GE
Security

CS875-575-375-275-175 Alarm system

Installers Manual
with CS5500 keypad

GE Interlogix

CE

MANUFACTURERS
DECLARATION OF CONFORMITY

For

Product identification:
Model/type : CS575 series   BOM revision level   : see model listing
Category (description) : Alarm control panel
Brand : GE-InterlogiX/Aritech / Sentrol/ESL/ITI/Caddx/Casi Rusco/Kalatel

Manufacturer:
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2008 Orchard Avenue
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Concerning	RTTE		
	EMC	Safety	Telecom
A sample of the product has been tested by:	Compliance Engineering Ireland Ltd. RAYSTOWN, RATOATH ROAD, ASHBOURNE, CO. MEATH, IRELAND	Interlogix Ireland Limited Greenhills Centre, Greenhills Road, Tallaght, Dublin 24, IRELAND	Belcomlab
Test report reference	CE Qualification Plan: 02DUBCE5001-3 CS575		
	00E293-1 & 01E515-1	01DR575LVD-2	BCL/00-04
Applied standards	EN50130-4(1995) +A1(1998) EN50081-1(1992) EN55022(1994) +A1(1995) +A2 (1997) EN61000-3-2(1995) +A1(1995) +A2(1998) +A14(2000) EN61000-3-3(1995)	EN60950(2001)	CTR21(1998) +EG201121(1998)

Equipment class identifier *(RF products falling under the scope of R&TTE)*

[X] Not Applicable   [ ] None (class 1 product)   [ ] ① (class 2 product)

Means of conformity

We declare under our sole responsibility that this product is in conformity with Directive 93/68/EEC (Marking) and/or complies to the essential requirements and all other relevant provisions of the 1999/5/EC (R&TTE) based on test results using (non)harmonized standards in accordance with the Directives mentioned

Signature of representative/manufacturer;   Raoul van Bergen
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The Netherlands

Place : Weert
Date : 9 December 2003
Page 1 of 2   Number: 02.42c

Model listing (list of all product variants or models for which this declaration is valid)

Model	Description	BOM revision date
CS575	Control Panel 8 Zones Plastic	18-JUN-02
CS575M	Control Panel 8 Zones Metal Hs	13-JUN-02
CS575S1	Control Panel 8 Zones Plastic	26-JUN-02
CS575S4	Control Panel 8 zones Varel	04-JUL-02
CS575S88	Control Panel 8 Securitas	21-MAR-02
CS575S88NTXF	Control Panel 8 Securitas NO XFR	21-MAR-02
CS375	Control Panel 24 Zones	September 2003
CS375M	Control Panel 24 Zones Metal	September 2003
CS575S88-NO	Control Panel 8 Zones Securitas Norway	November 2003
CS575S88-SW	Control Panel 8 Zones Securitas Sweden	December 2003
CS575S88-DK	Control Panel 8 Zones Securitas Denmark	December 2003
CS575S88-BE	Control Panel 8 Zones Belgacom	December 2003
RK575	Securitas Retrofit Solution	December 2003
CS375S88-BE	Control Panel 16 Zones Belgacom	December 2003
CS375S88-SW	Control Panel 16 Zones Securitas Sweden	December 2003
CS375S88-DK	Control Panel 16 Zones Securitas Denmark	December 2003
CS375S88-NO	Control Panel 16 Zones Securitas Norway	December 2003

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Section A:

Installing and programming a basic system

Chapter 1: Introducing the CSx75 system

1.1 Getting started

1.1.1 Welcome

Welcome to the CSx75 system range. We hope that you find it a useful addition to our range of products.

The CSx75 system design allows a fully loaded system to be housed in one single metal or plastic enclosure. It can be expanded as required with additional modules. Five different panel types are available: the CS175, CS275, CS375, CS575 and CS875. In this manual they are known collectively as the CSx75.

This manual describes a CSx75 installation using the CS5500, the menu driven keypad. The CS5500 allows you to program the system easily using a menu structure.

1.1.2 Default country codes

Table 1-1: *Default country codes* lists the default codes used in each country.

Table 1-1: Default country codes

Country	Country code	User code	Installer code	Download access code
Baltic states	03	1122	1278	12780000
France	02	1122(56)	1278(00)	84800000
Belgium	11	1122(56)	1278(00)	12780000
Czech Republic	20	1122	1278	12780000
Denmark	07	1122(00)	1278(00)	12780000
Finland	28	1122	1278	12780000
France	02	1122(56)	1278(00)	84800000
Germany	04	1122(56)	1278(00)	12780000
Hungary	22	1122	1278	12780000
Ireland	12	1122	1278	12780000
Italy	10	7777(77)	8522(22)	84800000
Netherlands	01	1122(56)	1278(00)	12780000
Norway	05	1122(00)	1278(00)	12780000
Poland	18	1122(56)	1278(00)	84800000
Portugal	21	1122(56)	1278(00)	84800000
Slovak Republic	24	1122	1278	12780000
Spain	09	1122(56)	1278(00)	84800000
Sweden	06	1122(00)	1278(00)	12780000
UK	03	1122	1278	12780000

✍ *The brackets contain the additional digits for the 6-digit codes.*

1.2 Keypads

1.2.1 CS5500 keypad

The CS5500 LCD keypad allows you to program the CSx75 system using a menu structure.

⏻	Power (green)	• **On** if the system is connected to the mains and the battery is OK.
		• **Flashes** if the system has no battery or a low battery.
		• **Off** if the system is not connected to the mains.
OK	Ready (green)	• **On** when the system is ready to arm.
		• **Flashes** when the system is ready to force arm.
		• **Off** when the system cannot be armed.
↝	Fire (red)	• **On** when a fire zone has been activated.
		• **Flashes** when there is a problem with a fire zone.
		• **Off** when all fire zones are operating correctly.

• Press **F1** to scroll to the start of the LCD message.

• Press **F3** to scroll to the end of the LCD message.

In multi-area mode, these keys have specific functions. If you select one or more areas in this mode:

Function keys

• Press **F1** to part arm the set of areas.

• Press **F2** to full arm the set of areas.

• Press **F3** to disarm the set of areas.

You can program these keys to perform a function when not in multi-area mode.
Press **No** to:

No

• Cancel a change to the menu selection **or**

• Navigate to a higher level in the menu structure **or**

• Cancel a sequence when entering numeric data.

Press **OK** to:

OK

• Activate the menu **or**

• Accept selection changes **or**

• Move forward in the menu structure **or**

• Complete a sequence when entering numeric data.

		When editing text and phone numbers:
#	Hash	• Press **# F1** to move to the first character or number.
		• Press **# F3** to move to the last character or number.
		• Press **#↓** to delete from the current position to the last character or number.

Press the navigation keys to scroll through menu lists and options.

When in multi-area mode or not in a menu:

↑ INS / DEL ↓	Navigation keys	• Press ↑ to display bypassed zones.
		• Press ↓ to display problem zones.

When editing text and telephone numbers:

- • Press ↑ to overwrite or insert text.
- • Press ↓ to delete text.

1.2.2 Other LCD and LED keypads

These are the other types of keypads that can be used with the CSx75 system. The LCD keypad can be used to program the system, but a menu structure is not provided.

It is recommended that you program the system using the CS550 keypad or the UDx75 upload/download software.

Chapter 2: Designing the CSx75 system

2.1 System versions

There are five versions of the CSx75. The following table lists the features of each version and some differences between them.

Table 2-1: CSx75 versions

	CS175	CS275	CS375/575	CS875
Number of wired zones on the CSx75	4	6	8	8
Maximum number of zones	8	16	24 (CS375) 48 (CS575)	168
Outputs	3 (2 open collector and 1 fire reset)	4 on-board (open collector)	4 on-board (2 relay/2 open collector)	4 on-board (2 relay/2 open collector)
Sounder outputs	Internal sounder with built–in siren driver for the internal sounder	Separate on-board external and internal sounder with built–in siren driver for the internal sounder	Separate on-board external and internal sounder with built–in siren driver for the internal sounder	Separate on-board external and internal sounder with built–in siren driver for the internal sounder
Maximum number of partitions	1	2	4	8
Report formats	Fast Format, Telim, Franklin 4+2, SIA, XSIA, Siren Tone, 200 baud FSK, Voice and Contact ID report formats	Fast Format, Telim, Franklin 4+2, SIA, XSIA, Siren Tone, 200 baud FSK, Voice and Contact ID report formats	Fast Format, Telim, Franklin 4+2, SIA, XSIA, Siren Tone, 200 baud FSK, Voice and Contact ID report formats	Fast Format, Telim, Franklin 4+2, SIA, XSIA, Siren Tone, 200 baud FSK, Voice and Contact ID report formats
Hardware expansion	1 module Keypads do not count as modules on the CS175	3 modules Keypads do not count as modules on the CS275	16 modules (CS375) 32 modules (CS575) Keypads count as modules when on the CS375-575	32 modules Keypads count as modules when on the CS875
Maximum number of user codes	8 (4 or 6-digit codes)	40 (4 or 6-digit codes)	66 (6-digit codes) or 99 (4-digit codes)	66 (6-digit codes) or 99 (4-digit codes)
Maximum number of keypads (up to 8 per partition)	8	16	16	32
Support for Proximity Reader	No	No	Yes	Yes

2.2 Parts of the system

Table 2-2: System modules

	Part number	Part	Purpose
	CS5500	Keypad module	Used to program the system. Other LCD and LED location based keypads can also be used.
	CS208/CS208H/CS216	Input expander module	Expands the number of wired zones by 8 or 16 zones The wired zone expanders can only be used with the CS375, CS575 and CS875. You can only expand the CS175 and CS275 by using a wireless receiver.
	CS507	Output expander module	Expands the number of outputs available on the system.
	CS586	Direct connect module	Used as: 1. A direct connect interface between the panel and PC. 2. A storage device, when connected only to the PC. You can also read/write from 1 of the 4 locations via the UDx75 software. 3. A storage device, connected only to the panel. You can read/write from 1 of the 4 locations on the CSx75. The CS590 RS232 direct connect cable is used with the CS275-375-575-875 and is connected directly to the PCB. The CS586 can be used on any panel in the range and connected to the 3-wire keypad bus.
	CS7002	GPRS module	Allows events to be reported via a GSM network or a GPRS network.
	CS1700	Door swipe module	Proximity card reader/door control module. You can program it to control access in any or all areas. The CS1700 can only be used with the CS575 and CS875.
	CS320	Auxiliary power module	Provides additional power for modules attached to a panel.
	CS535	Voice module	Allows events to be reported using voice messages.
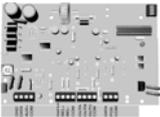
Table 2-2: System modules

	Part number	Part	Purpose
	CS534	Audio (listen-in) module	Two-way audio (listen-in) communicator that allows the situation on the premises to be monitored.
	CS7050	TCP/IP Module	Dual microprocessor-controlled Internet/Intranet interface used to connect the CSx75 control panel to the OH Network Receiver.
	CS7501	ISDN Module	Integrated services digital network dialler that allows digital data to be sent over an ISDN line.
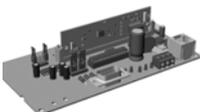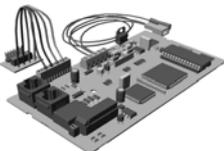
Table 2-3: System equipment

	Part number	Purpose
	AS270/271	Internal sounders
	AS500 and AS290/390	External sounders
	DB701 + DP721 and DB702 +DP721R	Fire detector

Table 2-4: Wireless Equipment

	Part Number	433 MHz	868 MHz	Purpose
	Wireless Receiver	RX8I4CA-pcb RX16I4CA-pcb RX48I4CA-pcb	RX8W8CA-pcb RX16W8CA-pcb RX32W8CA-pcb	RF 433 versions provide RF capability for 8, 16, or 48 wireless/RF components. RF868 versions provide RF capability for 8 or 16 or 32 wireless/RF components.
	Wireless keyfobs	RF352I4 (2 button) RF354I4 (4 button)	RF354W8 (4 button)	Arms and disarms the system.
	Micro multipurpose panic button	RF356I4	Not available	Used for activating police, medical, or auxiliary alarms throughout the premises. When the panic button is pressed, the LED mounted under the front cover will blink and an alarm signal is transmitted.
	Wireless water resistant medical pendant	RF360I4	Not available	Sends an alarm signal with one button press to the panel.
	Wireless fire detector	RF572SI4 RF572NSTI4	RF572SW8	Battery powered fire detector.

Table 2-4: Wireless Equipment

	Part Number	433 MHz	868 MHz	Purpose
	Wireless door window sensor	RF320I4 RF310I4	RF300W8 RF300W8B	Transmits events to the control panel via the RF receiver.
	Wireless shock sensor	RF620I4 RF620I4B	Not available	Transmits events to the control panel via the RF receiver.
	Wireless glass break detector	RF903I4	RF903W8	Transmits events to the control panel via the RF receiver.
	Wireless motion sensor	RF425I4 RF425I4PI	RF425W8 RF425W8PI	Battery powered PIR.

Chapter 3: Installation guidelines

3.1 Mains power connection

Use the mains connector terminal for connecting the mains supply. You can use a fixed cable or a flexible mains lead to an earthed mains outlet. If fixed wiring is used, insert a dedicated circuit breaker in the power distribution network. In all cases, the mains connection must comply with local regulations.

IMPORTANT: Disconnect the mains power before opening the cabinet. To do this:

- Disconnect the AC mains plug from the AC mains wall socket **or**

- Disconnect the mains with the dedicated circuit breaker.

CAUTION: This unit can be provided with a lead battery inside. Dispose of this battery according to chemical waste regulations only.

3.2 Mounting

- Ensure that the unit is mounted on a flat, solid, vertical surface so that the base will not flex or warp when the mounting screws/bolts are tightened.

- Leave a 50 mm clearance between equipment enclosures mounted side by side and 25 mm between the enclosure and the walkway.

- The battery mounting facility inside the housing is only useful for steady state use of the control panel. Remove the battery for transport of the control panel.

- Take care that wire terminals are isolated. Use tie wraps to prevent contact with any other wires or circuits in case wires break.

3.3 Cabling

3.3.1 Shielded and unshielded cable

- In a clean environment, use unshielded cable. This provides the maximum cable length.

- In a harsh environment, use shielded cable. The maximum cable length is reduced as part of the signal will go into the shield. The amount of length lost depends on the type and quality of the shielded cable.

3.3.2 Twisted and untwisted cable

- You can use either twisted or untwisted cable for the bus. Since the bus only has 3 wires, twisted pair cable is not necessary.

3.4 Wiring guidelines

The CSx75 control panel has been designed, assembled and tested to meet the requirements of current relevant standards related to safety, emission and immunity with respect to environmental electrical and electromagnetic interference. Only a qualified electrician or other suitable trained and qualified person should attempt to wire this system to the mains or to the public telephone network.

1. Ensure that there is a good earth for the alarm system. A good earth is essential for effective resistance to electrical interference. Do not forget to provide a (network) earth for the telephone dialler.

2. Maintain a good separation between low voltage and mains supply cables. Use separate points of cable entry to the control panel cabinet.

- If the entry cable holes are used to route wiring into the control panel, always use a proper pipe fitting system by means of an appropriate conduit and junction box. For this purpose, use only materials of suitable flammability class (HB or better).

- Avoid cable ducts and cableways that contain mains power cables. This is particularly important when such ducts contain cables supplying electric motors, fluorescent lights or 3-phase power. If this is not possible,

shielded cable should be used and the cable should be connected to a GND terminal at the control panel end **only**.

3. The remote bus cable is used for communication between the control panel and the keypads/expanders. The greatest care should be taken when installing this cable. **Never** split it into separate cables. Do not use cables with wires that are used for telephone connections or for switching, for example, flashing lights, sirens or relays.

4. For mains power connection, use the mains connector terminal either through a permanent wiring or a flexible mains cable to an earthed mains outlet. Always use cable ties to fix the mains cable, at the dedicated fixing point provided near the mains terminal connector.

- In case of permanent fixed wiring, insert an easily accessible, dedicated bipolar circuit breaker in the power distribution network.

- Never attempt to solder a mains connection wire's end where they will be wired to the terminal connectors.

5. Avoid loops of wire inside the control panel and route cables so they do not lie on top or underneath the printed circuit board. The use of cable ties is recommended and improves neatness within the box.

6. The battery used with this unit, must be made of materials of suitable flammability class (HB or better).

7. Any circuit connected either directly to the on-board relay's contact or to the external relay's contact through the on-board electronic output, must be of **SELV** (**Safety extra-low voltage**) operating circuit.

- The mains switching relay must not be fitted inside the control panel cabinet.

- Always place a suppression diode (for example, a 1N4001) across the relay coil.

- Use only a relay with good insulation between the contacts and the coil.

8. The minimum clearance between equipment closures is 50 mm between equipment vents.

9. Only use units in a clean environment and not in humid air.

3.5 Defaulting the panel

IMPORTANT: Before installing and programming the system, default the panel to ensure that you have the correct country defaults according to your local regulations.

3.6 Using the DIP switch diagrams

- When the DIP switch is set to the ON position, the switch is at the top. This is illustrated in the DIP switch diagrams as

- When the DIP switch is set to OFF, the switch is at the bottom. This is illustrated in the DIP switch diagram as

- In this example the first, third and sixth DIP switches are ON and the second, fourth and fifth DIP switches are OFF.

- The DIP switch diagram demonstrates this as shown.

Chapter 4: Installing a basic system

4.1 Wiring zones

4.1.1 General

The control unit inputs are set up as standard EOL (4K7) freely programmable zones. However, by programming the zones as dual loop, all control unit zone inputs can be programmed to give alarm and tamper indication on the same zone.

4.1.2 Dual wiring

One zone includes both alarm and tamper wiring.

The alarm devices are wired in series and a 4K7 resistor is fitted in parallel across the closed circuit contacts.

The tamper contacts are wired in series with a 4K7 EOL resistor.

- All devices closed - loop resistance is 4K7.

- Tamper device open - loop is an open or short circuit.

- Alarm device open - loop resistance is 9K4 (i.e. EOL resistor PLUS parallel resistor).

①	Zone terminal	③	Alarm contact
②	Sensor	④	Tamper contact
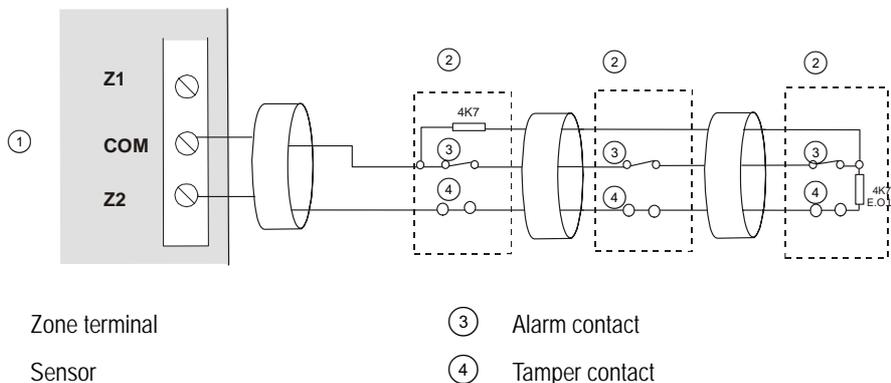
4.1.3 Single wiring

Two zones are required, one zone for alarm and one zone for tamper. The tamper contacts are wired in series with a 4K7 EOL resistor.

①	Zone terminal	③	Alarm contact
②	Sensor	④	Tamper contact
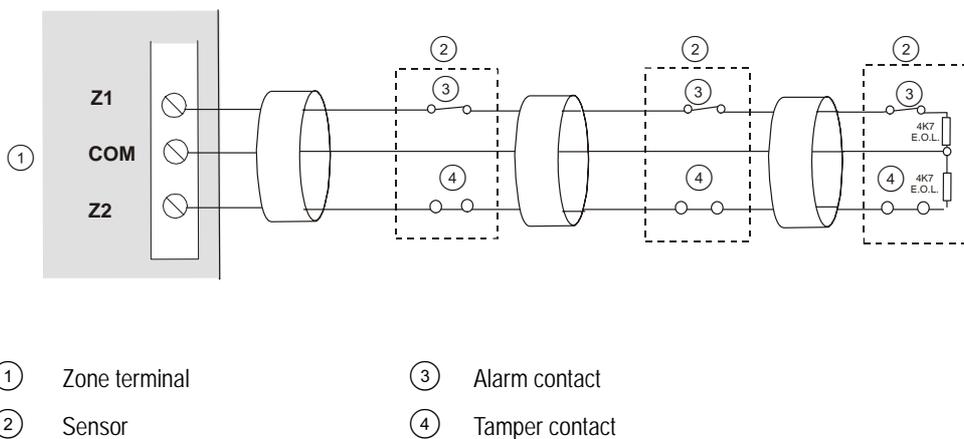
Information on programming the zones can be found in chapter B-2 *Programming the control panel*.

4.2 Installing the control unit

The control panel is available in three separate housings. The method of installation and the positioning of expander modules vary depending on the housing used.

The instructions below show the details for installing a basic system. For details on installing the CS7050, CS7501 and CS7002, see the relevant chapters.

✎ *The housing/enclosures covered in this manual are not suitable for every CSx75 model and may not be available in your country. Contact your local supplier to get more information on availability.*

4.2.1 CS575M/CS875M (large metal housing)

This large metal housing can be used with the CS375, CS575 and CS875.
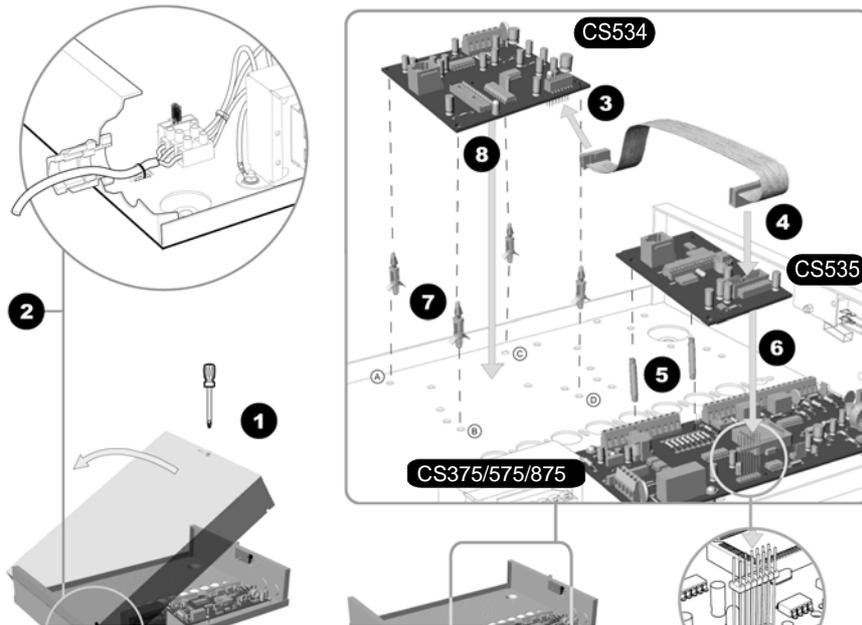
1. Open the box.

2. Wire the panel.

3. If you are using a CS534 listen-in module, a CS535 voice module and a CS7002 GPRS module, complete the following steps:

   - Attach a ribbon cable to the CS7002 GPRS module.

   - Attach a ribbon cable to the CS534 listen-in module.

   - Connect the CS7002 GPRS module and CS535 voice module with the ribbon cable.

   - Connect the CS534 listen-in module and CS535 voice module with the ribbon cable.

   - Add the pillars for the CS7002 GPRS module to the board.

   - Attach the CS7002 GPRS module to the main board via the jumpers and pillars.

   - Place the CS534 listen-in module and CS535 voice module on top of the CS7002 GPRS module in the box.

4. If you are using a CS534 and a CS535 without a CS7002 complete the following steps:

   - Attach the ribbon cable to the CS534 listen-in module.

   - Connect the CS534 listen-in module and CS535 voice module with the ribbon cable.

   - Add the pillars for the CS535 voice module to the board.

   - Attach the CS535 voice module to the board via the jumpers and pillars.

- Attach the pillars for the CS534 listen-in module to the box.

- Insert the CS534 listen-in module in the box.
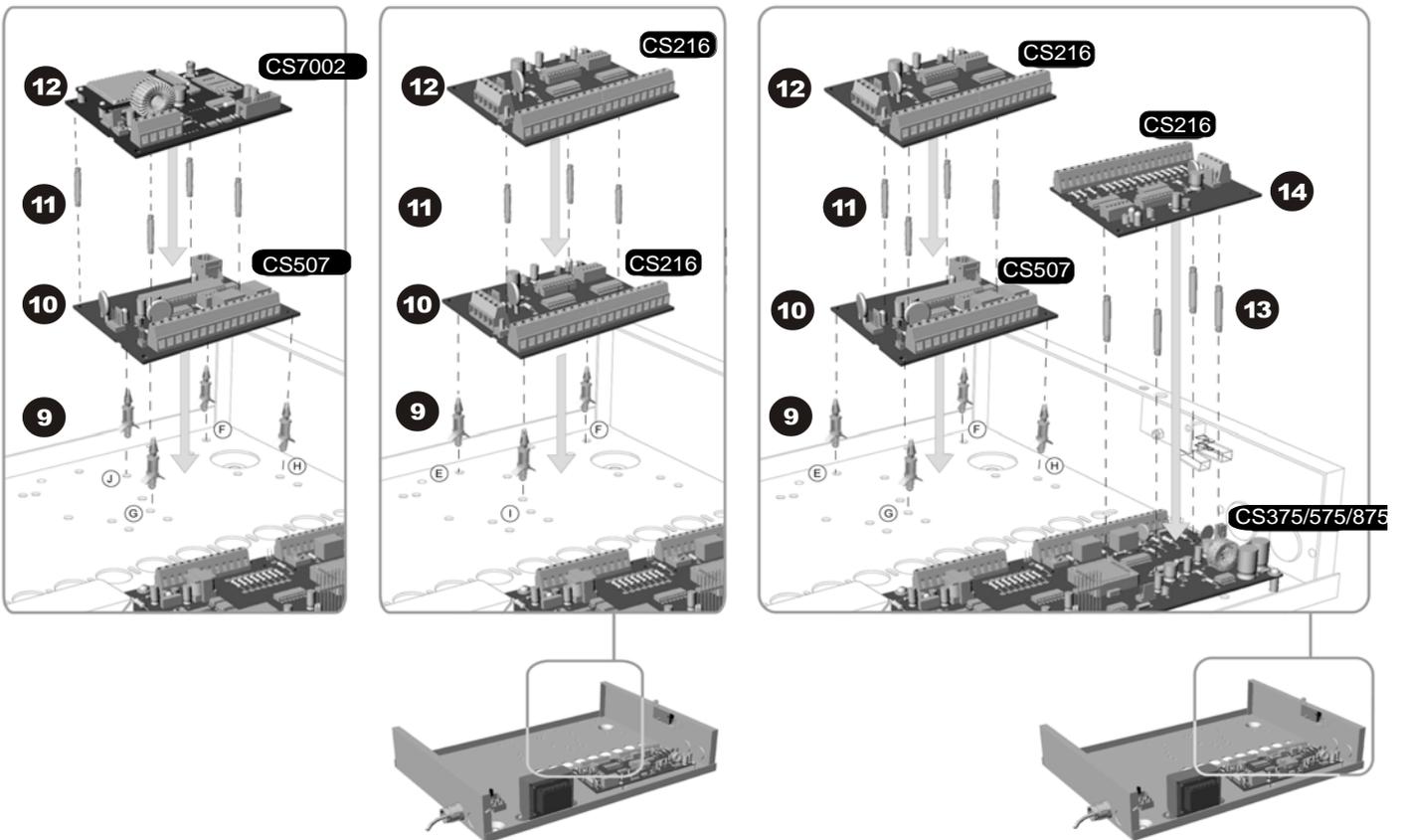
5. Add the pillars for the CS507 output module or CS208 / CS216 input expander or CS7002 GSM module to the box.

6. Mount the CS507 output module or CS208 / CS216 input expander or CS7002 GSM module.

7. Mount the pillars for a CS208 / CS216 input expander on the CS575/875 board.

8. Mount the CS208 / CS216 input expander on the CS575/875 board.

9. Wire the keypad bus for all modules. Check the relevant module chapter for wiring information. For information on mounting the CS7501 ISDN dialler, see chapter B-16 *Setting up the CS7501*.

10. Connect the battery and power up the panel.

4.2.2 CS275/CS375/CS575/CS875 (polycarbonate housing)

This polycarbonate housing can be used with the CS275, CS375, CS575and CS875.

CS534

CS275/375/575/875
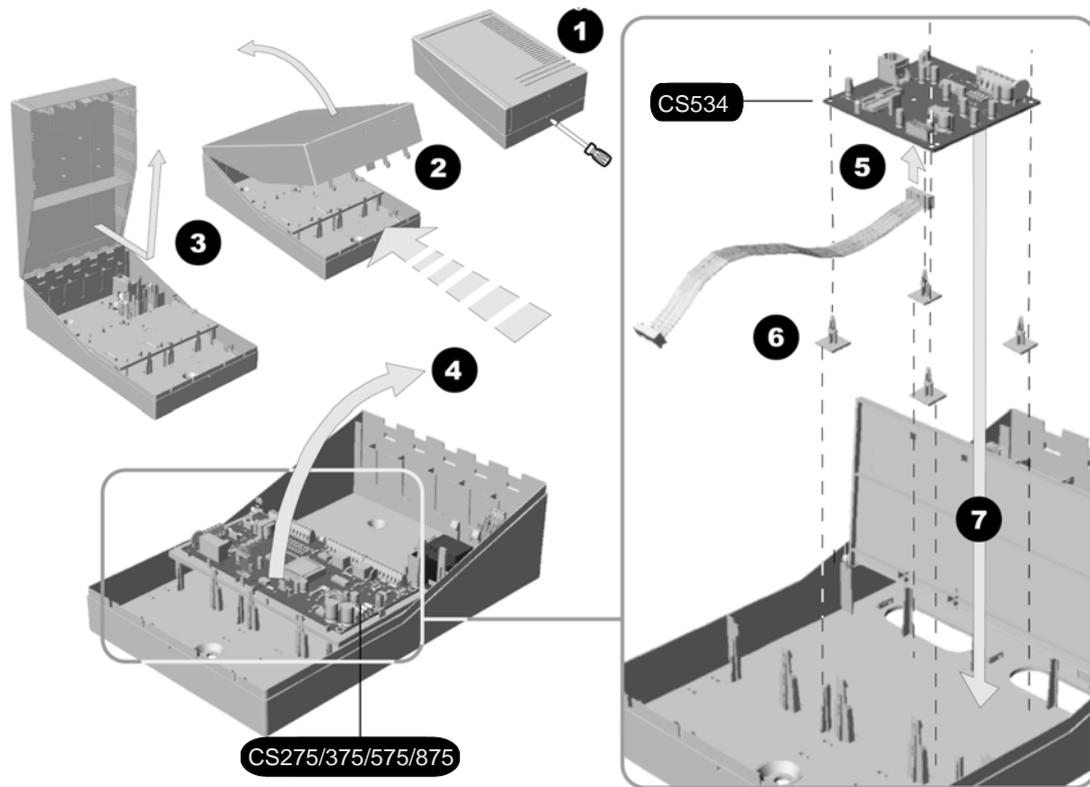
1. Unscrew the holding screw in the polycarbonate housing.

2. Open the box.

3. Lift off the lid of the box.

4. Flip up the PCB mounting tray.

5. If you are using a CS534 listen-in module, a CS535 voice module and a CS7002 GPRS module, complete the following steps:

    -   Attach the ribbon cable to the CS7002 GPRS module.

    -   Attach the ribbon cable to the CS534 listen-in module.

    -   Remove the sticky pads and insert the pillars for the CS7002 GPRS module in the box.

    -   Connect the CS7002 GPRS module to the main board.

    -   Flip down the PCB mounting tray.

    -   Attach the pillars for the CS535 voice module to the board.

    -   Attach the CS535 voice module to the board via the jumpers and pillars.

    -   Connect the CS7002 GPRS module and CS535 voice module with the ribbon cable.

    -   Connect the CS535 voice module and CS534 listen-in module with the ribbon cable.

6. If you are using a CS534 and a CS535 without a CS7002 complete the following steps:

    -   Attach the ribbon cable to the CS534 listen-in module.

    -   Remove the sticky pads and insert the pillars for the CS534 listen-in module in the box.

- Connect the CS534 listen-in module to the box.

- Flip down the PCB mounting tray.

- Attach the pillars for the CS535 voice module to the board.

- Attach the CS535 voice module to the board via the jumpers and pillars.

- Connect the CS534 listen-in module and CS535 voice module with the ribbon cable.

7. Attach the pillars for the CS208 / CS216 input expander or CS507 output module to the board.

8. Mount the CS208 / CS216 input expander or CS507 output module on the board.
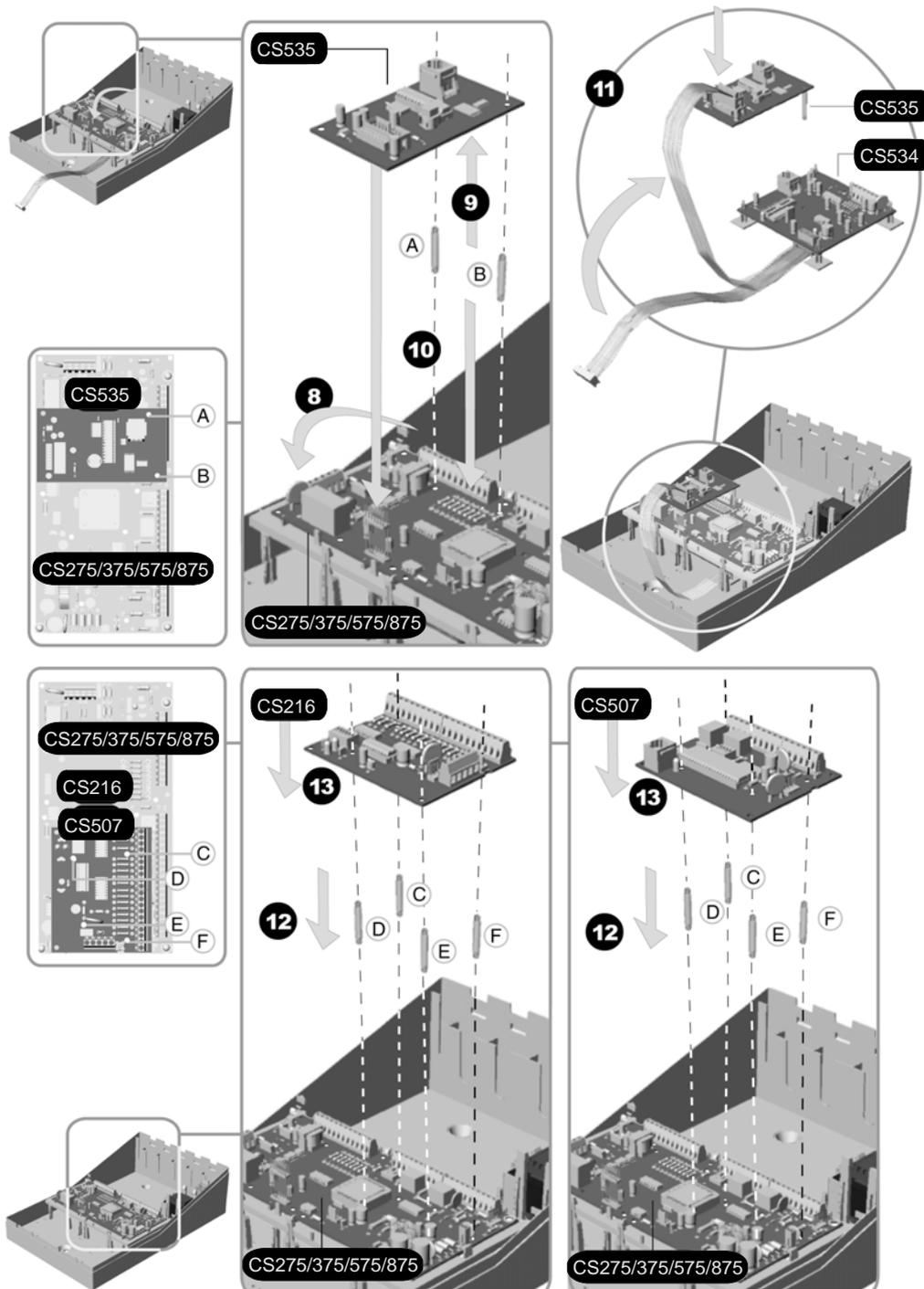
9. Drill 0.3 mm holes for the card guides in the box.

10. Place the card guide (NX-CA-SL) in the box.

11. Screw in the card guides.

12. Use the card guides to mount up to 3 further pre-wired modules. Check the relevant module chapter for wiring information. For information on mounting the CS7501 ISDN dialler, chapter B-16 *Setting up the CS7501*.

13. Connect the control panel battery leads to the module.

14. Mount the RF receiver in the lid of the box. This facility is not available in every country.

15. If you are installing an RX8I4, RX16I4 or RX48I4 CA series receiver, you must insert the antennae through the lid.

16. Wire the keypad bus for any other modules that are not in the card guides.

17. Connect the battery and power up the panel.

4.2.3 CS175M/CS275M/CS375M/CS575SM (small metal housing)

This is a small metal housing that can be used with the CS175, CS275, CS375 and CS575.
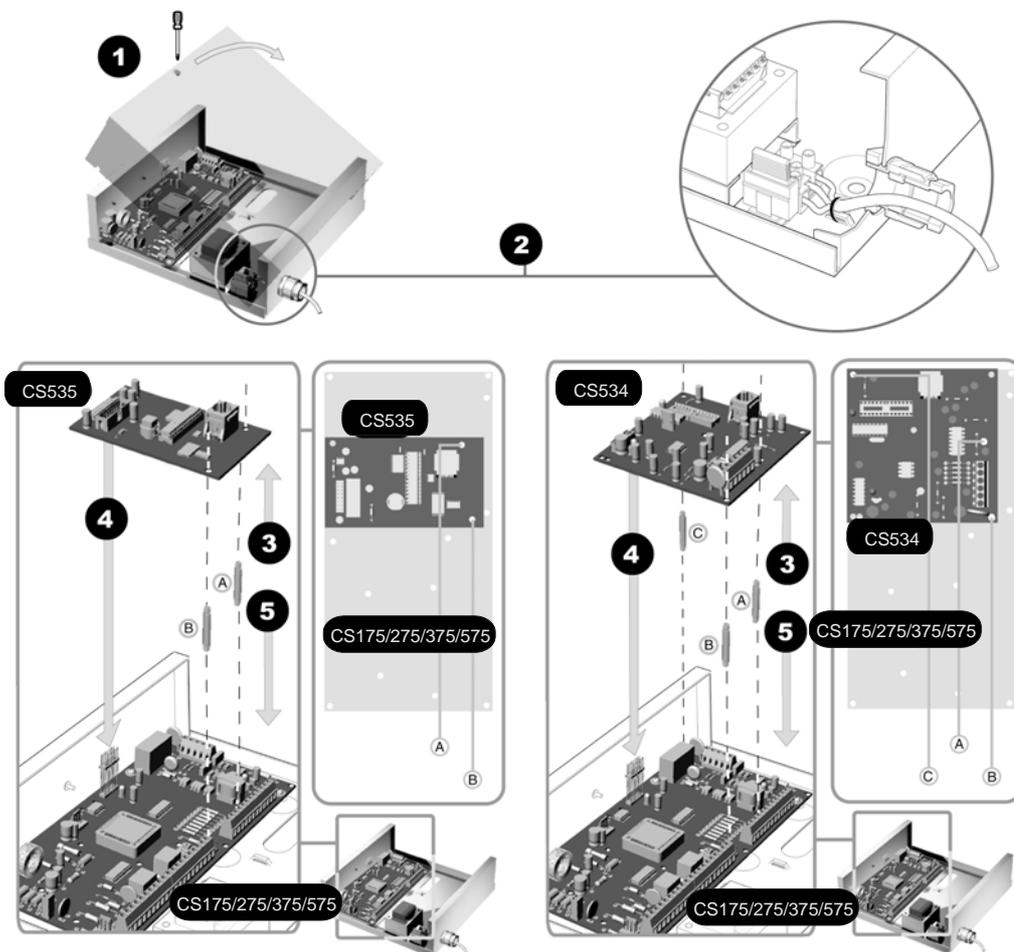
1. Open the box.

2. Wire the panel.

3. If you are using a CS534 listen-in module, a CS535 voice module and a CS7002 GPRS module, complete the following steps:

   - Attach the pillars for the CS7002 GPRS module to the main board.

- Mount the CS535 voice module to the extension gate (jumper).

- Attach a ribbon cable to the CS534 listen-in module.

- Connect the CS534 listen-in module and CS535 voice module with the ribbon cable.

- Mount the CS7002 GPRS module on the pillars to the main board.

4. If you are using a CS534 and a CS535 without a CS7002 complete the following steps:

- Attach the pillars for the CS534 listen-in module or CS535 voice module to the main board.

- Mount the CS534 listen-in module or CS535 voice module to the extension gate (jumper).

- Mount the CS534 listen-in module or CS535 voice module on the pillars to the main board.
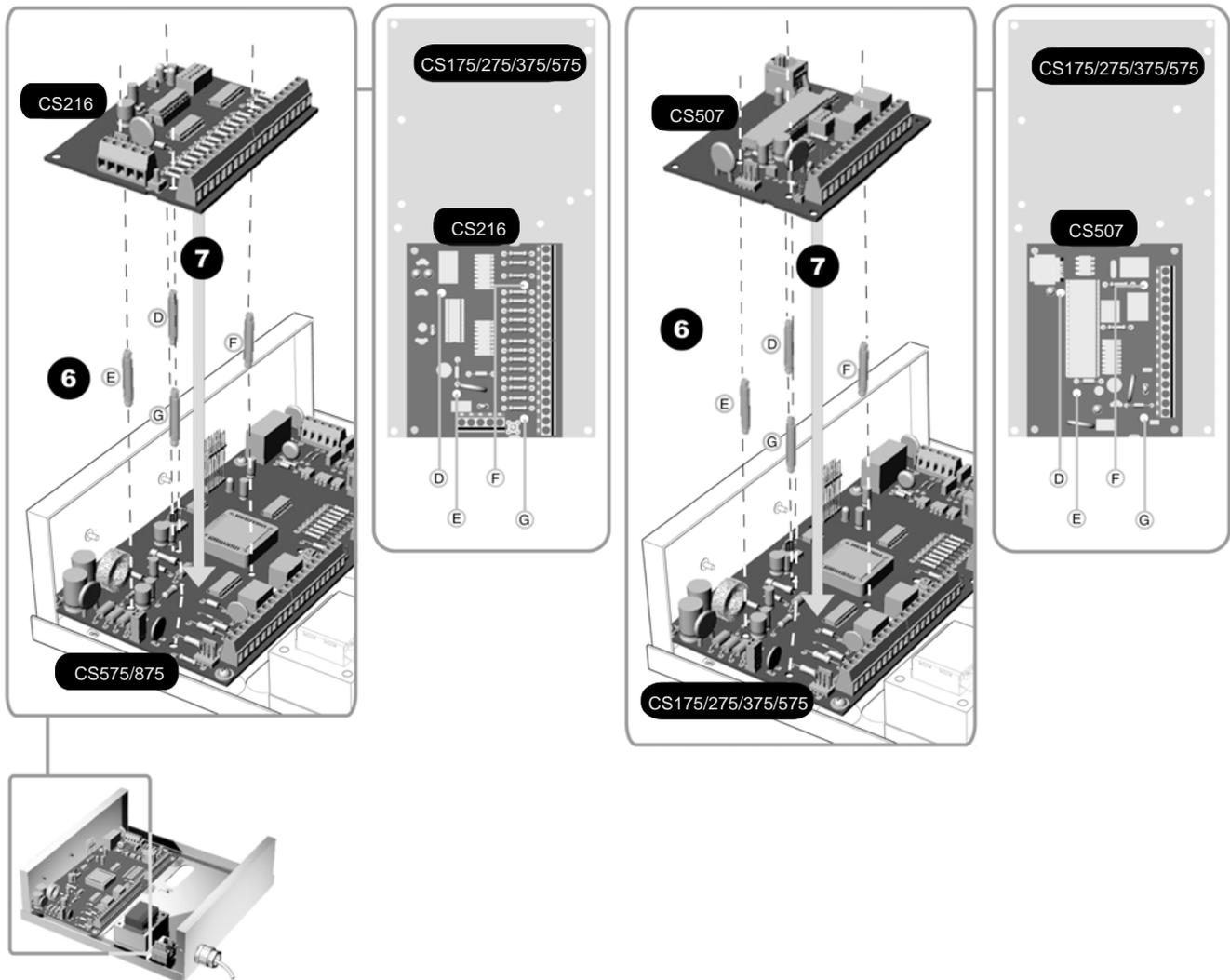
5. Add the pillars for the CS208 / CS216 input expander or CS507 output expander to the main board.

6. Mount the CS208 / CS216 input expander or CS507 output expander.

7. Wire the keypad bus for all modules. Check the relevant module chapter for wiring information. For information on mounting the CS7501 ISDN dialler, see chapter B-16 *Setting up the CS7501*.

8. Connect the battery and power up the panel.

4.3 Installing the keypad
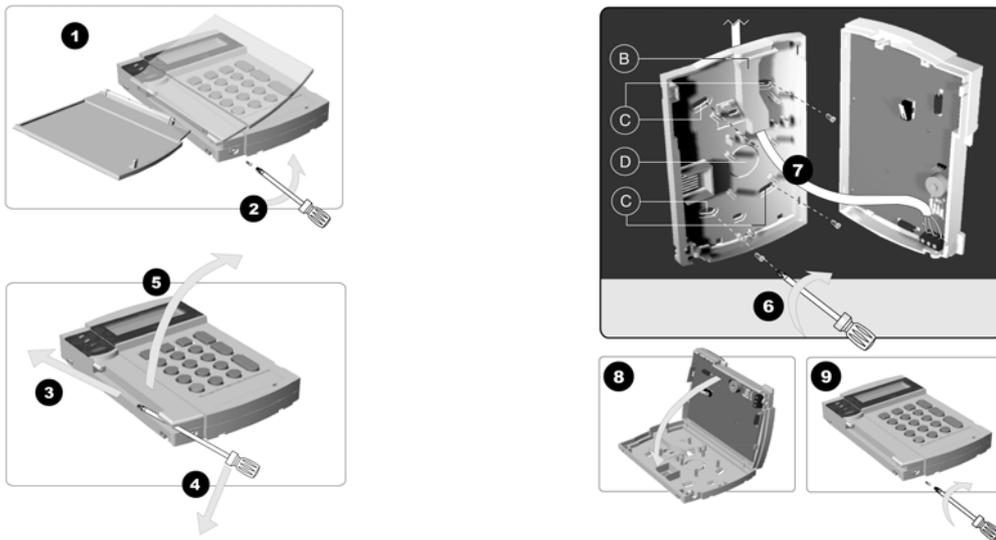
1. Remove the keypad door.

2. Remove the bottom screw if fitted.

3. Place a short length of the shaft of the screwdriver in the hollow of the door hinge.

4. Twist the screwdriver carefully.

5. The two parts of the keypad should separate. Lift up the lid.

6. Mount the keypad on the wall using the mounting holes C.

7. Use the wire trunking B or wire cutout hole D to place the wires in the keypad.

8. Re-attach the base and lid.

9. Attach the pry-off tamper screw if desired.

4.3.1 Wiring the keypad

The keypad should be wired to the control unit as follows.
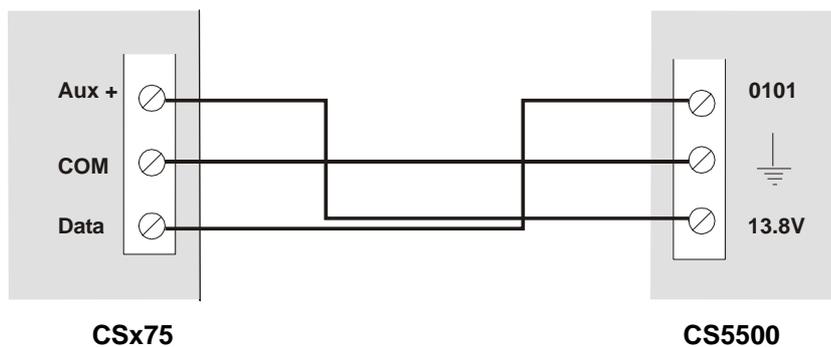
4.3.2 Wiring several keypads together

The total cable length of wiring is restricted to 800 m. The chart below shows the wire gauge that should be used. These numbers are for one keypad at the end of the wire. When connecting more than one keypad to the end of the wire, a higher gauge wire is required.

Table 4-1: Keypad bus length

Length	Connected to CSx75
Length in Metres	Wire mm²
110	0.50
200	0.75
333	1.00
500	1.50
800	2.50

4.3.2.1 Multidrop network

In a multidrop network, keypads are chained together. Each keypad is connected in parallel to the one before it.

4.3.2.2 Star network

In a star network, each keypad is wired back separately to the control unit terminals.
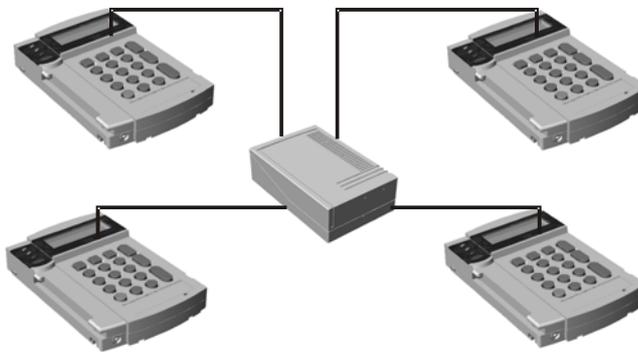
4.3.2.3 Star and multidrop network

You can create a combination of a star and multidrop network. The following diagram shows how four keypads can be connected using both methods.
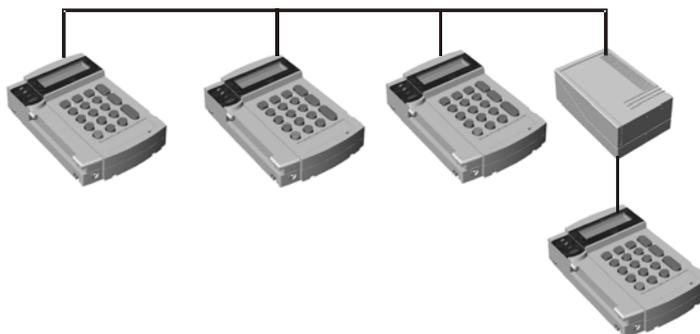
4.4 Wiring sounders

4.4.1 Wiring a sounder with EOL protection

Any zone can be used. It should be programmed as tamper and single EOL.

4.4.1.1 AS500

CSX75
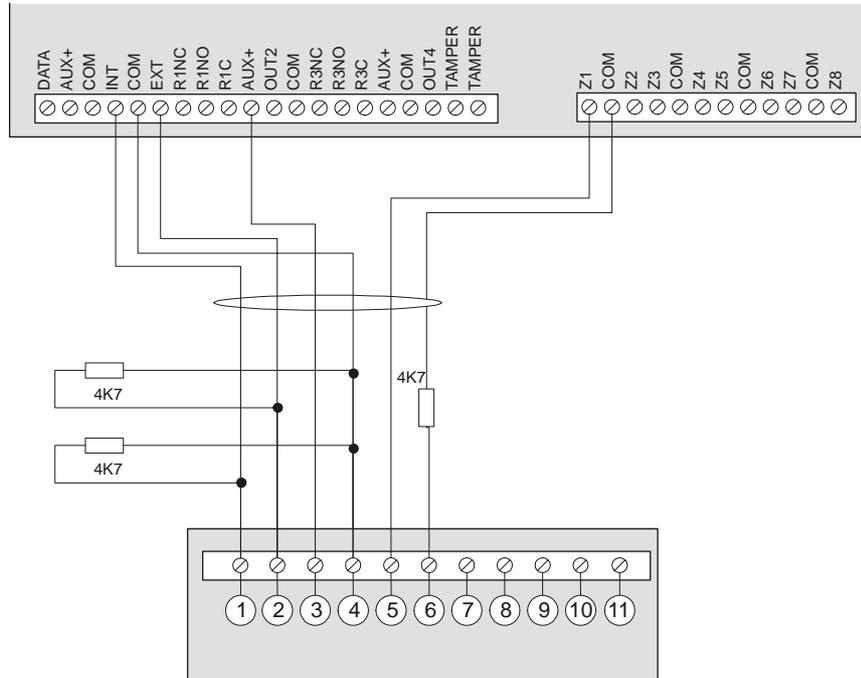
AS500

① Beacon - hold off	⑤ Tamper	⑨ Piezo
② Siren - hold off	⑥ Tamper	⑩ Piezo
③ +13.8 V	⑦ Beacon	⑪ Piezo
④ GND	⑧ Beacon	

✍ *Tn all cases, select negative hold-off on the sounder.*

4.4.1.2 AS271

✍ *A resistor should be added between the COM and the Ext on the panel PCB. This resistor prevents the panel being constantly in a trouble condition. Both the internal and external sirens are supervised.*

CSX75
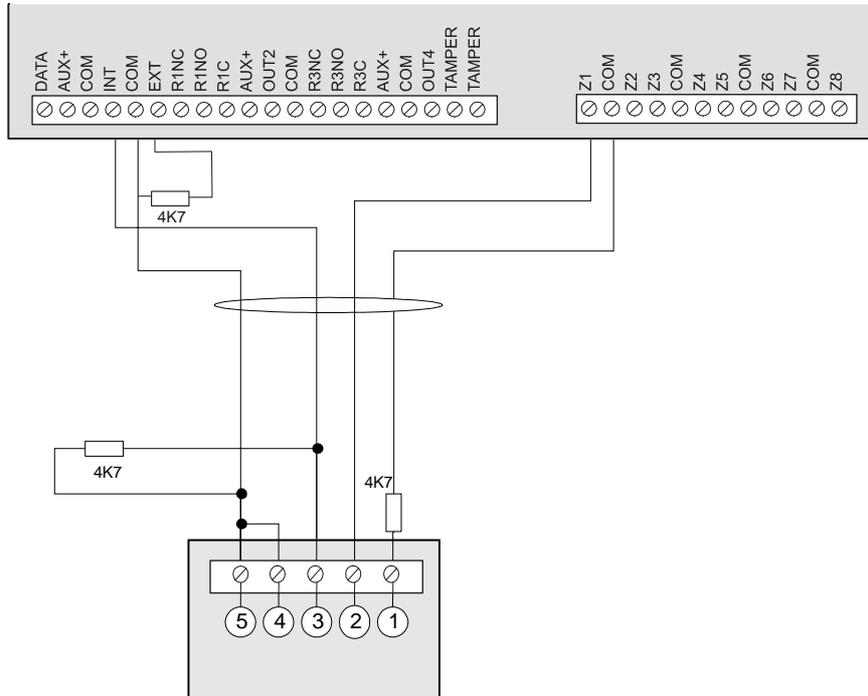
AS271

①	Tamper	④	0 V speaker
②	Tamper	⑤	0 V beacon (AS271 only)
③	+13.8 V		

✍ *This wiring configuration for the AS271 allows the beacon to follow the internal sounder.*

4.4.1.3 AS290/390

CSX75
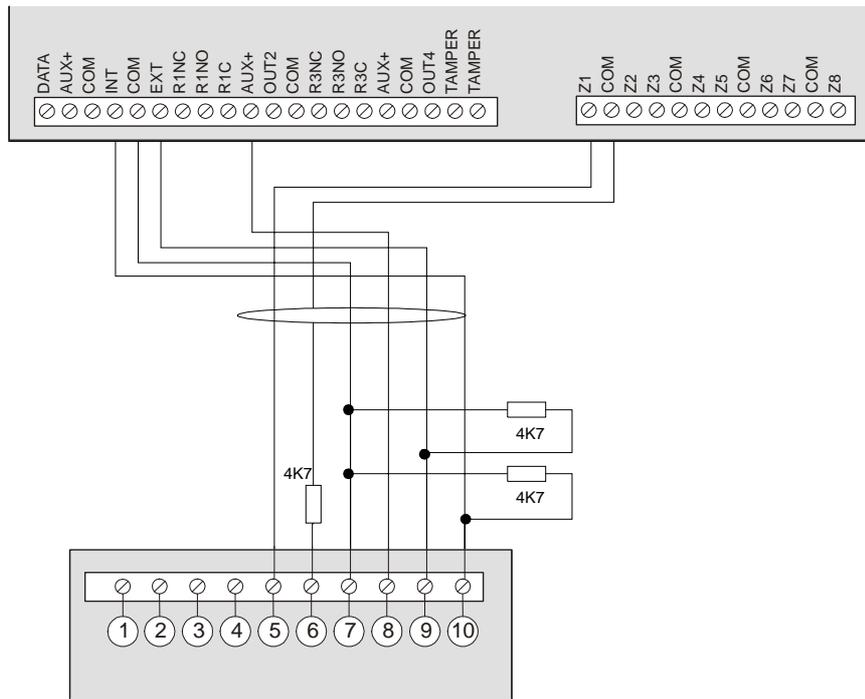
AS290/390

① Piezo	④ Beacon	⑦ GND	
② Piezo	⑤ Tamper	⑧ +13.8 V	
③ Beacon	⑥ Tamper	⑨ Siren - hold off	
⑩ Beacon - hold off			

✍ *Cut jumpers 5 and 7 for negative hold-off on the sounder.*

Information on programming the sounders can be found in chapter B-2 *Programming the control panel*.

4.5 Wiring fire detectors

In a 4-wire configuration, you can connect as many fire detectors, as long as you do not exceed the AUX power capacity of the panel.

In a 2-wire configuration, you can connect a maximum of three fire detectors on the same loop.

4.5.1 4-wire fire detector (CS275-375-575-875)

DB702 +DB721R   **DB702 +DB721R**

CS275   AUX+

CS375   COM

CS575   OUT4

CS875   Z4

         COM

4k7
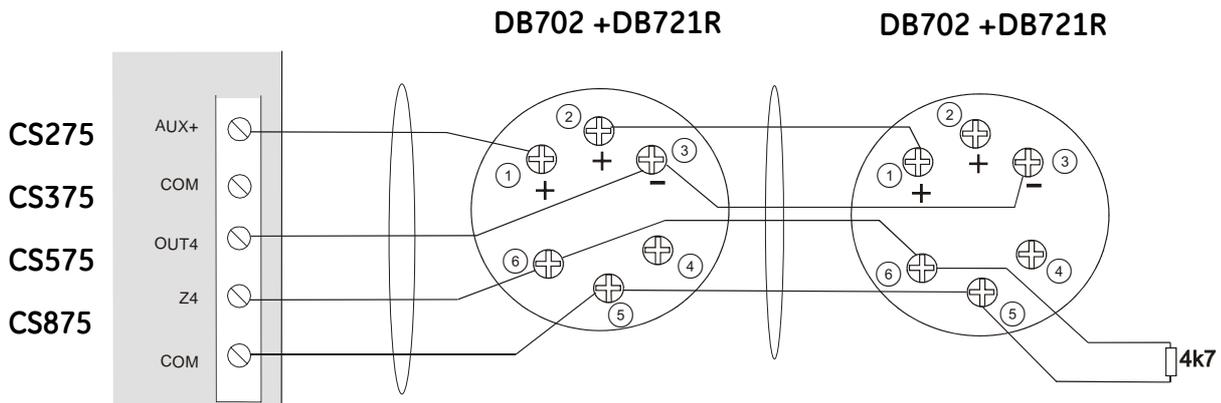
(1) + Line in   (4) NC (normally closed)

(2) + Line out   (5) COM

(3) - Line   (6) NO (normally open)

4.5.2 2-wire fire detector (CS275-375-575-875)

DB701 +DB721R   **DB701 +DB721R**

CS275

CS375   AUX+

CS575   COM

CS875   OUT4

         Z4

         COM

560 Ohm
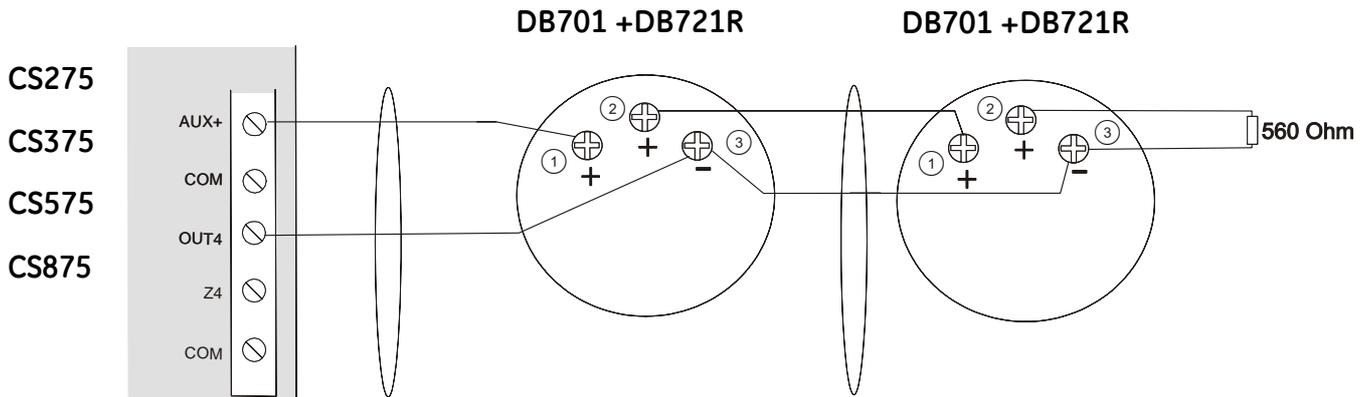
(1) + Line in

(2) + Line out

(3) - Line

✍   *A fire alarm is activated as an alarm on zone 8 for the CS375-575-875 and as an alarm on zone 7 on the CS275. The **fire detector power** is connected to Aux and Output.*

*If you are using a 2-wire fire detector you must change the menu option for 2-wire fire detector to **On.***

The CS175 does not support a 2-wire fire detector. A fire alarm activates the zone connected to the 4-wire fire detector.

4.5.3 4-wire fire detector (CS175)

DB702 +DB721R   DB702 +DB721R
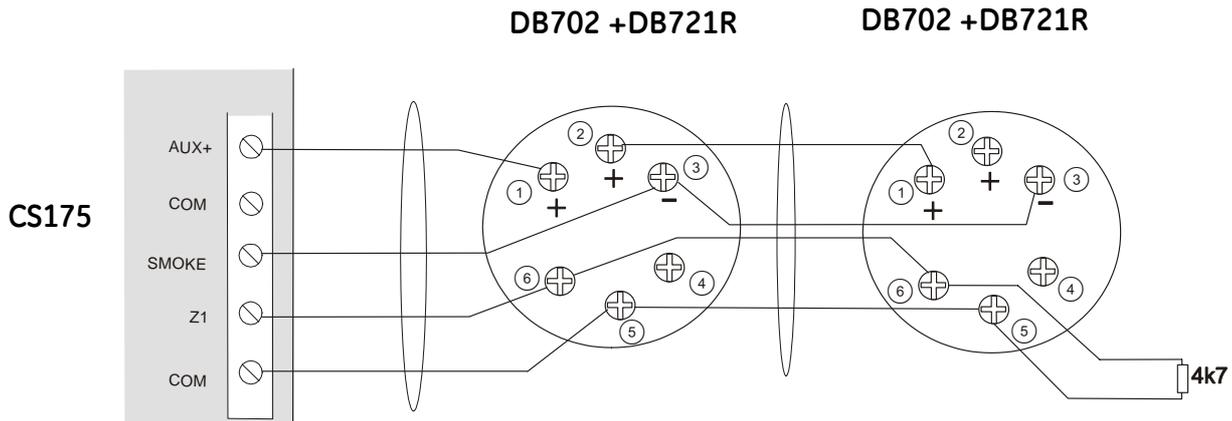
① + Line in   ④ NC (normally closed)

② + Line out   ⑤ COM

③ - Line   ⑥ NO (normally open)

If you are using a CS175, you must program output 3 for the fire detector.

1. Select *Installer Menu>Control Panel>Outputs>Prog Outputs>Output 3>Event>Alarms>Fire Reset*.

2. Make sure that the option to follow the event is 0. To do this, select *Installer Menu>Control Panel>Outputs>Prog Outputs>Output 3>Time* and set the time to 0.

4.6 Wiring the outputs

CS875
CS575
CS375
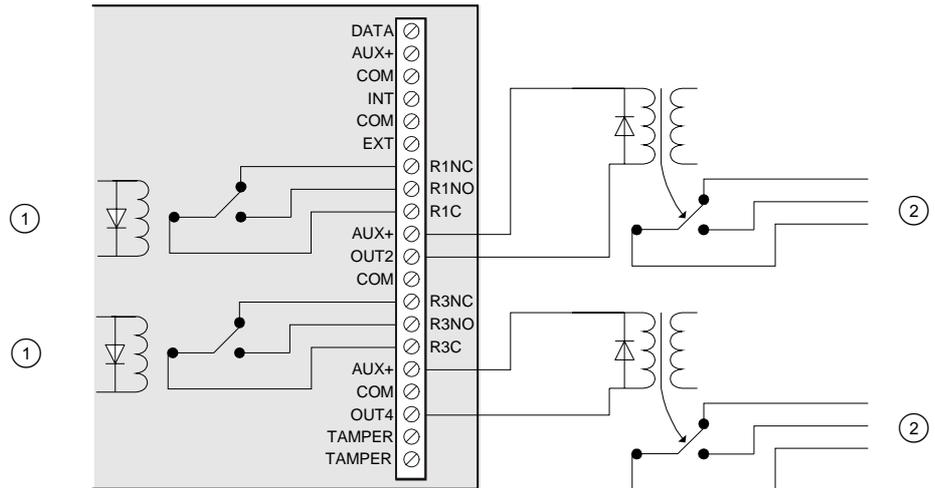
CS275
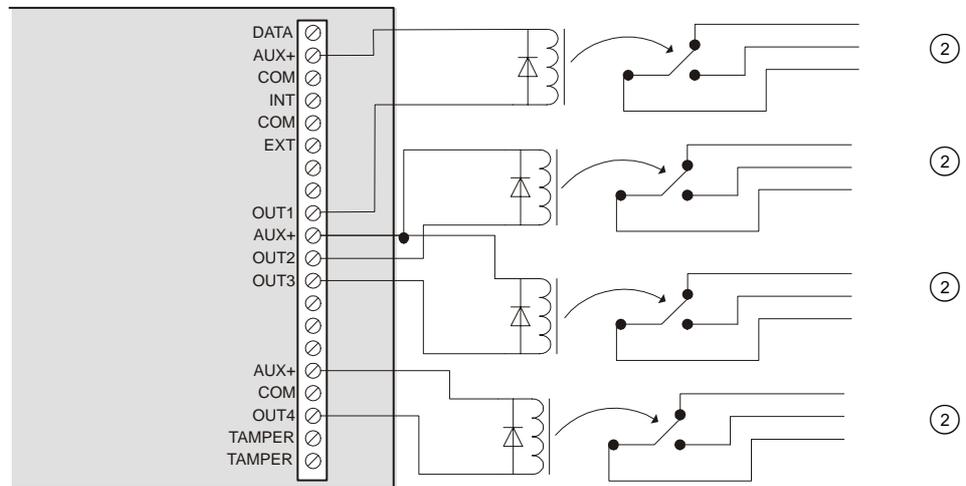
CS175
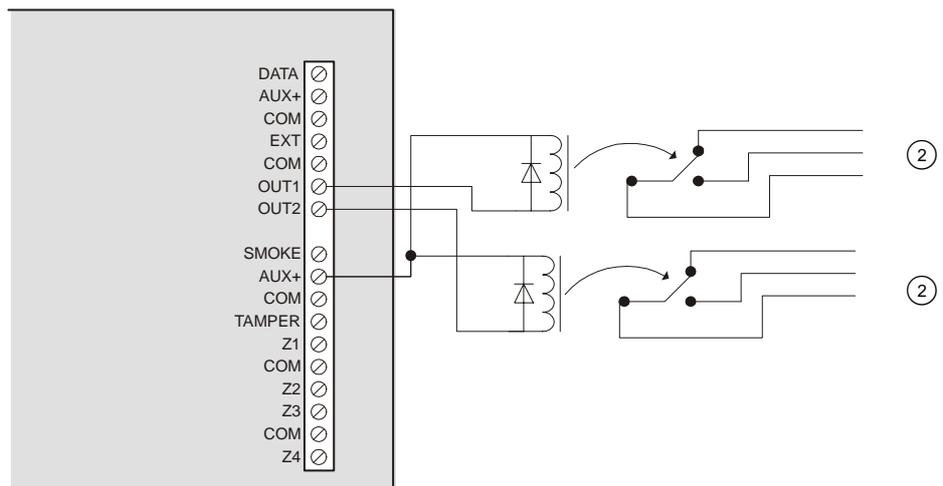
①   1A rated contacts. Relays are powered and switched from the panel. No external power is needed to switch the relays.

②   Digital outputs limited to 40 mA.

Information on programming the outputs can be found in chapter B-2 *Programming the control panel*.

4.7 Control unit wiring diagrams

4.7.1 CS175

①	Zones 1-4	⑥	External sounder	⑪	Serial expansion
②	Box tamper input	⑦	Keypad bus	⑫	Phone line connector
③	Fire detector reset output	⑧	Additional keypad bus connection	⑬	Phone line communication LED
④	Open collector 2	⑨	Lid tamper		
⑤	Open collector 1	⑩	Bus supervision LED		
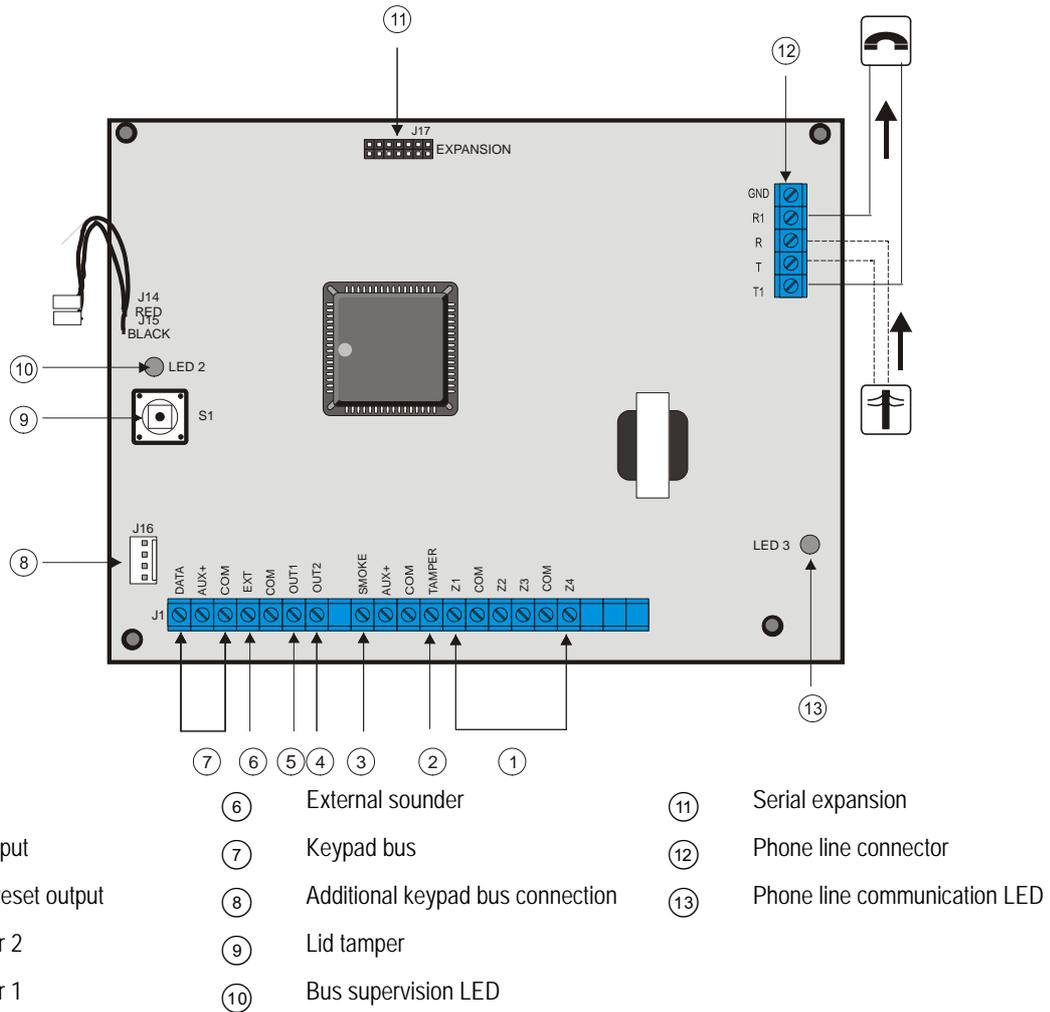
4.7.1.1 Inputs and outputs

DATA	Communication/Expander data (0101) (including keypad)		COM	Ground
AUX +	Communication/Expander power (including keypad)		TAMPER	Tamper loop
COM	Communication/Expander ground (including keypad)		Z1	Zone 1
EXT	External bell return		COM	Ground
COM	Ground		Z2	Zone 2
OUT 1	Output 1		Z3	Zone 3
OUT 2	Output 2		COM	Ground
SMOKE	Fire detector reset output		Z4	Zone 4
AUX +	Power			

4.7.2 CS275
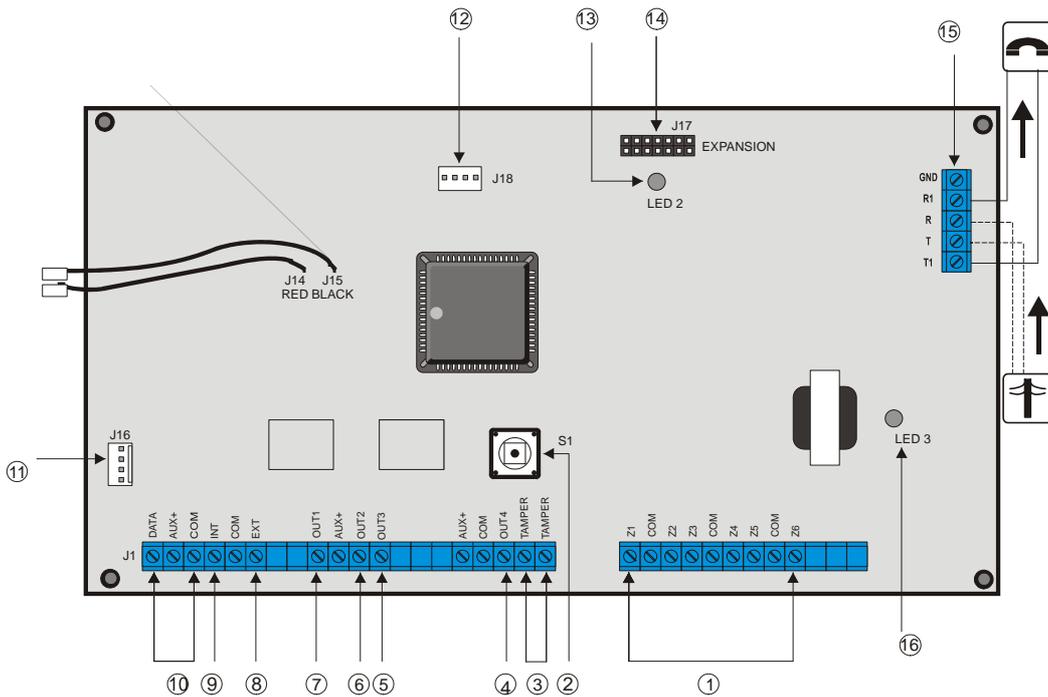
①	Zones 1-6	⑦	Open collector 1	⑫ Serial expansion
②	Lid tamper	⑧	External sounder	⑬ Bus supervision LED
③	Box tamper input	⑨	Internal sounder	⑭ Full expansion port
④	Open collector 4 (2 wire smoke)	⑩	Keypad bus	⑮ Phone line connector
⑤	Open collector 3	⑪	Additional keypad bus connection	⑯ Phone line communication LED 3
⑥	Open collector 2	⑫	Serial expansion	

4.7.2.1 Inputs and outputs
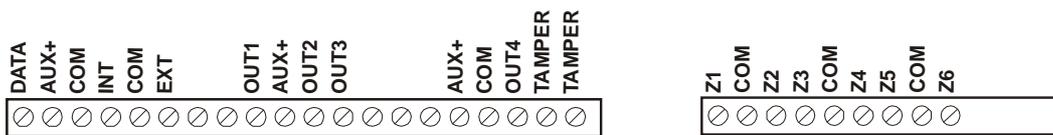
DATA	Communication/Expander data (0101) (including keypad)	OUT 4	Output 4
AUX +	Communication/Expander power (including keypad)	TAMPER	Tamper loop
COM	Communication/Expander ground (including keypad)	Z1	Zone 1
INT	Internal bell return	COM	Ground
COM	Ground	Z2	Zone 2
EXT	External bell return	Z3	Zone 3
OUT1	Output 1	COM	Ground
AUX +	Power	Z4	Zone 4
OUT 2	Output 2	Z5	Zone 5
OUT 3	Output 3	COM	Ground
AUX +	Power	Z6	Zone 6
COM	Ground		

4.7.3 CS375, CS575 and CS875
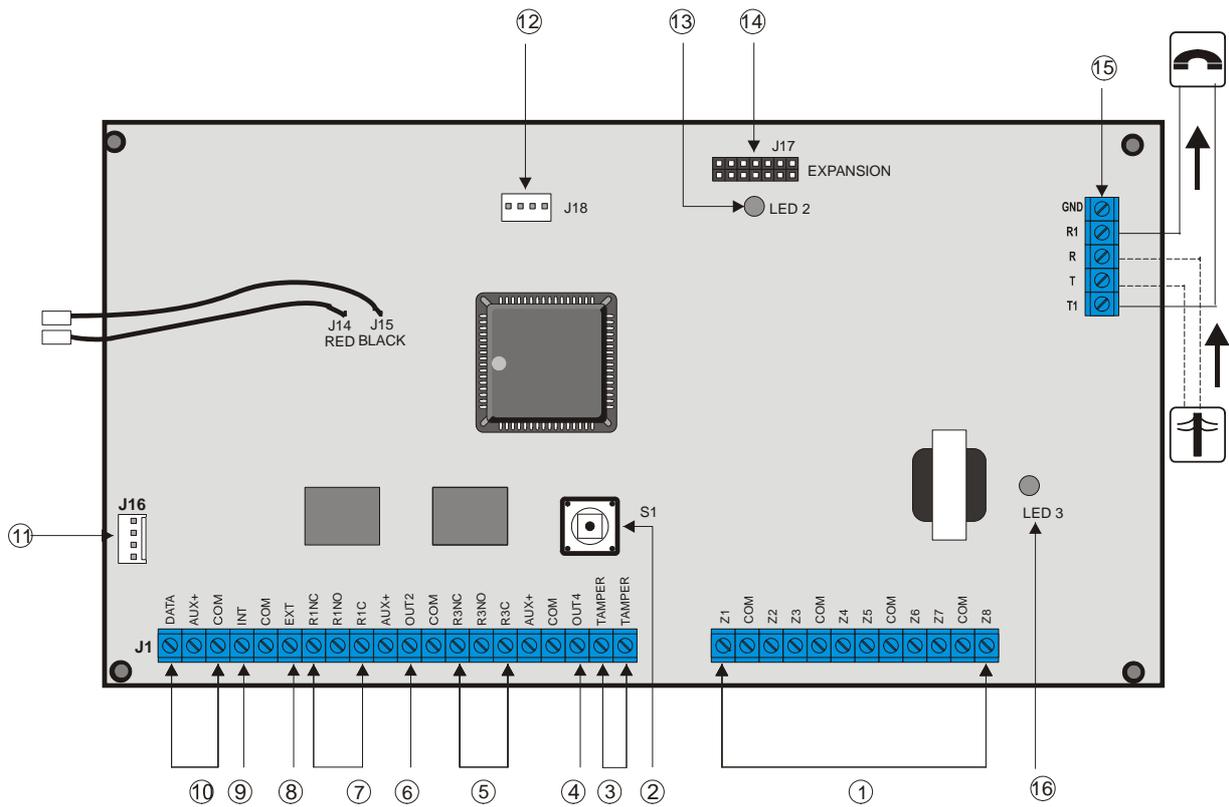
① Zones 1-8	⑦ Relay 1	⑬ Bus supervision LED
② Lid tamper *	⑧ External sounder	⑭ Full expansion port
③ Box tamper input *	⑨ Internal sounder	⑮ Phone line connector
④ Open collector 4 (2 wire smoke)	⑩ Keypad bus	⑯ Phone line communication LED
⑤ Relay 3	⑪ Additional keypad bus connection	
⑥ Open collector 2	⑫ Serial expansion	

✎ *Always use in parallel. Only one or the other can be used.*

4.7.3.1 Inputs and outputs

DATA	AUX+	COM	INT	COM	EXT	R1NC	R1NO	R1C	AUX+	OUT2	COM	R3NC	R3NO	R3C	AUX+	COM	OUT4	TAMPER	TAMPER
⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘

Z1	COM	Z2	Z3	COM	Z4	Z5	COM	Z6	Z7	COM	Z8
⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘
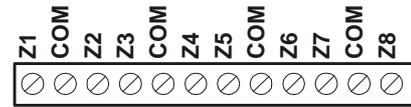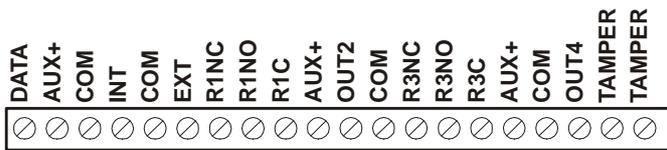
DATA	Communication/Expander data (0101) (including keypad)
AUX +	Communication/Expander power (including keypad)
COM	Communication/Expander ground (including keypad)
INT	Internal bell power
COM	Ground
EXT	External bell return
R1NC	Relay 1 (normally closed)
R1NO	Relay 1 (normally open)
R1C	Relay 1 (ground)
AUX +	Power
OUT 2	Output 2
COM	Ground
R3NC	Relay 3 (normally closed)
R3NO	Relay 3 (normally open)
R3C	Relay 3 (ground)
AUX +	Power
COM	Ground
OUT 4	Output 4
TAMPER	Tamper loop
Z1	Zone 1
COM	Ground
Z2	Zone 2
Z3	Zone 3
COM	Ground
Z4	Zone 4
Z5	Zone 5
COM	Ground
Z6	Zone 6
Z7	Zone 7
COM	Ground
Z8	Zone 8

Chapter 5: Programming the system

5.1 Powering up the system

When the CS5500 if powered up for the first time, the language, keypad defaults, partition and keypad must be set. These options must also be set each time a keypad is defaulted.

- The language option sets the first language of the keypad.

- The keypad defaults option sets the country specific keypad defaults. It does not default the keypad.

- The partition and keypad options set the keypad address.

Use the navigation keys to scroll between the different options and press **OK** to select an option. See *Navigating the menus* for more information.

5.2 Entering programming mode

Your installer code allows you to program the system through the installer menu. There are two levels in the installer menu. The light menu contains the most important options and the advanced menu contains additional options. The system cannot be armed while in programming mode on the current keypad or another keypad.

1. Press **OK** at the system prompt and enter your installer code. For a list of default codes, see chapter A-1 *Introducing the CSx75 system*.

2. Use the ↑↓ keys to navigate the menu. The full menu map can be found in the *Menu Structure* included in your language kit. The light menu is in green text and the advanced menu is in black text.

3. Select **OK** to select an option or use the numerical/character keys to edit the existing option.

✍ *'To switch to 'Advanced menu', navigate to Commands>Advanced and select Enabled. The keypad displays the advanced menu until this option is disabled.*

5.2.1 Changing the user interface language

1. Press **OK** at the system prompt.

2. Press **OK** again to display the system prompt in a different language.

3. Press **OK** until you find the language you require.

4. Continue using the keypad as normal.

For more information on setting languages, see chapter B-3 *Programming the current keypads*.

5.3 Navigating the menus

- Press the ↑↓ keys to scroll through menu lists and options.
- Press # ↑ to move to the same menu item for the previous option. For example, if you are in a submenu for zone 2, press # ↑ to move to the same submenu for zone 1.
- Press # ↓ to move to the same menu item for the next option. For example, if you are in a submenu for zone 2, press # ↓ to move to the same submenu for zone 3.

✍ *The keypad may timeout from the menu system and return to the default display.*

5.3.1 Command menu

You can access a limited number of menu options without entering your installer code. This opens the command menu.

1. Press **OK** at the system prompt.

2. Press the ↑↓ keys to enter and navigate the command menu.

5.4 Selecting a menu option

- Press **OK** to select a menu option and move forward in the menu structure.

- Press **NO** to reject a menu option and move backwards in the menu structure.

- Press **F1** to move through the second line of the LCD display, one word at a time, from right to left.

- Press **F3** to move through the second line of the LCD display, one word at a time, from left to right.

5.5 Changing a menu option

The CSx75 has several editors that you can use to change the value of certain programmable menu options. You can change selection list entries, binary entries, phone numbers and text. This section describes how to change selection list entries, binary entries, numeric entries and phone numbers. For information on changing text, see *Editing text*.

5.5.1 Changing selection list entries

1. Navigate with the ↑↓ keys to the relevant menu option and press **OK**.

2. The current value for the menu option is displayed, for example, *Enabled*.

3. Press the ↑↓ keys to change the value, for example, change *Enabled* to *Disabled*.

4. Press **OK** to accept the change.

   - If the new value is valid, the keypad beeps once to confirm the change and returns to the menu option.
   - If the new value is invalid, the keypad beeps three times to reject the change and returns to the menu option.

5. Press **NO** to cancel the change and return to the menu option.

5.5.2 Changing binary entries

1. Navigate with the ↑↓ keys to the relevant menu option and press **OK**.

2. The current value for the menu option is displayed, for example, *1 2 3 - - - - 8* means that 1, 2, 3 and 8 are on (included) while 4, 5, 6 and 7 are off (excluded).

3. Press the corresponding numerical key to change a value, for example, press **1** to change the state of 1 to off and press **4** to change the state of 4 to on. The display changes to *- 2 3 4 - - - 8*.

4. Press **OK** to accept the changes.

   - If the new values are valid, the keypad beeps once to confirm the change and returns to the menu option.
   - If the new value is invalid, the keypad beeps three times to reject the change and returns to the menu option.

5. Press **NO** to cancel the changes and return to the menu option.

5.5.3 Changing numeric entries

1. Navigate with the ↑↓ keys to the relevant menu option and press **OK**.

2. The current value for the menu option is displayed, for example, 55.

3. Do one of the following:

   - Press a number key to clear the current value and display the value of the key pressed.
   - Press ↑ to increase the current value by one.

- Press ↓ to decrease the current value by one.

- Press **##** to clear the current value to 0.

4. Press the number keys to enter the value.

5. Press **OK** to accept the changes.

   - If the new value is valid, the keypad beeps once to confirm the change and returns to the menu option.

   - If the new value is invalid, the keypad beeps three times to reject the change and returns to the menu option.

6. Press **NO** to cancel the changes and return to the menu option.

5.5.4 Changing phone numbers and phone prefixes

1. Navigate with the ↑↓ keys to the relevant menu option and press **OK**.

2. The current value for the menu option is displayed, for example, *4567999*.

3. Do one of the following:

   - Press ↑ to toggle between insert mode and overwrite mode (insert mode allows you to insert new numbers and overwrite mode allows you to overwrite existing numbers).

   - Press ↓ to delete the number at the cursor position.

   - Press **#↓** to delete all the numbers from the number at the cursor position to the end of the string.

4. Do one of the following:

   - Press the keys **0** to **9** to insert new numbers.

   - Press **#0** to insert G.

   - Press **#1** to insert a star.

   - Press **#2** to insert #.

   - Press **#3** to insert a four-second delay when programming numbers on the control panel.

   - Press **#3** to insert + when programming numbers on the CS7002 GPRS module.

   - Press **#4** to insert P (this enables pulse dialing).

5. Press **OK** to accept the changes.

   - If the new number is valid, the keypad beeps once to confirm the change and returns to the menu option.

   - If the new number is invalid, the keypad beeps three times to reject the change and returns to the menu option.

6. Press **NO** to cancel the changes and return to the menu option.

5.6 Exiting the menu system

1. Press **##** to display the *OK to Exit* prompt.

2. Press **OK** at this prompt to exit the menu system.

5.7 Editing text

5.7.1 Overview

The CSx75 has a text editor that includes a word library. You can use this editor to change the text of certain programmable text options.

1. Navigate with the ↑↓ keys to the relevant menu option and press **OK**.

2. Press **OK** to select the language you want to edit.

3. The current text for the menu option is displayed, for example, *Zone 2*.

4. Do one of the following:

• Press ↑ to toggle between insert mode and overwrite mode (insert mode allows you to insert new text and overwrite mode allows you to overwrite existing text).

• Press ↓ to delete the character at the cursor position.

• Press #↓ to delete all the characters from the character at the cursor position to the end of the string.

5. Press the keys **0** to **9** to insert new characters. Each key cycles through lower case and then upper case characters.

6. Press **OK** to accept the changes. The keypad beeps once to confirm the change and returns to the menu option.

7. Press **NO** to cancel the changes and return to the menu option.

✍ *A flashing cursor highlights the character you are editing. Press F2 to toggle flashing on the current word.*

5.7.2 Example

To change a zone name from *Zone 2* to *Upstairs*:

1. Navigate to *Zone 2* and press **OK**.

2. Press **#F1** to go to the start of the zone name.

3. Press #↓ to delete all the characters.

4. Press **8** four times to enter the upper case letter 'U'.

5. Press **7** once to enter the lower case letter 'p'. Continue until you have entered the new zone name.

6. Press **OK** to save your changes.

✍ *Each character key cycles through lower and upper case letters and language specific characters.*

5.7.3 Word library

The word library is a predefined collection of words that speeds up text editing. As you type a character, the keypad automatically displays a matching word. The word library is enabled by default. For a complete list of words in the word library, see chapter C-1 *Appendix 6: Word library words*.

• To accept the word, press **F3**. The cursor moves to the end of the new word and you can continue to enter text.

• To accept a shortened version of the word, press **F3** to accept the word. Then move the cursor to the unnecessary characters and press ↓ to delete them.

• To reject the word, continue entering text as normal.

• Press the ↑↓ keys to scroll through the list of word library words.

• To disable the word library:

1. Navigate with the ↑↓ keys to *Word Library* and press **OK**.

2. The current state of the word library is displayed. In this case, it is enabled.

3. Use the ↑↓ keys to change the state to disabled and press **OK**.

4. The keypad beeps once to accept the change and returns to *Word Library*.

5.7.4 Installer message

Up to four messages can be displayed on the LCD when the keypad is idle or when it times out from a menu. If you enable more than one message, the messages are shown in a continuous cycle.

- Installer message

- Date and time

- Service required

- System ready/not ready

To enable the installer message:

1. Navigate with the ↑↓ keys to *This Keypad* and press **OK**.

2. Select *Keypad Features>Display* and press **OK**.

3. Scroll to *Custom Message* and press **OK**. The current status of the installer message is displayed. In this case, it is disabled.

4. Use the ↑↓ keys to change the status to enabled and press **OK**.

5. The keypad beeps once to accept the change and returns to *Custom Message*.

Chapter 6: Setting up a communicator

6.1 Reporting

The CSx75 supports different modes of reporting events to multiple central stations. There are six phone numbers - each phone number has it own account code, protocol and events. The configured prefix is common to all six phone numbers. If a four-second delay is specified in the prefix, the panel does not look for a dial tone, but performs blind-dialling. The following scenarios are examples of how to set different modes of reporting.

6.1.1 Reporting to one phone number

The control panel reports events to one central station only. You specify settings for phone number 1. Events for phone number 1 are enabled by default.

✎ *The characters B, C, D, E, F can be used in control panel account codes. The letter 'A' cannot be used as part of the code as it is a termination digit.*

Level 1	Level 2	Value	State
Phone Number	Phone Number 1	123456	
	Phone Number 2		
Account Code	Phone Number 1	BE5566	
	Phone Number 2		
Protocol	Phone Number 1	SIA	
	Phone Number 2		
Events	Phone Number 1 – Alarms		Enabled
	Phone Number 1 – Alarm Restores		Enabled
	Phone Number 1 – Tampers and Restores		Enabled
	Phone Number 2 – Alarms		
	Phone Number 2 – Alarm Restores		
	Phone Number 2 – Tampers and Restores		

6.1.2 Backup reporting

Backup reporting configures the control panel to report to two or more central stations. The first phone number belongs to the main central station and all other phone numbers belong to the backup central stations. Events are reported to the first number but, if the panel cannot reach this number, it dials the backup number(s). The control panel makes two calls to each number in sequence. It performs the sequence for the number of times specified in *ARC Dial Attempts* or until it receives a kiss off. The same account code is used to report to all numbers. Events for phone number 1 are enabled by default and events for phone numbers 2 - 6 are disabled by default. If phone number 1 and phone number 2 are programmed, the default sequence is 1,1 2,2 1,1,2,2 for a total of eight calls to each number.

Level 1	Level 2	Value	State
Phone Number	Phone Number 1	123456	
	Phone Number 2	456789	
Account Code	Phone Number 1	BE5566	
	Phone Number 2	445566	
Protocol	Phone Number 1	SIA	
	Phone Number 2	SIA	

Level 1	Level 2	Value	State
Events	Phone Number 1 – Alarms		Enabled
	Phone Number 1 – Alarm Restores		Enabled
	Phone Number 1 – Tampers and Restores		Enabled
	Phone Number 2 – Alarms		Disabled
	Phone Number 2 – Alarm Restores		Disabled
	Phone Number 2 – Tampers and Restores		Disabled

6.1.3 Dual reporting

Dual reporting configures the control panel to report to two different central stations. Events must be reported to both phone numbers. The control panel dials the first number twice. If it cannot reach this number, it dials the second number twice. It performs this sequence for the number of times specified in *ARC Dial Attempts* or until it reports the events to both numbers. The same account code is used to report to both numbers. Events for phone number 1 are enabled by default and events for phone number 2 are disabled by default.

Level 1	Level 2	Value	State
Phone Number	Phone Number 1	123456	
	Phone Number 2	456789	
Account Code	Phone Number 1	BE5566	
	Phone Number 2	445566	
Protocol	Phone Number 1	SIA	
	Phone Number 2	SIA	
Events	Phone Number 1 – Alarms		Enabled
	Phone Number 1 – Alarm Restores		Enabled
	Phone Number 1 – Tampers and Restores		Enabled
	Phone Number 2 – Alarms		Enabled
	Phone Number 2 – Alarm Restores		Enabled
	Phone Number 2 – Tampers and Restores		Enabled

6.1.4 Split reporting

Split reporting configures the control panel to report to two different central stations. Some events must be reported to phone number 1 and others to phone number 2. The control panel dials the first number twice. If it cannot reach this number, it dials the second number twice. It performs this sequence for the number of times specified in *ARC Dial Attempts* or until it reports the relevant event to each number. The same account code is used to report to both numbers. Events for phone number 1 are enabled by default and events for phone numbers 2 are disabled by default.

Level 1	Level 2	Value	State
Phone Number	Phone Number 1	123456	
	Phone Number 2	456789	
Account Code	Phone Number 1	BE5566	
	Phone Number 2	445566	
Protocol	Phone Number 1	SIA	
	Phone Number 2	SIA	

Level 1	Level 2	Value	State
Events	Phone Number 1 – Alarms		Enabled
	Phone Number 1 – Alarm Restores		Enabled
	Phone Number 1 – Tampers		Disabled
	Phone Number 2 – Alarms		Disabled
	Phone Number 2 – Alarm Restores		Disabled
	Phone Number 2 – Tampers and Restores		Enabled

Section B

Installing and programming the modules

Chapter 1: Enrolling modules

```
1.1 ┌ Enrol
1.2 │ Number of Modules
    └
```

To enroll and default the system modules, you must enable the advanced menu. Select *Commands>Advanced Menu>Enabled* and press **OK**.

1.1 Enrolling the system modules

When you select the enrol modules process, new modules are enrolled on both the control panel and the keypad. The keypad must enrol modules in order to display the relevant menu options.

1. Press **OK** at the system prompt and enter your installer code.

2. Navigate with the ↑↓ keys to *Enrol Modules>Enrol* and press **OK**.

3. The keypad starts enrolling the modules. The *Enrolling* message is displayed while enrolment is taking place (approximately 12 seconds). When the modules have been enrolled, a beep sounds and the message disappears.

4. When the modules have been enrolled, the keypad returns to *Enrol*.

5. Verify the enrolled modules. Navigate with the ↑↓ keys to *Commands* and press **OK**.

6. Scroll to *Event Log* and press **OK**. When the control panel enrols a module, it adds an enrol event to the event log. This event contains the module number. Scroll through the event log to verify that each module has been enrolled.

✎ *The modules are enrolled each time you leave programming mode. In this case, the Enrolling message is displayed but no beep sounds.*

1.2 Defaulting the modules

Each module can be defaulted. It is recommended that you default each module before modifying its settings.

1. Navigate with the ↑↓ keys to *Default Settings* in the relevant module menu and press **OK**. In this case, select *Control Panel>Default Settings* to restore the default control panel settings.

2. A confirmation message is displayed. Press **OK** to accept the default settings.

3. The keypad sounder beeps once to confirm the reset.

1.3 Glossary

Location	Term	Definition
1	Enrol Modules	A menu option that activates the process by which the control makes an internal list of all keypads and modules connected to the system.
1.1	Enrol	A menu entry that groups enrolled module information.
1.2	Number of Modules	A menu option that displays the total number of installed modules.

Chapter 2: Programming the control panel

2.1 Overview

You must enroll and default the control panel before you begin to program the system. For more information on enrolling and defaulting, see chapter B-1 *Enrolling modules*.

2.2 Programming inputs
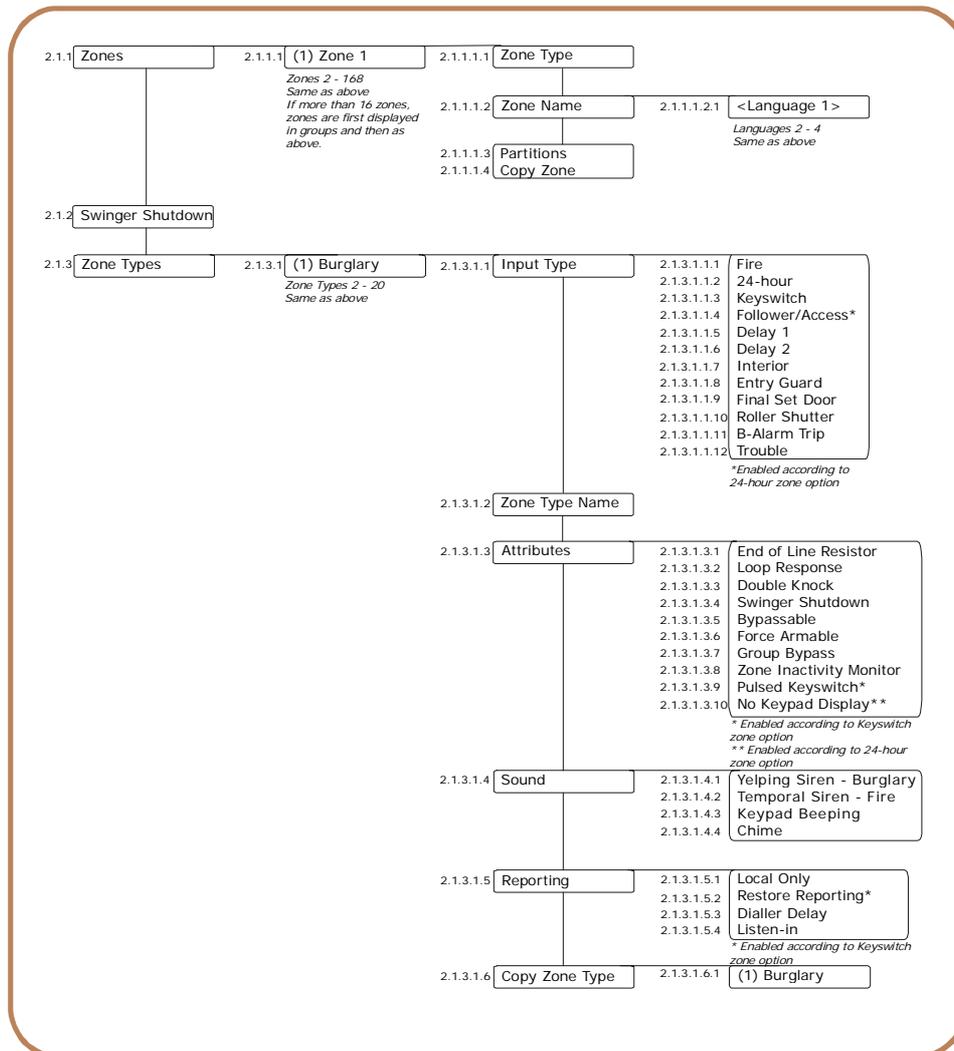
An input is any zone that is set up on the system. A zone is an area guarded by a group of one or more detection devices. It represents a single input in the system.

A zone may reside in any combination of partitions. A zone that resides in more than one partition becomes a common zone and is reported to its lowest partition number. A common zone is armed only when all the partitions that it belongs to are armed. It is immediately disarmed when one of the partitions it belongs to is disarmed.

The control panel can have a maximum of eight on-board inputs. RF receivers and CS208H / CS208 / CS216 input expanders can be used to increase the number of inputs to a maximum total of 168 depending on the model of the control panel. For more information on the maximum number of zones per model, see chapter A-2 *Designing the CSx75 system*. For information on RF receivers, see chapter B-5 *Setting up the RF receivers*. For information on CS208H / CS208 / CS216 input expanders, see chapter B-2 *Programming the control panel*. To program on-board inputs, select *Installer Menu>Control Panel>Inputs*.

2.2.1 Defining a zone

You must select the language in which to program the new name and also assign partitions to the zone. You can select the zone type and zone name for each new zone. The following steps explain how to select the zone type and zone name for a new zone.

1. Navigate with the ↑↓ keys to *Control Panel>Inputs>Zones* and press **OK**.

2. Select the zone number of the new zone to be configured and press **OK**.

3. Select *Zone Type* and press **OK**.

4. Scroll to the relevant zone type and press **OK**.

5. Select *Zone Name* and press **OK**.

6. Scroll to the relevant language and press **OK**. The current name for zone is displayed, for example, *Zone 1*.

7. Press ↑ to enter overwrite mode and press the keys **0** to **9** to insert new characters.

8. Press **OK** to accept the changes.

9. The keypad beeps once to confirm the change and returns to *Zone Name*.

10. Scroll to *Partitions* and press **OK**. The current partitions for that zone are displayed, for example, *1 2 3 - - - - 8* means that 1, 2, 3 and 8 are included in the zone definition while 4, 5, 6 and 7 are excluded.

11. Press the corresponding numerical key to include or exclude a partition, for example, press **1** to exclude partition 1 and press **4** to include partition 4. The display changes to *- 2 3 4 - - - 8*.

12. Press **OK** to accept the changes.

13. The keypad beeps once to confirm the change and returns to *Partitions*.

2.2.2 Copying zone settings

You can copy the settings for the current zone to another zone or a set of other zones. All the zone settings (except the user defined zone name and RF settings) are copied to the target zones. The following steps explain how to copy the settings from one zone to another.

1. Navigate with the ↑↓ keys to *Control Panel>Inputs>Zones* and press **OK**.

2. Select the relevant zone number and press **OK**.

3. Scroll to *Copy Zone* and press **OK**.

4. The keypad prompts you to enter the start zone.

5. Enter the number of the first zone to which the settings will be copied and press **OK**.

6. The keypad prompts you to enter the end zone.

7. Enter the number of the last zone to which the settings will be copied and press **OK**.

8. The keypad prompts you to confirm your selection.

9. Press **OK**.

10. Copying message is displayed while the zone settings are copied. When copying is complete, the keypad beeps once and returns to *Copy Zone*.

2.2.3 Editing a zone type

A zone type is a collection of characteristics. All the zones included in a particular zone type share the same characteristics. Each zone must belong to a zone type. There are 20 pre-defined zone types which you can edit. To edit a zone type, you must enable the advanced menu. The following example edits a burglary zone type so that the input type is 24-hour and it can be automatically bypassed after five alarms within one arm period.

1. Ensure the advanced menu is enabled. See chapter 20 for more information.

2. Navigate with the ↑↓ keys to *Control Panel>Inputs>Zone Types* and press **OK**.

3. Select *Burglary>Input Type>24-hour>Yes* and press **OK**.

4. The keypad beeps once to confirm the change and returns to *24-hour*.

5. Scroll to *Attributes>Swinger Shutdown>Yes* and press **OK**.

6. The keypad beeps once to confirm the change and returns to Sw*inger Shutdown*.

7. Set the value of *Inputs>Swinger Shutdown* to 5. For more information see *Setting swinger shutdown* below.

2.2.4 Setting swinger shutdown

Swinger shutdown allows the selected zone to be automatically bypassed after a specified number of alarms. To configure swinger shutdown, you must enable the advanced menu. The following example sets swinger shutdown to 5. This means that any zone for which swinger shutdown is enabled can be activated five times within one arm period before it is automatically bypassed.

1. Ensure the advanced menu is enabled. See chapter 20 for more information.

2. Navigate with the ↑↓ keys to *Control Panel>Inputs>Swinger Shutdown* and press **OK**.

3. Enter **5** and press **OK**.

4. The keypad beeps once to confirm the change and returns to *Swinger Shutdown*.

2.3 Programming outputs
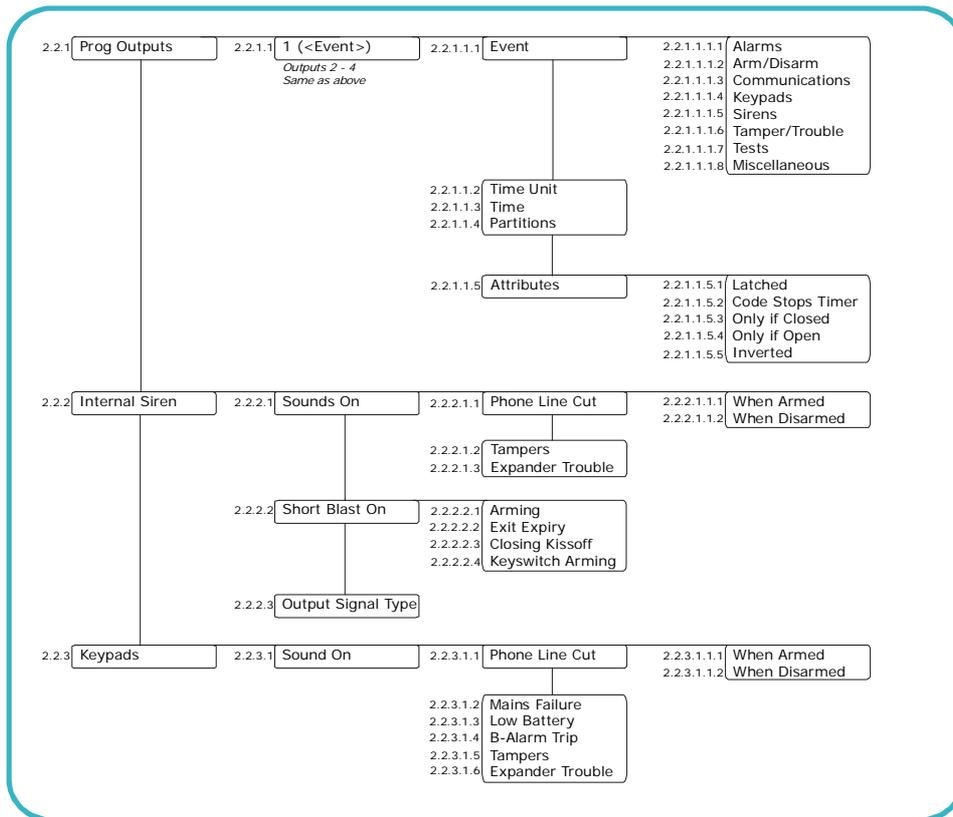
The control panel includes up to four on-board auxiliary outputs. CS507 output expander modules and CS320 power modules can be used to increase the number of outputs. For more information on the CS507 output expander, see chapter 11. For information on the CS320 power module, see chapter 15.

To program on-board outputs, select *Installer Menu>Control Panel>Outputs.*

2.3.1 Configuring an output

You can change the characteristics of each output. You must specify the events and/or partitions that activate an output and the length of time for which the output is activated. The events are grouped in the programming tree. A full list of all possible selectable events can be found in Table 2-1: *Control panel output events*. The following example configures output 1 to activate for 15 minutes when a burglary alarm occurs.

1. Navigate with the ↑↓ keys to *Control Panel>Outputs>Prog Outputs>Output 1* and press **OK**.

2. Scroll to *Event>Alarms>Burglary Alarm* and press **OK**.

3. The keypad beeps once to confirm the change and returns to *Alarms*.

4. Scroll to *Time Unit>Minutes* and press **OK**.

5. The keypad beeps once to confirm the change and returns to *Time Unit*.

6. Scroll to *Time* and press **OK**.

7. Select *15 min.* and press **OK** to accept the changes.

8. The keypad beeps once to confirm the change and returns to *Time*.

Table 2-1: Control panel output events

#	Event	#	Event	#	Event
	Misc		**Keypads**		**Alarms**
8	Any Bypass	12	Keypad Fire	0 ✓	Burglary Alarm
11 ✓	Duress	13 ✓	Keypad Medical	1 ✓	Fire Alarm
48 ✓	Code Entry (Note 1)	14 ✓	Keypad Panic	2 ✓	24-hour Alarm
37	Program Mode	15	Keypad Tamper	3 ✓	Trouble Alarm
49 * ✓	Keyfob Funct 1	27	Chime	4 ✓	Tamper Alarm
50 * ✓	Keyfob Funct 2	47	Keypad Beeping	46 ✓	Any Alarm
	Tests	56	Audible Panic	17	Alarm Memory
29	Dyn Battery Test	57	Silent Panic		**Sirens**
52	Manual Test		**Tampers and faults**	5	Burglary Siren
16 ✓	Automatic Test	25	Fire LED	6	Fire Siren
59	Walktest Mode	39	Smoke Det Reset (Note 2)	7	Any Siren
	Arm/Disarm	40	Over-current	60	External Siren
21	Armed	41	Box Tamper	61	Internal Siren
22	Disarmed	42	Siren Tamper		**Communications**
23	Ready to Arm	43	Any Open Circuit	32	Listen-in
24	Not Ready to Arm	44	Any Short Circ′t	33	Line Seizure
53	Armed Away	45	Any Open/Short	35	Fail to Comm′ate
54	Armed Stay	26	Fire Trouble	36	Phone Line Fault
30	Open Period	28 ✓	Expander Trouble	38	Downloading
31	Closed Period	9	Mains Failure	55	Aux Comm Fail
18	Entry	10	Low Battery		
19	Exit				
20	Entry or Exit				

*   Events 49 and 50 require RX8w8, RX16w8, RX32w8, RX8i4, RX16i4, or RX48i4 wireless receivers to operate.

✓   If set to latched condition, these events are one second.

✍ 1. *When Event 48 is programmed, it is possible to program a user code's authorization to select which output(s) a particular code activates.*

✍ 2. *Always program Event 39, Fire alarm reset, to follow the event.*

2.3.2 Configuring the internal siren

You can specify conditions and/or events that activate the internal siren. To configure the internal siren, you must enable the advanced menu. The following example configures a short blast of the internal siren when the system is armed using a keyswitch.

1.   Ensure the advanced menu is enabled.

2.   Navigate with the ↑↓ keys to *Control Panel>Outputs>Internal Siren>Short Blast On* and press **OK**.

3. Scroll to *Keyswitch Arming>Yes* and press **OK**.

4. The keypad beeps once to confirm the change and returns to *Keyswitch Arming*.

2.3.3 Programming the keypad sounder

You can specify conditions and/or events that activate the keypad sounder. To configure the sounder, you must enable the advanced menu. The following example programs the keypad sounder to activate when an expander trouble condition occurs.

1. Ensure the advanced menu is enabled.

2. Navigate with the ↑↓ keys to *Control Panel>Outputs>Keypads>Sound On* and press **OK**.

3. Scroll to *Expander Trouble>Enabled* and press **OK**.

4. The keypad beeps once to confirm the change and returns to *Expander Trouble*.

2.4 Assigning codes
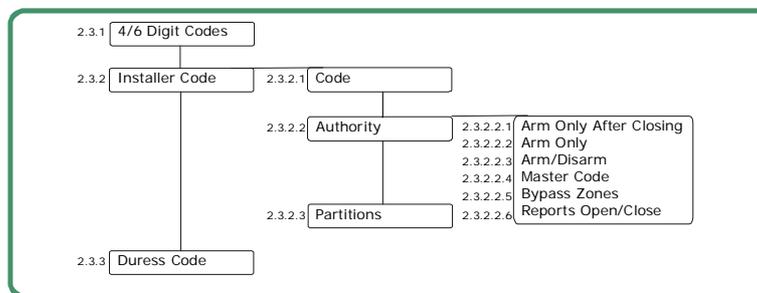
System codes can be either four or six digits long. There are two types of programmable code; an installer code and a duress code. A duress code disarms the system and activates a duress alarm. This is a silent alarm that sends a special report to the central station. To program codes, select *Installer Menu>Control Panel>Codes*.

2.4.1 Setting up the installer code

An installer code has associated arming options and access rights. To set the authority and access rights, you must enable the advanced menu. The following example assign partitions 1 and 2 to a new installer code that can be used only to arm the system.

1. Ensure the advanced menu is enabled.

2. Navigate with the ↑↓ keys to *Control Panel>Codes>Installer Code* and press **OK** twice.

3. Enter the new code and press **OK**.

4. Enter the new code and press **OK**.

5. The keypad beeps once to confirm the change and returns to *Code*.

6. Scroll to *Authority>Arm Only>Yes* and press **OK**.

7. The keypad beeps once to confirm the change and returns to *Arm Only*.

8. Navigate with the ↑↓ keys to *Partitions* and press **OK**.

9. Press the corresponding numerical key to include partitions **1** and **4** and to exclude all other partitions and press **OK**.

10. The keypad beeps once to confirm the change and returns to *Partitions*.

2.5 Setting communication options

2.4.1 Central Station
- **2.4.1.1** Phone Prefix
- **2.4.1.2** Phone Numbers
  - **2.4.1.2.1** Phone Number 1 — *Phone Numbers 2 - 6 Same as above*
    - **2.4.1.2.1.1** Phone Number
    - **2.4.1.2.1.2** Account Code
    - **2.4.1.2.1.3** Protocol
    - **2.4.1.2.1.4** Events
      - **2.4.1.2.1.4.1** Arm/Disarm/Alarm
        - **2.4.1.2.1.4.1.1** Alarms
        - **2.4.1.2.1.4.1.2** Alarm Restores
        - **2.4.1.2.1.4.1.3** Opening/Closings
        - **2.4.1.2.1.4.1.4** Zone Bypass and Restores
      - **2.4.1.2.1.4.2** Tamper/Trouble
        - **2.4.1.2.1.4.2.1** Tampers and Restores
        - **2.4.1.2.1.4.2.2** Zone Trouble and Restores
        - **2.4.1.2.1.4.2.3** Expander Trouble and Restores
        - **2.4.1.2.1.4.2.4** Siren/Phone Faults and Restores
        - **2.4.1.2.1.4.2.5** RF Sensor Lost and Restores
        - **2.4.1.2.1.4.2.6** RF Low Battery and Restores
      - **2.4.1.2.1.4.3** Power
        - **2.4.1.2.1.4.3.1** Power Trouble and Restores
        - **2.4.1.2.1.4.3.2** Aux Overcurrent and Restores
      - **2.4.1.2.1.4.4** Communications
        - **2.4.1.2.1.4.4.1** Fail to Communicate
        - **2.4.1.2.1.4.4.2** Test Reports
      - **2.4.1.2.1.4.5** Miscellaneous
        - **2.4.1.2.1.4.5.1** Program/Download
        - **2.4.1.2.1.4.5.2** Zone Inactivity Monitor
    - **2.4.1.2.1.5** Fast Format Channels
      - **2.4.1.2.1.5.1** Channels 1 - 8
      - **2.4.1.2.1.5.2** Channels 9 - 16
- **2.4.1.3** Partition Account Codes
  - **2.4.1.3.1** (1) Partition 1 — *Partitions 2 - 8 Same as above*
- **2.4.1.4** Dial Attempts
  - **2.4.1.4.1** ARC Dial Attempts
  - **2.4.1.4.2** FTC Dial Attempts
  - **2.4.1.4.3** Voice/Siren Dial Attempts
- **2.4.1.5** Dialler Output Level
- **2.4.1.6** Dialler Abort Delay
- **2.4.1.7** Listen-in Time
- **2.4.1.8** Send Restores
  - **2.4.1.8.1** At Disarm
  - **2.4.1.8.2** For Zones On Siren Timeout

2.4.2 Up/Download
- **2.4.2.1** Call Back Number
- **2.4.2.2** Access Code
- **2.4.2.3** Call Back Reqd
- **2.4.2.4** Rings to Answer
- **2.4.2.5** Answer Machine Defeat
- **2.4.2.6** Call PC on Autotest
- **2.4.2.7** Require Code for Download
- **2.4.2.8** Lockout
  - **2.4.2.8.1** System Shutdown
  - **2.4.2.8.2** Local Programming
  - **2.3.2.8.3** Comms Settings
  - **2.4.2.8.4** Download Settings

2.4.3 Autotest
- **2.4.3.1** Autotest Control
- **2.4.3.2** Interval
- **2.4.3.3** Hour
- **2.4.3.4** Minute
- **2.4.3.5** Time Since Test

2.4.4 Reporting
- **2.4.4.1** Partition Reports
  - **2.4.4.1.1** Opening/Closings
  - **2.4.4.1.2** Zone Bypass
  - **2.4.4.1.3** Zone Restore
  - **2.4.4.1.4** Zone Trouble
  - **2.4.4.1.5** Zone Tamper
  - **2.4.4.1.6** Cancel
  - **2.4.4.1.7** Recent Closing
  - **2.4.4.1.8** Exit Error
- **2.4.4.2** System Reports
  - **2.4.4.2.1** Tamper/Trouble
    - **2.4.4.2.1.1** Box Tamper
    - **2.4.4.2.1.2** Expander Trouble
    - **2.4.4.2.1.3** Siren Supervision
    - **2.4.4.2.1.4** RF Sensor Lost
    - **2.4.4.2.1.5** RF Low Battery
  - **2.4.4.2.2** Power
    - **2.4.4.2.2.1** Mains Failure
    - **2.4.4.2.2.2** Low Battery
    - **2.4.4.2.2.3** Aux Overcurrent
  - **2.4.4.2.3** Communications
    - **2.4.4.2.3.1** Phone Line Cut
    - **2.4.4.2.3.2** Fail to Communicate
    - **2.4.4.2.3.3** Autotest
    - **2.4.4.2.3.4** Autotest Disarmed No Call
  - **2.4.4.2.4** Miscellaneous
    - **2.4.4.2.4.1** Log Full
    - **2.4.4.2.4.2** Start/End Programming
    - **2.4.4.2.4.3** End Download
  - **2.4.4.2.5** Bypass on Force Arm
  - **2.4.4.2.6** First to Open/Last to Close
- **2.4.4.3** Report Codes
  - **2.4.4.3.1** Zone Types
    - **2.4.4.3.1.1** (1) Burglary — *Zone Types 2 - 20 Same as above*
      - **2.4.4.3.1.1.1** SIA Code*
      - **2.4.4.3.1.1.2** Contact ID Code*
      - **2.4.4.3.1.1.3** FF Channel*
      - **2.4.4.3.1.1.4** FF Restore Channel*
      - **2.4.4.3.1.1.5** TELIM Channel*
      - **2.4.4.3.1.1.6** TELIM Code*
      - **2.4.4.3.1.1.7** 4+2 Code*
      - **2.4.4.3.1.1.8** 4+2 Restore Code*
      - **2.4.4.3.1.1.9** 200Bd FSK Channel*
      - **2.4.4.3.1.1.10** 200Bd FSK Restore Channel*
      - **2.4.4.3.1.1.11** Voice Channel*
  - **2.4.4.3.2** Open/Close/Cancel
    - **2.4.4.3.2.1** Opening
    - **2.4.4.3.2.2** Closing
    - **2.4.4.3.2.3** Partarm
    - **2.4.4.3.2.4** Recent Closing
    - **2.4.4.3.2.5** Exit Error
    - **2.4.4.3.2.6** Cancel
      - **2.4.4.3.2.1.1** FF Channel*
      - **2.4.4.3.2.1.2** TELIM Channel*
      - **2.4.4.3.2.1.3** 4+2 Code*
      - **2.4.4.3.2.1.4** 200Bd FSK Channel*
      - **2.4.4.3.2.1.5** Voice Channel*
  - **2.4.4.3.3** Tamper/Trouble
    - **2.4.4.3.3.1** B-Alarm Trip
      - **2.4.4.3.3.1.1** FF Channel*
      - **2.4.4.3.3.1.2** TELIM Channel*
      - **2.4.4.3.3.1.3** 4+2 Code*
      - **2.4.4.3.3.1.4** 200Bd FSK Channel*
      - **2.4.4.3.3.1.5** Voice Channel*
    - **2.4.4.3.3.2** Zone Tamper
    - **2.4.4.3.3.3** Zone Trouble
    - **2.4.4.3.3.4** Siren Tamper
    - **2.4.4.3.3.5** Box Trouble
    - **2.4.4.3.3.6** Expander Trouble
    - **2.4.4.3.3.7** RF Sensor Lost
    - **2.4.4.3.3.8** RF Low Battery
      - **2.4.4.3.3.2.1** FF Channel*
      - **2.4.4.3.3.2.2** FF Restore Channel*
      - **2.4.4.3.3.2.3** TELIM Channel*
      - **2.4.4.3.3.2.4** 4+2 Code*
      - **2.4.4.3.3.2.5** 4+2 Restore Code*
      - **2.4.4.3.3.2.6** 200Bd FSK Channel*
      - **2.4.4.3.3.2.7** 200Bd FSK Restore Channel*
      - **2.4.4.3.3.2.8** Voice Channel*
  - **2.4.4.3.4** Keypad
    - **2.4.4.3.4.1** Duress
    - **2.4.4.3.4.2** Keypad Tamper
    - **2.4.4.3.4.3** Keypad Panic
    - **2.4.4.3.4.4** Keypad Aux 1 (Fire)
    - **2.4.4.3.4.5** Keypad Aux 2 (Medical)
      - **2.4.4.3.4.1.1** FF Channel*
      - **2.4.4.3.4.1.2** TELIM Channel*
      - **2.4.4.3.4.1.3** 4+2 Code*
      - **2.4.4.3.4.1.4** 200Bd FSK Channel*
      - **2.4.4.3.4.1.5** Voice Channel*
  - **2.4.4.3.5** Power
    - **2.4.4.3.5.1** Mains Failure
    - **2.4.4.3.5.2** Low Battery
    - **2.4.4.3.5.3** Aux Overcurrent
      - **2.4.4.3.5.1.1** FF Channel*
      - **2.4.4.3.5.1.2** FF Restore Channel*
      - **2.4.4.3.5.1.3** TELIM Channel*
      - **2.4.4.3.5.1.4** 4+2 Code*
      - **2.4.4.3.5.1.5** 4+2 Restore Code*
      - **2.4.4.3.5.1.6** 200Bd FSK Channel*
      - **2.4.4.3.5.1.7** 200Bd FSK Restore Channel*
      - **2.4.4.3.5.1.8** Voice Channel*
  - **2.4.4.3.6** Communications
    - **2.4.4.3.6.1** Phone Line Cut
      - **2.4.4.3.6.1.1** FF Channel*
      - **2.4.4.3.6.1.2** FF Restore Channel*
      - **2.4.4.3.6.1.3** TELIM Channel*
      - **2.4.4.3.6.1.4** 4+2 Code*
      - **2.4.4.3.6.1.5** 4+2 Restore Code*
      - **2.4.4.3.6.1.6** 200Bd FSK Channel*
      - **2.4.4.3.6.1.7** 200Bd FSK Restore Channel*
      - **2.4.4.3.6.1.8** Voice Channel*
    - **2.4.4.3.6.2** Fail to Communicate
    - **2.4.4.3.6.3** Autotest
      - **2.4.4.3.6.2.1** FF Channel*
      - **2.4.4.3.6.2.2** TELIM Channel*
      - **2.4.4.3.6.2.3** 4+2 Code*
      - **2.4.4.3.6.2.4** 200Bd FSK Channel*
      - **2.4.4.3.6.2.5** Voice Channel*
  - **2.4.4.3.7** Miscellaneous
    - **2.4.4.3.7.1** Log Full
    - **2.4.4.3.7.2** Start Programming
    - **2.4.4.3.7.3** End Programming
    - **2.4.4.3.7.4** End Download
      - **2.4.4.3.7.1.1** FF Channel*
      - **2.4.4.3.7.1.2** TELIM Channel*
      - **2.4.4.3.7.1.3** 4+2 Code*
      - **2.4.4.3.7.1.4** 200Bd FSK Channel*
      - **2.4.4.3.7.1.5** Voice Channel*
  - **2.4.4.3.8** Zones 200Bd FSK
    - **2.4.4.3.8.1** (1) Zone 1 — *Zones 2 – 99 same as above. If more than 16 zones, zones are first displayed in groups and then displayed as above.*
      - **2.4.4.3.8.1.1** 200Bd FSK Channel*

2.4.5 Format Override
- **2.4.5.1** Features 1
- **2.4.5.2** Features 2

*If relevant protocol set in Phone Numbers

The control panel can report to a central station after all or specified events. Communication between the control panel and the central station is monitored to ensure against damage or faults. The control panel can also communicate with up/download software when a download session has been established. To program control panel communciation options, select *Installer Menu>Control Panel>Communications.*

2.5.1 Defining communication with a central station

You can specify up to six central stations to which the control panel reports events. You can also select the events to be reported to each station. For more information on setting up a communicator, see chapter 21. For an example of how to program phone settings, see chapter 5.

You can set a number of conditions that must be met before a communication session is established between the control panel and the central station. To enable restore report options, you must enable the advanced menu. The following example configures the control panel to ring the central station three times before a fail to communicate condition occurs. It also enables a restore report to be sent at the moment the system is disarmed.

1. Ensure the advanced menu is enabled.

2. Navigate with the ↑↓ keys to *Control Panel>Communications>Central Station* and press **OK**.

3. Scroll to *Dial Attempts>FTC Dial Attempts* and press **OK**.

4. Select *3* and press **OK**.

5. The keypad beeps once to confirm the change and returns to *FTC Dial Attempts*.

6. Navigate with the ↑↓ keys to *Send Restores>At Disarm>Yes At Disarm* and press **OK**.

7. The keypad beeps once to confirm the change and returns to *At Disarm*.

2.5.2 Defining communication with upload/download software

You can set up a number of conditions that must be met before a communication session is established between the control panel and the up/download software. For more information on programming using the upload/download software, see chapter 22.

2.5.3 Configuring the system autotest

The autotest is run at configured intervals to ensure communication between the control panel and central station or the control panel and up/download software is functioning correctly. The following example sets the system autotest to run every Friday at 12.45, assuming that today is Wednesday.

1. Navigate with the ↑↓ keys to *Control Panel>Communications>Autotest>Autotest Control>Days* and press **OK**.

2. Scroll to *Interval>7 days* and press **OK**.

3. The keypad beeps once to confirm the change and returns to *Autotest Control*.

4. Scroll to *Hour>12* and press **OK**.

5. The keypad beeps once to confirm the change and returns to *Hour*.

6. Scroll to *Minutes>45* and press **OK**.

7. The keypad beeps once to confirm the change and returns to *Minutes*.

8. Scroll to *Time Since Test>5 Days* and press **OK**.

9. The keypad beeps once to confirm the change and returns to *Time Since Test*.

2.5.4 Enabling reporting

You must enable event reporting in the control panel and program the events and zone types for which reports are sent. You must specify the format of the report and, in the case of voice reports, you must map each event to a recorded message. You can map one message to a number of events. The following example enables voice reporting to phone number 2 for a phone line cut event and assigns a voice message to this event.

1. Navigate with the ↑↓ keys to *Control Panel>Communications>Central Station* and press **OK**.

2. Scroll to *Phone Numbers>Phone Number 2>Protocol>Voice* and press **OK**.

3. The keypad beeps once to confirm the change and returns to *Protocol*.

4. Navigate with the ↑↓ keys to *Reporting>Report Codes>Communications* and press **OK**.

5. Scroll to *Phone Line Cut>Voice Channel* and press **OK**.

6. Scroll to the number of the message that you want to map to that zone and press **OK**.

7. The keypad beeps once to confirm the change and returns to *Voice Channel*.

2.6 Configuring partitions
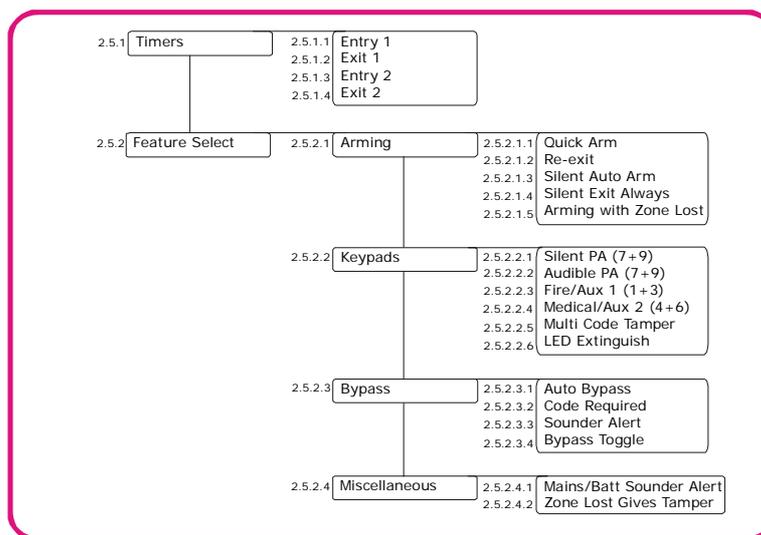
A partition is a group of zones which operate as a unit and can be armed and disarmed independently of other partitions in the system. A partition is also known as an area. The control panel can be divided into separate partitions with distinct zones, keypad and user codes for each partition. Arming and bypass options can be set for each partition. To program partition settings, select *Installer Menu>Control Panel>Partition Settings.*

2.6.1 Setting timers

You can specify the time in which a user must disarm or arm a system before a full alarm occurs. The following example sets time within which the user must leave the protected zone after arming the system (12 seconds). It also sets the time within which the user must disarm the system (10 seconds).

1. Navigate with the ↑↓ keys to *Control Panel>Partition Settings>Timers >Entry 1* and press **OK**.

2. Enter 12 and press **OK**.

3. The keypad beeps once to confirm the change and returns to *Entry 1*.

4. Scroll to *Exit 1* and press **OK**.

5. Enter 10 and press **OK**.

6. The keypad beeps once to confirm the change and returns to *Exit 1*.

2.6.2 Configuring a partition

You can set partition features including arming and bypassing options. You can also enable life safety keys for the partition keypads. The following example allows the system to be armed with a lost zone and enables the personal alarm combination keys so they activate a personal attack alarm when pressed.

1. Ensure the advanced menu is enabled.

2. Navigate with the ↑↓ keys to *Control Panel>Partition Settings>Feature Select>Arming* and press **OK**.

3. Scroll to *Arming with Zone Lost>Yes* and press **OK**.

4. The keypad beeps once to confirm the change and returns to *Arming with Zone Lost*.

5. Navigate with the ↑↓ keys to *Keypads>Silent PA (7+9)>Yes* and press **OK**.

6. The keypad beeps once to confirm the change and returns to *Silent PA (7+9)*.

✍ *When the Arming with Zone Lost option is enabled, the user is always allowed to arm the system even if the PIR or door/window sensor does not report within the short window. For more information on short windows, see chapter 9.*

2.7 Configuring the system
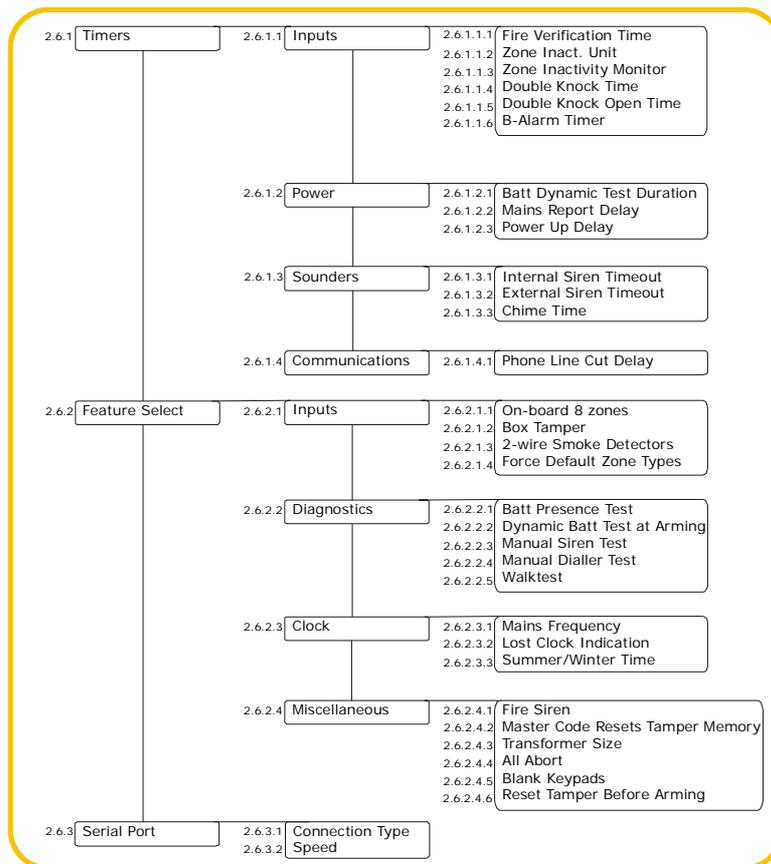
Configurable system settings include timers, input features, the system clock and serial port and various tests that can be performed on the control panel. To program system settings, select *Installer Menu>Control Panel>System Settings*.

2.7.1 Setting timers

You can set timers to control the duration of various system functions. The following example sets the internal siren timer to five minutes. When the siren starts ringing, the timer starts counting down. When the timer is finished, the siren automatically cuts out.

1. Ensure the advanced menu is enabled. See chapter 20 for more information.

2. Navigate with the ↑↓ keys to *Control Panel>System Settings* and press **OK**.

3. Scroll to *Timers>Sounders>Internal Siren Timeout* and press **OK**.

4. Enter **5** and press **OK**.

5. The keypad beeps once to confirm the change and returns to *Internal Siren Timeout*.

2.7.2 Configuring system features

You can specify various system features, enable the tests that can be performed on the control panel and set clock options. The following example programs the control panel to activate the siren and make a manual test call to the central station during the do self tests.

1. Ensure the advanced menu is enabled. See chapter 20 for more information.

2. Navigate with the ↑↓ keys to *Control Panel>System Settings>Feature Select* and press **OK**.

3. Scroll to *Diagnostics>Manual Siren Test>Enabled* and press **OK**.

4. The keypad beeps once to confirm the change and returns to *Manual Siren Test*.

5. Scroll to *Manual Dialler Test>Enabled* and press **OK**.

6. The keypad beeps once to confirm the change and returns to *Manual Dialler Test*.

2.8 Setting arm schedules
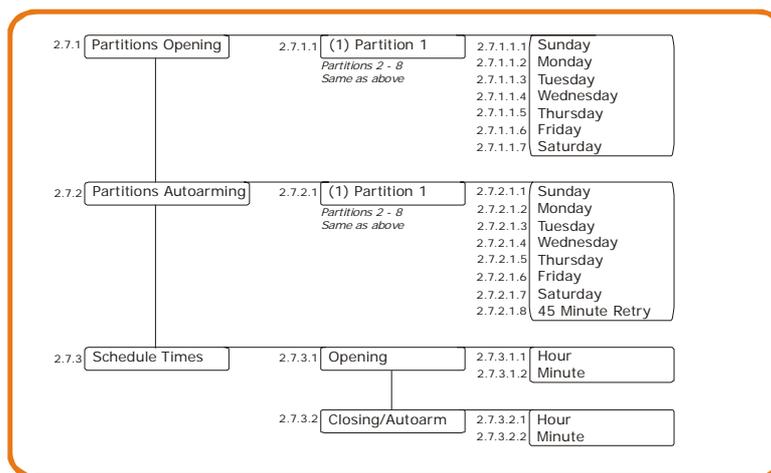
The control panel can be programmed to automatically open and close partitions at specified times on specified days. To program schedules, you must enable the advanced menu. Select *Installer Menu>Commands>Advanced Menu>Enabled* and press **OK**. Then select *Installer Menu>Control Panel>Arm Schedules*.

2.8.1 Setting up schedules

You can set up a schedule to control the opening and autoarming events for each partition. The following example sets a schedule for partition 1 so that it is automatically closed at 18.00 on a Monday if there is no activity in the building. If there is activity at closing time, the control panel will try to arm after every 45 minutes of inactivity until the next opening time, or until the system is armed manually.

1. Ensure the advanced menu is enabled. See chapter 20 for more information.

2. Navigate with the ↑↓ keys to *Control Panel>Arm Schedules* and press **OK**.

3. Scroll to *Partitions Autoarming>Partition 1>Sunday>Yes* and press **OK**.

4. The keypad beeps once to accept the change and returns to *Sunday*.

5. Scroll to *45 Minute Retry>Enabled* and press **OK**.

6. The keypad beeps once to accept the change and returns to *45 Minute Retry*.

7. Navigate with the ↑↓ keys to *Schedule Times>Closing/Autoarm>Hour* and press **OK**.

8. Enter **18** and press **OK**.

9. The keypad beeps once to confirm the change and returns to *Hour*.

10. Scroll to *Minute* and press **OK**.

11. Enter **0** and press **OK**.

12. The keypad beeps once to confirm the change and returns to *Minute*.

2.9 Programming the system to work with a home automation system

2.8.1	Protocol				
2.8.2	Transition Broadcasts	2.8.2.1	Interface Configuration		
		2.8.2.2	Zone Status		
		2.8.2.3	Zone Snapshot		
		2.8.2.4	Partition Status		
		2.8.2.5	Partition Snapshot		
		2.8.2.6	System Status		
		2.8.2.7	X-10 Message		
		2.8.2.8	Log Event		
		2.8.2.9	Keypad Message		
2.8.3	Commands/Requests	2.8.3.1	Misc Requests	2.8.3.1.1	Interface Configuration
				2.8.3.1.2	Zone Name
				2.8.3.1.3	Zone Status
				2.8.3.1.4	Zone Snapshot
				2.8.3.1.5	Partition Status
				2.8.3.1.6	Partition Snapshot
				2.8.3.1.7	System Status
				2.8.3.1.8	Log Event
		2.8.3.2	Misc Commands	2.8.3.2.1	X-10 Message
				2.8.3.2.2	Store Comms Event
				2.8.3.2.3	Zone Bypass Toggle
		2.8.3.3	Programming	2.8.3.3.1	Program Data Request
				2.8.3.3.2	Program Data Command
				2.8.3.3.3	User Info Request	2.8.3.3.3.1	With PIN
				2.8.3.3.4	Set User Code	2.8.3.3.3.2	Without PIN
				2.8.3.3.5	Set User Authority
				2.8.3.3.6	Set Date/Time
		2.8.3.4	Keypad Functions	2.8.3.4.1	1st Keypad Function	2.8.3.4.1.1	With PIN
						2.8.3.4.1.2	Without PIN
				2.8.3.4.2	2nd Keypad Function
				2.8.3.4.3	Send Keypad Text
				2.8.3.4.4	Keypad Terminal Mode
2.8.4	LCD Keypad Address				

The control panel can communicate to home automation protocols such as the X-10 protocol. The connection between the control panel and the X-10 home automation module is made through the CS507 output expander or the CS534 listen-in module RJ11 connectors. The on-board RS232 connector on the CS275, CS375, CS575 and

CS875 can be used to connect to other home automation systems. Consult your local Aritech Support to obtain more information.

Updated system information can be sent from the control panel to the home automation system in binary or ASCII format. The control panel can respond to requests sent by the home automation system and in turn can send commands to the home automation system. To program home automation options, you must enable the advanced menu. Select *Installer Menu>Commands>Advanced Menu>Enabled* and press **OK**. Then select *Installer Menu>Control Panel>Home Automation.*

2.9.1 Enabling broadcasts

You can specify how updated information is sent to the home automation system from the RS232 interface. The following example enables the home automation protocol to send different end-user messages to the keypad display.

1. Ensure the advanced menu is enabled. See chapter 20 for more information.

2. Navigate with the ↑↓ keys to *Control Panel>Home Automation* and press **OK**.

3. Scroll to *Transition Broadcasts>Keypad Message>Enabled* and press **OK**.

4. The keypad beeps once to accept the change and returns to *Keypad Message*.

2.9.2 Enabling commands and requests

You can specify which commands can be sent to the serial port by the home automation system. These include arming and disarming, programming and bypassing zones. The following example enables primary keypad functions that are sent by the home automation system with a valid user code.

1. Ensure the advanced menu is enabled. See chapter 20 for more information.

2. Navigate with the ↑↓ keys to *Control Panel>Home Automation* and press **OK**.

3. Scroll to *Commands/Requests>Keypad Functions>1st Keyad Function>With PIN>Enabled* and press **OK**.

4. The keypad beeps once to confirm the change and returns to *With PIN*.

2.10 Glossary

Location	Term	Definition
2	Control Panel	This groups all options relating to the central processing unit of the alarm system. The control panel monitors the detection devices and activates any number of signalling devices.
2.1	Inputs	A menu entry that groups options relating to all zones.
2.1.1	Zones	An menu entry that groups zone options.
2.1.1.1.1	Zone Type	An menu option that specifies the zone type of a particular zone.
2.1.1.1.2	Zone Name	An menu option that allows the installer to define names for each installed zone. For example, Zone 1 can be named Living Room PIR.
2.1.1.1.3	Partitions	A menu entry that lists the partitions assigned to the selected zone. The selected zone can trigger an event on these partitions. A zone may reside in any combination of partitions. A zone that resides in more than one partition becomes a common zone and is reported to its lowest partition number. A common zone is armed only when all the partitions that it belongs to are armed. It is disarmed the moment one of the partitions it belongs to is disarmed.
2.1.1.1.4	Copy Zone	A menu option that copies the settings for an individual zone to a contiguous set of other zones.
2.1.2	Swinger Shutdown	A zone characteristic that allows the selected zone to be automatically bypassed after a specified number of alarms. An *Inputs* menu entry that contains the swinger count.
2.1.3	Zone Types	A menu entry that groups zone type characteristics and allows the installer to select a pre-defined zone type. There are 20 pre-defined zone types. The characteristics of each zone can be changed. For example, if a keypad beeps, if the zone is a delay 1 or delay 2 zone, a 24-hour zone and so on.
2.1.3.1.1	Input Type	A menu entry that groups options that determine the basic features of the selected zone type.
2.1.3.1.1.1	Fire	A zone type that reports a fire alarm when activated.
2.1.3.1.1.2	24-hour	A zone type where reaction is not dependent on the arm/disarm state of the system. It is permanently active 24 hours a day unless bypassed by forced arming. An example of a 24-hour zone is a fire, panic or glassbreak zone.
2.1.3.1.1.3	Keyswitch	A zone type that can be used to arm or disarm a partition using a switch connected to a zone instead of a code. Both pulsed and maintained keyswitches can be used.
2.1.3.1.1.4	Follower/Access	A zone type that acts like a normal burglary zone except during entry and exit times when it is inhibited. The entry time is started when a Delay zone is opened. The zone is instant when the system is armed and no entry or exit delay is timed.
2.1.3.1.1.5	Delay 1	A zone type whose events can be delayed for a specified interval before a zone creates an alarm. This type of zone is usually used to allow exit and entry to a building. The time intervals for a Delay 1 zone are defined in Entry 1 and Exit 1.
2.1.3.1.1.6	Delay 2	A zone type whose events can be delayed for a specified interval before a zone creates an alarm. This type of zone is usually used to allow exit and entry to a building. The time intervals for a Delay 2 zone are defined in Entry 2 and Exit 2.

Location	Term	Definition
2.1.3.1.1.7	Interior	A zone type within the building that is bypassed when the system is armed in stay mode.
2.1.3.1.1.8	Entry Guard	A zone type that reduces false alarms. If an armed entry guard zone is opened, the keypad sounder activates and the entry delay starts before creating an alarm. This can be programmed as a zone type.
2.1.3.1.1.9	Final Set Door	A zone type that arms the system the moment the exit door is closed. It differs from an exit terminator zone in that it is available in the standard CSx75 and is attached to a zone that can also create alarms and so on.
2.1.3.1.1.10	Roller Shutter	A zone type used with roller shutter blinds. These zones can be used only on the control panel. They cannot be used on a CS208/CS216 input expander.
2.1.3.1.1.11	B-Alarm Trip	A zone type that generates a B-alarm trip event. The event is reported to the central station using the codes set in the B-Alarm Trip report codes menu. Typically, all alarms are A-alarms. Both A-alarms and B-alarms activate sirens and keypad buzzers. However, the central station reacts differently to A and B-alarm trip events. A police patrol is sent when an A-alarm trip event is reported (full alarm), whereas a guard from the security company is sent when a B-alarm trip event is reported (near alarm). If two B-alarm trip events occur within the pre-set B-alarm time, the second B-alarm trip event is treated as an A-alarm trip event.
2.1.3.1.1.12	Trouble	A zone type that sends an alarm when the system is armed and trouble when the system is disarmed.
2.1.3.1.2	Zone Type Name	A menu option that specifies the name of a particular zone type. This option also allows the name to be edited.
2.1.3.1.3	Attributes	A menu entry that groups the additional characteristics of the selected zone type.
2.1.3.1.3.1	End of Line Resistor	A zone characteristic that specifies that two 4K7 end of line resistors are used. An end of line resistor (EOL) is a resistor that is placed on the line to stop the signal being bounced back.
2.1.3.1.3.2	Loop Response	A zone characteristic of on-board control panel zones that specifies the response rate. This can be either 500 ms or 50 ms.
2.1.3.1.3.3	Double Knock	A zone characteristic that causes an event only if the zone is activated twice within a specified time. This is to prevent false alarms on PIRs.
2.1.3.1.3.4	Swinger Shutdown	A zone characteristic that allows the selected zone to be automatically bypassed after a specified number of alarms. An *Inputs* menu entry that contains the swinger count.
2.1.3.1.3.5	Bypassable	A zone characteristic that allows the zone to be bypassed.
2.1.3.1.3.6	Force Armable	A zone characteristic that allows the zone to be force armed.
2.1.3.1.3.7	Group Bypass	A zone characteristic that allows the user to bypass multiple zones with a single operation.
2.1.3.1.3.8	Zone Inactivity Monitor	A zone characteristic that sends a report to the central station when the zone does not change conditions within a specified time period.
2.1.3.1.3.9	Pulsed Keyswitch	A zone characteristic that allows a zone input to be used with a momentary keyswitch. Each activation of the keyswitch toggles the armed state of the control.
2.1.3.1.3.10	No Keypad Display	A zone characteristic that blanks the zone status when armed.
2.1.3.1.4	Sound	A menu entry that groups sounder characteristics for a particular zone type. These characteristics determine the sounds produced by the sirens and keypads when the selected zone is activated.

Location	Term	Definition
2.1.3.1.4.1	Yelping Siren - Burglary	A menu option that sounds a yelping siren when a burglary zone is activated.
2.1.3.1.4.2	Temporal Siren - Fire	A menu option that sets whether a zone type activates a fire or a burglary siren.
2.1.3.1.4.3	Keypad Beeping	A menu option that activates the keypad buzzer when an alarm occurs.
2.1.3.1.4.4	Chime	A menu option that sets whether a zone type activates a chime. A chime is generally a single stroke signal and is often used as an indication on a shop door. This can be set as a zone type. There is a beep on chime activation and no beep on deactivation.
2.1.3.1.5	Reporting	A menu entry that groups reporting options for the selected zone type.
2.1.3.1.5.1	Local Only	A zone characteristic that causes that zone not to report alarms to the central station. Locally, the sirens are activated according to the other zone type characteristics.
2.1.3.1.5.2	Restore Reporting	A menu option that causes restore events to be reported to the central station.
2.1.3.1.5.3	Dialler Delay	A menu option that sets the length of time (in seconds) the dialler waits before reporting an abortable alarm. If the system is disarmed during this time, the abortable alarm is not sent to the central station. The delay can be from 0-255 seconds. A value of 0 means that there is no abort delay.
2.1.3.1.5.4	Listen-in	A menu option that sends a report to the central station indicating that a listen-in session must be started. In order to use listen-in, a CS534 listen-in module must be installed and a microphone must be connected. When an alarm is generated and reported, the central station can listen to what is happening on the premises. Certain protocols (such as SIA, Contact ID and 200Bd FSK) have 'listen-in blocks' that are communicated with the alarm code and indicate that a listen-in session must be started.
2.1.3.1.6	Copy Zone Type	A menu option that copies the settings for a zone type to a new zone type.
2.2	Outputs	A menu entry that groups options relating to programmable outputs.
2.2.1	Prog Outputs	A menu entry that groups options that configure outputs.
2.2.1.1.1	Event	Any occurrence such as system arming, faults and alarms. A menu option that specifies which event activates an output.
2.2.1.1.1.1	Alarms	A menu option that groups together the alarm events that can be selected to trigger an output.
2.2.1.1.1.2	Arm/Disarm	A menu option that groups the events that can be used to trigger outputs. The entry is available to make selection of output events more convenient.
2.2.1.1.1.3	Communications	A menu option that groups together the communication events that can be selected to trigger an output.
2.2.1.1.1.4	Keypads	A menu option that groups the keypad events that trigger an output.
2.2.1.1.1.5	Sirens	A menu option that groups together the siren events that can be selected to trigger an output.
2.2.1.1.1.6	Tamper/Trouble	A menu option that groups together the tamper and trouble events that can be selected to trigger an output.
2.2.1.1.1.7	Tests	A menu option that groups settings related to different tests. These include tests such as automatic test calls, dynamic battery tests and so on. should this be changed to: An *Outputs* menu option that groups together the test events that can be selected to trigger an output.

Location	Term	Definition
2.2.1.1.2	Time Unit	A menu option that specifies whether the outputs are timed in minutes or seconds.
2.2.1.1.3	Time	A menu option that sets the length of time for which an output is activated. If it is set to 0, the output follows the event.
2.2.1.1.4	Partitions	A menu entry that lists the partitions assigned to the selected output. The selected output can be triggered by an event on these partitions. A zone may reside in any combination of partitions. A zone that resides in more than one partition becomes a common zone and is reported to its lowest partition number. A common zone is armed only when all the partitions that it belongs to are armed. It is disarmed the moment one of the partitions it belongs to is disarmed.
2.2.1.1.5	Attributes	A menu entry that groups the programmable attributes of the selected output.
2.2.1.1.5.1	Latched	A menu option that causes an output to remain activated until a code is entered at the keypad.
2.2.1.1.5.2	Code Stops Timer	A menu entry that allows the timer used on programmable outputs to be reset by entering a valid user code.
2.2.1.1.5.3	Only if Closed	A menu option that activates an output after closing time and before opening time. During these times, codes can be used to arm/disarm the system. A timer is used to set these times.
2.2.1.1.5.4	Only if Open	A menu option that activates an output between opening time and closing time.
2.2.1.1.5.5	Inverted	A menu option that enables a mode that inverts the state of an output (normally activated and then deactivated when an event occurs).
2.2.2	Internal Siren	A menu entry that groups options that set the conditions/events that activate the internal siren. This is a siren which sounds within the building.
2.2.2.1	Sounds On	A menu entry that groups events that activate the internal siren.
2.2.2.1.1	Phone Line Cut	A menu entry that groups options that activate the internal siren when a phone line cut event occurs.
2.2.2.1.1.1	When Armed	A menu option that activates the internal siren if a phone line cut event occurs while the system is armed.
2.2.2.1.1.2	When Disarmed	A menu option that activates the internal siren if a phone line cut event occurs while the system is disarmed.
2.2.2.1.2	Tampers	A menu option that activates the internal siren when a tamper occurs.
2.2.2.1.3	Expander Trouble	A menu option that activates the internal sound when an expander trouble condition occurs.
2.2.2.2	Short Blast On	A menu entry that groups internal sounder options. Each option specifies a time at which the sounder blasts. These options are: *Arming, Exit Expiry, Closing Kissoff* and *Keyswitch Arming*.
2.2.2.2.1	Arming	A menu option that causes the internal sounder to blast when the system arms.
2.2.2.2.2	Exit Expiry	A menu option that causes the internal sounder to blast when the exit time expires.
2.2.2.2.3	Closing Kissoff	A menu option that causes the internal sounder to blast when the central station receives a closing report.
2.2.2.2.4	Keyswitch Arming	A menu option that causes the internal sounder to blast when the system is armed by keyswitch or armed and disarmed by keyswitch. There is one blast for arming and two blasts for disarming.

Location	Term	Definition
2.2.2.3	Output Signal Type	A menu option that converts the internal siren to accept a speaker. The built-in 112db siren driver can be converted to a 1-amp voltage output. The siren can be 15 or 30 Watt maximum, with an impedance of 4, 8 or 16 ohms.
2.2.3	Keypads	A menu option that groups keypad buzzer options.
2.2.3.1	Sound On	A menu entry that groups events that activate the keypad buzzer.
2.2.3.1.1	Phone Line Cut	A menu entry that groups options that activate the keypad buzzer when a phone line cut event occurs.
2.2.3.1.1.1	When Armed	A menu option that activates the keypad buzzer if a phone line cut event occurs while the system is armed.
2.2.3.1.1.2	When Disarmed	A menu option that activates the keypad buzzer if a phone line cut event occurs while the system is disarmed.
2.2.3.1.2	Mains Failure	Amenu option that activates the keypad buzzer when the mains power supply fails.
2.2.3.1.3	Low Battery	A menu option that activates the keypad buzzer when a low battery event occurs.
2.2.3.1.4	B-Alarm Trip	A menu option that activates the keypad buzzer when a B-Alarm Trip event occurs.
2.2.3.1.5	Tampers	A menu option that activates the keypad buzzer when a tamper occurs.
2.2.3.1.6	Expander Trouble	A menu option that activates the keypad buzzer when an expander trouble condition occurs.
2.3	Codes	A menu entry that groups user code options.
2.3.1	4/6 Digit Codes	A menu option that specifies whether a four or six digit code is used.
2.3.2	Installer Code	A four or six-digit code used to program the system. It specifies the partitions and parts of the system the installer can access. It can also be used as a standard arm/disarm code, in which case it becomes user 255. A *Codes* menu entry that groups installer code options.
2.3.2.1	Code	A menu option that sets the user code. This is a series of four or six numbers that allows access to the system.
2.3.2.2	Authority	A menu entry that groups access options. These options specify the level of access an individual has when using the control panel.
2.3.2.2.1	Arm Only After Closing	A menu option that specifies a code that arms the system during the close window only (when the system is scheduled to be armed). If entered during the open window when the system is turned off, the code does not arm the system.
2.3.2.2.2	Arm Only	A menu option that specifies a code that arms the system and does not perform any other function. For example, the code issued to service staff.
2.3.2.2.3	Arm/Disarm	A menu option that specifies a four-digit or six-digit code that arms or disarms the system depending on its current status.
2.3.2.2.4	Master Code	A menu option that specifies a code that can program other user codes provided it has access to the same partitions as the user code. The user 1 code is the default master code.
2.3.2.2.5	Bypass Zones	A menu option that allows the selected code to bypass zones.
2.3.2.2.6	Reports Open/Close	A menu option that specifies a code that reports arms (close) and disarms (open) to the central station.

Location	Term	Definition
2.3.2.3	Partitions	A *Codes* menu entry that lists the partitions assigned to the selected code. The selected code can trigger an event on these partitions.
2.3.3	Duress Code	A menu option that sets the duress code. A duress code disarms the system and activates a duress alarm. This is a silent alarm that sends a special report to the central station.
2.4	Communications	A menu entry that groups options for communication between the control panel and the up/download software or central stations.
2.4.1	Central Station	A menu entry that groups options relating to the central station. This is a remote location that is designed to monitor signals and reports from alarm systems and summon assistance if necessary. This is also known as a control station or ARC.
2.4.1.1	Phone Prefix	A menu option that specifics the phone prefix. This is a four-digit telephone prefix that is used to select tone and pulse dialing and enter a delay to wait for a dial tone. This sequence is pre-dialled by each of the telephone numbers. - Press **#0** to insert G. - Press **#1** to insert a star. - Press **#2** to insert #. - Press **#3** to insert a four-second delay. - Press **#4** to insert P (this enables pulse dialing). If a four-second delay is programmed at the first digit, the panel does not wait for a dial tone before starting to dial the number. Select this option when the phone system has a poor quality dial tone or does not generate a dial tone.
2.4.1.2	Phone Numbers	A menu entry that groups phone number reporting options.
2.4.1.2.1.1	Phone Number	A menu option that sets the phone number to which events are reported. The control panel can report to up to six phone numbers.
2.4.1.2.1.2	Account Code	A menu option that specifies the unique code sent from the modem in the control panel to the selected phone number. This code is used to identify and charge the user. Separate account codes can be set up for each phone number and each partition. This is also known as the account number. The letters B, C, D, E and F can be included in control panel account codes.
2.4.1.2.1.3	Protocol	A menu option that sets the communicator format used to transmit to the receiver connected to a phone. Up to six phones can be set up. Multiple formats are available, such as Contact ID, SIA, 4+2 and pager format. Contact ID and SIA are the recommended formats. Consult the instructions for your central station receiver to determine which format is compatible.
2.4.1.2.1.4	Events	A menu entry that groups settings that control which events are reported for phone communication.
2.4.1.2.1.4.1	Arm/Disarm/Alarm	A menu entry that groups the events that are reported to the selected phone number.
2.4.1.2.1.4.1.1	Alarms	A menu option that sends a report to the selected phone number when an alarm occurs.
2.4.1.2.1.4.1.2	Alarm Restores	A menu option that sends a report to the selected phone number when the alarm has been restored after an alarm.
2.4.1.2.1.4.1.3	Opening/Closings	A menu option that sends a report to the selected phone number stating when the system is opened (disarmed) and closed (armed).
2.4.1.2.1.4.1.4	Zone Bypass and Restores	A menu option that sends a report to the selected phone number when a zone is bypassed. A report is also sent when the zone is restored (un-bypassed).
2.4.1.2.1.4.2	Tamper/Trouble	A menu entry that groups together the tamper and trouble events that are reported to the selected phone number.

Location	Term	Definition
2.4.1.2.1.4.2.1	Tampers and Restores	A menu option that sends a report to the selected phone number when a tamper occurs. A report is also sent when the tamper is no longer active.
2.4.1.2.1.4.2.2	Zone Trouble and Restores	A menu option that sends a report to the selected phone number when a zone trouble condition occurs. A report is also sent when the trouble condition is no longer active.
2.4.1.2.1.4.2.3	Expander Trouble and Restores	A menu option that sends an expander trouble and restore report to the selected phone number.
2.4.1.2.1.4.2.4	Siren/Phone Faults and Restores	A menu option that sends a report to the selected phone number when a siren or phone fault occurs. A restore report is sent when the fault is fixed.
2.4.1.2.1.4.2.5	RF Sensor Lost and Restores	A menu option that sends a report to the selected phone number when an RF sensor is missing. A restore report is sent to the central station when the receiver receives a valid signal from the lost transmitter.
2.4.1.2.1.4.2.6	RF Low Battery and Restores	A menu option that sends a report to the selected phone number when a low battery condition occurs in an RF sensor. A restore report is also sent when the low battery condition is no longer active.
2.4.1.2.1.4.3	Power	A menu entry that groups the power events that are reported to the selected phone number.
2.4.1.2.1.4.3.1	Power Trouble and Restores	A menu option menu option that reports mains failure, mains restore, low battery and low battery restore events to the selected phone number.
2.4.1.2.1.4.3.2	Aux Overcurrent and Restores	A menu option that sends a report to the selected phone number when too much current is detected. A restore report is also sent when the overcurrent condition is fixed.
2.4.1.2.1.4.4	Communications	A menu entry that groups together the communication events that are reported to the selected phone number.
2.4.1.2.1.4.4.1	Fail to Communicate	A menu option that reports a fail to communicate event to the selected phone number.
2.4.1.2.1.4.4.2	Test Reports	A menu option that sends a test report to the selected phone number at pre-programmed intervals. The units can be set in days or hours.
2.4.1.2.1.4.5.1	Program/Download	A menu option that reports programming and up/download events to the selected phone number.
2.4.1.2.1.4.5.2	Zone Inactivity Monitor	A menu option that sends a report to the selected phone number when a zone inactivity event occurs.
2.4.1.2.1.5	Fast Format Channels	A menu option that specifies which Fast Format channels are enabled. These are grouped as Channels 1 – 8 and Channels 9 – 16.
2.4.1.3	Partition Account Codes	A menu option that lists the account codes for each partition. The account code is sent when the relevant partition is reported.
2.4.1.4	Dial Attempts	A menu entry that groups dialling options.
2.4.1.4.1	ARC Dial Attempts	A menu option that specifies the number of dial attempts (1 to 15 attempts) that the communicator makes when reporting to the central station.
2.4.1.4.2	FTC Dial Attempts	A menu entry that groups options related to the number of attempts that are made to a specified phone number, before the Fail To Communicate condition appears.
2.4.1.4.3	Voice/Siren Dial Attempts	A menu option that specifies the number of dial attempts (1 to 15) that the communicator makes for voice dialing, pager or Siren Tone formats.

Location	Term	Definition
2.4.1.5	Dialler Output Level	A menu option that sets the volume of the output tone. The Dialler Output Level can only be used in combination with the stand-alone ISDN dialler TDA2001.
2.4.1.6	Dialler Abort Delay	A menu option that creates a delay, programmed in seconds, in reporting an alarm to the central station.
2.4.1.7	Listen-in Time	A menu option that sets the length of time the central station can listen for sounds of intrusion by means of microphones at the alarm site.
2.4.1.8	Send Restores	A menu entry that groups restore report options. Each option specifies a time at which the restore report is sent to the central station. Restores can be sent *As They Occur, At Disarm* or *For Zones On Siren Timeout*.
2.4.1.8.1	At Disarm	A menu option that sends a restore report to the central station when a code is entered to disarm the system.
2.4.1.8.2	For Zones On Siren Timeout	A menu option that sends a restore report to the central station when the siren times out.
2.4.2	Up/Download	A menu entry that groups options used to control download sessions between the up/download software and the control panel.
2.4.2.1	Call Back Number	A menu option that specifies the telephone number that the control panel dials if the *Call Back Req'd* option is enabled.
2.4.2.2	Access Code	A menu option that specifies the eight-digit access code sent by the up/download software to the control panel. The panel permits downloading to occur when it receives this code.
2.4.2.3	Call Back Reqd	A menu option that controls access of the up/download software to the control panel. When the software calls the control panel, the panel answers the call and then hangs up. After approximately 36 seconds, the panel calls the software back.
2.4.2.4	Rings to Answer	A menu option that sets the number of rings that must occur before the panel answers to start a download session. If the value is 0, the panel will never pick up the phone line.
2.4.2.5	Answer Machine Defeat	A menu entry used to defeat an answering machine. If two-call Answer Machine Defeat AMD is enabled, two telephone calls are required to defeat the answering machine. On the first call, the phone rings once or twice. The control panel detects the rings and starts a 45-second timer. During this timer, the control panel answers the next call on the first ring. This is not recommended for commercial applications.
2.4.2.6	Call PC on Autotest	A menu option that allows the panel to use call back when the central station performs an autotest. After the test report is delivered to the central station, the panel calls the up/download software using the call back phone number. Actions, such as upload event log and download phone numbers, can be selected in the up/download software.
2.4.2.7	Require Code for Download	A menu option that requires a user code to be entered before downloading can start.
2.4.2.8	Lockout	A menu entry that groups options that lock certain system functions.
2.4.2.8.1	System Shutdown	A menu option that allows the up/download software to shutdown the control panel. This option can be set only from the up/download software. The shutdown LCD message is shown to explain the reason for the shutdown. During shutdown the system is completely inactive. It is not possible to arm/disarm the system and no reports or sirens are activated.
2.4.2.8.2	Local Programming	A *Communications* menu option that disables the installer menu. This option can be set only through the up/download software.

Location	Term	Definition
2.3.2.8.3	Comms Settings	A menu option that prevents the installer changing the communication settings (telephone numbers, account codes and so on). This option must be set using the up/download software.
2.4.2.8.4	Download Settings	A menu option that prevents the installer changing the following download settings: Answer Machine Defeat Call Back Req'd Lockout>System Shutdown Lockout>Local Programming Lockout>Comms Settings Lockout>Download Settings Call PC on Autotest This option must be set through the up/download software.
2.4.3	Autotest	A menu entry that groups options that configure the automatic test run by the system.
2.4.3.1	Autotest Control	A menu option that specifies whether the autotest occurs after a specified number of days or hours. The autotest can be suppressed if another report has been sent.
2.4.3.2	Interval	A menu option that sets the length of time between autotests. The unit is set in autotest control. The *Hour* and *Minute* options set the time at which the test is performed.
2.4.3.5	Time Since Test	A menu option that sets the length of time since the last autotest. It controls when the next autotest report is sent to the central station.
2.4.4	Reporting	A menu entry that groups reporting options.
2.4.4.1	Partition Reports	A menu option that specifies the events that are enabled for each partition. Events specified in this option are related to all partitions in the system.
2.4.4.1.1	Opening/Closings	A menu option that enables opening/closings reporting.
2.4.4.1.2	Zone Bypass	A menu option that that sends a report to the central station when zones are bypassed.
2.4.4.1.3	Zone Restore	A menu option that sends a report to the central station when zones are restored.
2.4.4.1.4	Zone Trouble	A menu option that sends a report to the central station when a zone trouble condition occurs.
2.4.4.1.5	Zone Tamper	A menu option that sends a report to the central station when a zone tamper occurs.
2.4.4.1.6	Cancel	A menu option that enables cancel reporting. A cancel report is sent to the central station when the system is disarmed (within the time specified by the dialler delay) after an alarm.
2.4.4.1.7	Recent Closing	A menu option that sends a report to the central station if an alarm occurs within five minutes after the panel has been armed. The user number that armed the system is also sent.
2.4.4.1.8	Exit Error	A menu option that specifies that the control panel sends an exit error report if an entry/exit zone is faulted when the exit delay expires. This report is sent along with the user number that armed the system, if the panel is not disarmed before the entry delay expires. The alarm report is also sent. Even if this feature is not enabled, the siren sounds if any entry/exit zone is faulted when the exit delay expires.
2.4.4.2	System Reports	A menu entry that groups options relating to system reports.

Location	Term	Definition
2.4.4.2.1	Tamper/Trouble	A menu entry that groups together the tamper and trouble events that are reported to the central station.
2.4.4.2.1.1	Box Tamper	A menu option that enables the box tamper switch on the control panel. The CSx75 has an input for a normally closed tamper switch. When opened, a box tamper is reported as an event.
2.4.4.2.1.2	Expander Trouble	A menu option that sends a report to the central station when an expander trouble condition occurs.
2.4.4.2.1.3	Siren Supervision	A menu option that monitors the siren to detect cut wires. If the wires are cut, the control panel sends a report to the central station.
2.4.4.2.1.4	RF Sensor Lost	A menu option that sends a report to the central station, when an RF sensor is missing. RF sensors send out supervision signals every 15 or 64 minutes, depending on the frequency. An RF receiver must receive these signals within a specified time window. This window is set by the Supervision timer. If the RF receiver does not receive these signals during the time window, the RF sensor is considered missing.
2.4.4.2.1.5	RF Low Battery	A menu option that sends a report to the central station when a low battery condition occurs in an RF sensor.
2.4.4.2.2	Power	A menu entry that groups the power events that are reported to the central station.
2.4.4.2.2.1	Mains Failure	A menu option that sends a report to the central station when the mains power supply fails. A delay time can be set for this report.
2.4.4.2.2.2	Low Battery	A menu option that enables low battery reporting on the control panel.
2.4.4.2.2.3	Aux Overcurrent	A menu option that enables overcurrent reporting. A report is sent to the selected central station when too much current is drawn from a device powered by the system.
2.4.4.2.3	Communications	A menu entry that groups together the communication events that are reported to the central station.
2.4.4.2.3.1	Phone Line Cut	A menu option that sends a report is sent to the central station the moment the phone line cut is restored.
2.4.4.2.3.2	Fail to Communicate	A menu option that sends a report to the central station when the system has failed to communicate with the central station after the number of attempts set in FTC Dialler Attempts. The report is sent when communication with the central station has been restored.
2.4.4.2.3.3	Autotest	A menu option that enables reporting of autotest events to the central station at a specified interval.
2.4.4.2.3.4	Autotest Disarmed No Call	A menu option that allows test calls to be made only when the system is armed.
2.4.4.2.4.1	Log Full	A menu option that sends a report to the central station when the event log is full.
2.4.4.2.4.2	Start/End Programming	A menu option that causes reports to be sent to a specified phone number. A report is sent when local programming begins and ends.
2.4.4.2.4.3	End Download	A menu option that sends a report to the central station when downloading from the up/download software to the control panel is complete.
2.4.4.2.5	Bypass on Force Arm	A menu option that enables bypass reporting when a zone is force armed.

Location	Term	Definition
2.4.4.2.6	First to Open/Last to Close	A menu option that sends a report to the central station stating when the system opened and closed. This option can only be used in a multi-partitioned system. A report is sent stating the first area opened. A log is then kept recording when the other areas opened and when they closed. This information is sent in a second report when the last open area closes.
2.4.4.3	Report Codes	A menu option that groups codes that are sent to the central station when a particular event occurs.
2.4.4.3.1	Zone Types	A menu entry that groups all reporting codes for the selected zone type.
2.4.4.3.1.1.1	SIA Code	A menu option that sets the SIA code reported for the selected zone type.
2.4.4.3.1.1.2	Contact ID Code	A menu option that specifies the contact ID code to be used when reporting the selected zone type.
2.4.4.3.1.1.3 2.4.4.3.2.1.1 2.4.4.3.2.1.1 2.4.4.3.3.1.1 2.4.4.3.3.2.1 2.4.4.3.4.1.1 2.4.4.3.5.1.1 2.4.4.3.6.1.1 2.4.4.3.6.2.1 2.4.4.3.7.1.1	FF Channel	A menu option that specifies that the Fast Format channel format is used to report the selected zone, zone type or event. Other options with this definition include:
2.4.4.3.1.1.4 2.4.4.3.3.2.2 2.4.4.3.5.1.2 2.4.4.3.6.1.2	FF Restore Channel	A menu option that sets the channel used by the selected zone, zone type or event for FF channel restore events.
2.4.4.3.1.1.5 2.4.4.3.2.1.2 2.4.4.3.3.1.2 2.4.4.3.3.2.3 2.4.4.3.4.1.2 2.4.4.3.5.1.3 2.4.4.3.6.1.3 2.4.4.3.6.2.2 2.4.4.3.7.1.2	TELIM Channel	A menu option that specifies that the TELIM channel format is used to report the selected zone, zone type or event.
2.4.4.3.1.1.6	TELIM Code	A menu option that specifies the text message that is sent to the receiver with the TELIM channel. This message provides extra information.
2.4.4.3.1.1.7 2.4.4.3.2.1.3 2.4.4.3.3.1.3 2.4.4.3.3.2.4 2.4.4.3.4.1.3 2.4.4.3.5.1.4 2.4.4.3.6.1.4 2.4.4.3.6.2.3 2.4.4.3.7.1.3	4+2 Code	A menu option that specifies the event code sent to the central station indicating a 4+2 alarm.
2.4.4.3.1.1.8 2.4.4.3.3.2.5 2.4.4.3.5.1.5 2.4.4.3.6.1.5	4+2 Restore Code	A menu option that specifies the event code sent to the central station indicating a 4+2 restore.

Location	Term	Definition
2.4.4.3.1.1.9 2.4.4.3.2.1.4 2.4.4.3.3.1.4 2.4.4.3.3.2.6 2.4.4.3.4.1.4 2.4.4.3.5.1.6 2.4.4.3.6.1.6 2.4.4.3.6.2.4 2.4.4.3.7.1.4 2.4.4.3.8.1.1	200Bd FSK Channel	A menu option that sets the channel used by the selected zone, zone type or event for 200Bd FSK protocol. The zones between 1 and 99 can be directed to separate channels. The zones between 100 and 168 follow the 200Bd FSK Channel as specified on the zone type.
2.4.4.3.1.1.10 2.4.4.3.5.1.7 2.4.4.3.3.2.7 2.4.4.3.6.1.7	200Bd FSK Restore Channel	A menu option that sets the channel used by the selected zone, zone type or event for 200Bd FSK protocol restore events.
2.4.4.3.1.1.11 2.4.4.3.2.1.5 2.4.4.3.3.1.5 2.4.4.3.3.2.8 2.4.4.3.4.1.5 2.4.4.3.5.1.8 2.4.4.3.6.1.8 2.4.4.3.6.2.5 2.4.4.3.7.1.5	Voice Channel	A menu option that sets the voice message to be reported for the selected zone type or event. The channel corresponds to one of the 15 pre-recorded voice messages.
2.4.4.3.2	Open/Close/Cancel	A menu entry that groups all reporting codes for opening, closing and cancel events.
2.4.4.3.2.1	Opening	A menu entry that groups the codes reported on an opening (disarm) event.
2.4.4.3.2.2	Closing	A menu entry that groups the report codes sent to the central station when the system arms.
2.4.4.3.2.3	Partarm	A menu option that groups the report codes sent to the central station when the system is part armed.
2.4.4.3.2.4	Recent Closing	A menu entry that specifies the code (SIA/ContactID/FastFormat/200Bd FSK) or voice channel to be used for recent closings events.
2.4.4.3.2.5	Exit Error	A menu entry that groups the report codes sent to the central station if an alarm is created during the exit time.
2.4.4.3.2.6	Cancel	A menu entry that groups the report codes sent to the central station when a Cancel event occurs.
2.4.4.3.3	Tamper/Trouble	A menu entry that groups together the codes used to report tamper and trouble events to the central station.
2.4.4.3.3.1	B-Alarm Trip	A menu entry that groups the report codes sent to the central station when a B-Alarm Trip event occurs.
2.4.4.3.3.2	Zone Tamper	A menu entry that groups report codes that are sent to the central station when a zone tamper event occurs.
2.4.4.3.3.3	Zone Trouble	A menu entry that groups report codes that are sent to the central station when a zone trouble condition occurs.
2.4.4.3.3.4	Siren Tamper	A menu entry that groups report codes sent to the central station when a siren tamper has occurred.
2.4.4.3.3.5	Box Trouble	A menu entry that groups the report codes sent to the central station when a *Box Trouble* condition is activated.
2.4.4.3.3.6	Expander Trouble	A menu entry that groups report codes sent to the central station when an expander trouble event occurs.

Location	Term	Definition
2.4.4.3.3.7	RF Sensor Lost	A menu entry that groups report codes sent to the central station when an RF sensor lost event occurs.
2.4.4.3.3.8	RF Low Battery	A menu entry that specifies the code (SIA/ContactID/FastFormat/200Bd FSK) or voice channel to be used for RF Low Battery events.
2.4.4.3.4	Keypad	A menu entry that groups the report codes sent to the central station for keypad related events.
2.4.4.3.4.1	Duress	A menu entry that groups the report codes sent for a duress event. A duress situation is one in which a user is being threatened and forced to disarm the system. A duress code is entered to disarm the system as normal and a duress alarm is activated.
2.4.4.3.4.2	Keypad Tamper	A menu entry that groups the report codes sent for the keypad tamper event.
2.4.4.3.4.3	Keypad Panic	A menu entry that groups the report codes sent for the keypad panic event.
2.4.4.3.4.4	Keypad Aux 1 (Fire)	A menu entry that groups the report codes sent for the keypad aux 1 (fire) event.
2.4.4.3.4.5	Keypad Aux 2 (Medical)	A menu entry that groups the report codes sent for the keypad aux 2 (medical) event.
2.4.4.3.5	Power	A menu entry that groups report codes that are sent to the central station when power related events occur.
2.4.4.3.5.1	Mains Failure	A menu entry that groups the codes used to report a mains failure event.
2.4.4.3.5.2	Low Battery	A menu entry that groups report codes sent to the central station for a low battery event. A restore report is sent to the central station when this condition is no longer active.
2.4.4.3.5.3	Aux Overcurrent	A menu entry that groups the report codes sent to the central station when an overcurrent event occurs.
2.4.4.3.6	Communications	A menu entry that groups together the codes used to report communication events to the central station.
2.4.4.3.6.1	Phone Line Cut	A menu entry that groups the report codes sent when a phone line is cut.
2.4.4.3.6.2	Fail to Communicate	A menu entry that groups the report codes sent to the central station when a fail to communicate event occurs.
2.4.4.3.6.3	Autotest	A menu entry that groups the report codes sent to the central station when an autotest is performed.
2.4.4.3.7.1	Log Full	A menu entry that groups the report codes sent to the central station when the event log is full.
2.4.4.3.7.2	Start Programming	A menu entry that groups the reporting codes sent to the central station when programming starts.
2.4.4.3.7.3	End Programming	A menu entry that groups the report codes that are sent to the central station when the installer leaves programming mode.
2.4.4.3.7.4	End Download	A menu entry that groups the report codes sent to the central station when downloading is complete.
2.4.4.3.8	Zones 200Bd FSK	A menu entry that groups 200Bd FSK protocol options.
2.4.5	Format Override	A menu option that allows you to build communication formats if using a non-standard central station. Consult technical support before using this option.
2.4.5.1	Features 1	A menu option that allows you to configure your own reporting protocol based on the options enabled.

Location	Term	Definition
2.4.5.2	Features 2	A menu option that allows you to configure your own reporting protocol based on the options enabled.
2.5	Partition Settings	A menu entry that groups all partition settings. These settings include partition features, partition timers and so on.
2.5.1	Timers	A menu entry that groups timer options.
2.5.1.1	Entry 1	A menu option that sets the time within which the user must disarm the system before a full alarm occurs. This time can be between 10 and 255 seconds.
2.5.1.2	Exit 1	A menu option that sets the time within which the user must leave the protected zone after arming the system before a full alarm occurs. This time can be between 10 and 255 seconds.
2.5.1.3	Entry 2	A menu option that sets the time within which the user must disarm the system before a full alarm occurs. This time can be between 10 and 255 seconds.
2.5.1.4	Exit 2	A menu option that sets the time within which the user must leave the protected zone after arming the system before a full alarm occurs. This time can be between 10 and 255 seconds.
2.5.2	Feature Select	A menu entry that groups all optional features relating to partitions.
2.5.2.1	Arming	A menu entry that groups the arming characteristics of the selected partition.
2.5.2.1.1	Quick Arm	A menu option that enables the function keys for part arming and for full arming. These options work on a single-area keypad only.
2.5.2.1.2	Re-exit	A menu option that enables the exit delay without disarming the system. The exit delay can be restarted if in arm stay mode by using the Arm Away command in the user menu or by pressing a function key programmed by the installer to activate arm away.
2.5.2.1.3	Silent Auto Arm	A menu option that arms the system automatically at a preset time without the keypad buzzer sounding.
2.5.2.1.4	Silent Exit Always	A menu option that prevents the exit time buzzer activating whenever the system is armed or during the re-exit time.
2.5.2.1.5	Arming with Zone Lost	A menu option that allows the system to be armed when RF zones have not reported to the RF receiver for a period longer than the normal supervision window. When this option is disabled, the system cannot be armed when an RF zone is lost.
2.5.2.2	Keypads	A menu entry that groups keypad options.
2.5.2.2.1	Silent PA (7+9)	A menu option that prevents all audible and visual indications when a personal attack alarm occurs.
2.5.2.2.2	Audible PA (7+9)	A menu entry that causes the keypad to beep and sounds the internal and external sirens when a PA alarm is activated.
2.5.2.2.3	Fire/Aux 1 (1+3)	A menu option that activates keys 1 and 3 as the fire alarm combination keys. When this option is enabled and these keys are pressed at the same time, a fire alarm is generated.
2.5.2.2.4	Medical/Aux 2 (4+6)	A menu option that activates keys 4 and 6 as the medical alarm combination keys. When this option is enabled and these keys are pressed at the same time, a medical alarm is generated.
2.5.2.2.5	Multi Code Tamper	A menu option that disables the keypad for 60 seconds and sends a tamper signal to the central station if 30 key presses are entered without producing a valid code.
2.5.2.2.6	LED Extinguish	A menu option that enables or disables LED Extinguish for all partitions.

Location	Term	Definition
2.5.2.3	Bypass	To temporarily remove a zone from operation when arming the system. A menu entry that groups bypass options.
2.5.2.3.1	Auto Bypass	A menu option that automatically bypasses interior follower zones if no exit is detected during the exit delay time. The exit is detected by the opening and closing of an entry/exit zone.
2.5.2.3.2	Code Required	A menu option that specifies whether a user code is required for bypassing zones.
2.5.2.3.3	Sounder Alert	A menu option that activates the keypad buzzer when a user arms the system with one or more zones bypassed.
2.5.2.3.4	Bypass Toggle	A menu option that allows an interior zone be bypassed or included while the system is armed.
2.5.2.4.1	Mains/Batt Sounder Alert	A menu option that causes the keypad sounder to beep upon arming or disarming if the mains power is missing or a low battery is detected.
2.5.2.4.2	Zone Lost Gives Tamper	A menu option that sends a report to the central station when a wireless zone sensor is lost and activates a tamper alarm. Different reports are sent depending on the system status. When armed the tamper and the lost report are sent. When disarmed only the lost report is sent.
2.6	System Settings	A menu entry that groups programmable system features and reporting options.
2.6.1	Timers	A menu entry that groups timer options.
2.6.1.1	Inputs	A menu entry that groups time settings relating to inputs.
2.6.1.1.1	Fire Verification Time	A menu option that sets the amount of time within which a second trip must occur on a smoke detector in order to generate an alarm.
2.6.1.1.2	Zone Inact. Unit	A menu option that allows the zone inactivity option to be configured in hours or days.
2.6.1.1.3	Zone Inactivity Monitor	A menu option that sets the zone inactivity time. It is possible to specify this time in minutes or hours.
2.6.1.1.4	Double Knock Time	A menu option that sets the double knock time. If a double knock zone is opened twice within this time, an alarm is activated.
2.6.1.1.5	Double Knock Open Time	A menu option that sets the double knock open time. If a double knock zone remains open longer than this time, an alarm is activated.
2.6.1.1.6	B-Alarm Timer	A menu option that sets the time during which a second B-Alarm Trip event is treated as a full burglary alarm.
2.6.1.2	Power	A menu entry that groups the timer options relating to power events.
2.6.1.2.1	Batt Dynamic Test Duration	A menu option that sets the length of time that the control panel performs the *Dynamic Battery* test. This can be between 0 to 255 minutes where 0 is no test.
2.6.1.2.2	Mains Report Delay	A menu option that sets the length of time between detecting a mains failure on the control panel and sending a report to the central station. The restore event is sent four minutes after the mains is restored.
2.6.1.2.3	Power Up Delay	A menu option that sets the time between mains restore after a power failure and the system powering up again. This can be set from 0-60 seconds. 0 means no power up delay.
2.6.1.3	Sounders	A menu entry that groups timers for the internal siren, external siren and chime duration on the keypad.

Location	Term	Definition
2.6.1.3.1	Internal Siren Timeout	A menu option that sets the length of time the internal siren rings before automatically cutting out. This time can be between 0 and 255 minutes. When set to 0, the siren is active until a valid code is entered on the keypad.
2.6.1.3.2	External Siren Timeout	A menu option that sets the length of time an external sounder/siren rings before automatically cutting out. A new alarm trip reactivates the external sounder for the length of time specified in this option. This time can be between 0 and 255 minutes. When set to 0, the siren is active until a valid code is entered on the keypad.
2.6.1.3.3	Chime Time	A menu option that sets the length of time that the chime operates. This time can be set in 50 ms (1/20th second) increments from 0-12 seconds. 0 = follows zone.
2.6.1.4	Communications	A menu option that groups timers for communication events.
2.6.1.4.1	Phone Line Cut Delay	A menu option that sets the length of time before a phone line cut is signalled after a phone line cut is detected. A phone line fault is displayed in *Service Check>Reset* when *Phone Line Cut Delay* = 0.
2.6.2	Feature Select	A menu entry that groups all optional features relating to control panel system settings.
2.6.2.1	Inputs	A menu entry that groups options that enable features relating to inputs.
2.6.2.1.1	On-board 8 zones	A menu option that disables the zones on the control panel. This provides a completely wireless alarm system.
2.6.2.1.2	Box Tamper	A menu option that enables the box tamper switch on the control panel. The CSx75 has an input for a normally closed tamper switch. When opened, a box tamper is reported as an event.
2.6.2.1.3	2-wire Smoke Detectors	A menu option that enables the 2-wire smoke detector in the control panel. A 2-wire smoke detector is connected to the control panel with two wires instead of four. A maximum number of three 2-wire smoke detectors can be connected.
2.6.2.1.4	Force Default Zone Types	A menu option that uses the default zone types in the country defaults for the selected country rather than configured zone types.
2.6.2.2	Diagnostics	A menu entry that groups test options. These options specify the tests that can be performed on the control panel.
2.6.2.2.1	Batt Presence Test	A menu option that enables a test to determine whether the battery is connected to the system. This test is usually performed automatically when the system is first powered up and periodically thereafter.
2.6.2.2.2	Dynamic Batt Test at Arming	A menu option that enables a dynamic battery test at arming. This is an automatic test carried out by the control panel at the moment of arming to ensure the battery is working properly. The panel lowers the battery charging voltage in order to draw current from the battery. If the system is not armed between 00:01 and 23:59, the test is performed at 00:00.
2.6.2.2.3	Manual Siren Test	A menu option that activates the siren test when the *Do Self Test* command is selected from the user menu.
2.6.2.2.4	Manual Dialler Test	A menu option that includes a dialler test in the user's manual test. A manual test call is made to the central station and the corresponding signal is transmitted.
2.6.2.2.5	Walktest	A menu option that enables walktest mode. This mode allows an authorised user to test the detection devices and to verify that all zone inputs operate correctly.
2.6.2.3	Clock	A menu entry that groups options that configure the clock.

Location	Term	Definition
2.6.2.3.1	Mains Frequency	A menu option that provides an accurate clock in situations where different mains frequencies are used: 50 Hz or 60 Hz are possible selections.
2.6.2.3.2	Lost Clock Indication	A menu option that enables the service message 'Control Loss of time'.
2.6.2.3.3	Summer/Winter Time	A menu option that allows automatic switching of summer and winter time.
2.6.2.4.1	Fire Siren	A menu option that sets the type of siren activated when a fire alarm occurs. This can be either yelping or temporal.
2.6.2.4.2	Master Code Resets Tamper Memory	A menu option that allows a master user to reset the system after a tamper alarm. If this option is disabled, an installer must reset the system each time a tamper occurs. The user should identify the cause of the alarm before arming the system and contact the installer if necessary.
2.6.2.4.3	Transformer Size	A menu option that specifies the size of the transformer that is used. There are two possibilities: 25 VA or 40/50 VA. Depending on the setting, the power supply of the CS275, CS375, CS575 and CS875 can deliver 0.5 A (25 VA setting) or 1 A (40/50VA setting) on the AUX terminals. If this is not sufficient, additional CS320 power modules can be used.
2.6.2.4.4	All Abort	A menu option that aborts all on-board communications. Any alarms in the dialler buffer waiting to be sent to the central station are cancelled.
2.6.2.4.5	Blank Keypads	A menu option that allows an authorised user to turn off all LEDs (except the Power LED) on the keypad and to lock the keypad so that it does not accept key presses.
2.6.2.4.6	Reset Tamper Before Arming	A menu option that requires you to reset the tamper message after a tamper event has occured so that the user can arm the system. To do this, you must enter and then leave programming mode.
2.6.3	Serial Port	A menu entry that groups the settings of the on-board Serial RS232 port.
2.6.3.1	Connection Type	A menu option on the serial port that specifies what the serial port is used for. It can be set to Serial printer or Home Automation Protocol.
2.6.3.2	Speed	A menu option that sets the data communications speed from the computer to the control panel. This can be set from 600 baud to 76.8k baud. It is recommended to use the default setting of 9600 baud.
2.7	Arm Schedules	A menu entry that groups scheduling options. These options configure the schedules used by the control panel for auto arming.
2.7.1	Partitions Opening	A menu option that specifies the days of the week that each partition is open.
2.7.2	Partitions Autoarming	A menu option that allows the control panel to auto arm at a specified time. At this time, the keypad beeps for 50 seconds before the panel arms. The arming process is stopped if a code is entered on the keypad.
2.7.2.1.8	45 Minute Retry	A menu option that causes the panel to try to arm after every 45 minutes of inactivity until the next opening time, or until the system is armed. The 45-minute timer is extended when there is activity in the building. This causes the Ready LED to turn off and on. If closing reports are sent, the user code is 97.
2.7.3	Schedule Times	A menu entry that groups entries related to automatic arming, opening and closing schedules.
2.7.3.1	Opening	A menu option that sets the time at which the selected schedule enters the open state. At this time, the control panel enables codes designated as 'arm only after closing'.

Location	Term	Definition
2.7.3.2	Closing/Autoarm	A menu option that sets the time after which the partitions selected in *Partitions Autoarming* start to arm automatically. Users with arm only after closing rights can arm the partitions selected in *Partitions Opening* only after this time.
2.8	Home Automation	A menu entry that groups options relating to the home automation system.
2.8.1	Protocol	A menu option that sets the home automation protocol to binary or ASCII.
2.8.2	Transition Broadcasts	A menu entry that groups methods of sending updated information to the home automation system from the RS232 interface.
2.8.2.1	Interface Configuration	A menu option that enables interface configuration transition broadcasts. These broadcasts transmit changes to zones, partitions and so on to the home automation system.
2.8.2.2	Zone Status	A menu option that sends the entire status for one zone.
2.8.2.3	Zone Snapshot	A menu option that allows the control panel to send a snapshot of the current status of the zones. A snapshot sends the tripped, bypassed, trouble/tamper and alarm memory state for sixteen zones. This is done on a zone-by-zone basis.
2.8.2.4	Partition Status	A menu option that enables partition status transition broadcasts.
2.8.2.5	Partition Snapshot	A menu option that enables partition snapshot transition broadcasts.
2.8.2.6	System Status	A menu command request sent by the home automation system to the CS586 direct connect module to transmit the system status.
2.8.2.7	X-10 Message	A menu option that enables X-10 message transition broadcasts.
2.8.2.8	Log Event	A menu option that enables log event transition broadcasts.
2.8.2.9	Keypad Message	A menu option that allows the home automation protocol to send different end-user messages to the keypad display.
2.8.3	Commands/Requests	A menu option that performs commands sent to the serial port module by the home automation system.
2.8.3.1	Misc Requests	A menu entry that groups home automation requests.
2.8.3.1.1	Interface Configuration	A menu option that enables the control panel to respond to interface configuration requests sent by the home automation system.
2.8.3.1.2	Zone Name	A menu option that enables the home automation system to change zone names on the control panel.
2.8.3.1.3	Zone Status	A menu option that enables the control panel to respond to zone status requests sent by the home automation system.
2.8.3.1.4	Zone Snapshot	A menu option that enables the control panel to respond to zone snapshot requests sent by the home automation system.
2.8.3.1.5	Partition Status	A menu option that enables the control panel to respond to partition status requests sent by the home automation system.
2.8.3.1.6	Partition Snapshot	A menu option that enables the control panel to respond to partition snapshot requests sent by the home automation system.
2.8.3.1.7	System Status	A menu request sent by the home automation system to the CS586 direct connect module to view the system status of the entire system.
2.8.3.1.8	Log Event	A menu option that causes the control panel to log an event each time an output on the CS507 output expander module trips and each time an output restores.

Location	Term	Definition
2.8.3.2	Misc Commands	A menu entry that groups home automation commands.
2.8.3.2.1	X-10 Message	A menu option that enables the control panel to respond to X-10 message commands sent by the home automation system.
2.8.3.2.2	Store Comms Event	A menu command that allows a device connected to the serial port to send reports to the central station using the controls modem.
2.8.3.2.3	Zone Bypass Toggle	A menu option that enables the control panel to respond to zone bypass toggle commands sent by the home automation system.
2.8.3.3	Programming	A menu entry that groups home automation commands.
2.8.3.3.1	Program Data Request	A menu command request sent by the home automation system to the CS586 Direct Connect module. It is used to read configuration data from the control panel through the serial port.
2.8.3.3.2	Program Data Command	A menu command request sent by the home automation system to the CS586 Direct Connect module. It is used to configure the system through the serial port.
2.8.3.3.3	User Info Request	A menu command that allows the device connected to the serial port to read out the programmed settings for a particular user. This can be activated with a PIN or without a PIN.
2.8.3.3.4	Set User Code	A menu entry that groups home automation commands. The home automation protocol allows new users to be defined in the control panel. These commands specify the user's code.
2.8.3.3.5	Set User Authority	A menu entry that groups home automation commands. The home automation protocol allows new users to be defined in the control panel. These commands specify the user's authority, for example, and arm/disarm.
2.8.3.3.3.1	With PIN	A menu command request sent by the home automation system to the CS586 direct connect module to grant user access with a PIN number only.
2.8.3.3.3.2	Without PIN	A menu command request sent by the home automation system to the CS586 direct connect module to grant user access without a PIN number.
2.8.3.3.6	Set Date/Time	A menu command request sent by the home automation system to the CS586 direct connect module to set the time and date.
2.8.3.4	Keypad Functions	A menu entry that groups settings that enable home automation commands related to keypads.
2.8.3.4.1	1st Keypad Function	A menu entry that groups keypad options that enable home automation commands. The commands activate the primary function of a keypad. These options are With PIN and Without PIN.
2.8.3.4.1.1	With PIN	A menu command request sent by the home automation system to the CS586 direct connect module to grant user access with a PIN number only.
2.8.3.4.1.2	Without PIN	A menu command request sent by the home automation system to the CS586 direct connect module to grant user access without a PIN number.
2.8.3.4.2	2nd Keypad Function	A menu option that enables the home automation command that activates the secondary function of a keypad.
2.8.3.4.3	Send Keypad Text	A menu command request sent by the home automation system to the control panel. It is used in terminal mode to allow the device connected to the serial port to put text on the keypad.
2.8.3.4.4	Keypad Terminal Mode	A menu option that makes the keypad a home automation terminal when requested by the CS586 direct connect module.

Location	Term	Definition
2.8.4	LCD Keypad Address	A menu option that uses the programmed keypad address as the keypad terminal mode and keypad text.

2.11 Technical Specifications

Mains power specifications	
Mains Input Voltage (25VA Transfo)	230V - 50Hz - 25VA
Mains Input Voltage (40VA Transfo)	230V - 50Hz - 40VA
Current consumption at 230V~ (25 VA)	0.108 A
Current consumption at 230V~ (40 VA)	0.173 A
Main board supply voltage	16.5 V ~ typical

Power supply specifications	
Power supply voltage	13.8V ⎓ ±2%
Power supply current (CS275-375 -575-875)	2.0 A max. at 13.8V ⎓ ±2%
Power supply current (CS175)	1.0 A max. at 13.8V ⎓ ±2%
Auxiliary Power output (CS275-375 -575-875)	1.2 A max at 13.8V ⎓ ±2%
Auxiliary Power output (CS175) Note: maximum permanent current to power devices external to the control equipment in the absence of alarm conditions.	0.5 A max at 13.8V ⎓ ±2%
Battery Power output (CS275-375 -575-875)	0.800 A max at 13.8V ⎓ ±2%
Battery Power output (CS175)	0.500 A max at 13.8V ⎓ ±2%
Battery Type and max. capacity (Large Metal Housing for CS575M-CS875M)	Lead acid rechargeable 16 Ah 12 V nom.
Battery Type and max. capacity (Polycarbonate Housing for CS275– CS375-CS575-CS875)	Lead acid rechargeable 10 Ah 12 V nom.
Battery Type and max. capacity (Small Metal Housing for CS175M–CS275M-CS575M)	Lead acid rechargeable 7.2 Ah 12 V nom.
Main board consumption (No EOL)	60 mA at 13.8V ⎓ ±2%
Main board consumption (With EOL on zones, smoke and supervised siren)	91 mA at 13.8V ⎓ ±2%
Main board consumption (With EOL on zones, smoke and supervised siren) and dialer active	105 mA at 13.8V ⎓ ±2%

General feature specifications				
Nr. of combination of codes	From 9.999 (4 digits) to 99.999 (6 digits)			
End of line resistor (standard)	4,7 KOhm, 2% 0.25W			
End of line resistor (2 wire smoke)	560 Ohm, 2% 0.25W			
Loop Response	Selectable 50 msec or 500 msec			
Built-in Siren Driver	2 tone (Temporal and Yelp)			
On-board Outputs Note: see general installation guidelines	Aux Outputs (Relay)	NC/NO Relay	Rating: 1 A at 13.8 V ⎓	
	Aux Outputs (OC)	Electronic output	Rating: 40 mA at 13.8 V ⎓	
	External siren	Electronic output	Rating: 1 A at 13.8 V ⎓	
	Internal siren	Electronic output	Rating: 1 A at 13.8 V ⎓	
Environmental (Housing)	IP protection grade		IP30	
Large metal housing	Dimensions	315x447x80 mm	Colour	Beige
Small metal housing	Dimensions	250x250x80 mm	Colour	Beige
Large polycarbonate housing	Dimensions	257x400x112 mm	Colour	Grey
Small polycarbonate housing	Dimensions	257x228x112 mm	Colour	Grey
Environmental	Operating temperature		+0° C to + 40 °C	
	Humidity		Max 93% non condensing	
Shipping Weight			4.500 Kg	
Fuses				
* Mains fuse	F315 mA L 20x5	F1 Battery		T 5 A L 20x5

Chapter 3: Programming the current keypads

3.1 Overview

Each keypad has a sounder and an LCD display that displays messages in a number of possible languages.

Each keypad must be enrolled, defaulted to the country settings for the selected country and defaulted to the factory defaults before starting to program the system. For more information on enrolling and defaulting, see chapter B-1 *Enrolling modules*.
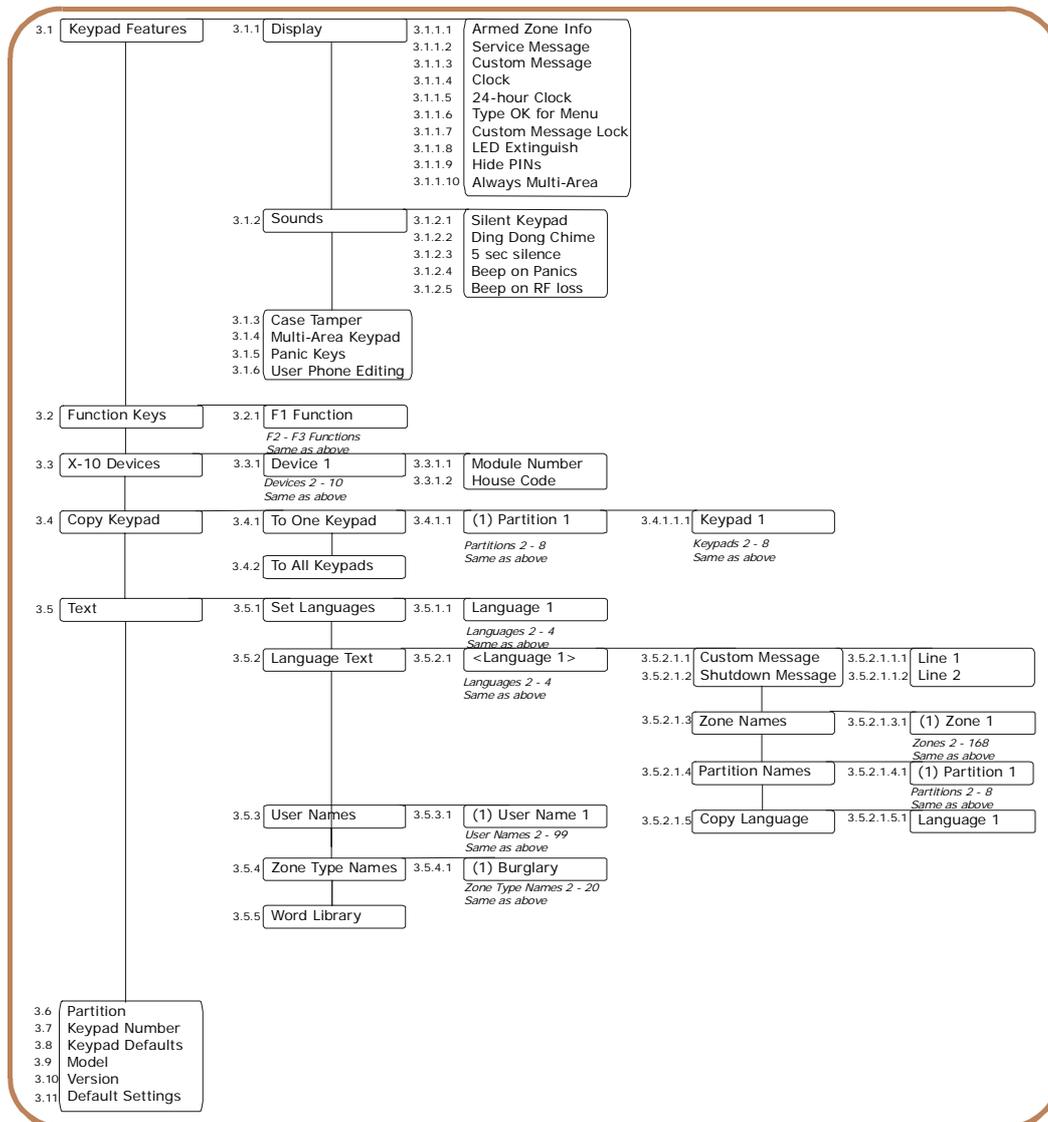
To program the current keypad, select *Installer Menu>This Keypad*.

3.2 Configuring keypad features

You can configure the LCD display, the keypad sounder and combination keys. The following example configures the keypad so that all codes are displayed as stars rather than in digits. It also configures the keypad sounder to beep when a wireless receiver does not report within the supervision window. For more information on supervision, see chapter 9.

1. Navigate with the ↑↓ keys to *This Keypad>Keypad Features* and press **OK**.

2. Scroll to *Display>Hide PINs>Yes* and press **OK**.

3. The keypad beeps once to confirm the change and returns to *Hide PINs*.

4. Navigate with the ↑↓ keys to *Sounds>Beep on RF loss>Yes* and press **OK**.

5. The keypad beeps once to confirm the change and returns to *Beep on RF loss*.

3.3 Multi-area mode

You can program a keypad to act as a single-area keypad or a multi-area keypad by default. A single-area keypad allows the user to arm one area only while a multi-area keypad allows the user to arm one or more areas. A user with rights can change a single-area keypad to a multi-area keypad and vice versa.

1. Navigate with the ↑↓ keys to *This Keypad>Keypad Features>Multi-Area Keypad* and press **OK**.

• Select *Yes* to set the keypad as a multi-area keypad by default.

• Select *No* to set the keypad as a single-area keypad by default.

2. Press **OK** to save the setting.

3. The keypad beeps once to confirm the change and returns to *Multi-Area Keypad*.

3.4 Assigning X-10 devices

The keypad can be used to activate selected X-10 devices. The following example programs the module number (3) and house code (L) for device 1.

1. Navigate with the ↑↓ keys to *This Keypad>X-10 Devices>Device 1* and press **OK**.

2. Scroll to *Module Number* and press **OK**.

3. Select *3* and press **OK**.

4. The keypad beeps once to confirm the change and returns to *Module Number*.

5. Scroll to *House Code* and press **OK**.

6. Select *L* and press **OK**.

7. The keypad beeps once to confirm the change and returns to *House Code*.

3.5 Copying keypad settings

The current keypad settings can be copied to one or multiple keypads in the system. The following example copies the current keypad settings to another keypad in the system.

1. Navigate with the ↑↓ keys to *This Keypad>Copy Keypad>To One Keypad* and press **OK**.

2. Select the relevant partition number and press **OK**.

3. Select the number of the keypad to which the settings will be copied and press **OK**.

4. The keypad displays the message 'Copying' while copying the settings and returns to *Keypad #* when copying is complete.

3.6 Configuring keypad text

You can set several languages on the keypad. The following example configures French as the second keypad language.

1. Navigate with the ↑↓ keys to *This Keypad>Text>Set Languages* and press **OK**.

2. The current language is displayed as *Language 1*.

3. Scroll to *Language 2* and press **OK**.

4. Use the ↑↓ keys to select *Français* and press **OK**.

5. The keypad returns to *Set Languages*.

6. Repeat these steps to set other languages.

For information on changing the user interface language or setting the keypad messages, see chapter 5.

3.7 Setting the keypad partition and keypad number

When you first power up the keypad, you are prompted to set the language, the default country and the partition and keypad number for the current keypad. The keypad can connect to the bus only after you set these numbers. The partition number and keypad number prompts are displayed for the initial setting only. To change these numbers again, scroll to *This Keypad>Partition* and *This Keypad>Keypad Number*.

3.8 Glossary

Location	Term	Definition
3	This Keypad	A menu entry that groups the settings of the current keypad. It allows resetting of the keypad, configuration of keypad features and verification of software version and models.
3.1	Keypad Features	A menu entry that groups keypad options.
3.1.1	Display	A menu entry that groups LCD display options for the keypad.
3.1.1.1	Armed Zone Info	A menu option that enables the mode that displays zone status on the keypad when the system is armed. When this mode is disabled, zone status information is not displayed when armed.
3.1.1.2	Service Message	A menu option that enables or disables the service messages on the keypad. A message displayed on the LCD keypad informing the user or installer of a system fault. The service message disappears from the keypad when the installer enters and leaves programming mode. The message is used as an Engineer Reset.
3.1.1.3	Custom Message	A menu option that shows or hides the custom message on the LCD keypad.
3.1.1.4	Clock	A menu option that displays the clock on the keypad. This is the internal real time clock used for the schedules and autotest intervals.
3.1.1.5	24-hour Clock	A menu option that switches between 24-hour and 12-hour notation.
3.1.1.6	Type OK for Menu	A menu option that enables the menu prompt 'Type OK for Menu'.
3.1.1.7	Custom Message Lock	A menu option that prevents the customized keypad message being edited.
3.1.1.8	LED Extinguish	A menu option that enables or disables LED Extinguish for an individual keypad. Both options must be enabled for this feature to work. LED extinguish turns off all LEDs on the keypad (except the Power LED) after 60 seconds without a key press. All LEDs are illuminated again when any key is pressed.
3.1.1.9	Hide PINs	A menu option that displays the user code as dashes when programming codes using the keypad. If this option is disabled, each digit is shown rather than displayed as a dash.
3.1.1.10	Always Multi-Area	A menu option that enables a mode on a multi-area keypad in which partition status is always displayed regardless of each partition state.
3.1.2	Sounds	A menu entry that groups sounder characteristics for the current keypad. It defines the events that activate the keypad buzzer.

Location	Term	Definition
3.1.2.1	Silent Keypad	A menu option that silences the keypad's entry/exit sounder and chime only.
3.1.2.2	Ding Dong Chime	A menu option that sets the sound a chime makes. It is either a ding dong or a beep.
3.1.2.3	5 sec silence	A menu option that silences the pulsing keypad sounder for five seconds when a key is pressed.
3.1.2.4	Beep on Panics	A menu option that sounds a keypad beep when the personal attack alarm combination keys are held down long enough.
3.1.2.5	Beep on RF loss	A menu option that activates the keypad sounder, causing it to beep, when an RF zone is lost. This beep indicates that the receiver did not receive the supervision signal from the wireless transmitter.
3.1.3	Case Tamper	A menu option that sends a tamper report to the central station and activates a siren and/or the keypad when interference with keypad housing occurs. A tamper occurs when the casing of a piece of hardware (for example, the control panel, sound box or keypad) is interfered with. The CSx75 has an input for a normally closed tamper switch. When opened, a box/case tamper is reported as an event.
3.1.4	Multi-Area Keypad	A menu option that sets the default mode of the selected keypad to multi-area mode. This is a mode of operation on a keypad that allows a user or installer access multiple partitions within the system and to perform functions in these partitions. A multi-area keypad can be temporarily switched to operate in single-area mode and a single-area keypad can be temporarily switched to operate in multi-area mode.
3.1.5	Panic Keys	A menu option that enables panic keys to be programmed. The CSx75 allows the user to generate different types of panic by pressing two keys at once.
3.1.6	User Phone Editing	A menu option that allows the user to change the phone numbers used for alarm reporting. Typically, the installer programs the central station phone numbers and is the only person who can change the number. However, when voice protocol and siren protocol are used, the user can change the phone number. These protocols typically report to the homeowner's mobile phone rather than to the central station.
3.2	Function Keys	A menu entry that groups all programmable function key options. Function keys are dedicated for a particular function as programmed by the installer.
3.3	X-10 Devices	A menu entry that groups X-10 device options for the selected keypad.
3.3.1.1	Module Number	A menu option*s* menu option that sets the X-10 module number used to identify a particular X-10 device on the selected module. A CSx75 bus module number is assigned to each system module. The system uses this number to identify the module. It is also used to report module problems (such as tampers and module supervision lost) to the central station.
3.3.1.2	House Code	A menu option that sets the code used to identify a particular premises. It is necessary in case any neighbouring premises also has an X-10 home automation system. More information on the X-10 home automation system can be found at www.x-10europe.com.
3.4	Copy Keypad	A menu option that copies the current keypad settings to another or multiple keypads in the system.
3.4.1	To One Keypad	A menu option that specifies that the current keypad settings are copied to one specific keypad.

Location	Term	Definition
3.4.2	To All Keypads	A menu option that specifies that the current keypad settings are copied to all connected keypads.
3.5	Text	A menu entry that groups the language options of the current keypad. It allows the installer to set options such as zone name descriptors and user names.
3.5.1	Set Languages	A menu option that selects the keypad language. There are four possible languages.
3.5.2	Language Text	A menu entry that groups descriptors such as Custom Message and Shutdown Message. These messages are language independent.
3.5.2.1.1	Custom Message	A *This Keypad* menu option that edits the custom message.
3.5.2.1.2	Shutdown Message	A menu option that edits the message that is displayed on the keypad when the control panel is in shutdown mode.
3.5.2.1.3	Zone Names	A menu option that specifies the name of each zone and allows these names to be edited.
3.5.2.1.4	Partition Names	A menu option that specifies the name of each partition.
3.5.2.1.5	Copy Language	A menu option that copies information from the current keypad descriptors to another or multiple keypads in the system. Included are the zone descriptors, custom message, shutdown message, zone names and partition names.
3.5.3	User Names	A menu option that specifies a name for each user code. The maximum length of a user name is 15 characters.
3.5.4	Zone Type Names	A menu option that allows the installer to define names for each installed zone type. For example, Type 1 can be named Burglary A Alarm, Type 2 can be named Fire Alarm, Type 3 can be named Entry/Exit and so on.
3.5.5	Word Library	A menu option that enables the word library. This is a predefined collection of words that speed up text editing. As the user/installer types a character, the keypad automatically displays a matching word. The word library is enabled by default.
3.6	Partition	A menu entry menu option that specifies the partition that the selected keypad can access if it is a single-area keypad. Together with the keypad number, it determines the keypad bus module number for both single-area and multi-area keypads.
3.7	Keypad Number	A menu option that sets the keypad number within the partition. The keypad can be numbered from one to eight. The selected number links to the module number reported to the central station in the case of tampers or expansion troubles.
3.8	Keypad Defaults	A menu option that defaults the keypad to the country settings for the selected country.
3.9	Model	A menu option that displays the current model of the keypad.
3.10	Version	A menu option that displays the current software version of the keypad.
3.11	Default Settings	A menu option that defaults the keypad to factory defaults.

3.9 Technical specifications

3.9.1 CS5006 LED keypad

Power supply specifications	
Power supply voltage	13.8V ⎓ ±0.2V
Consumption – Normal condition (Piezo Off)	78 mA at 13.8V ⎓ ±2%
Consumption – Normal condition (Piezo On)	90 mA at 13.8V ⎓ ±2%
Consumption – Standby	7 mA at 13.8V ⎓ ±2%
Consumption – In Alarm	36 mA at 13.8V ⎓ ±2%

General feature specifications		
PCB Size	Dimensions (width x height x depth)	90x135x1.2 mm
Housing Size	Dimensions (width x height x depth)	102x153x29 mm
Environmental	Operating temperature	+0° C to + 40 °C
	Humidity	Max 93% non condensing
	Shipping Weight	170 g

3.9.2 CS5XX8 LED keypad, where XX is the country code

Power supply specifications	
Power supply voltage	13.8V ⎓ ±2%
Consumption – Normal condition (Piezo Off)	92 mA at 13.8V ⎓ ±2%
Consumption – Normal condition (Piezo On)	103 mA at 13.8V ⎓ ±2%
Consumption – Standby	12 mA at 13.8V ⎓ ±2%
Consumption – In Alarm	65 mA at 13.8V ⎓ ±2%

General feature specifications		
PCB Size	Dimensions (width x height x depth)	90x135x1.2 mm
Housing Size	Dimensions (width x height x depth)	102x153x29 mm
Environmental	Operating temperature	+0° C to + 40 °C
	Humidity	Max 93% non condensing
	Shipping Weight	170 g

3.9.3 CS5500 menu driven keypad

Power supply specifications	
Power supply voltage	13.8V ▄▄ ±2%
Consumption – Normal condition (Piezo Off)	90 mA at 13.8V ▄▄ ±2%
Consumption – Normal condition (Piezo On)	100 mA at 13.8V ▄▄ ±2%
Consumption – Standby	7 mA at 13.8V ▄▄ ±2%
Consumption – In Alarm	36 mA at 13.8V ▄▄ ±2%

General feature specifications		
PCB Size	Dimensions (width x height x depth)	90 x 135 x 1.2
Housing Size	Dimensions (width x height x depth)	102x153x29 mm
Environmental	Operating temperature	+0° C to + 40 °C
	Humidity	Max 93% non condensing
	Shipping Weight	170 g

3.9.4 Keyswitch zones

		Static	Impulse
Single loop	4k7:	Disarmed	Quiet
	Short	Armed	Change status
	Open:	No reaction	No reaction
Dual loop	9k4	Disarmed	Quiet
	4k7	Armed	Change status
	Short or totally open	Tamper	Tamper

Chapter 4: Programming the other keypads

```
4.1  (1) Partition 1      4.1.1  Keypad 1        4.1.1.1  Model
     Partitions 2 - 8            Keypads 2 - 8    4.1.1.2  Version
     Same as above              Same as above     4.1.1.3  Default Settings
```
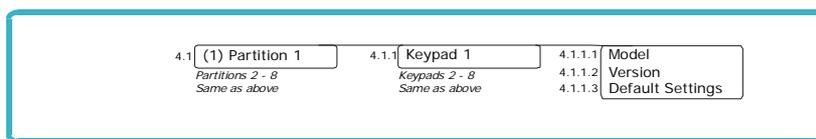
To program other keypads, select *Installer Menu>Other Keypads* and select the partition containing the keypad. You can view the keypad version and model and default the selected keypad.

4.1 Glossary

Location	Term	Definition
4	Other keypads	A menu entry that groups programming options for other keypads in the system.
4.1.1.1	Model	A menu option that displays the current model of the selected keypad.
4.1.1.2	Version	A menu option that displays the current software version of the selected keypad.

Chapter 5: Setting up the RF receivers

5.1 Overview

You can add either an 868 Mhz or 433 Mhz wireless receiver to the CSx75. Adding a receiver module makes a CSx75 control panel compatible with wireless sensors and keychain touchpads or keyfobs.

5.1.1 Types of receivers

Table 5-1: Types of receivers

Type of Receiver	Description
RX8I4CA-pcb	433 Mhz receiver allowing up to 8 wireless zones.
RX16I4CA-pcb	433 Mhz receiver allowing up to 16 wireless zones.
RX48I4CA-pcb	433 Mhz receiver allowing up to 48 wireless zones.
RX8W8CA-pcb	868 Mhz receiver allowing up to 8 wireless zones.
RX16W8CA-pcb	868 Mhz receiver allowing up to 16 wireless zones.
RX32W8CA-pcb	868 Mhz receiver allowing up to 32 wireless zones.

5.2 Installing an RF433 Mhz receiver
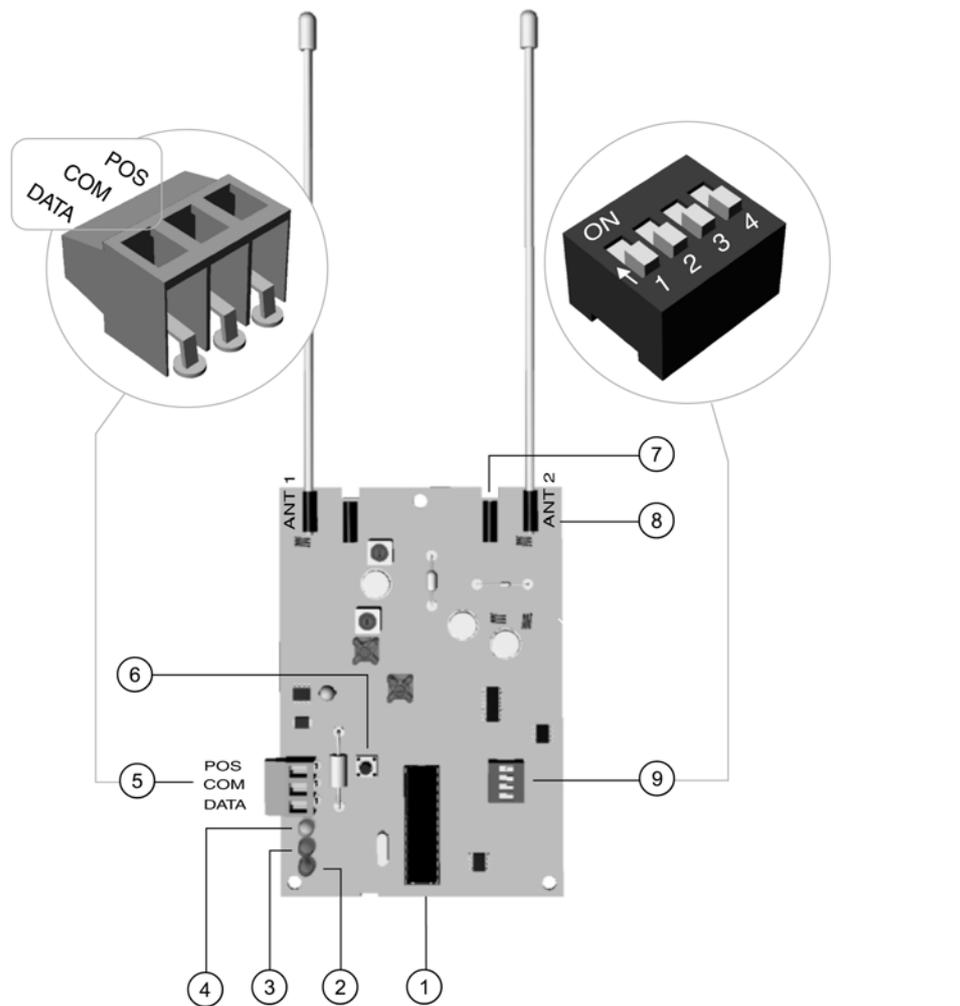
①	Processor	④	Wireless communication LED	⑦	Not used
②	No function	⑤	Keypad bus connection	⑧	Antenna
③	Bus supervision LED	⑥	Lid tamper	⑨	DIP switches

5.2.1 Wiring an RF433 Mhz receiver

Wire the RF433 Mhz receiver terminals ⑤ as follows.

Table 5-2: RF433 Mhz receiver terminal connections

Terminal	Description
POS	Connect to the KP POS terminal of the CSx75. Current draw is 30 mA.
COM	Connect to the KP GND terminal of the CSx75.
DATA	Connect to the KP DATA terminal of the CSx75.

5.2.2 Setting the RF433 Mhz receiver DIP switches

1. Power down the RF433 Mhz receiver.

2. Decide the module number of the RF433 Mhz receiver.

3. Set the DIP switch ⑨ from Table 5-3: *RF433 Mhz receiver DIP switches*.

4. Power up the RF433 Mhz receiver.

Table 5-3: RF433 Mhz receiver DIP switches

DIP switch 1-3 settings	RF receiver	Module number	DIP switch 1-3 settings	RF receiver	Module number
	1	34		5	38
	2	33		6	37
	3	32 (default)		7	36
	4	39		8	35

■ (top black) □ (bottom white) = ON   □ (top white) ■ (bottom black) = OFF   *DIP switch 4 is not used*

5.2.3 RF433 Mhz receiver status conditions

When you apply power to the CSx75, the middle (red) LED should start blinking. The LEDs on the receiver indicate the module status.

Table 5-4: RF433 Mhz receiver LED indications

LED	Module Status
Red blinking Red off	Normal data communication with the CSx75. No data communication with the CSx75, check the wiring and power source.
Yellow blinking Yellow off	Receiving radio signals from learn mode wireless sensors. No radio signals currently being received.

✍ *The red LED at the bottom of the RF433 Mhz receiver may emit a dim glow but is not used as an indicator and can be ignored.*

For information on installing the RF433 Mhz receiver in the various housings, see chapter A-4 *Installing a basic system.*

5.3 Installing an RF868 Mhz receiver
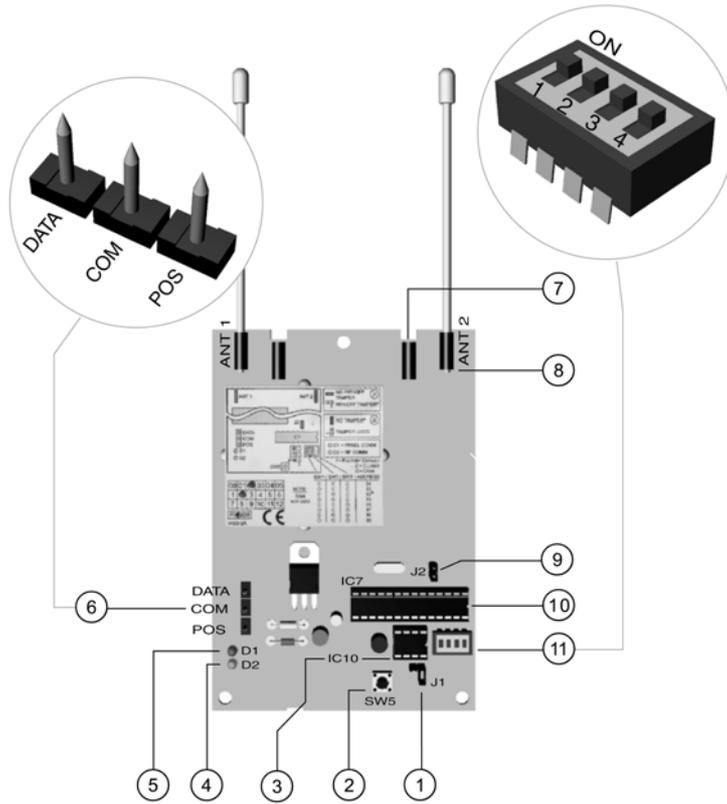
①	Jumper setting	⑤	Wireless communication LED	⑨	Jumper setting
②	Lid tamper	⑥	Keypad bus connection	⑩	Processor
③	Eeprom	⑦	Not used	⑪	DIP switches
④	Bus supervision LED	⑧	Antenna		

5.3.1 Wiring an RF868 Mhz receiver

Table 5-5: RF868 Mhz receiver terminal connections

Terminal	Description
DATA	Connect to the KP DATA terminal of the CSx75.
COM	Connect to the KP GND terminal of the CSx75.
POS	Connect to the KP POS terminal of the CSx75. Current draw is 30 mA.

5.3.2 Setting the RF868 Mhz receiver DIP switches

1. Power down the receiver.

2. Decide the module number of the RF868 Mhz receiver.

3. Set the DIP switch ⑩ from Table 5-6: *RF868 Mhz receiver DIP switches*.

4. Power up the RF868 Mhz receiver.

Table 5-6: RF868 Mhz receiver DIP switches

DIP switch 1-3 settings	RF receiver	Module number	DIP switch 1-3 settings	RF receiver	Module number
	1	34		5	38
	2	33		6	37
	3	32 (default)		7	36
	4	39		8	35

= C (ON)   = O (OFF)   *DIP switch 4 is not used*

5.3.3 RF868 Mhz receiver status conditions

When you apply power to the CSx75, the red LED should start blinking. The LEDs on the receiver indicate the module status.

Table 5-7: RF868 Mhz receiver LED indications

LED	Module status
Red blinking Red off	Normal data communication with the CSx75. No data communication with the CSx75, check the wiring and power source.
Green blinking Green off	Receiving radio signals from learn mode wireless sensors. No radio signals currently being received.

? *If you are installing a system in Holland or Belgium, you must use the test antennas RX 9008 when installing an RF868 system.*

For information on installing the RF868 Mhz receiver in the various housings, see chapter A-4 *Installing a basic system*.

5.4 Programming the RF system
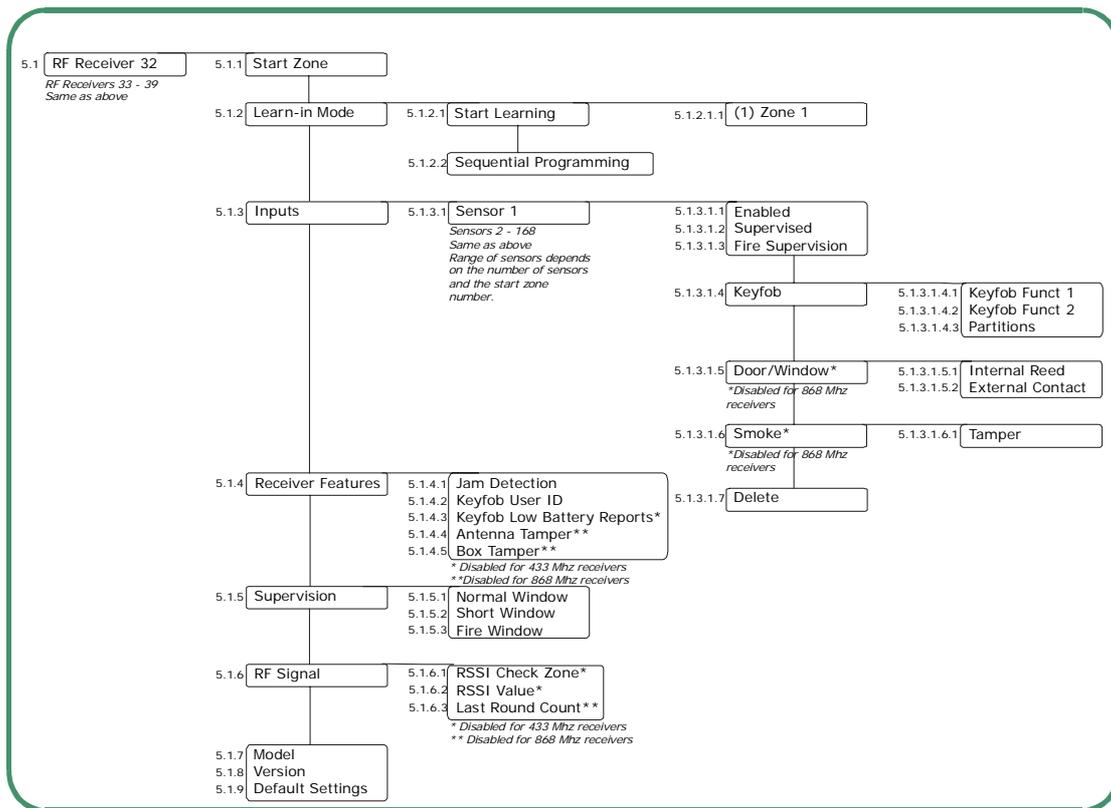
5.4.1 Defaulting the wireless modules

You must enroll and default each RF receiver before you begin programming the system.

You must default each module before you start programming it.

1. Navigate with the ↑↓ keys to *RF Receivers* and press **OK**.

2. Select the relevant module bus ID and press **OK**. In this case select *RF Receiver 32* and press **OK**.

3. Select *Default Settings* and press **OK**.

4. A confirmation message is displayed. Press **OK** to accept the default settings.

5. The keypad sounder beeps once to confirm the reset.

5.4.2 Programming the wireless detectors

1. Navigate with the ↑↓ keys to *RF Receivers* and press **OK**.

2. Select the relevant module bus ID and press **OK**. In this case select *RF Receiver 32* and press **OK**.

3. Scroll to *Start Zone* and press **OK**.

4. Enter the starting zone of the receiver. In this case, enter zone 9 to set zone 9 as the starting zone for receiver 32.

5. Scroll to *Learn-in Mode* and press **OK**.

6. To learn-in more than one device, scroll to *Sequential Programming*, select *Yes* and press **OK**.

7. Scroll to *Start Learning* and press **OK**.

8. Enter the zone number to start with. In this case, enter 9 to program the detectors in zones 9 and 10 and press **OK**.

5. Tamper the different detectors in sequence. To do this, you activate the sensor's tamper switch. Table 5-8: *Learning RF sensors* explains how to activate each type of sensor.

Table 5-8: Learning RF sensors

Transmitter	Action
Door/Window	Activate the tamper switch by removing the cover.
Door/Window with external contact	Activate the tamper switch by removing the cover.
PIR	Activate the tamper switch by removing the back plate from the PIR.
Fire detector	Press and hold the test button.
Single Button Panic	Press and hold the button.
Keyfobs	Press and hold the arm and disarm buttons together.

9. Press **##** to leave the programming mode. The *OK to Exit* prompt is displayed. The system now functions as a normal alarm system. See the *CS5500 LCD Keypad User Manual* for information on arming and disarming the system.

✍ *Select Installer Menu>RF Receivers>RF Receiver x>Inputs>Sensor x>Delete to delete an enrolled RF zone.*

5.4.3 Configuring receiver features

Configurable receiver features include tampers and communication errors. The following example enables RF jamming detection on RF receiver 32. RF communication is considered to be jammed when there has been a jamming signal for more than 30 seconds in a 60 second window.

1. Navigate with the ↑↓ keys to *RF Receivers>RF Receiver 32>Receiver Features* and press **OK**.

2. Scroll to *Jam Detection>Enabled* and press **OK**.

3. The keypad beeps once to accept the change and returns to *Jam Detection*.

5.4.4 Setting supervision windows

There are three wireless supervision options: Short Window, Normal Window and Fire Window. PIR and door/window sensors follow short and normal windows.

• If a PIR or door/windows sensor does not report within the time specified in Short Window, the system does not allow the user to arm the system. However, an RF Sensor Lost condition is not reported to the central station.

• If a PIR or door/windows sensor does not report within the time specified in Normal Window, an RF Sensor Lost condition is reported to the central station and a service message is displayed on the keypad.

The short and normal window timers are configured differently according to country and frequency. 868 Mhz transmitters typically report every 15 minutes while 433 Mhz transmitters typically report every 64 minutes.

? *If you are installing a system in Holland or Belgium, you must set the supervision values to 120 for a long supervision window. Set the short supervision window in Belgium to 15 and in Holland to 20. Fire transmitter supervision windows should be set to 240.*

When the *Arming with Zone Lost* option is enabled, the user is always allowed to arm the system even if the PIR or door/window sensor does not report within the short window.

Smoke detectors follow the fire window. 433 Mhz and 868 Mhz smoke sensors report every 64 minutes. Smoke detectors follow supervision windows only and report to the central station when not reporting within the fire window.

5.5 Testing wireless sensors

5.5.1 RF433 Mhz system

The RF433 Mhz system uses a last round count to provide an indication of the quality of the data reception. It displays the number of rounds of RF data received during the last transmission. The following example tests the last round count on sensors enrolled on RF receiver 33.

1. Activate a tamper alarm and wait five seconds before restoring the tamper to prevent additional signals being counted.

2. Navigate with the ↑↓ keys to *RF Receivers>RF Receiver 33* and press **OK**.

3. Scroll to *RF Signal>Last Round Count* and press **OK**.

4. The last round count is displayed on the keypad.

5.5.2 RF868 Mhz system

The Remote Signal Strength Indication Value (RSSI) is a measure of the RF reception and is similar to the indication on a mobile phone. The value is linked to the level of the signal between the wireless sensors and the RF receiver. On an 868 Mhz system, the RF receiver stores the signal strength of the transmission it receives from the sensor in a specified zone. The values in this zone are read as follows:

• Values between 1 and 5: The sensor will not work properly and must be moved to another location.

• Values between 6 and 10: The sensor will work but ideally should be moved to another location.

• Values between 11 and 20: These are low values but the sensor will still work properly.

• Values between 20 and 50: These are normal working values for sensor located at a longer distance from the receiver.

• Values above 50: Perfect conditions.

RSSI Values may change due to environmental circumstances, for example, additional furniture or metal constructions. The following example tests the RSSI value of zone 2 on receiver 32.

1. Navigate with the ↑↓ keys to *RF Receivers>RF Receiver 32* and press **OK**.

2. Scroll to *RF Signal>RSSI Check Zone>(2) Zone 2* and press **OK**.

3. Open and close zone 2.

4. Scroll to *RSSI Value* and press **OK**.

5. The RSSI value is displayed on the keypad.

5.6 Deleting sensors

You can program a receiver to ignore a sensor. This does not remove the sensor identification from the module's memory. The sensor can be reactivated later or a new sensor can be learned into the zone. The following example removes sensor 10 learned in on receiver 32.

1. Navigate with the ↑↓ keys to *RF Receivers>RF Receiver 32* and press **OK**.

2. Scroll to *Inputs>Sensor 10>Enabled>NO* and press **OK**.

3. The keypad beeps once to accept the change and returns to *Enabled*.

5.7 Glossary

Location	Term	Definition
5.1	RF Receiver 32	An *menu* entry that groups all options for the selected RF receiver.
5.1.1	Start Zone	An *menu* option that specifies the first zone number of zones on the RF receiver.
5.1.2	Learn-in Mode	An *menu* option that enables the mode in which a new wireless device is enrolled on the system.
5.1.2.1	Start Learning	An *menu* command that triggers the learn-in mode.
5.1.2.2	Sequential Programming	An *menu* option that allows a group of RF sensors to be enrolled in sequence. Once the first sensor (Start Learning sensor) is configured, the detectors are learned-in in sequence. The value of 'Start Learning' is increased automatically. This option allows easier programming.
5.1.3	Inputs	An *menu* entry that groups options relating to RF zones only.
5.1.3.1.2	Supervised	An *menu* option that enables supervision of the selected RF sensor.
5.1.3.1.3	Fire Supervision	An *menu* option that specifies that the RF433 or RF868 receiver uses the fire supervision timing window.
5.1.3.1.4	Keyfob	An *menu* entry that groups options relating to any device that sends commands by a wireless receiver.
5.1.3.1.4.1	Keyfob Funct 1	An *menu* option that enables the light bulb button on the keyfob for the selected RF zone on the selected RF receiver. If this option is enabled, pressing the light bulb button sends a keyfob function 1 event. Control panel auxiliary outputs and CS507 outputs can be programmed to respond to this event.
5.1.3.1.4.2	Keyfob Funct 2	An *menu* option that enables the * button on the keyfob for the selected RF zone on the selected RF receiver. If this option is enabled, pressing the * button sends a keyfob function 2 event. Control panel auxiliary outputs and CS507 outputs can be programmed to respond to this event.
5.1.3.1.4.3	Partitions	An *menu* entry that lists the partitions assigned to the selected keyfob. The selected keyfob can trigger an event on these partitions. A zone may reside in any combination of partitions. A zone that resides in more than one partition becomes a common zone and is reported to its lowest partition number. A common zone is armed only when all the partitions that it belongs to are armed. It is disarmed the moment one of the partitions it belongs to is disarmed.
5.1.3.1.5	Door/Window	An *RF Receiver* menu option that configures door/window settings on an RF 433 Mhz receiver. It includes the use of internal reed and additional external contact of the door/windows transmitters.
5.1.3.1.5.1	Internal Reed	An *menu* option on an RF door/window sensor that enables the internal reed contact.
5.1.3.1.5.2	External Contact	An *menu* option on an RF door/window sensor that enables an additional external contact. When the external contact is triggered, an alarm is generated on the same zone number as the door/window sensor (reed contact) itself.
5.1.3.1.6	Smoke	An *menu* entry that groups smoke sensor options.
5.1.3.1.6.1	Tamper	An *menu* option that enables/disables the tamper of a smoke sensor.
5.1.3.1.7	Delete	An *menu* entry that deletes an enrolled RF zone.
5.1.4	Receiver Features	An *menu* entry that groups programmable options for RF receivers.
5.1.4.1	Jam Detection	A menu option that enables the detection of RF jamming.

Location	Term	Definition
5.1.4.2	Keyfob User ID	A menu option that makes the keyfob report as the zone that it is learned into. When this option is disabled, all keyfobs report their open/closing reports as user 99.
5.1.4.3	Keyfob Low Battery Reports	A menu option that reports a keyfob low battery condition. This option is available on the 868 Mhz RF Receiver only. The low battery condition is reset by pressing the Arm (Lock) and Disarm (Unlock) button at the same time. If this option is enabled, each enrolled keyfob uses up one zone in the system. If this option is disabled, keyfobs do not use up a zone in the system and can overlap with a used zone.
5.1.4.4	Antenna Tamper	A menu option that sends a report if the antenna on the selected RF receiver is removed or damaged (cut).
5.1.4.5	Box Tamper	A menu option that enables the box tamper switch on the selected RF receiver.
5.1.5	Supervision	A menu entry that groups wireless supervision options.
5.1.5.1	Normal Window	A menu option that specifies the normal supervision window for RF devices. RF devices on 433 Mhz typically report every 64 minutes. RF devices on 868 Mhz typically report every 15 minutes. Depending on the country regulations, this timer must be set to specific values.
5.1.5.2	Short Window	A menu option that specifies the short supervision window for RF devices. RF devices on 433 Mhz typically report every 64 minutes. RF devices on 868 Mhz typically report every 15 minutes. Depending on the country regulations, this timer must be set to specific values.
5.1.5.3	Fire Window	A menu option that specifies the RF supervision to be used for RF smoke/fire detectors. The RF smoke/fire detectors send a supervision every 64 minutes, irrespective of 433 Mhz or 868 Mhz.
5.1.6	RF Signal	A menu entry that groups entries related to measuring RF signal strengths.
5.1.6.1	RSSI Check Zone	A menu option that sets the zone number on the selected RF receiver. The RF receiver stores the signal strength of the transmission it receives from the sensor in this zone. To read the signal strength, open and close the zone and then select the *RSSI Value* menu option.
5.1.6.2	RSSI Value	Remote Signal Strength Indication Value. This is a measure of the RF reception and is similar to the indication on a mobile phone. A menu entry that displays the RSSI value. The value is linked to the level of the signal between the wireless transmitters and the RF receiver.
5.1.6.3	Last Round Count	A menu option that displays the number of rounds of RF data received during the last transmission. This option is available only on a 433 Mhz system and is replaced by the RSSI value on an 868 Mhz system.
5.1.7	Model	A menu option that displays the model of the selected receiver.
5.1.8	Version	A menu option that displays the current software version of the selected receiver.
5.1.9	Default Settings	A menu option that defaults the selected receiver to factory defaults.

5.8 Technical specifications

5.8.1 RF433 receivers: RX8i4-pcb, RX16i4-pcb, RX48i4-pcb

Power supply specifications	
Power supply voltage	13.8V ▬ ±2%
Consumption	20 mA at 13.8V ▬ ±2%
Wireless Frequency	433 Mhz
General feature specifications		
PCB Size	Dimensions (width x height x depth)	110x81x25.4 mm
Environmental	Operating temperature	+0° C to + 40 °C
	Humidity	Max 93% non condensing
	Shipping Weight	95 g

5.8.2 RF868 receivers: RX8w8-pcb, RX16w8-pcb, RX32w8-pcb

Power supply specifications	
Power supply voltage	13.8V ▬ ±2%
Consumption	20 mA at 13.8V ▬ ±2%
Wireless Frequency	868 Mhz
General feature specifications		
PCB Size	Dimensions (width x height x depth)	117x81x25.4 mm
Environmental	Operating temperature	+0° C to + 40 °C
	Humidity	Max 93% non condensing
	Shipping Weight	105 g

5.8.3 Empty housing RXWEH00 (868 Mhz) and RXIEH00 (433 Mhz)

General feature specifications		
Housing Size	Dimensions (width x height x depth)	110x81x25.4 mm
Environmental	Operating temperature	+0° C to + 40 °C
	Humidity	Max 93% non condensing
	Shipping Weight	95 g

Chapter 6: Setting up the CS208H / CS208 / CS216

6.1 Overview

The CS208H, CS208 and CS216 input expanders can provide extra wired zones for a CSx75 control panel. Each CS208H and CS208 input expander can provide up to 8 extra wired zones. Each CS216 input expander can provide up to 16 wired zones. Each CS208 / CS216 input expander has an optional tamper switch and power isolator. Each CS208H input expander has a tamper switch and power isolator.

6.2 CS208 / CS216 input expander

The CS208 input expander and CS216 input expander are similar. The only difference is the number of zones provided. The illustration below shows the CS216 input expander.

6.2.1 Installing the CS208 / CS216 input expander
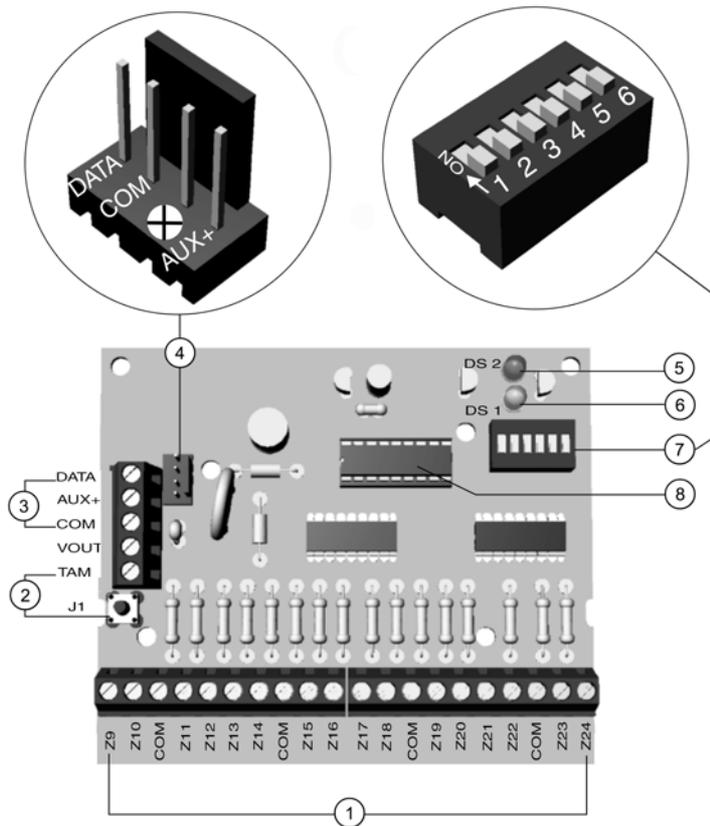
①	Zone connections (16 sets)	⑤	No function
②	Tamper connection (required)	⑥	Supervision LED
③	Keypad bus connection	⑦	DIP switches (6 positions)
④	Additional keypad bus connection	⑧	Processor

6.2.2 Setting the DIP switches

1. Power down the CS208 / CS216 input expander.

2. Decide the starting zone of each input expander. The starting zone of each zone expander must be on a boundary of 8 zones.

3. To set the starting zone, set the DIP switches from Table 6-1: *CS208 / CS216 input expander DIP switches*. The zones for this module begin from this starting zone number.

---

4. Power up the CS208 / CS216 input expander

Table 6-1: CS208 / CS216 input expander DIP switches

DIP switch setting	Starting zone number	Module number	DIP switch setting	Starting zone number	Module number
(switch pattern)	9	23	(switch pattern)	89	99
(switch pattern)	17	16	(switch pattern)	97	100
(switch pattern)	25	17	(switch pattern)	105	101
(switch pattern)	33	18	(switch pattern)	113	102
(switch pattern)	41	19	(switch pattern)	121	103
(switch pattern)	49	20	(switch pattern)	129	104
(switch pattern)	57	21	(switch pattern)	137	105
(switch pattern)	65	96	(switch pattern)	145	106
(switch pattern)	73	97	(switch pattern)	153	107
(switch pattern)	81	98	(switch pattern)	161	108

▯ = ON   ▮ = OFF

6.2.2.1 DIP switch 6 (CS216 only)

To disable the second group of 8 zones on the CS216 input expander, turn DIP switch 6 on. This should be done only if you need an 8-zone expander in a particular location.

For details on how to install the CS208 / CS216 input expander in the various housings, chapter A-4 *Installing a basic system*.

6.2.3 Wiring the CS208 / CS216 input expander

To wire the CS208 / CS216 input expander, see Table 6-2: *CS208 / CS216 input expander terminals*. Any unused zones must have an EOL resistor across them, unless all 8 are disabled by DIP switch 6 (CS216 only). The CS208 / CS216 input expander is similar to the CS507 output expander. A white connector J9 can be used to connect to the CSx75 panel in a housing mounted inside the control unit.

Table 6-2: CS208 / CS216 input expander terminals

Terminal	Description
	Connector on the left side ③
DATA	Connect to the KP DATA terminal of the CSx75.
AUX	Connect to the KP POS terminal of the CSx75. Current draw is 30 mA.
COM	Connect to the KP COM terminal of the CSx75.
Out	Can be used to power devices directly from the CS208 / CS216. Power comes from the CSx75 and the current draw of these devices must be added to the total current draw of the CS208 / CS216. The output current connected to a COM terminal is limited to 100 mA.
TAM	If not used, connect to a COM terminal.
	Bottom connector ①
Z9	Connect to one side of zone 9 loop. Connect the other side to the COM terminal. Open or short causes alarm.
COM	Common (-) terminal for zones 9 and 10.
Z10	Connect to one side of zone 10 loop. Connect the other side to the COM terminal. Open or short causes alarm.
Z11-Z24	Connect as described for Z9 and Z10.
	Additional keypad connector ④ (from top to bottom)
1	DATA
2	COM
3	Unused
4	AUX+

6.3 CS208H input expander

The CS208H input expander comes in its own housing. The board is different to the CS208 input expander.

6.3.1 Installing the CS208H input expander
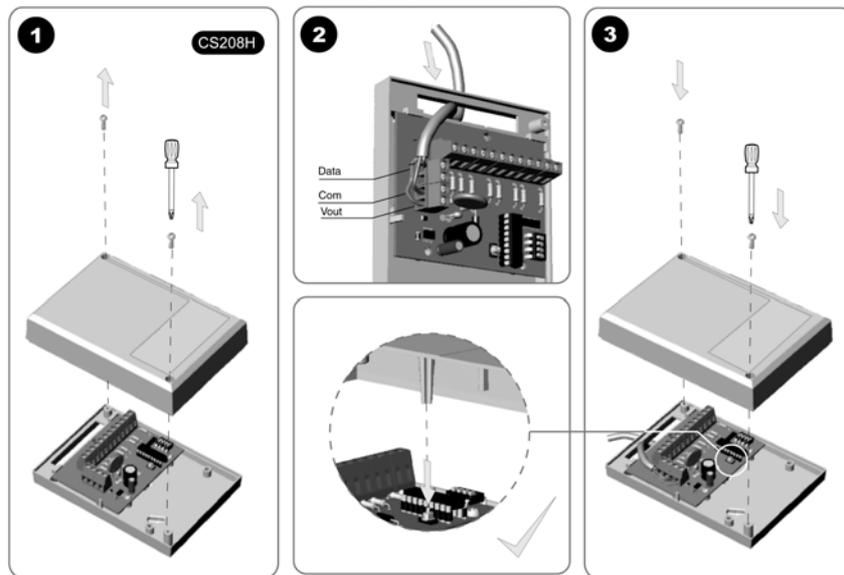
1. Unscrew the screws to open the housing.

2. Wire the terminals as shown.

3. Replace the lid, making sure that the orientation is correct.

6.3.2 CS208H input expander board
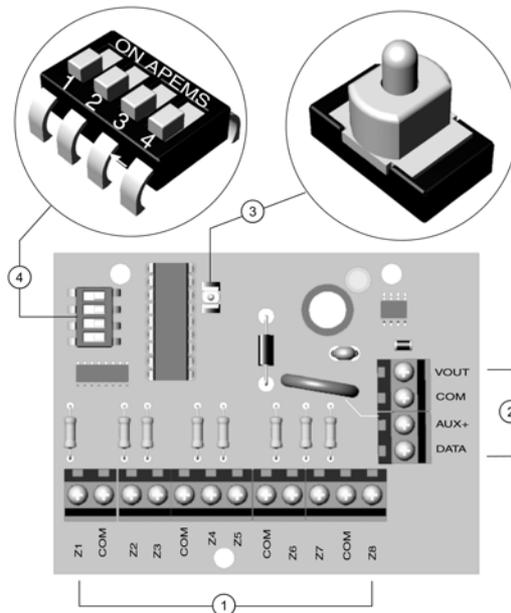
①	Zone connections (8 sets)	③	Tamper switch
②	Keypad bus connection	④	DIP switches

6.3.3 Setting the DIP switches

1. Power down the CS208H input expander.

2. Decide the starting zone of each CS208H input expander. The starting zone of each zone expander must be on a boundary of 8 zones.

3. To set the starting zone, set the DIP switches from Table 6-3: *CS208H DIP switches*. The 8 zones for this module begin from this starting zone number.

4. Power up the CS208H input expander.

Table 6-3: CS208H DIP switches

DIP switch setting	Starting zone number	Module number	DIP switch setting	Starting zone number	Module number
	9	23		73	97
	17	16		81	98
	25	17		89	99
	33	18		97	100
	41	19		105	101
	49	20		113	102
	57	21		121	103
	65	96			
= ON = OFF					

6.3.4 Wiring the CS208H input expander

To wire the CS208H input expander, see Table 6-4: *CS208H input expander terminals*. Any unused zones must have an EOL resistor across them.

Table 6-4: CS208H input expander terminals

Terminal	Description
DATA	Connect to the KP DATA terminal of the CSx75.
AUX	Connect to the KP POS terminal of the CSx75. Current draw is 30 mA.
COM	Connect to the KP COM terminal of the CSx75.
Out	Can be used to power devices directly from the CS208H. Power comes from the CSx75 and the current draw of these devices must be added to the total current draw of the CS208H. The output current connected to a COM terminal is limited to 100 mA.
Z1	Connect to one side of zone 1 loop. Connect the other side to the COM terminal. Open or short causes alarm.
COM	Common (-) terminal for zones 1 and 2.
Z2	Connect to one side of zone 2 loop. Connect the other side to the COM terminal. Open or short causes alarm.
Z3-Z8	Connect as described for Z1 and Z2.

6.4 Programming the CS208H / CS208 / CS216 input expander

6.1 | Input Exp 16
Input Exps 17 - 108
Same as above

The zones on the CS208H / CS208 / CS216 input expander are programmed in a similar way to on-board zones. For more information on programming on-board zones, see chapter B-2 *Programming the control panel*. You must enroll and default each input expander before you begin to program the system. For more information on enrolling and defaulting, see chapter B-1 *Enrolling modules*. To program the input expander zones, select *Installer Menu>Control Panel>CS208/CS216 Input Expander*.

6.5 Glossary

Location	Term	Definition
6	CS208 / CS216 Input Expanders	An expander board that increases the number of wired inputs that can be used for a particular zone. It has an optional tamper switch and a power isolator for use in a remote location. It cannot be used on the CS175 or CS275 control panel. The CS208 has 8 zones and the CS216 has 16 zones. A menu entry that groups CS208/CS216 input expander options.

6.6 Technical specifications

6.6.1 CS208 / CS216 input expander

Power supply specifications	
Power supply voltage	13.8V ▬ ±2%
Consumption (with 4K7 EOL)	64 mA at 13.8V ▬ ±2%
Auxiliary Power output	100 mA max at 13.8V ▬ ±2%

General feature specifications		
PCB Size	Dimensions (width x height x depth)	110x95x25.4 mm
Environmental	Operating temperature	+0° C to + 40 °C
	Humidity	Max 93% non condensing
	Shipping Weight	115 g

6.6.2 CS208H input expander

Power supply specifications	
Power supply voltage	13.8V ▬ ±2%
Consumption (with 4K7 EOL)	64 mA at 13.8V ▬ ±2%
Auxiliary Power output	100 mA max at 13.8V ▬ ±2%

General feature specifications		
PCB Size	Dimensions (width x height x depth)	80x60x105 mm
Environmental	Operating temperature	+0° C to + 40 °C
	Humidity	Max 93% non condensing
	Shipping Weight	105 g

Chapter 7: Setting up the CS507

7.1 Overview

The CS507 output expander is an auxiliary module used to expand the output capabilities of the CSx75 control panel with the following functionality:

- Microprocessor controlled two relay, five Open Collector expander.

- Two separate normally open and normally closed relay contacts for a variety of applications, including access control, home control/automation, wireless interfaces, and security functions.

- Five low current trigger outputs (Output 1-2-3-4-5).

The CS507 output expander can be programmed to:

- Activate for an event in any or all partitions, if the control panel supports partitions.

- Set up each relay to follow up to eight different schedules to either activate the relay during the On time, or to be used in conjunction with another programming option to create time zones.

7.2 Installing the CS507 output expander
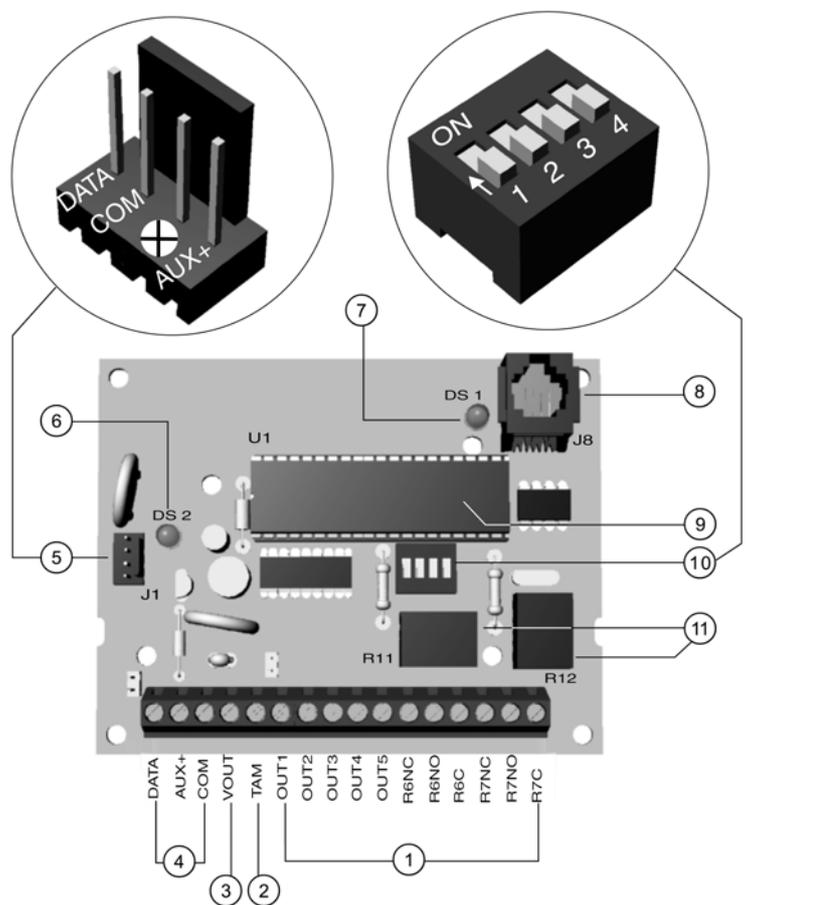
①	Form C (SPDT) relay connections (2 sets) + 5 open collectors	⑦	X–10 supervision LED
②	Tamper connection	⑧	X-10 connection
③	Auxiliary power connection	⑨	Processor
④	Keypad bus connection	⑩	DIP switches (4 positions)
⑤	Additional keypad bus connection	⑪	Relay
⑥	Supervision LED		

7.2.1 Setting the DIP switches

1. Power down the CS507 output expander.

2. Set the DIP switch according to Table 7-1: *CS507 output expander DIP switches*.

Table 7-1: CS507 output expander DIP switches

DIP switch setting	Address	Outputs	DIP switch setting	Address	Outputs
	24	1-7		28	33-39
	25	9-15		29	41-46
	26	17-23		30	49-55
	27	25-31		31	57-63
= ON = OFF					
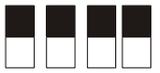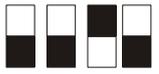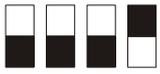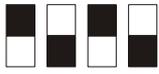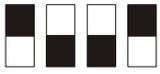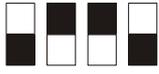
3. The outputs can be logged in the event log. The output numbers that appear in the event log are linked to a selected CS507 output expander address.

4. Power up the CS507 output expander. The position of all switches is updated when the CS507 output expander is powered up.

For details on how to install the CS507 output expander in the various housings, see chapter A-4 *Installing a basic system*.

7.2.2 Wiring the CS507 output expander

Table 7-2: CS507 output expander terminal connections

Terminal	Description
DATA	Connect to the KP DATA terminal of the CSx75.
AUX	Connect to the KP POS terminal of the CSx75. Current draw is 30 mA.
COM	Connect to the KP COM terminal of the CSx75.
Vout	This terminal can supply up to 100 mA fused separate from the power in the control panel. Note: Any power drain from this terminal should be included in total current draw from the CSx75. This allows an isolation of the power between the main control and remote devices. If a short is created past the AUX terminal, these devices cease to function, but the other devices, including the CS507 output expander, continue to operate. The CS507 output expander reports this problem to the control panel for display on the keypad as an expander power trouble.

Table 7-2: CS507 output expander terminal connections

Terminal	Description
TAM	If not used, connect to a COM terminal.
Out 1- 5	Open Collector outputs that switch to GND when activated - capable of up to 100 mA. **Note**: If the device is connected to outputs, it must see the transition from 13 Volts to GND. The enclosed resistors must be used. Connect the resistor between AUX and the output being used.
Relay 6 /NC	Closed dry contact rated 1 Amp at 30 Vdc.
Relay 6 /NO	Open dry contact rated 1 Amp at 30 Vdc.
Relay 6 /CO	Common dry contact rated 1 Amp at 30 Vdc.
Relay 7 /NC	Closed dry contact rated 1 Amp at 30 Vdc.
Relay 7 /NO	Open dry contact rated 1 Amp at 30 Vdc.
Relay 7 /CO	Common dry contact rated 1 Amp at 30 Vdc.
	Additional keypad connector ⑤ (from top to bottom)
1	DATA
2	COM
3	Unused
4	AUX+

An additional connector J1, (left middle), allows a direct bus connection to the controller. An additional cable is supplied with the panel in case you install the expander in the housing of the CSx75, and connects to J16 on the CS575. There are 2 ways of connecting the CS507 output expander module to the CSx75 controller:

• When the CS507 output expander is mounted in the box, you can use the direct bus connection as explained above.

• When the expansion module is mounted remotely, you can use the terminals DAT, AUX+, COM as outlined in Table 7-2: *CS507 output expander terminal connections*. In this case, you must wire the tamper of the external box to the COM and TAM terminals.

7.3 Programming the CS507 output expander

7.1	Output Exp 24	7.1.1	Outputs	7.1.1.1	1 (<Event>)	7.1.1.1.1	Event	7.1.1.1.1.1	Alarms
	Output Exps 25 - 31 *Same as above*				*Outputs 2 - 8* *Same as above*			7.1.1.1.1.2	Arm/Disarm
								7.1.1.1.1.3	Communications
								7.1.1.1.1.4	Keypads
								7.1.1.1.1.5	Sirens
								7.1.1.1.1.6	Tamper/Trouble
								7.1.1.1.1.7	Tests
								7.1.1.1.1.8	Miscellaneous

7.1.1.1.2	Zone/User
7.1.1.1.3	Time Unit
7.1.1.1.4	Time
7.1.1.1.5	Partitions

7.1.1.1.6	Attributes	7.1.1.1.6.1	Latched
		7.1.1.1.6.2	Code Stops Timer
		7.1.1.1.6.3	Only if Closed
		7.1.1.1.6.4	Only if Open
		7.1.1.1.6.5	Inverted
		7.1.1.1.6.6	Log Event

7.1.1.1.7	Schedules

7.1.1.1.8	X-10 Address	7.1.1.1.8.1	Module Number
		7.1.1.1.8.2	House Code

7.1.2	Schedules	7.1.2.1	Schedule 1	7.1.2.1.1	Opening	7.1.2.1.1.1	Hour
			Schedules 2 - 8 *Same as above*	7.1.2.1.2	Closing	7.1.2.1.1.2	Minute

7.1.2.1.3	Active	7.1.2.1.3.1	Sunday
		7.1.2.1.3.2	Monday
		7.1.2.1.3.3	Tuesday
		7.1.2.1.3.4	Wednesday
		7.1.2.1.3.5	Thursday
		7.1.2.1.3.6	Friday
		7.1.2.1.3.7	Saturday
		7.1.2.1.3.8	Disable on Holidays

7.1.3	Date of holidays	7.1.3.1	January	7.1.3.1.1	Day 1
		7.1.3.2	February		*Days 2 - 8* *Same as above.*
		7.1.3.3	March		
		7.1.3.4	April		
		7.1.3.5	May		
		7.1.3.6	June		
		7.1.3.7	July		
		7.1.3.8	August		
		7.1.3.9	September		
		7.1.3.10	October		
		7.1.3.11	November		
		7.1.3.12	December		

7.1.4	Users	7.1.4.1	(1) User 1	7.1.4.1.1	Outputs
			Users 2 - 99 *Same as above* *If more than 10 users,* *users are first displayed in* *groups of 10 and then* *displayed as above.*		

7.1.5	Model
7.1.6	Version
7.1.7	Default Settings

The CS507 outputs are programmed in a similar way to on-board outputs. The outputs are triggered based on different events. The events are grouped in the programming tree. A full list of all possible selectable events can be found in Table 7-3: *CS507 output expander output events*. You must enroll and default each output expander before you begin to program the system. For more information on enrolling and defaulting, see chapter B-1 *Enrolling modules*. To program the outputs, select *Installer Menu>CS507 Output Expanders.*

Table 7-3: CS507 output expander output events

#	Event	#	Event	#	Event
	Tampers		**Misc**		**Communications**
9	Mains Failure	8	Any Bypass	32	Listen-in
10	Low Battery	11 ✔	Duress	33	Line Seizure
25	Fire LED	45 ✔	Code Entry	34	Failed to communicate
26	Fire Trouble	36	Program Mode	35	Telephone line fault
28 ✔	Expander Trouble	46 ✔✔	Keyfob Funct 1	37	Download
39	Over-current	47 ✔✔	Keyfob Funct 2	55	End Listen In (Integrated Only)
40	Box Tamper	51	CS507 Schedule		**Arm/disarm**
41	Siren Tamper	52	X-10 Alarm Mem	18	Entry
42	Any Open Zone	53	X-10 Siren	19	Exit
58	Sensor Low Battery	56	Compare X10 Commands To Programmed Outputs	20	Entry or exit
59	Sensor Lost		**Keypads**	21	Armed
64	Smoke Reset Function	12 ✔	Manual Fire	22	Not armed
65	Antimask Output	13 ✔	Keypad Medical	23	Ready
	Alarms	14 ✔	Keypad panic	24	Not ready
0 ✔	Burglary Alarm	15	Keypad tamper	30 *	Open schedule
1 ✔	Fire Alarm	27	Chime	31 *	Closed schedule
2 ✔	24-hour Alarm	44	Keypad beeping	48	Auto arm control
3 ✔	Trouble Alarm		**Sirens**	49	Auto disarm control
4 ✔	Tamper Alarm	5	Burglary Siren	50	Auto arm and disarm control
17	Alarm memory	6	Fire Siren	54	Armed Away With Exit Expired
43 ✔	Any Alarm	7	Any Siren	57	Armed Stay
62	Verified Burg	61	External Siren		**Tests**
63	Verfied Fire			16 ✔	Automatic Test
				29	Dyn Battery Test
				60	Walktest Mode

*   See *Schedule Times>Opening* and *Schedule Times>Closing/Autoarm*.
✔   If set to latched condition, these events are one second.
✔✔   Events 46 and 47 require RX8w8, RX16w8, RX32w8, RX8i4, RX16i4, or RX48i4 wireless receivers to operate.

Events 48, 49 and 50 arm or disarm the CSx75 at the open (disarm) or close (arm) time for the appropriate schedule.
✎ *For events 48 and 50, the keypad buzzer will sound one minute prior to auto arm if the zone value is 1.If the zone value is 0, the keypad will not sound prior to auto arm*

7.3.1 Setting up schedules

You can set up a schedule to control the day and time at which the system automatically opens and closes or the days on which specific output events are active. You can also specify certain days on which the schedule is not active. For example, you might use a schedule to disarm the system each morning at a certain time. However, on holidays you might not want the system to disarm at this time. The following example sets up January 1st as the day on which schedule 1 is not active.

1. Navigate with the ↑↓ keys to *CS507 Output Expanders>Output Exp 24>Schedules* and press **OK**.

2. Scroll to *Schedule 1>Active>Disable on Holidays>Yes* and press **OK**.

3. Navigate with the ↑↓ keys to *Date of holidays>January>Day 1>1* and press **OK**.

4. The keypad beeps once to accept the change and returns to *Day 1*.

5. To use this schedule, enable *Outputs>Schedules* for the selected output. For information on how to enable this option, see *Configuring an output*.

7.3.2 Configuring an output

You can specify events, users and partitions that can activate a particular output. The output can be controlled using a schedule or by an X-10 device. If an output is controlled by a schedule, it can be activated during the times specified in the schedule only. If it is controlled by an X-10 device, it can be activated during the time the X-10 device is switched on or off. The following example configures output 1 on output expander 24 to be activated by a box tamper event. This output is controlled by schedule 1.

1. Navigate with the ↑↓ keys to *CS507 Output Expanders>Output Exp 24>Outputs* and press **OK**.

2. Scroll to *Output 1>Event>Tamper/Trouble>Box Tamper* and press **OK**.

3. The keypad beeps once to accept the change and returns to *Tamper/Trouble*.

4. Scroll to *Schedules* and press **OK**.

5. Press the relevant keys to select schedule only and press **OK**.

6. The keypad beeps once to accept the change and returns to *Schedules*.

7.3.3 Configuring users

You can specify the user code that triggers the selected output. The following example sets user code 1 to activate outputs on output expander 24.

1. Navigate with the ↑↓ keys to *CS507 Output Expanders>Output Exp 24>Outputs>Output 1* and press **OK**.

2. Scroll to *Event>Miscellaneous>Code Entry* and press **OK**.

3. The keypad beeps once to accept the change and returns to *Miscellaneous*.

4. Scroll to *Zone/User>(User) 1* and press **OK**.

5. The keypad beeps once to accept the change and returns to *Zone/User*.

6. Navigate with the ↑↓ keys to *Users>User 1>Outputs* and press **OK**.

7. Press the relevant keys to select the outputs that the user code can activate and press **OK**.

8. The keypad beeps once to accept the change and returns to *Outputs*.

7.4 Glossary

Location	Term	Definition
7	CS507 Output Expanders	An expander board that increases the number of outputs that can be used with the control panel. A menu entry that groups CS507 output expander options.
7.1.1	Outputs	A menu entry that groups options relating to programmable outputs. There are two types of outputs; relay and open collector. The control panel includes up to four auxiliary outputs. The CS507 output expander provides additional outputs.
7.1.1.1.1	Event	Any occurrence such as system arming, faults and alarms. A menu option that specifies which event activates an output.
7.1.1.1.1.1	Alarms	A *CS507 Output Expander* menu entry that groups together the alarm events that can be selected to trigger an output.
7.1.1.1.1.2	Arm/Disarm	A menu entry that groups the events that can be used to trigger outputs.
7.1.1.1.1.3	Communications	A menu entry that groups together the communication events that can be selected to trigger an output.
7.1.1.1.1.4	Keypads	A menu entry that groups the keypad events that trigger an output.
7.1.1.1.1.5	Sirens	A menu entry that groups together the siren events that can be selected to trigger an output.
7.1.1.1.1.6	Tamper/Trouble	A menu entry that groups together the tamper and trouble events that can be selected to trigger an output.
7.1.1.1.1.7	Tests	A menu entry that groups settings related to different tests. These include tests such as automatic test calls, dynamic battery tests and so on.
7.1.1.1.2	Zone/User	A menu entry that specifies that the selected event must occur on a specific zone or by a specific user.
7.1.1.1.3	Time Unit	A menu option that specifies whether the outputs are timed in minutes or seconds.
7.1.1.1.4	Time	A menu option that sets the length of time for which an output is activated. If it is set to 0, the output follows the event.
7.1.1.1.5	Partitions	A *menu* entry that lists the partitions assigned to the selected output. The selected output can be triggered by an event on these partitions.
7.1.1.1.6	Attributes	A menu entry that groups the programmable attributes of the selected output.
7.1.1.1.6.1	Latched	A menu option that causes an output to remain activated until a code is entered at the keypad.
7.1.1.1.6.2	Code Stops Timer	A menu option that allows the timer used on programmable outputs to be reset by entering a valid user code.
7.1.1.1.6.3	Only if Closed	A menu option that activates an output after closing time and before opening time. During these times, codes can be used to arm/disarm the system. A timer is used to set these times.
7.1.1.1.6.4	Only if Open	A menu option that activates an output between opening time and closing time.
7.1.1.1.6.5	Inverted	A menu option that enables a mode that inverts the state of an output (normally activated and then deactivated when an event occurs).
7.1.1.1.6.6	Log Event	A menu option that causes the selected output to log an event when it is activated.
7.1.1.1.7	Schedules	A menu option that selects the schedules that affect the selected output.

Location	Term	Definition
7.1.1.1.8	X-10 Address	A menu option that sets the address of an X-10 device. This is a unique number assigned to an X-10 device. It consists of the module number and house code. The system uses this address to identify the device.
7.1.1.1.8.1	Module Number	A menu option that sets the X-10 module number used to identify a particular X-10 device on the selected module. A CSx75 bus module number is assigned to each system module. The system uses this number to identify the module. It is also used to report module problems (such as tampers and module supervision lost) to the central station.
7.1.1.1.8.2	House Code	A menu option that sets the code used to identify a particular premises. It is necessary in case any neighbouring premises also has an X-10 home automation system. More information on the X-10 home automation system can be found at www.x-10europe.com.
7.1.2	Schedules	A menu entry that groups scheduling options. These options set the times to start and end an operation.
7.1.2.1.1	Opening	A menu option that sets the time at which the selected schedule enters the open state.
7.1.2.1.2	Closing	A menu option sets the time at which the selected schedule enters the closed state.
7.1.2.1.3	Active	A menu option that specifies the days of the week that a particular schedule is active.
7.1.2.1.3.2	Disable on Holidays	A menu option that activates the holidays feature. The selected schedule is not active on the dates specified in *Date of holidays*.
7.1.3	Date of holidays	A menu option that sets the dates of holidays. If the holidays feature (7.1.2.1.3.2) has been enabled, no schedules are active on these dates. Up to eight holidays per month can be specified.
7.1.4	Users	A menu option that specifies the zone or user number that triggers the output on the expander module or power module.
7.1.4.1.1	Outputs	A menu option that specifies which outputs the selected user can operate. The users menu can be used only when event 45 (code entry) is used.
7.1.5	Model	A menu option that displays the current model of the selected output expander.
7.1.6	Version	A menu option that displays the current software version of the selected output expander.
7.1.7	Default Settings	A menu option that defaults the selected output expander.

7.5 Technical specifications

Power supply specifications	
Power supply voltage	13.8V ⎓ ±2%
Consumption – No outputs active	10 mA at 13.8V ⎓ ±2%
Consumption – All outputs active	25 mA at 13.8V ⎓ ±2% + current draw of any device attached.
Auxiliary Power output	100 mA max at 13.8V ⎓ ±2%

General feature specifications		
PCB Size	Dimensions (width x height x depth)	110x95x25.4 mm
Environmental	Operating temperature	+0° C to + 40 °C
	Humidity	Max 93% non condensing
	Shipping Weight	115 g

Chapter 8: Setting up the CS586

8.1 Overview

The CS586 direct connect module is an optional device used to interface the up/download software directly to the control panel when the on board serial port is not available. The CS586 direct connect module has four programming memories.

8.2 Connecting the CS586 direct connect module

8.2.1 Connecting the CS586 to a PC
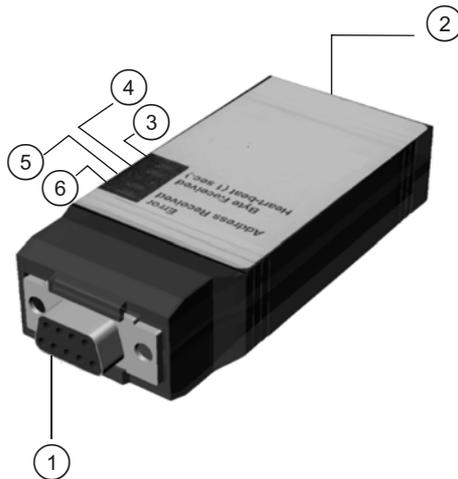
① RS232 connector

② RJ11 (rear-entry connector)

③ Waiting for host communication LED

④ Waiting for bus communication LED

⑤ Sending data LED

⑥ Receiving data LED

1. Connect the CS586 direct connect module to the serial port of the PC. The layout of the 25 PIN serial connector on the PCB is:

Table 8-1: CS586 direct connect module serial connector

Sub	D9	D25
RXD	PIN 2	PIN 3
TXD	PIN 3	PIN 2
GND	PIN 5	PIN 7

2. Connect the cable to the CS586 direct connect module.

3. Using stripped wires, connect the cable with alligator clips to a CSx75 panel as follows:

• Red to POS

• Black to COM

• Green to DATA

8.2.2 Connecting the CS586 to a PC and a panel

Connect the CS586 direct connect module to the serial port of the PC and the panel as shown in the previous section. The black and red connectors can be connected to any 12V DC source and the green connector does not need to be connected.
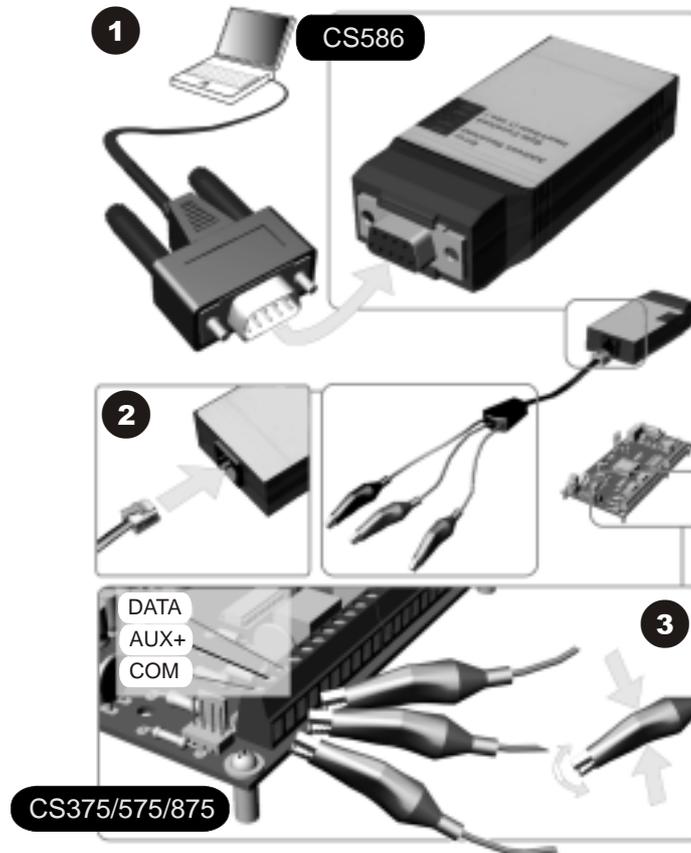
8.2.3 Connecting the CS586 to a panel

1. Connect the cable with alligator clips to a CSx75 panel as follows:

• Red to POS

• Black to COM

• Green to DATA

✍ *If you are using a CS875 and have a keypad installed in partition 8, keypad 8, it must be removed during this operation.*

8.3 Programming the CS586 direct connect module
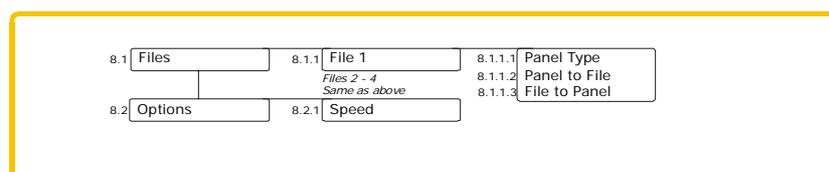
The control panel's programming memory can be copied to one of the four programming memories in the CS586 direct connect module and visa versa. You must enroll and default the module before you begin to program the system. For more information on enrolling and defaulting, see chapter B-1 *Enrolling modules*.

To program the CS586 using the CS5500 keypad, select *Installer Menu>CS586 Direct Connect Module*. To program the CS586 using a PC, start the UDx75 up/download software on the PC.

8.3.1 Enabling memory transfer using the CS5500 keypad

The following example uses the CS5500 keypad to copy the control panel's programming memory to the CS586 programming memory 2. It then copies programming information from the CS586 programming memory 3 to the control panel.

1. Navigate with the ↑↓ keys to *CS586 Direct Connect Module>Files* and press **OK**.

2. To write information from the control panel to the CS586, scroll to *File 2>Panel to File* and press **OK**.

3. Select *Yes* to confirm and press **OK**.

4. The control panel's programming memory is copied to the CS589 direct connect module's programming memory 2. The Receiving Data LED on the CS586 direct connect module flashes while the data is received. The keypad sounder chimes when the operation is successful.

5. To read information from the CS586 to the control panel, scroll to *File 3>File to Panel* and press **OK**.

6. Select *Yes* to confirm and press **OK**.

7. The information in the CS586 programming memory 3 is copied to the current control panel. The Sending Data LED on the CS586 direct connect module flashes while the data is received. The keypad sounder chimes when the operation is successful.

8. A triple beep sounds if any error occurs when reading or sending data.

8.3.2 Enabling memory transfer using UDx75 software

The following example uses UDx75 software to copy the control panel's programming memory to the CS586 programming memory 2. It then copies programming information from the CS586 programming memory 3 to the control panel.

1. Start the UDx75 upload/download software.

2. The *UDx75 Master access* screen opens. Enter the operator name and password and press **OK**. The default name and password in the program when it is shipped is *Operator* Aritech and *Password* 1278.

3. The *UDx75 Operator access* screen opens. Enter the operator name and password and press **OK**. The default name and password in the program when it is shipped is *Operator* Aritech and *Password* 1278.

4. Select *Program>Setup>Direct connect settings* and press **OK**.

5. Select the correct port number and baud rate and press **OK**. The protocol must be binary (default). The baud rate should match the CS586 direct connect module. The default baud rate is 9600.

6. Select *View>Customers>List* and choose the account to use from the *Customer list* screen.

7. Select *Download>Connect>Write panel to 586* and download as normal. You are warned that this could overwrite user codes if the user changed them.

8. Select where to store the data on the CS586 direct connect module. This overwrites the existing data without further prompting.

9. A screen opens indicating that the data is being sent. When this screen disappears, the process is complete.

10. Select *Download>Read panel from 586*.

11. Select which data should be retrieved on the CS586 direct connect module.

12. A screen opens showing that the data is being read. When this screen disappears, the process is complete.

8.4 Glossary

Location	Term	Definition
8	CS586 Direct Connect Module	A menu optional device used to interface the up/download software directly to the control panel when the on board serial port is not available.
8.1	Files	A menu entry that groups the four programming memories in the direct connect module.
8.1.1	File 1	A menu option that selects the programming memories within the direct connect module. There are four possible programming memories.
8.1.1.1	Panel Type	A menu option that displays panel type information currently stored in one of the four programming memory files in the direct connect module. Possible values are CS175, CS275, CS375, CS575 and CS875.
8.1.1.2	Panel to File	A menu option that copies a panel's programming to one of the programming memories in the direct connect module. There are four possible programming memories in the CS586.
8.1.1.3	File to Panel	A menu option to copy programming memory from one of the four memory locations contained in the direct connect module, to the control panel.
8.2.1	Speed	A menu option that sets the data communications speed from the CS586 direct connect module to the control panel. This can be set from 600 baud to 76.8k baud. It is recommended to use the default setting of 9600 baud.

8.5 Technical Specifications

Power supply specifications	
Power supply voltage	13.8V ⎓ ±2%
Consumption	30 mA at 13.8V ⎓ ±2%
General feature specifications		

Housing Size	Dimensions (width x height x depth)	57x100x20 mm
Environmental	Operating temperature	+0° C to + 40 °C
	Humidity	Max 93% non condensing
	Shipping Weight	150 g
Telephone	Telephone requirement	Touchtone

Chapter 9: Setting up the CS534

9.1 Overview

The CS534 listen-in module is a two-way audio and voice communicator for the CSx75 control panel. Once the control panel has communicated an alarm, the CS534 listen-in module allows a monitoring service operator to listen-in to a customer's premises. It can also provide basic two-way voice communication. This procedure is controlled from the central station by the use of a touch tone telephone.

9.2 Installing the CS534 listen-in module

The CS534 listen-in module is installed on top of the main panel board and must be connected to the expansion header. For more details on how to install the CS534 listen-in module in the various housings, see chapter A-4 *Installing a basic system.*
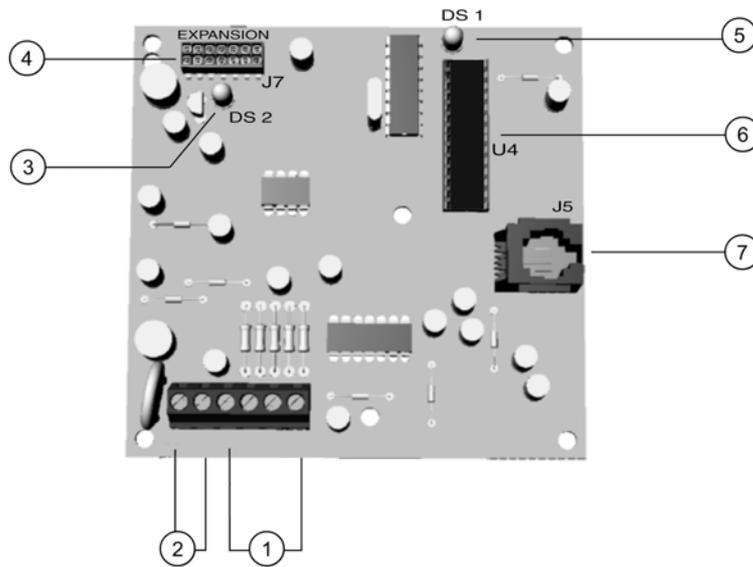
1. Microphone channels A and B
   Wire run can be 300 m if microphone wires are in a separate jacket from the speaker, 150 m if in the same jacket.

2. Speaker terminals
   Maximum speaker wire run = 300 m
   Minimum speaker rating is 5 W, 8 ohms

3. Supervision LED

4. Expansion port

5. Bus supervision LED

6. Processor

7. X-10 Connection: RJ11

9.2.1 Wiring the CS534 listen-in module

Table 9-1: CS534 terminal connections

Terminal	Description
	Connector on the left side.
1	Connect positive side of microphone #A.
2	Connect negative side of microphone #A.
3	Connect positive side of microphone #B.
4	Connect negative side of microphone #B.
SPK+ SPK-	Connect to the speaker(s). Maximum speaker wire run: 300m. Minimum speaker rating: 5 Watts, 8 Ohms. Do not go below 4 Ohms.

9.2.2 General operating instructions

The system operates as follows, regardless of how a two-way session is started.

- The session timer is started. Select *CS534 Listen-in Module>Timers>Session Timeout*.

- All microphones are on. Select *Installer Menu>CS534 Listen-in Module>Feature Select>Mic A at Startup* or *Installer Menu>CS534 Listen-in Module>Feature Select>Mic B at Startup*.

- Low gain listen-in audio mode is selected (automatic).

- Level 0 command set is active (automatic).

- The CS534 listen-in module operates in one of two modes that must be programmed in. Select *CS534 Listen-in Module>Feature Select>Mode*.

9.2.2.1 Line hold mode

1. An alarm is recognized.

2. The phone line is seized from the control panel and all phones on the premises.

3. The line disconnects (goes off the hook).

4. The CS534 listen-in module sends a tone indicator to the central station. For more details see *Tones*.

5. If a line hold digit has been programmed, the system will wait for the digit to be received before a two-way session is started. To check this, select *CS534 Listen-in Module>Line Hold digit*. If the digit is not received before the time-out period, the system returns to stand-by mode and waits for a new trip.

6. If the line hold digit is received or not programmed, the system starts a two-way session.

9.2.2.2 Call back mode

1. An alarm is recognized.

2. The phone line is seized from the control panel and all phones on the premises.

3. The line disconnects (goes off the hook).

4. The CS534 listen-in module starts the call back window timer. If the time runs out before the number of rings has been reached, the system returns to stand-by mode and waits for a new trip.

5. The CS534 listen-in module waits to receive the call back, up to the selected number of minutes programmed in for the first ring.

6. The CS534 listen-in module sends a continuous indicator tone to the central station until the access code is received or the maximum number of attempts is exhausted. When a code is received, the indicator tone is silenced.

7. The CS534 listen-in module waits for the access code to match. The reset [#] key may be used during PIN entry to clear the PIN buffer. If the access code does not match after a set number of attempts, the system returns to stand-by mode and waits for a new trip. If the code is validated, the system silences the siren and starts a two-way session.

9.2.3 Control levels

Levels of the modes may be changed at any time by pressing ***** followed by the level number you wish to access on a touch-tone telephone. If no key is pressed for 3 seconds on the telephone, then the buffer is automatically cleared. Press * on the telephone twice to return to the beginning.

- If a new alarm in the *same partition* is activated during a two-way session, the session timer can be extended by pressing a key before the session times out.

- If a new alarm in a *different partition* is activated during a two-way session, the timer is reduced to 20 seconds, and cannot be extended.

✍ *Levels 1, 2 and 4 are not supported. Attempts to access these levels will revert to Level 0*

Table 9-2: CS534 control levels

Level 0		Basic control level
	0	Returns to the initial session settings when it is tripped. This includes the microphone selection and audio mode.
	1	High gain talk to the premises and extends the session time.
	3	High gain listen-in from the premises and extends the session time.
	2, 4, 5, 7, 8, 9	Extends the session time.
	6	Low gain listen-in from the premises and extends the session time.
	88	Terminates the session and starts the call back mode.
	99	Terminates the session and returns to the stand-by mode and waits for a new trip.
Level 3		Microphone control (zoning)
	0	Returns to the initial session settings when it was tripped. This includes the microphone selection and audio mode.
	1	Turns microphone 1 on, microphone 2 off, and extends the session time.
	2	Turns microphone 2 on, microphone 1 off, and extends the session time.
	3, 4, 5, 6, 7, 8	Extends the session time.
	9	Turns both microphones on and extends the session time.
Level 5		Output / relay control level (negative—turn off) Note: This feature requires X-10 Interface.
	0	Returns to the initial session settings when it is tripped. This includes the microphone selection and audio mode.
	1 – 9	Turns the corresponding output/relay OFF. A negative confirmation tone (two low beeps) is heard. For more information, see Table 9-3: *CS534 tones*.

Table 9-2: CS534 control levels

Level 6	Output / relay control level (positive—turn Note: This feature requires X-10 Interface.	
	0	Returns to the initial session settings when it is tripped. This includes the microphone selection and audio mode.
	1 - 9	Turns the corresponding output/relay ON. A positive tone sounds.
Level 7	**Status check**	
	0	Returns to the initial session settings when it is tripped. This includes the microphone selection and audio mode.
	1	Armed status: If partition 1 is armed, a positive tone sounds. If disarmed, a negative tone sounds.
	2	Ready status: If partition is in Ready status, a positive tone sounds. If it is not Ready, a negative tone sounds.
	3	Power status: If AC and battery are good, a positive confirmation tone sounds. If either AC or battery is bad, a negative tone sounds.
	4 – 9	Extends the session time.
Level 8	**Arming / disarming partition 1**	
	0 – 9	Enter your PIN user code to arm or disarm the system. If partition 1 is armed, a positive beep sounds. If partition 1 is disarmed, a negative beep sounds.

9.2.4 Tones

These indicator tones may be heard at the central station during a two-way session. The definition of these indicator tones is as follows:

LOW = 400 HzMID = 1000 Hz....................................HIGH = 1600 Hz

Table 9-3: CS534 tones

Tone	Description
One high tone for 100 mS	Time remaining indicator "A ".
One mid tone for 100 mS	Time remaining indicator "B".
One mid tone for 100 mS, off for 100 mS, one high tone for 100 mS	New alarm alerts for the same partition.
One high tone for 100 mS, off for 100 mS, one mid tone for 100 mS, off for 100 mS, one high tone for 100 mS	New alarm alerts for a different partition.
Continuous on/off high tone every 100 mS; will stop after a digit is received	System waiting for access PIN.
One low tone for 200 mS (if enabled)	Anti lock-up
One mid tone for 500 mS	Acknowledgement to level change command.
One mid tone for 250 mS, off for 250 mS, one mid tone for 250 mS, off for 250 mS, one mid tone for 250 mS	Error tone
One low tone for 100mS	Relay / Output turned ON, or Positive Status response, or Partition 1 armed.
One low tone for 100mS; off for 200mS; one low tone for 100 mS	Relay / Output turned OFF, or Negative Status response, or Partition 1 disarmed.

9.3 Programming the CS534 listen-in module
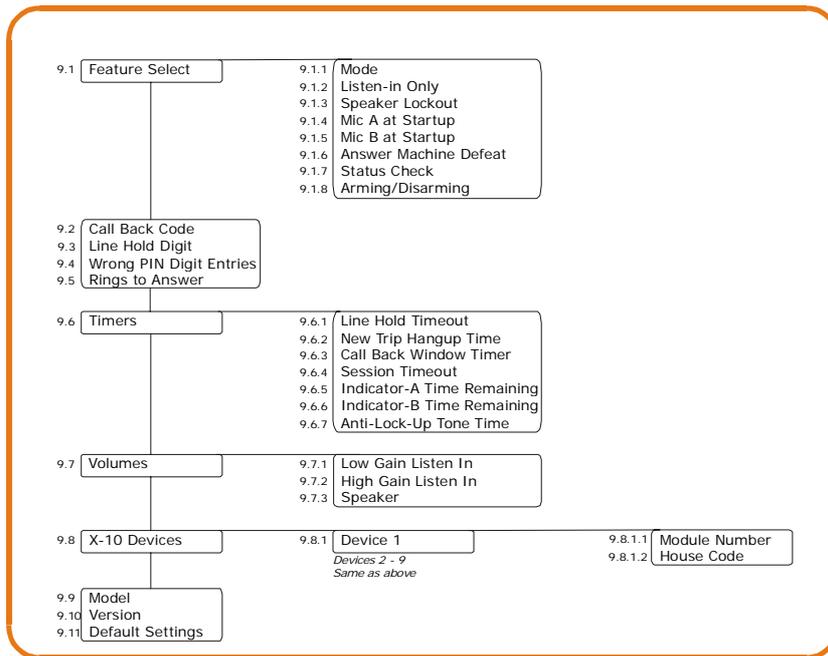
You must enroll and default the CS534 module before you begin to program the system. For more information on enrolling and defaulting, see chapter 6. To program the CS534, select *Installer Menu>CS534 Listen-in Module*.

9.3.1 Configuring listen-in options

You can configure the listen-in mode and listen-in options. The following example prevents the central station turning on the speaker at the premises if a duress, silent panic or hold-up alarm is reported by the control panel.

1. Navigate with the ↑↓ keys to *CS534 Listen-in Module>Feature Select* and press **OK**.

2. Scroll to *Speaker Lockout>Yes* and press **OK**.

3. The keypad beeps once to accept the change and returns to *Speaker Lockout*.

9.3.2 Programming timers

You can set timers to control various CS534 listen-in module features. The following example sets the line hold digit to 2 and line hold timeout to 60 seconds.

1. Navigate with the ↑↓ keys to *CS534 Listen-in Module>Line Hold Digit* and press **OK**.

2. Select *2* and press **OK**.

3. The keypad beeps once to confirm the change and returns to *Line Hold Digit*.

4. Scroll to *Timers>Line Hold Timeout* and press **OK**.

5. Select *60* and press **OK**.

6. The keypad beeps once to confirm the change and returns to *Line Hold Timeout*.

9.3.3 Setting volume levels

You can adjust volume levels used with the CS534 listen-in module. The following example sets the volume for high gain listen in to level 4.

1. Navigate with the ↑↓ keys to *CS534 Listen-in Module>Volumes* and press **OK**.

2. Scroll to *High Gain Listen In>4* and press **OK**.

3. The keypad beeps once to accept the change and returns to *High Gain Listen In*.

9.3.4 Assigning X-10 devices

The CS534 listen-in module can activate X-10 devices over the telephone. The following example assigns device 1 (module number 5, house code L) to the CS534 listen-in module.

1. Navigate with the ↑↓ keys to *CS534 Listen-in Module>X-10 Devices>Device 1* and press **OK**.

2. Scroll to *Module Number* and press **OK**.

3. Select **5** and press **OK**.

4. The keypad beeps once to confirm the change and returns to *Module Number*.

5. Scroll to *House Code* and press **OK**.

6. Select *L* and press **OK**.

7. The keypad beeps once to confirm the change and returns to *House Code*.

9.4 Glossary

Location	Term	Definition
9	CS534 Listen-in Module	A two-way audio voice communicator. If the control panel communicates an alarm, the audio module allows the central station to establish a two-way session or monitor the premises for listen-in purposes.
9.1	Feature Select	A menu entry that groups all optional features relating to partition settings, control panel system settings and so on.
9.1.1	Mode	A menu option that specifies if the listen-in module is used in line hold mode or call back mode.
9.1.2	Listen-in Only	A menu option that enables the listen-in only mode. This is the mode in which the central station can monitor sounds at the customer's premises but cannot establish two-way communication.
9.1.3	Speaker Lockout	A menu option that prevents the central station turning on the speaker at the premises if a duress, silent panic or hold-up alarm is reported by the control panel.
9.1.4	Mic A at Startup	A menu option that activates microphone A when listen-in commences.
9.1.5	Mic B at Startup	A menu option that activates microphone B when listen-in commences.
9.1.6	Answer Machine Defeat	A menu entry used to defeat an answering machine. A telephone call is made to the premises and is answered by an answering machine or other device. If tone-sniff AMD is enabled, only one call is required to defeat the answering machine. The computer calls the panel as normal. When the answering machine answers, the panel hears the tones from the modem and seizes the phone line for a download.
9.1.7	Status Check	A menu option that allows the end-user to verify the system status using a touch phone. This option enables level 7.
9.1.8	Arming/Disarming	A menu option that allows the end-user to arm/disarm the system from a remote location using a touch phone (for example, GSM). This option enables level 8.

Location	Term	Definition
9.2	Call Back Code	A menu option that specifies the code that starts a listen-in session when the panel is in call back mode. This code can be a maximum of six digits long.
9.3	Line Hold Digit	A menu option that specifies the digit that starts a two-way session when the control panel is in line hold mode.
9.4	Wrong PIN Digit Entries	A menu option that specifies the maximum number of incorrect digits that can be entered for call-back and call-in features before the panel is locked out.
9.5	Rings to Answer	A menu option that sets the number of rings that must occur before the panel answers to start a listen-in session. If the value is 0, the panel or the CS534 will never react to an incoming phone line and will never pick up the phone line. Regulations in some countries do not allow a call in from an installer or central station without approval by the end-user. In this case the *Answer U/D Call* or *Begin U/D Call* menu options should be used instead.
9.6	Timers	A menu entry that groups timer options.
9.6.1	Line Hold Timeout	A menu option that sets the length of time the listen-in module will remain on the phone line with no activity from the central station. This time can be set from 30 to 255 seconds. If it does not receive the digit within this time, the listen-in module disconnects.
9.6.2	New Trip Hangup Time	A menu option that sets the time at which the two-way session timer is reset if a new event occurs in a partition during a two-way session between the partition and the central station.
9.6.3	Call Back Window Timer	A menu option that sets the amount of time, in one-minute increments, that the CS534 listen-in module will wait to call back after an alarm has been reported.
9.6.4	Session Timeout	A menu option that defines how long the listen-in module remains on the phone line with no activity from the central station.
9.6.5	Indicator-A Time Remaining	A menu option that sets the length of time remaining after indicator "A" is sent to the central station. The two-way session is terminated after this time if there is no further activity from the central station. This time can be set between 1 and 255 seconds.
9.6.6	Indicator-B Time Remaining	A menu option that sets the length of time remaining after indicator "B" is sent to the central station. The two-way session is terminated after this time if there is no further activity from the central station. This time can be set between 1 and 255 seconds.
9.6.7	Anti-Lock-Up Tone Time	A menu option that sets the interval at which the anti-lock-up tone is sounded at the central station.
9.7	Volumes	A menu entry that groups options to adjust levels used with the CS534 listen-in module.
9.7.1	Low Gain Listen In	A menu option that enables the mode in which the central station listens in to the customer's premises. This mode is used in environments where background noise may distort the audio.
9.7.2	High Gain Listen In	A menu option that activates high gain listen-in mode. This is a listen-in mode that is generally used in environments that produce very low noise.
9.7.3	Speaker	A menu option that sets the volume of the speaker.
9.8	X-10 Devices	A menu entry that groups X-10 device options for the selected listen-in module.
9.8.1.1	Module Number	A menu option that sets the X-10 module number used to identify a particular X-10 device on the selected module. A CSx75 bus module number is assigned to each system module. The system uses this number to identify the module. It is also used to report module problems (such as tampers and module supervision lost) to the central station.

Location	Term	Definition
9.8.1.1	House Code	A menu option that sets the code used to identify a particular premises. It is necessary in case any neighbouring premises also has an X-10 home automation system. More information on the X-10 home automation system can be found at www.x-10europe.com.
9.9	Model	A menu option that displays the current model of the selected module.
9.10	Version	A menu option that displays the current software version of the selected module.
9.11	Default Settings	A menu option that defaults the selected module to factory defaults.

9.5 Technical specifications

Power supply specifications	
Power supply voltage	13.8V ⎓ ±2%
Consumption – Not in session	50 mA at 13.8V ⎓ ±2%
Consumption – 2 way listen-in in session	100 mA at 13.8V ⎓ ±2%

General feature specifications		
PCB Size	Dimensions (width x height x depth)	100x96x25.4 mm
Environmental	Operating temperature	+0° C to + 40 °C
	Humidity	Max 93% non condensing
	Shipping Weight	115 g
Telephone	Telephone requirement	Touchtone

Chapter 10: Setting up the CS320

10.1 Overview

The CS320 is an auxiliary power module that can be used with the CSx75 range of panels. It has three programmable outputs and one dedicated sounder output.

You can use up to eight CS320 auxiliary power modules to supply 32 outputs for the panel, 24 of which are programmable and eight are dedicated sounder outputs. The 24 programmable outputs can be used as auxiliary power, fire detector power and sounder power outputs.

10.2 Installing the CS320 auxiliary power module

Each CS320 auxiliary power module has a tamper terminal that can be used to supervise the casing.

When the CS320 auxiliary power module is connected to the CSx75, the maximum total wire run to all devices is 750 metres. Each CS320 auxiliary power module should be connected individually to the CSx75 and not in series.
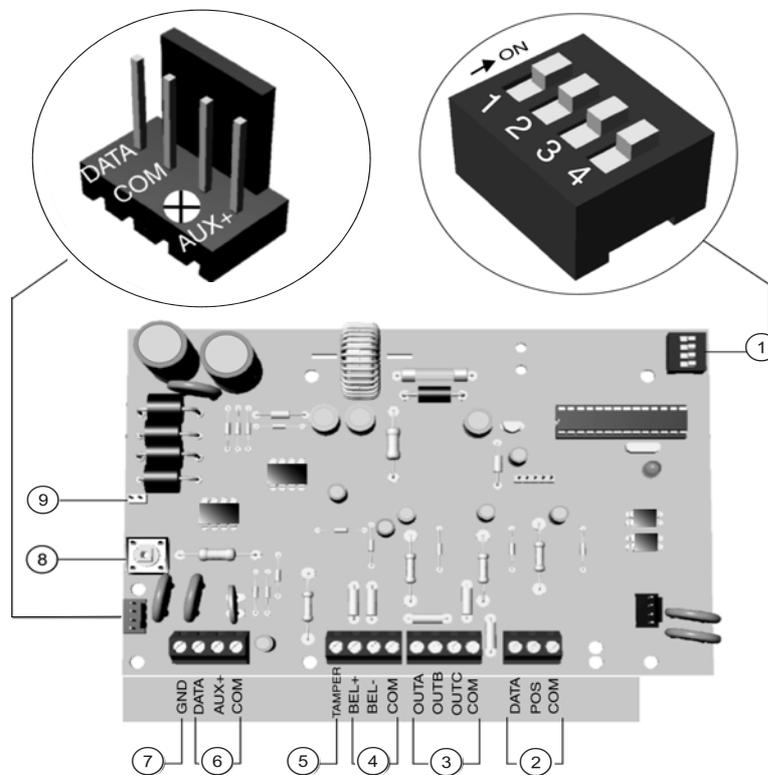
1 DIP switches	4 Bell	7 Earth
2 Outgoing terminals	5 Tamper terminal	8 Tamper switch (not used)
3 Outputs	6 Incoming bus terminals	9 AC inputs

10.2.1 Wiring the CS320 auxiliary power module

Table 10-1: CS320 auxiliary power module terminal connections

Terminal	Description
DATA	Connect to the KP DATA terminal of the CSx75. This terminal is the incoming data-signalling terminal to the CS320 auxiliary power module.
COM	Connect to the KP COM terminal of the CSx75. This terminal supplies the common side of the power to the CS320 auxiliary power module.
POS	Connect to the KP POS terminal of the CSx75.
DATA	This terminal is the outgoing data-signalling terminal for the bus extension.
COM	Common terminal for any device powered by the CS320 auxiliary power module.
OUT A	Programmable output current limited to 1.9 A.[1]
OUT B	Programmable output current limited to 1.9 A.
COM	Common terminal for any device powered by the CS320 auxiliary power module.
OUT C	Programmable output current limited to 1.9 A.
BELL +	Positive sounder current limited to 2.5 A.
BELL -	Negative sounder current limited to 2.5 A.
TAM	Optional tamper terminal. Connect the normally closed tamper switch between this terminal and COM. If DIP switch 4 is off, this feature is not used.
EARTH (GND)	Earth Ground
AC	AC input. Connect to a 16.5 V 50 VA transformer.

1.The total current of the CS320 auxiliary power module is 2.5 A. There can be a total of 1.9 A between outputs A, B and C and a total of 2.5 A between the sounders and outputs.

10.2.2 Setting the DIP switches

DIP switches 1-3 set the address of the CS320 auxiliary power module.

Table 10-2: CS320 auxiliary power module DIP switches

DIP switch 1-3 settings	Address	DIP switch 1-3 settings	Address
	84		88
	85		89
	86		90
	87		91
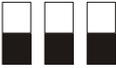
▢ = ON   ▮ = OFF

DIP switch 4 controls the tamper feature. On enables tamper. Off disables tamper.

10.2.3 Enrolling the CS320 auxiliary power module

1. Set DIP switches 1-3 to the correct address.

2. Select *Enrol Modules>Enrol* and press **OK**. to enrol the CS320 auxiliary power module. The enrolling process takes about 12 seconds. User codes are not accepted during the enrolling process.

10.3 Programming the CS320 auxiliary power module

```
10.1  Power Module 84      10.1.1  Outputs       10.1.1.1  1 (<Event>)       10.1.1.1.1  Event
      Power Modules 85 - 91                                 Outputs 2 - 3
      Same as above                                         Same as above
                                                                               10.1.1.1.1.1  Alarms
                                                                               10.1.1.1.1.2  Arm/Disarm
                                                                               10.1.1.1.1.3  Communications
                                                                               10.1.1.1.1.4  Keypads
                                                                               10.1.1.1.1.5  Sirens
                                                                               10.1.1.1.1.6  Tamper/Trouble
                                                                               10.1.1.1.1.7  Tests
                                                                               10.1.1.1.1.8  Miscellaneous

                                          10.1.1.1.2  Time Unit
                                          10.1.1.1.3  Time
                                          10.1.1.1.4  Partitions

                                          10.1.1.1.5  Attributes
                                                                               10.1.1.1.5.1  Latched
                                                                               10.1.1.1.5.2  Code Stops Timer
                                                                               10.1.1.1.5.3  Inverted
                                                                               10.1.1.1.5.4  Disable on Listen-in

10.1.2  Users             10.1.2.1  (1) User 1     10.1.2.1.1  Outputs
                                    Users 2 - 99
                                    Same as above
                                    If more than 10 users,
                                    users are first displayed in
                                    groups of 10 and then
                                    displayed as above.

10.1.3  Feature Select    10.1.3.1  Mains Delay Time
                          10.1.3.2  Battery Test
                          10.1.3.3  Battery Test Time

                          10.1.3.4  Reports        10.1.3.4.1  Report Mains Fault Always
                                                   10.1.3.4.2  Low Battery
                                                   10.1.3.4.3  Siren Tamper/Trouble

10.1.4  Model
10.1.5  Version
10.1.6  Default Settings
```

You must enroll and default the CS320 power module before you begin to program the system. For more information on enrolling and defaulting, see *Enrolling the CS320 auxiliary power module* above and chapter B-1 *Enrolling modules*. To program the CS320 power module, select *Installer Menu>CS320 Power Modules.*

10.3.1 Configuring outputs

You can specify events and partitions that can activate a particular output. The outputs are triggered based on different events. The events are grouped in the programming tree. A full list of all possible selectable events can be found in Table 10-3: *CS320 power module output events*.   You can also assign a defined attribute to the output. The following example enables user code 1 to reset the timer on output 1, power module 84 when an autotest event occurs.

1. Navigate with the ↑↓ keys to *CS320 Power Modules>Power Module 84>Outputs* and press **OK**.

2. Scroll to *Output 1>Event>Tests>Automatic Test* and press **OK**.

3. The keypad beeps once to accept the change and returns to *Tests*.

4. Scroll to *Attributes>Code Stops Timer>Yes* and press **OK**.

5. The keypad beeps once to accept the change and returns to *Code Stops Timer.*

6. Navigate with the ↑↓ keys to *Users>(1) User 1>Outputs>* and press **OK**.

7. Press the relevant keys to select output 1 only and press **OK**.

8. The keypad beeps once to accept the change and returns to *Outputs*.

Table 10-3: CS320 power module output events

#	Event	#	Event	#	Event
	Alarms		**Arm/disarm**		**Misc**
17	Alarm Memory	21	Armed	32	Code Entry
	Tests	22	Disarmed	7	Program Mode
3	Dyn Battery Test	23	Ready to Arm	0	Always On
	Tampers	18	Entry		**Keypads**
25	Fire LED	19	Exit	29	Keypad Fire
11	Smoke Det Reset	20	Entry or Exit	30	Keypad Medical
8	Over-current	24	Not Ready to Arm	31	Keypad Panic
9	Box Tamper		**Sirens**	28	Keypad Beeping
10	Siren Tamper	12	Burglary Siren	27	Chime
26	Fire Trouble	13	Fire Siren		**Communications**
1	Mains Failure	14	Any Siren	4	Listen-in
2	Low Battery	15	Fire Sir Steady	5	Line Seizure
		16	Any Sir Temporal	6	Phone Line Fault

10.3.2 Configuring features

You can configure testing and reporting features for the CS320 power module. The following example enables a battery test which lasts for 60 minutes and sends a report to the central station when a low battery condition occurs.

1. Navigate with the ↑↓ keys to *CS320 Power Modules>Power Module 84>Feature Select* and press **OK**.

2. Scroll to *Battery Test>Enabled* and press **OK**.

3. The keypad beeps once to accept the change and returns to *Battery Test*.

4. Scroll to *Battery Test Time* and press **OK**.

5. Select *60 min.* and press **OK**.

6. The keypad beeps once to confirm the change and returns to *Battery Test Time*.

7. Scroll to *Reports>Low Battery>Yes* and press **OK**.

8. The keypad beeps once to accept the change and returns to *Low Battery*.

10.4 Glossary

Location	Term	Definition
10	CS320 Power Modules	A module that provides an additional power supply if the system is using more peripherals than can be serviced by the panel power supply.
10.1	Power Module 84	A menu entry that groups all options for the selected power module.
10.1.1	Outputs	A menu entry that groups options relating to programmable outputs. There are two types of outputs; relay and open collector. The control panel includes up to four auxiliary outputs. The CS320 power module provides additional outputs.
10.1.1.1.1	Event	Any occurrence such as system arming, faults and alarms. A menu option that specifies which event activates an output.
10.1.1.1.1.1	Alarms	A menu entry that groups together the alarm events that can be selected to trigger an output.
10.1.1.1.1.2	Arm/Disarm	A menu entry that groups the events that can be used to trigger outputs.
10.1.1.1.1.3	Communications	A menu entry that groups together the communication events that can be selected to trigger an output.
10.1.1.1.1.4	Keypads	A menu entry that groups the keypad events that trigger an output.
10.1.1.1.1.5	Sirens	A menu entry that groups together the siren events that can be selected to trigger an output.
10.1.1.1.1.6	Tamper/Trouble	A menu entry that groups together the tamper and trouble events that can be selected to trigger an output.
10.1.1.1.1.7	Tests	A menu entry that groups settings related to different tests. These include tests such as automatic test calls, dynamic battery tests and so on.
10.1.1.1.2	Time Unit	A menu option that specifies whether the outputs are timed in minutes or seconds.
10.1.1.1.3	Time	A menu option that sets the length of time for which an output is activated. If it is set to 0, the output follows the event.
10.1.1.1.4	Partitions	A menu entry that lists the partitions assigned to the selected output. The selected output can be triggered by an event on these partitions.
10.1.1.1.5	Attributes	A menu entry that groups the programmable attributes of the selected output.
10.1.1.1.5.1	Latched	A menu option that causes an output to remain activated until a code is entered at the keypad.
10.1.1.1.5.2	Code Stops Timer	A menu entry that allows the timer used on programmable outputs to be reset by entering a valid user code.
10.1.1.1.5.3	Inverted	A menu option that enables a mode that inverts the state of an output (normally activated and then deactivated when an event occurs).
10.1.1.1.5.4	Disable on Listen-in	A menu option that disables the selected output during listen-in time. This option is normally used to silence sirens during listen-in. After the listen-in session, the sirens are activated again.
10.1.2	Users	A menu option that specifies the zone or user number that triggers the output on the expander module or power module.
10.1.2.1.1	Outputs	A menu option that specifies which outputs the selected user can operate.
10.1.3	Feature Select	A menu entry that groups all optional features relating to the selected module.

Location	Term	Definition
10.1.3.1	Mains Delay Time	A menu option that sets the length of time between detecting a mains failure on a power module and sending a report to the central station. The restore event is sent four minutes after the mains is restored.
10.1.3.2	Battery Test	A menu option that enables a test to determine whether the battery is connected to the power module. This test is usually performed automatically when the system is first powered up and periodically thereafter.
10.1.3.3	Battery Test Time	A menu option that sets the length of time that the power module performs the battery test. This can be between 0 to 255 minutes where 0 is no test.
10.1.3.4	Reports	A menu entry that groups report options for the selected module.
10.1.3.4.1	Report Mains Fault Always	A menu option that sends a report to the central station if power is lost for the time programmed in *Mains Delay Time*. If this option is disabled, the report is sent only if the control panel has not sent a mains power lost report and *Mains Fail* report is enabled. This option applies only to the CS320 power module and not to the control panel.
10.1.3.4.2	Low Battery	A menu option that enables low battery reporting on a CS320 power module.
10.1.3.4.3	Siren Tamper/Trouble	A menu option that sends a report to the central station when a power module siren tamper or trouble condition occurs.
10.1.4	Model	A menu option that displays the current model of the selected module.
10.1.4	Version	A menu option that displays the current software version of the selected module.
10.1.5	Default Settings	A menu option that defaults the selected module to factory defaults.

10.5 Technical specifications

Mains power specifications	
Mains Input Voltage (25VA Transfo)	230V ~ - 50Hz ±10% - 25VA
Mains Input Voltage (40VA Transfo)	230V ~ - 50Hz ±10% - 40VA
Current consumption at 230V~ (25 VA)	0.108 A
Current consumption at 230V~ (40 VA)	0.173 A
Main board supply voltage	16.5 V ~ typical
Power supply specifications	
Power supply voltage	13.8V ⎓ ±2%
Consumption - Standby	40 mA at 13.8V ⎓ ±2%
Consumption – Maximum	110 mA at 13.8V ⎓ ±2%

General feature specifications		
PCB Size	Dimensions (width x height x depth)	161x108x28 mm
Housing Size	Dimensions (width x height x depth)	DHX75PB 380x260x120 mm DHX75PBM 450x300x90 mm
Environmental	Operating temperature	+0° C to + 40 °C
	Humidity	Max 93% non condensing
	Shipping Weight	146g

Chapter 11: Setting up the CS535

11.1 Overview

The CS535 voice module reports alarm events to designated phone numbers using pre-recorded voice messages. You record the voice messages using a normal analog telephone. When an alarm event occurs, the control panel establishes a telephone connection with a specified phone number and informs the CS535 voice module to report configured events.

The CS535 voice module can send four types of voice message in a report.

- A leader message announces the report.

- An event message describes the event(s) that have occurred.

- An address message identifies the premises reporting the event(s).

- A kiss off message confirms receipt of a kiss off digit.

The voice module informs the panel when it is finished reporting and the panel closes the connection with the phone.

11.2 Installing the CS535 voice module

The CS535 voice module can be connected directly to the board. If a CS534 listen-in module is used, the CS535 voice module is connected to the board and the CS534 listen-in module is attached to it via a ribbon cable. If a CS7002 GPRS module is used, the CS7002 GPRS module is connected to the board and the CS535 listen-in module is attached to it via a ribbon cable.

For information on installing the CS535 voice module in the various housings, see chapter A-4 *Installing a basic system*.
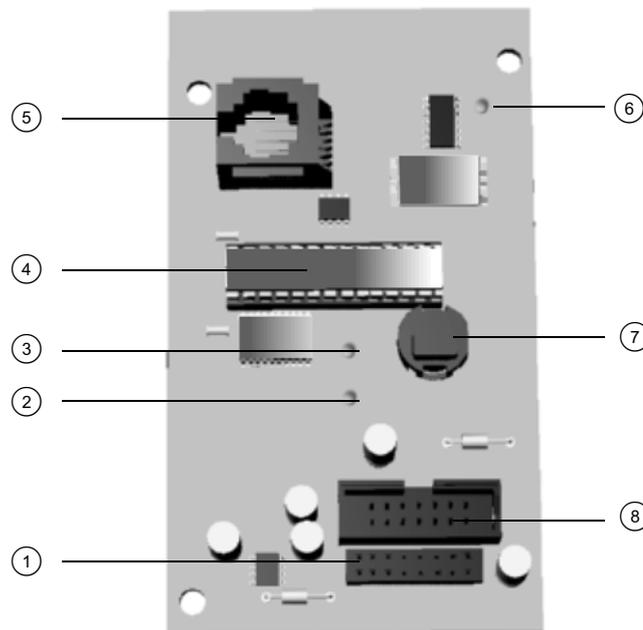
①	Rear entry connector	⑤	RJ11 telephone connection
②	Reporting LED	⑥	Record/playback LED
③	Bus supervision LED	⑦	Record/playback button
④	Processor	⑧	Expansion port for CS534 listen-in module

11.3 Programming the CS535 voice module
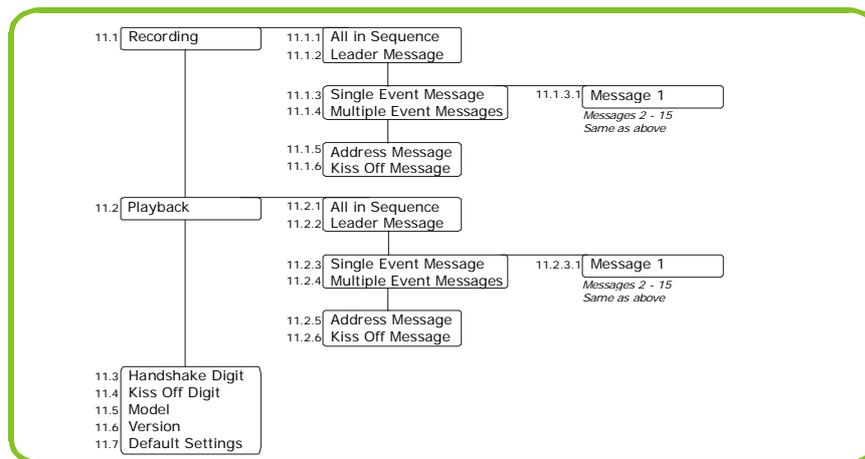
You must enroll and default the CS535 voice module before you begin to program the system. For more information on enrolling and defaulting, see chapter B-1 *Enrolling modules*. To program the CS535, select *Installer Menu>CS535 Voice Module.*

11.3.1 Configuring the control panel for voice reporting

You must enable event reporting in the control panel and program the zones types for which reports are sent. You must also map each event to a recorded message. You can map one message to a number of events. For more information see chapter B-2 *Programming the control panel*.

Events can be reported to six phone numbers. Each phone number has it own account code, protocol and events. You must program this information for phone number 1 at least. You can also set number of dial attempts and a dialer delay for voice reporting. For more information, see chapter B-2 *Programming the control panel*.

✍ To allow a user to cancel reports and stop voice reporting by entering a user code, enable the abort all function. This is useful in the case of a false alarm. Select *Control Panel>System Settings>Feature Select>Miscellaneous>All Abort>Enabled* and press **OK**.

11.3.2 Recording voice messages

The CS535 voice module can store up to 18 recorded voice messages. There must be one leader message and one address message. There can be an optional kiss off message. The remaining 15 messages are event messages. The messages can be recorded altogether or one at a time. Some events may be covered by one message. The following steps explain how to record different messages.

1. Connect a telephone handset to the phone jack on the CS535 voice module.

2. Navigate with the ↑↓ keys to *CS535 Voice Module>Recording* and press **OK**.

3. Complete one of the following steps depending on the message(s) you want to record.

   - To record all messages, scroll to *All in Sequence* and press **OK**.

   - To record one message at a time, scroll to the relevant menu option and press **OK**. For example, to record the leader message, scroll to *Leader Message* and press **OK**.

   - To record a single event message, scroll to *Single Event Message* and press **OK**. Select the number of the message (1-15) and press **OK**.

   - To record a range of event messages, scroll to *Multiple Event Message* and press **OK**. Select the number of the first message (1-15) and press **OK**.

4. Press the recording/playback button on the CS535 voice module and record the message.

5. If you a recording a single message, press the recording/playback button to stop recording. The message is played back.

6. If you are satisfied with the message, press the recording/playback button to record the next message. Do not start recording the next message while the recording/playback LED is lit.

7. To re-record a message, press the recording/playback button twice in quick succession and re-record the message.

8. If you are recording a range of messages, continue recording each message until you have finished. All the messages are played back in sequence when you have recorded and played back the final message.

9. Record all messages finishing with the address message.

11.3.3 Playing back messages

Pre-recorded voice messages can be played back altogether or one at a time. The following steps explain how to playback different messages.

1. Connect a telephone handset to the phone jack on the CS535 voice module.

2. Navigate with the ↑↓ keys to *CS535 Voice Module>Playback* and press **OK**.

    - To playback all messages, scroll to *All in Sequence* and press **OK**.

    - To playback one message at a time, scroll to the relevant menu option and press **OK**.

    - To playback a single event message, scroll to *Single Event Message* and press **OK**. Select the number of the message (1-15) and press **OK**.

    - To playback a range of event messages, scroll to *Multiple Event Message* and press **OK**. Select the number of the first message (1-15) and press **OK**.

3. Press the recording/playback button on the CS535 voice module to playback the message.

4. Press the recording/playback button to playback the next message.

11.3.4 Configuring handshake and kiss off

Handshake and kiss off can be programmed as any key press or as a specific telephone key. The following steps explain how to configure these digits.

✍ *The voice protocol cannot generate a 'fail to communicate' signal.*

1. Navigate with the ↑↓ keys to *CS535 Voice Module>Handshake Digit* and press **OK**.

2. Select the handshake digit and press **OK**.

3. The keypad beeps once to accept the change.

4. Scroll to *Kiss Off Digit* and press **OK**.

• Select the kiss off digit and press **OK**.

• Select *Any Digit* to program any key press as the handshake/kiss off digit. This is the default.

• Select *None* to disable kiss off.

5. The keypad beeps once to accept the change.

11.4 Glossary

Location	Term	Definition
11	CS535 Voice Module	A module used to send pre-recorded voice messages when activated.
11.	Recording	A menu entry that groups recording options for messages sent by the voice module.
11.1.1	All in Sequence	A menu command that records all voice messages in sequence. The sequence is: Leader message; 15 messages that can be linked to different types of event (such as, alarms or opening/closing); Kiss off message; Address message.
11.1.2	Leader Message	A menu command that records the leader message. This message is sent by the CS535 voice module at the start of a voice reporting phone call.
11.1.3	Single Event Message	A menu command that records a single event message. This message is sent by the voice module and states the event that has occurred.
11.1.4	Multiple Event Messages	A menu command that records a multiple event message. This message is sent by the CS535 voice module and states the events that have occurred.
11.1.5	Address Message	A menu command that records the address message. This message is sent by the CS535 voice module and states where an event has occurred.
11.1.6	Kiss Off Message	A menu command that records the kiss off message. This message is sent by the CS535 voice module at the end of a voice reporting phone call to indicate that the kiss off digit has been received.
11.2	Playback	A menu entry that groups options that allow the installer to play back recorded voice messages.
11.2.1	All in Sequence	A menu command that plays back all voice messages in sequence.
11.2.2	Leader Message	A menu command that plays back the leader message.
11.2.3	Single Event Message	A menu command that plays back a single message.
11.2.4	Multiple Event Messages	A menu command that plays back multiple event messages in a row.
11.2.5	Address Message	A menu command that plays back the address message.
11.2.6	Kiss Off Message	A menu command that plays back the kiss off message.
11.3	Handshake Digit	A menu option that specifies the handshake digit. This digit is sent from the central station (in the case of a CS535 voice module, this is usually a house phone or a mobile phone) to the control panel in order to establish a connection.
11.4	Kiss Off Digit	A menu option that specifies the digit that the voice module accepts as a signal from the telephone saying that the person has understood the message.
11.5	Model	A menu option that displays the current model of the selected module.
11.6	Version	A menu option that displays the current software version of the selected module.
11.7	Default Settings	A menu option that defaults the selected module to factory defaults.

11.5 Technical specifications

Power supply specifications	
Power supply voltage	13.8V ⎓ ±2%
Consumption – Not in session	30 mA at 13.8V ⎓ ±2%
Consumption – 2 way listen-in in session	100 mA at 13.8V ⎓ ±2%

General feature specifications		
PCB size	Dimensions (width x height x depth)	57x100x20 mm
Environmental	Operating temperature	+0° C to + 40 °C
	Humidity	Max 93% non condensing
	Shipping Weight	150 g
Telephone	Telephone requirement	Touchtone

Chapter 12: Setting up the CS1700

12.1 Overview

The CS1700 is a proximity card reader/door control module. Up to 15 readers can be connected to the CSx75 control panel, depending on the model of panel. The CS1700 can be programmed to control access in any or all areas. The LEDs can be programmed to follow the output and/or the armed or ready status of the system. It has an optional optical tamper switch. The CS1700 proximity reader can be used only with the CS375, CS575 and CS875.

There are three badging actions that can activate a particular function or an X-10 device. These actions are different depending on whether you are in default mode or legacy mode.

In default mode:

- Single badge (1 beep) - a proximity card is held against the proximity reader for one beep.

- Double badge (2 beeps) - a proximity card is held against the proximity reader for two beeps.

- Badge hold (3 beeps) - a proximity card is held near the proximity reader for three beeps.

In legacy mode:

- Single badge (1 beep) - a proximity card is held once against the proximity reader.

- Double badge (2 beeps) - a proximity card is held against the proximity reader twice within the time set in *Scan Time*.

- Badge hold (3 beeps) - a proximity card is held near the proximity reader for longer than the time set in *Scan Time*.

12.2 Installing the CS1700 proximity reader
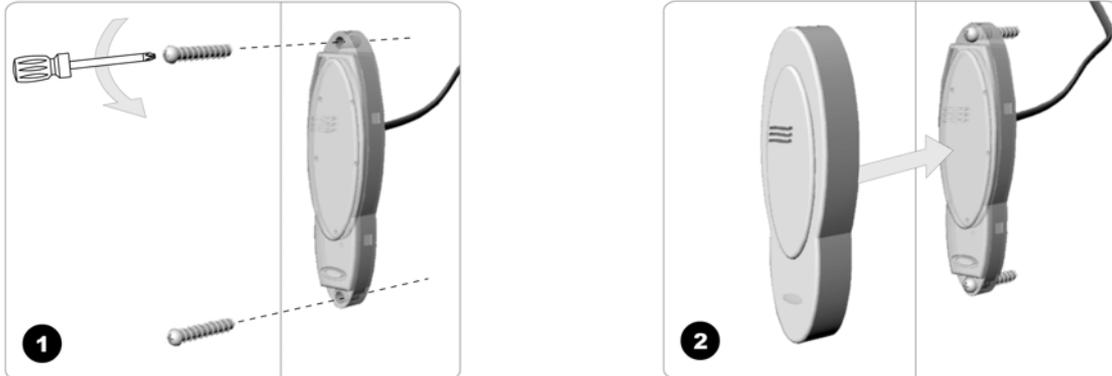
1. Place the screws in the screw holes of the CS1700 proximity reader. Attach to the door.

2. Place the cover on the CS1700 proximity reader.

12.2.1 Wiring the CS1700 proximity reader

Table 12-1: CS1700 proximity reader terminal connections

Wire	Description
Green (data)	Connect to the control panel DATA terminal. This wire is the data-signalling terminal to all the devices on the bus.
Black (com)	Connect to the control panel COMMON terminal. This wire supplies the common side of the power to the CS1700 proximity reader.
Red (pos)	Connect to the control panel AUX POWER + terminal. This wire supplies power to the CS1700 proximity reader.
White (egress)	This is an optional EGRESS input. To use this feature, connect the normally open egress switch between this terminal and COM. If this feature is not used, there is no need to connect this wire.
Blue (output)	This is an optional open-collector OUTPUT. To use this feature, connect the coil contacts of a relay between this terminal and AUX POWER +.

12.2.2 Enrolling the CS1700 proximity reader

Unlike most CSx75 expanders, the CS1700 proximity reader determines its own address after installation is complete. It is the first step in programming the reader. To enroll a reader follow the steps below:

1. Wire the CS1700 proximity reader to the system.

2. Enter programming mode.

3. When you are in the installer menu, scan a card at the reader to initiate addressing mode.

4. An address is assigned almost instantly and the reader beeps back its address as shown in Table 12-2: *CS1700 proximity reader addresses*.

Table 12-2: CS1700 proximity reader addresses

Beeps	Address	Beeps	Address
1	113	9	121
2	114	10	122
3	115	11	123
4	116	12	124
5	117	13	125
6	118	14	126
7	119	15	127
8	120		

5. Select *Installer Menu>Enrol Modules>Enrol* to enrol the CS1700 proximity reader. The enrolling process takes about 12 seconds. User codes are not accepted during the enrolling process.

12.3 Programming the CS1700 proximity reader
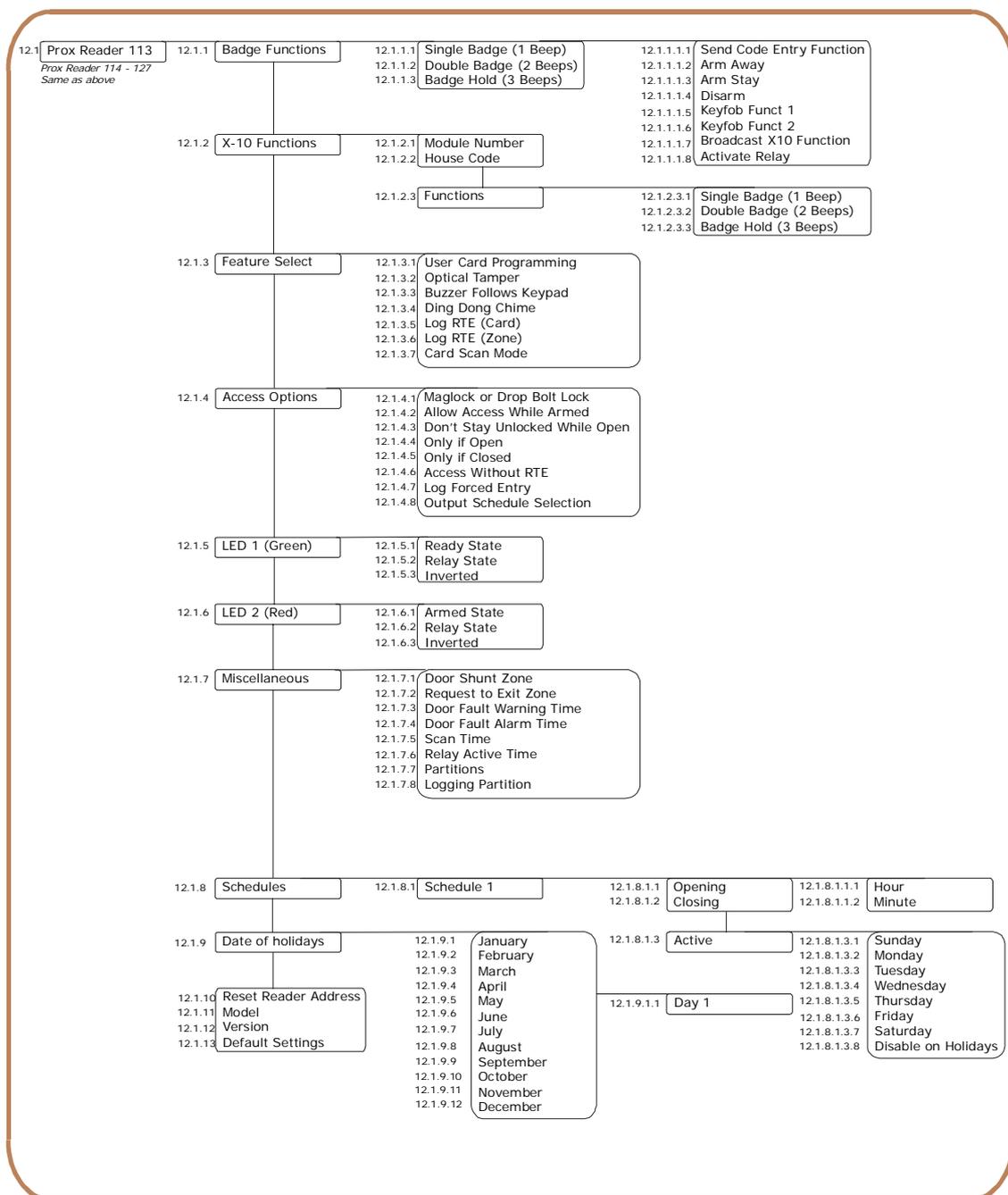
You must enroll and default each CS1700 proximity reader before you begin to program the system. For more information on enrolling, see *Enrolling the CS1700 proximity reader* above. For more information on defaulting, see chapter 6. If the proximity reader is moved, the module number must be wiped and the reader learned in again on the control panel using the *Reset Reader Address* option. To program the CS1700, select *Installer Menu>CS1700 Proximity Readers*.

12.3.1 Programming badge functions

Each of the three badging actions can activate a particular function. The following example explains how to enable keyfob function 1 for the single badge action on proximity reader 113. To enable this function, you must also program the keyfob function in RF Receivers. For more information see chapter 9.

1. Navigate with the ↑↓ keys to *CS1700 Proximity Readers>Prox Reader 113* and press **OK**.

2. Scroll to *Badge Functions>Single badge (1 beep)>Keyfob Funct 1>Yes* and press **OK**.

3. The keypad beeps once to accept the change and returns to *Keyfob Funct 1*.

12.3.2 Configuring X-10 functions

You can program the X-10 function that is performed when a card is scanned. The following example enables X-10 device 4 (module number 6, house code B) for the double badge action on proximity reader 113. To activate the double badge action, you must set the scan time. In this example, it is set to 1 second.

1. Navigate with the ↑↓ keys to *CS1700 Proximity Readers>Prox Reader 113* and press **OK**.

2. Scroll to *Feature Select>Card Scan Mode>Single/Double/Hold* and press **OK**.

3. The keypad beeps once to confirm the change and returns to *Card Scan Mode*.

4. Navigate with the ↑↓ keys to *Badge Functions>Double Badge (2 Beeps)>Broadcast X10 Function>Yes* and press **OK**.

5. The keypad beeps once to confirm the change and returns to *Broadcast X10 Function*.

6. Navigate with the ↑↓ keys to *X-10 Functions>Module Number* and press **OK**.

7. Select *6* and press **OK**.

8. The keypad beeps once to confirm the change and returns to *Module Number*.

9. Scroll to *House Code* and press **OK**.

10. Select *B* and press **OK**.

11. The keypad beeps once to confirm the change and returns to *House Code*.

12. Scroll to *Functions>Double Badge (2 Beeps)>On* and press **OK**.

13. The keypad beeps once to accept the change and returns to *Double Badge (2 Beeps)*.

14. Navigate with the ↑↓ keys to *Miscellaneous>Scan Time* and press **OK**.

15. Select *100 x 10 ms* and press **OK**.

16. The keypad beeps once to accept the change and returns to *Scan Time*.

Table 12-3: CS1700 proximity reader X-10 functions

Function	Description	Function	Description
0	All units off	4	Dim
1	All units on	5	Bright
2	On	6	All lights off
3	Off		

12.3.3 Adding and deleting cards

To add or delete cards, you must enter information at the keypad and then scan the cards. Before a card can be added, one CS1700 proximity reader on the system must be programmed to enable user card programming. It is recommended that only one reader on the system is enabled to do this and that this reader is located near a keypad. This CS1700 proximity reader transfers information to all other CS1700 proximity readers in the system once programming is finished. The following example enables user card programming on proximity reader 113.

✍ *The proximity reader recognizes pre-defined card serial numbers. It is not recommended to change these serial numbers.*

1. Navigate with the ↑↓ keys to *CS1700 Proximity Readers>Prox Reader 113* and press **OK**.

2. Scroll to *Feature Select>User Card Programming>Enabled* and press **OK**.

3. The keypad beeps once to accept the change and returns to *User Card Programming*.

4. Enter a master user code to enter the user menu. Choose from one of the procedures outlined below.

Task	Steps
Add one card	1. Select *User Menu>CS1700 Proximity Readers>Add One Card.* 2. Enter the user number to be assigned to the card and press **OK**. 3. LED1 on any enabled readers begins to flash. 4. Scan the card designated for the entered user. If the user card is not already in the system, it is added and LED1 stops flashing. If the card is already in the system, the reader triple beeps and LED1 continues flashing. 5. 40 seconds after you have finished scanning, all the readers in the system are updated with the new user card information.
Add multiple users	1. Select *User Menu>CS1700 Proximity Readers>Add Multiple Cards.* 2. Enter the user number to be assigned to the card and press **OK**. 3. LED1 on any enabled readers begins to flash. 4. Scan the card designated for the entered user. If the user card is not already in the system, it is added and LED1 continues flashing indicating that the next user card can be scanned. If the card is already in the system, the reader triple beeps and LED1 continues flashing. 5. 40 seconds after you have finished scanning, all the readers in the system are updated with the new user card information.
Delete one user	1. Select *User Menu>CS1700 Proximity Readers>Delete One Card.* 2. Enter the user number assigned to the card and press **OK**. 3. The user card information for the entered user number will be cleared and LED1 stops flashing. After about 40 seconds, all the readers in the system are updated with the new user card information.
Activate a card	1. Select *User Menu>CS1700 Proximity Readers>Activate Card.* 2. Enter the user number assigned to the card and press **OK**. 3. The user card information for the entered user number will be activated and LED1 stops flashing. After about 40 seconds, all the readers in the system are updated with the new user card information.
Deactivate a card	1. Select *User Menu>CS1700 Proximity Readers>Dectivate Card.* 2. Enter the user number assigned to the card and press **OK**. 3. The user card information for the entered user number will be deactivated and LED1 stops flashing. After about 40 seconds, all the readers in the system are updated with the new user card information.

12.4 Glossary

Location	Term	Definition
12	CS1700 Proximity Readers	A proximity card reader/door control module that can be programmed to control access in any or all areas.
12.1	Prox Reader 113	A menu entry that groups all options for the selected proximity reader.
12.1.1	Badge Functions	A menu entry that groups the functions activated by Single Badge, Double Badge and Badge Hold actions.
12.1.1.1	Single Badge (1 Beep)	A menu entry that groups the functions activated by holding a proximity card once against the proximity reader.
12.1.1.2	Double Badge (2 Beeps)	A menu entry that groups the functions activated by holding a proximity card against the proximity reader twice within the time set in *Badge Hold*.
12.1.1.3	Badge Hold (3 Beeps)	A menu entry that groups the functions activated by holding a proximity card near the proximity reader for longer than the time set in *Badge Hold*.
12.1.1.1.1	Send Code Entry Function	A menu option that enables the send code entry function for the selected proximity reader action. The actions are Single Badge, Double Badge and Badge Hold. This function sends the same command to the control panel, using the proximity card, as a keypad would send if a valid code were entered. For example, if the system is armed, the selected action disarms it.
12.1.1.1.2	Arm Away	A menu option that enables the arm away function for the selected proximity reader action. The actions are Single Badge, Double Badge and Badge Hold.
12.1.1.1.3	Arm Stay	A menu option that enables the arm stay function for the selected proximity reader action. The actions are Single Badge, Double Badge and Badge Hold.
12.1.1.1.4	Disarm	A menu option that enables the disarm function for the selected proximity reader action. The actions are Single Badge, Double Badge and Badge Hold.
12.1.1.1.5	Keyfob Funct 1	A menu option that sends a keyfob function 1 event for the selected proximity reader action. The actions are Single Badge, Double Badge and Badge Hold.
12.1.1.1.6	Keyfob Funct 2	A menu option that sends a keyfob function 2 event for the selected proximity reader action. The actions are Single Badge, Double Badge and Badge Hold.
12.1.1.1.7	Broadcast X10 Function	A menu option that causes the proximity reader to transmit an X-10 function to the home automation system.
12.1.1.1.8	Activate Relay	A menu option that activates the proximity reader's built in relay driver instead of an external relay driver.
12.1.2	X-10 Functions	A menu entry that groups X-10 device information and the functions for the selected proximity reader. The X-10 functions are linked to the access reader. It is possible to control X-10 devices using the badge on the card reader. It is also possible to configure the actions that are activated by each card action. 0 All units off 1 All lights on 2 On 3 Off All others 4 Dim 5 Bright 6 All lights off
12.1.2.1	Module Number	A menu option that sets the X-10 module number used to identify a particular X-10 device on the selected module. A CSx75 bus module number is assigned to each system module. The system uses this number to identify the module. It is also used to report module problems (such as tampers and module supervision lost) to the central station.

Location	Term	Definition
12.1.2.2	House Code	A menu option that sets the code used to identify a particular premises. It is necessary in case any neighbouring premises also has an X-10 home automation system. More information on the X-10 home automation system can be found at www.x-10europe.com.
12.1.2.3	Functions	A menu entry that groups the functions that can be linked between a CS1700 proximity reader and X-10 functions.
12.1.2.3.1	Single Badge (1 Beep)	A menu option that sets the X-10 function sent when a proximity card is held against the proximity reader once.
12.1.2.3.2	Double Badge (2 Beeps)	A menu option that sets the X-10 function sent when a proximity card is held against the proximity reader twice within the time set in *Badge Hold*.
12.1.2.3.3	Badge Hold (3 Beeps)	A menu option that sets the X-10 function sent when a proximity card is held near the proximity reader for longer than the time set in *Badge Hold*.
12.1.3	Feature Select	A menu entry that groups all optional features relating to the selected proximity reader.
12.1.3.1	User Card Programming	A menu option that enables user cards to be programmed.
12.1.3.2	Optical Tamper	A menu option that sends a report to the central station when there is interference with the proximity reader. The optical tamper is built in as a pry-off protection.
12.1.3.3	Buzzer Follows Keypad	A menu option that makes the reader buzzer settings the same as the keypad buzzer settings.
12.1.3.4	Ding Dong Chime	A menu option that enables a ding dong chime.
12.1.3.5	Log RTE (Card)	A menu option that records an RTE (Card) event in the event log. An RTE (Card) event is a request to exit by scanning a card.
12.1.3.6	Log RTE (Zone)	A menu option that records an RTE (Zone) event in the event log. An RTE (Zone) event is a request to exit by activating a zone.
12.1.3.7	Card Scan Mode	A menu option that switches between the old and new scanning mode. The old mode is displayed as *Single/Double/Hold* and the new mode is displayed as *1/2/3 Beeps*.
12.1.4	Access Options	A menu entry that groups access options for the selected proximity reader.
12.1.4.1	Maglock or Drop Bolt Lock	A menu option that controls a maglock or drop bolt lock. When a door zone is programmed and this option is enabled, the proximity reader monitors the door zone and waits for a couple of seconds after the door is closed before activating the lock. This is to prevent a door slamming shut due to a maglock or not getting shut at all due to the premature locking of a drop bolt.
12.1.4.2	Allow Access While Armed	A menu option that enables a user to activate/deactivate the selected proximity reader while the system is armed.
12.1.4.3	Don't Stay Unlocked While Open	A menu option that prevents a door which has been opened during the open period from staying open.
12.1.4.4	Only if Open	A menu option that activates the selected proximity reader between opening time and closing time. During these times, a card can be used to arm/disarm the system. A timer is used to set these times.
12.1.4.5	Only if Closed	A menu option that activates the selected proximity reader after closing time and before opening time. During these times, a card can be used to arm/disarm the system. A timer is used to set these times.

Location	Term	Definition
12.1.4.6	Access Without RTE	A menu entry that enables a user to open the door without a Request To Exit (RTE).
12.1.4.7	Log Forced Entry	A menu option that records a force entry event in the event log.
12.1.4.8	Output Schedule Selection	A menu option that selects the schedule that is used by the selected proximity reader. Up to eight schedules can run at the same time in a complementary manner.
12.1.5	LED 1 (Green)	A menu entry that groups options that cause LED 1 to display a green light. The proximity reader has a built-in LED (at the top of the reader) which can display a green light or be turned off. The LED follows the ready state or the state of the built-in relay in the proximity reader. It is possible to invert the action that activates the LED.
12.1.5.1	Ready State	A menu option that lights LED 1 (Green) when the system is ready to be armed.
12.1.5.2	Relay State	A menu option that lights the selected LED when the device's relay is activated.
12.1.5.3	Inverted	A menu option that lights the selected LED (Green/Red) when the device is in inverted mode.
12.1.6	LED 2 (Red)	A menu entry that groups options that cause LED 2 to display a red light. The proximity reader has a built-in LED (at the bottom of the reader) which can display a red light or be turned off. The LED follows the armed state or the state of the built-in relay in the proximity reader. It is possible to invert the action that activates the LED.
12.1.6.1	Armed State	A menu option that lights LED 2 (Red) when the system is armed.
12.1.6.2	Relay State	A menu option that lights the selected LED when the device's relay is activated.
12.1.6.3	Inverted	A menu option that lights the selected LED (Green/Red) when the device is in inverted mode.
12.1.7.1	Door Shunt Zone	A menu option that sets which zone senses that the door is open for door fault alarms and warnings.
12.1.7.2	Request to Exit Zone	A menu option that selects the zone that is monitored to signal a Request to Exit (RTE). You must enable the RTE zone type option for the selected zone.
12.1.7.3	Door Fault Warning Time	A menu option that sets the time after which a warning sound is made before a door fault alarm occurs.
12.1.7.4	Door Fault Alarm Time	A menu option that sets the time within which the door must be closed before a door fault alarm occurs.
12.1.7.5	Scan Time	A menu option that specifies the length of time during which the proximity card must be held near the proximity reader to activate its functions. A proximity reader can be programmed to activate different functions depending on whether the card is held near it once, twice within this time or continuously for this time.
12.1.7.6	Relay Active Time	A menu option that sets the length of time the relay is activated when a proximity card is held against the proximity reader.
12.1.7.7	Partitions	A menu entry that lists the partitions assigned to the selected proximity reader. The selected proximity reader can trigger an event on these partitions.
12.1.7.8	Logging Partition	A menu option that specifies the partition number that the proximity reader adds to any event that it records in the event log.
12.1.8	Schedules	A menu option that, combined with *Output Schedule Selection* selects the schedules that affect the proximity reader.

Location	Term	Definition
12.1.8.1.1	Opening	A menu option that sets the time at which the selected schedule enters the open state.
12.1.8.1.2	Closing	A menu option that sets the time at which the selected schedule enters the closed state.
12.1.8.1.3	Active	A menu option that specifies the days of the week that the selected schedule is active.
12.1.8.1.3.1	Disable on Holidays	A menu option that activates the holidays feature. The selected schedule is not active on the dates specified in *Date of holidays*.
12.1.9	Date of holidays	A menu option that sets the dates of holidays. If the holidays feature (12.1.8.1.3.1) has been enabled, no schedules are active on these dates. Up to eight holidays per month can be specified.
12.1.10	Reset Reader Address	A menu option that wipes the proximity reader's module number so that the reader can be learned in again on the control panel.
12.1.11	Model	A menu option that displays the current model of the proximity reader.
12.1.12	Version	A menu option that displays the current software version of the proximity reader.
12.1.13	Default Settings	A menu option that defaults the selected proximity reader to factory defaults.

12.5 Technical specifications

Power supply specifications	
Power supply voltage	13.8V ⎓ ±2%
Consumption - Standby	40 mA at 13.8V ⎓ ±2%
Consumption – Maximum	110 mA at 13.8V ⎓ ±2%
General feature specifications		
Reader Size	Dimensions (width x height x depth)	35x118x15 mm
Environmental	Operating temperature	+0° C to + 40 °C
	Humidity	Max 93% non condensing
	Shipping Weight	115 g

Chapter 13: Setting up the CS7002

13.1 Overview

The CS7002 is the GPRS module that can be added to a CSX75 range of panel. The CS7002 GPRS module features include

- Wireless event reporting

- Four programmable report destinations

- Selectable reportable events from eight partitions

- Provides backup for the panel and external diallers.

- PSTN/ISDN can be used as backup

- SIA reporting using TCP/IP over GPRS

- Contact ID reporting using TCP/IP over GPRS

- SIA reporting with optional area modifiers using SMS messages

- Control panel can use GSM in addition to PSTN (reporting all panel protocols using GSM)

- Wireless upload/download using a GSM CSD connection

- Wireless upload/download using a GPRS CSD connection

- Upload/download may be initiated remotely or locally

- Optional automatic download sessions. These normally follow test calls. Test call reporting can be switched off so that there is automatic download calls without test report calls.

- Contact ID or SIA reporting formats over SMS.

13.2 Installing the CS7002 GPRS module
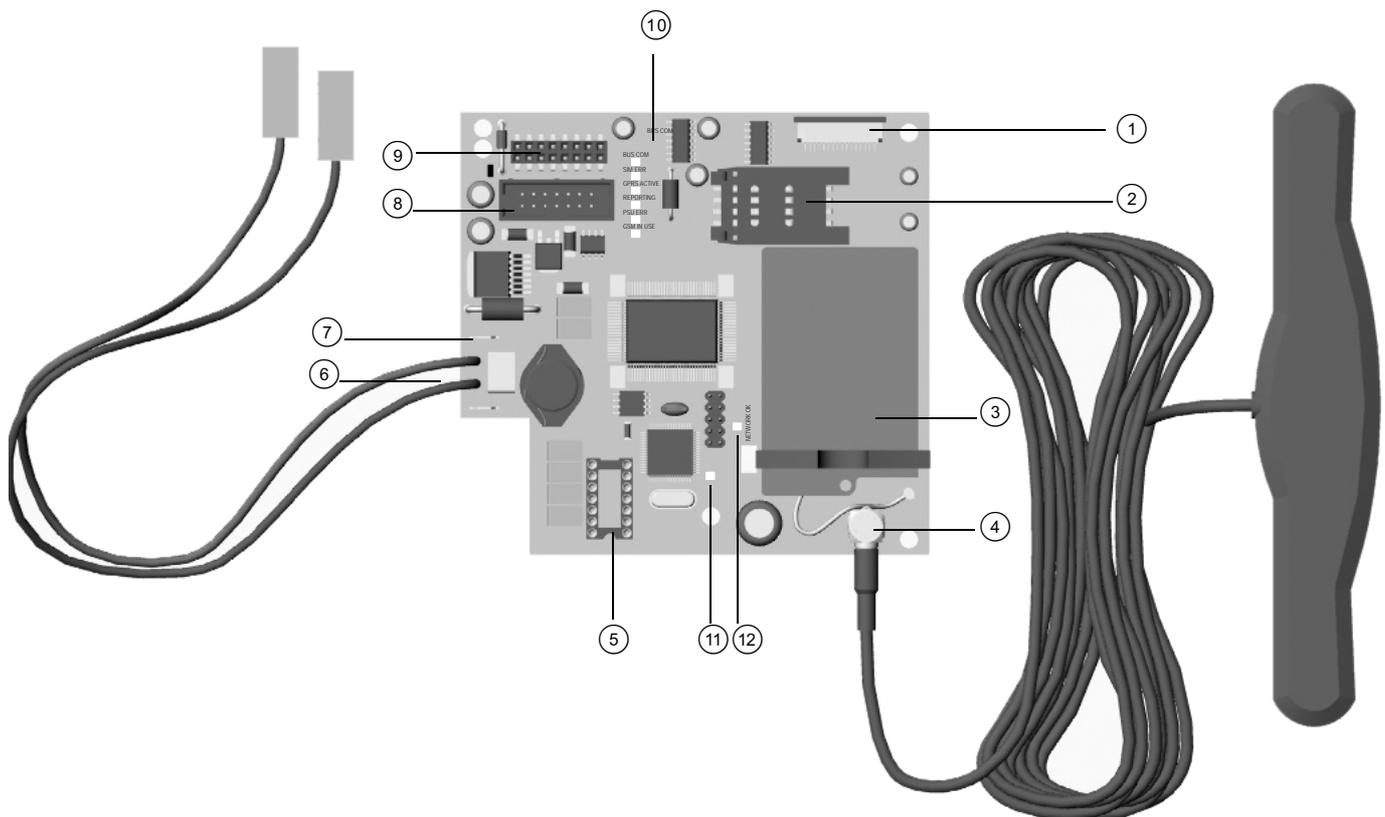
①	VVMiQ connector	⑦	Battery connectors for main panel battery leads
②	SIM card holder	⑧	Remote header connector for CS534/535
③	GPRS modem	⑨	Header connector for main panel
④	Antenna Connector	⑩	LEDs
⑤	Flash upgrade header	⑪	TCP socket open LED
⑥	Flying leads connect to battery terminals	⑫	Network OK LED. The CS7002 is logged on to GSM network LED

The CS7002 GPRS module can be connected directly to the board. If a CS534 listen-in module and/or a CS535 voice module are used, the CS7002 GPRS module is connected to the board and the CS534 listen-in module and CS535 listen-in module are attached to it via a ribbon cable.

For more details on how to install the CS7002 GPRS module in the various housings, see chapter A-4 *Installing a basic system*.

13.2.1 Enrol the SIM card on the GSM network

You must enrol the SIM card on the GSM network before you install it in the CS7002 GPRS module.

1. Select *CS7002 GPRS module>Options>GPRS>SIM PIN Code* and press **OK**.

2. Enter the SIM PIN and press **OK**.

3. Exit programming mode. The SIM PIN is automatically enrolled on the GSM network.

13.2.2 Inserting the SIM card

1. Power down the system.

2. Open the SIM card holder by sliding back the metal clip and lifting the holder.

3. Slide the SIM card into the holder with the contacts (gold pads) facing the circuit board and the angled corner facing out.

4. Close the holder and slide the metal clip back to the original position.

5. Power up the system.

6. The SIM card automatically selects a network operator when enrolled on the network. For details on manually selecting an operator, see the *CS7002 GPRS Module Installation Manual.*

7. Most SIM cards contain a preprogrammed SMS service centre address and under normal circumstances, this should not be changed. If you do need to change it, include the international country prefix using a '+' instead of leading zeros.

13.2.3 Wiring the CS7002 GPRS module

Table 13-1: CS7002 GPRS module terminal connections

Terminal	Description
+	Connect to the + panel battery lead
-	Connect to the – panel battery lead

When wiring the CS7002 do the following:

1. Attach the CS7002 to the CSx75 board.

2. Connect the control panel battery leads to the CS7002 board.

3. Connect the CS7002 battery leads to the battery and power up the panel.

More details can be found in the *CS7002 GPRS Module Installation Manual.*

13.2.4 Reporting LEDs
The module LEDs indicate the current status of the CS7002.

• The Bus communications LED indicates that the module is receiving messages over the Bus rather than from the GSM/GPRS network.

• The SIM error LED indicates that the SIM card is blocked and a PUK code is required to unblock it.

• The GPRS active LED indicates that the module is connected to the GPRS network. This LED turns off when the module is no longer connected to the GPRS network, for example, when it uses the voice channel or CSD.

• The Reporting LED indicates that TCP/SMS reporting is taking place.

• The PSU error LED indicates that there is a problem with the 3.8 V Switched Mode Power Supply Unit.

• The Network OK LED indicates that the CS7002 is currently using the GSM network (voice channel or CSD).

• The TCP socket open LED indicates that a TCP connection to a server has been established.

• The Logged on to GSM network LED indicates that the module is connected to the GSM network.

13.3 Programming the CS7002 GPRS module

13.1	Reporting	13.1.1	Report Control	13.1.1.1	(1) Report 1	13.1.1.1.1	Destination

Reports 2 - 6
Same as above

13.1.1.1.2	Backup Destination

13.1.1.1.3	Events	13.1.1.1.3.1	Arm/Disarm/Alarm	13.1.1.1.3.1.1	Alarms

13.1.1.1.3.1.2	Alarm Restores
13.1.1.1.3.1.3	Opening/Closings
13.1.1.1.3.1.4	Zone Bypass and Restores

13.1.1.1.3.2	Tamper/Trouble	13.1.1.1.3.2.1	Tampers and Restores

13.1.1.1.3.2.2	Zone Trouble and Restores
13.1.1.1.3.2.3	Expander Trouble and Restores
13.1.1.1.3.2.4	Siren/Phone Faults and Restores
13.1.1.1.3.2.5	RF Sensor Lost and Restores
13.1.1.1.3.2.6	RF Low Battery and Restores

13.1.1.1.3.3	Power	13.1.1.1.3.3.1	Power Trouble and Restores

| 13.1.1.1.3.3.2 | Aux Overcurrent and Restores |

13.1.1.1.3.4	Communications	13.1.1.1.3.4.1	Fail to Communicate

| 13.1.1.1.3.4.2 | Test Reports |

13.1.1.1.3.5	Miscellaneous	13.1.1.1.3.5.1	Program/Download

| 13.1.1.1.3.5.2 | Zone Inactivity Monitor |

13.1.1.1.4	Report Delay
13.1.1.1.5	Report When

13.1.2	TCP/IP Reporting	13.1.2.1	Receivers	13.1.2.1.1	(1) Receiver 1	13.1.2.1.1.1	IP Address

Receiver 2
Same as above

13.1.2.1.1.2	Account Code
13.1.2.1.1.3	Receiver Number
13.1.2.1.1.4	Line Number

13.1.2.2	Report Format
13.1.2.3	Receiver Polling
13.1.2.4	Polling Time

13.1.3	SMS Reporting	13.1.3.1	(1) Receiver 1	13.1.3.1.1	Phone Number

Receiver 2
Same as above

| 13.1.3.1.2 | Account Code |

13.1.3.1.3	Protocol	13.1.3.1.3.1	SIA Single Evts

13.1.3.1.3.2	SIA Comb'd Evts
13.1.3.1.3.3	SIA area mods
13.1.3.1.3.4	Contact ID

13.1.4	Partition Account Codes	13.1.4.1	(1) Partition 1

Partitions 2-8
Same as above

13.1.5	Report Attempts	13.1.5.1	Max Report Attempts

13.1.5.2	FTC Report Attempts
13.1.5.3	Max Reports in 24h
13.1.5.4	Report Timeout
13.1.5.5	Control Panel Timeout

13.1.6	Backup Format

13.2	Up/Download	13.2.1	Connection Type	**13.2.1.1**	**CSD**

| **13.2.1.2** | **GPRS** |

13.2.2	Phone Number
13.2.3	IP Address
13.2.4	Site Initiated
13.2.5	Remote Initiated
13.2.6	Allow Calls From
13.2.7	Auto-answer
13.2.8	Call Back Req'd
13.2.9	Auto U/D at Test Time

13.3	Options	13.3.1	GSM	13.3.1.1	SIM PIN Code

13.3.1.2	GSM Operator	13.3.1.2.1	Operator Selection

| 13.3.1.2.2 | Current Operator |

13.3.1.3	SMS Service Centre Address
13.3.1.4	RSSI Value
13.3.1.5	Bit Error Rate

13.3.1.6	Connection Fault	13.3.1.6.1	Line Fault RF Level

| 13.3.1.6.2 | Line Fault Delay |

13.3.1.7	GSM Engine Info	13.3.1.7.1	Manufacturer

13.3.1.7.2	Type
13.3.1.7.3	Software Revision
13.3.1.7.4	Serial Number

13.3.2	CSD	13.3.2.1	Speed

| 13.3.2.2 | Use V1.110 |
| 13.3.2.3 | Mode |

13.3.3	Network	13.3.3.1	DHCP Assigned IP Address

13.3.3.2	PPP User ID
13.3.3.3	PPP Password
13.3.3.4	GPRS APN
13.3.3.5	GPRS APN 2

13.3.3.6	Port Numbers	13.3.3.6.1	TCP/IP Alarm Port

| 13.3.3.6.2 | U/D Port |

13.3.4	Status Check	13.3.4.1	GSM Connection	13.3.4.1.1	GSM Engine Comms

13.3.4.1.2	SIM PIN Accepted
13.3.4.1.3	Logged into GSM Network
13.3.4.1.4	SIM PUK Required
13.3.4.1.5	Sending SMS
13.3.4.1.6	Using GSM Audio
13.3.4.1.7	Using GSM CSD
13.3.4.1.8	GPRS Connected
13.3.4.1.9	Good RSSI

13.3.4.2	Power	13.3.4.2.1	Battery Trouble

| 13.3.4.2.2 | SM PSU Trouble |
| 13.3.4.2.3 | Bus Power Trouble |

13.3.4.3	Application	13.3.4.3.1	Downloading

13.3.4.3.2	Download Starting
13.3.4.3.3	Reporting
13.3.4.3.4	Hit 24H Report Limit

13.4	Model
13.5	Version
13.6	Default Settings

You must enroll and default the CS7002 GPRS module before you begin to program the system. For more information on enrolling and defaulting, see chapter B-1 *Enrolling modules*. To program the CS7002 GPRS module, select *Installer Menu>CS7002 GPRS Module*.

13.3.1 Testing the RSSI value

During the enrolling procedure, it is mandatory to check the RSSI value (signal strength) of the CS7002 and record it in the system documentation. The RSSI value is linked to the signal level of the GSM network and

ranges from 0-31, with 99 as unknown. If an RSSI reading is not satisfactory, move the antenna to get a better reception. The following steps explain how to read the RSSI value.

1. Navigate with the ↑↓ keys to *CS7002 GPRS module>Options>GSM>RSSI Value* and press **OK**.

2. Note the RSSI reading.

3. Navigate with the ↑↓ keys to *Status Check* and press **OK**.

4. Scroll through the status messages to ensure the SIM card is logged onto the GSM network and the SIM card PIN is not blocked.

13.3.2 Reporting

The CS7002 contains six report controls which can use four report destinations. You can configure the events to be reported and specify two reporting destinations for each report control. Two of these can be SMS, two can be TCP/IP. The backup destination, which is used if there is a dialler problem, should be another dialler, for example PSTN.

✍ *All events in Report Control 1 are enabled by default.*

The module can send primary, secondary and backup reports.

13.3.2.1 Primary reports

Primary reports are the main means of reporting the selected events.

• Set a report control to *Report When>Report Always*.

• Select the event group for each partition.

• Select the report destination and report format.

13.3.2.2 CS7002 as backup for another dialler

The CS7002 reports the event when the control panel or other dialler fails to report.

13.3.2.3 CS7002 backup format (SMS / GPRS)

Control panel

The report control monitors the control panel and reports the selected events if the control panel fails to report them.

• Set a report control to *Report When>Control Dialler Problem*.

• Program the first report destination and report format.

CS7050/CS7501

The CS7050 is a TCP/IP auxiliary dialler. The CS7501 is an ISDN dialler. When either fails to report, it sends an expansion event which the CS7002 reports.

• Set a report control to *Report When>Report Always*.

• Enable Test Report events only.

• Program the first report destination and ensure the CS7002 report format is the same as that used by the CS7050.

13.3.2.4 CS7002 backup format (audio reporting)

Control panel

The control panel can send reports using GSM audio instead of PSTN. Alternatively, it can be configured to use both GSM audio and PSTN.

• Configure reporting on the control panel.

• Enter 'G' at the start of the phone number to use the GSM instead of the PSTN to dial the phone number.

✍ *Press #0 to enter 'G' on a CS5500 keypad or press 10 on a CS-LCD or CS-LED keypad.*

13.3.2.5 Control panel/CS7002 as backup for CS7002

Backup reports are sent when the CS7002 fails to send primary reports. Backup reports can be sent by another report control on the module or by another device on the system.

13.3.2.6 CS7002 as backup

- Set a report control to *Report When>Report Always*.

- Program the first and backup report destinations to one of the TCP/IP or SMS destinations or set another report control as *Report control>Backup.*

13.3.2.7 Control panel as backup

When the CS7002 fails to report, it sends an expansion event which the control panel or auxiliary dialler reports.

- Set a report control to *Report When>Report Alway*s.

- Set the backup destination to *Other Dialler.*

- Enable the autotest report on the panel phone events and panel system events.

- Ensure the reporting format on the dialler is the same as that set in *CS7002 GPRS>Module>Reporting>Backup Format*.

13.3.3 Using upload/download

13.3.3.1 GSM CSD connection.

The upload/download access code is set on the control panel in *Communications>Up/Download>Access Code*. For more information, see chapter B-2 *Programming the control panel*. The following example configures the CS7002 GPRS module to answers calls from phone number 5666666 only. The PC initiates the upload/ download session.

1. Navigate with the ↑↓ keys to C*S7002 GPRS Module>Up/Download* and press **OK**.

2. Scroll to *Remote Initiated>Enabled* and press **OK**.

3. The keypad beeps once to accept the change and returns to *Remote Initiated.*

4. Scroll to *Phone Number* and press **OK**.

5. Press #↓ to clear the current value.

6. Enter 5666666 and press **OK**.

7. The keypad beeps once to accept the change and returns to *Phone Number.*

8. You must configure the CS7002 data phone number on the upload/download PC. Ask your network provider for this number.

9. You must also configure the GSM modem on the upload/download PC. Select *Program>Setup>GSM Modem setup*. Enter **S7=60S10=255X0T+MS=9,1,9600,9600** in the *Initialization string 2* field.

13.3.3.2 GPRS CSD connection.

The connection is made via a TCP/IP network. Instead of a phone number, an IP address is set. The *Call Back Req'd* and *Allow Calls From* options are disabled.

13.4 Glossary

Location	Term	Definition
13	CS7002 GPRS Module	A module that operates as a GPRS and GSM communications module for reporting and upload/download.
13.1	Reporting	A menu entry that groups reporting options.
13.1.1	Report Control	A block of reporting data that contains configurations to format selected events into one or more messages according to pre-configured settings and send them to specified destinations. A menu entry that groups report control options.
13.1.1.1.1	Destination	A menu option that configures the report destination for the selected report control.
13.1.1.1.2	Backup Destination	A menu option that configures the backup destination for the selected report control. If using another device as the backup destination, set the reporting format in *Reporting>Backup Format* and enable test report events in the backup device.
13.1.1.1.3	Events	A menu entry that contains all configurable events for each report control. All events for report control 1 are enabled by default. Events for all other report controls are disabled by default. Enabled events are formatted into one or more messages according to pre-configured settings and sent to the selected report destination. You must enable only *Test Reports* if using the CS7002 as backup to another auxiliary dialler.
13.1.1.1.3.1	Arm/Disarm/Alarm	A menu entry that groups the events that are reported to the selected report control.
13.1.1.1.3.1.1	Alarms	A menu option that sends a report to the selected report control when an alarm occurs.
13.1.1.1.3.1.2	Alarm Restores	A menu option that sends a report to the selected report control when the alarm has been restored after an alarm.
13.1.1.1.3.1.3	Opening/Closings	A menu option that sends a report to the selected report control stating when the system is opened (disarmed) and closed (armed).
13.1.1.1.3.1.4	Zone Bypass and Restores	A menu option that sends a report to the selected report control when a zone is bypassed. A report is also sent when the zone is restored (un-bypassed).
13.1.1.1.3.2	Tamper/Trouble	A menu entry that groups together the tamper and trouble events that are reported to the selected report control.
13.1.1.1.3.2.1	Tampers and Restores	A menu option that sends a report to the selected report control when a tamper occurs. A report is also sent when the tamper is no longer active.
13.1.1.1.3.2.2	Zone Trouble and Restores	A menu option that sends a report to the selected report control when a zone trouble condition occurs. A report is also sent when the trouble condition is no longer active.
13.1.1.1.3.2.3	Expander Trouble and Restores	A menu option that sends an expander trouble and restore report to the selected report control.
13.1.1.1.3.2.4	Siren/Phone Faults and Restores	A menu option that sends a report to the selected report control when a siren or phone fault occurs. A restore report is sent when the fault is fixed.
13.1.1.1.3.2.5	RF Sensor Lost and Restores	A menu option that sends a report to the selected report control when an RF sensor is missing. A restore report is sent to the central station when the receiver receives a valid signal from the lost transmitter.
13.1.1.1.3.2.6	RF Low Battery and Restores	A menu option that sends a report to the selected report control when a low battery condition occurs in an RF sensor. A restore report is also sent when the low battery condition is no longer active.

Location	Term	Definition
13.1.1.1.3.3	Power	A menu entry that groups the power events that are reported to the selected report control.
13.1.1.1.3.3.1	Power Trouble and Restores	A menu option that reports mains failure, mains restore, low battery and low battery restore events to the selected phone number, report control, receiver or email account.
13.1.1.1.3.3.2	Aux Overcurrent and Restores	A menu option that sends a report to the selected report control when too much current is detected. A restore report is also sent when the overcurrent condition is fixed.
13.1.1.1.3.4	Communications	A menu entry that groups together the communication events that are reported to the selected report control.
13.1.1.1.3.4.1	Fail to Communicate	A menu option that reports a fail to communicate event to the selected report control.
13.1.1.1.3.4.2	Test Reports	A menu option that sends a test report to the selected report control at pre-programmed intervals. The units can be set in days or hours.
13.1.1.1.3.5.1	Program/Download	A menu option that reports programming and up/download events to the selected report control.
13.1.1.1.3.5.2	Zone Inactivity Monitor	A menu option that sends a report to the selected report control when a zone inactivity event occurs.
13.1.1.1.4	Report Delay	A menu option that configures the delay in seconds before the CS7002 module reports. If any other events occur during this delay, they are sent with the first event in one message. This can be from 0 to 255 seconds. This setting is useful only if using SMS reporting.
13.1.1.1.5	Report When	A menu option that enables primary reporting (Report Always) or secondary reporting (Control Dialler Problem) for the selected report control.
13.1.2	TCP/IP Reporting	A menu entry that groups TCP/IP reporting options.
13.1.2.1	Receivers	A menu entry that groups TCP/IP receiver options.
13.1.2.1.1.1	IP Address	A menu option that configures the address of the selected TCP/IP receiver.
13.1.2.1.1.2	Account Code	A menu option that specifies the unique code sent from the modem in the control panel or dialler to the selected report control or phone number. This code is used to identify and charge the user. Separate account codes can be set up for each phone number and each partition. This is also known as the account number. The letters A, B, C, D, E and F can be included in CS7002 GPRS module account codes.
13.1.2.1.1.3	Receiver Number	A menu option that configures the phone line receiver number associated with the receiver account.
13.1.2.1.1.4	Line Number	A menu option that configures the line number associated with the receiver account.
13.1.2.2	Report Format	A menu option that configures the communicator format used to report to TCP/IP receivers. Consult the instructions for your central station receiver to determine which format is compatible.
13.1.2.3	Receiver Polling	A menu option that configures the module to send polling messages to the report receivers.
13.1.2.4	Polling Time	A menu option that configures the TCP/IP polling time. This value must match the TCP/IP polling time set on a TCP/IP receiver. The value chosen is determined by the level of security required and the cost of data transmission. This can be from 1 to 255 minutes. If set to 0, the option is disabled.

Location	Term	Definition
13.1.3	SMS Reporting	A menu entry that groups SMS reporting options.
13.1.3.1.1	Phone Number	A menu option that sets the phone number to which SMS reports are sent.
13.1.3.1.2	Account Code	A menu option that specifies the unique code sent from the modem in the control panel or dialler to the selected report control. This code is used to identify and charge the user. Separate account codes can be set up for each phone number and each partition. This is also known as the account number. The letters B, C, D, E and F can be included in control panel account codes. The letters A, B, C, D, E and F can be included in CS7002 GPRS module account codes.
13.1.3.1.3	Protocol	A menu option that configures the communicator format used to report to the selected SMS receiver.
13.1.3.1.3.1	SIA Single Evts	A menu entry that sets SMS reporting options so that events are are grouped and sent as separate messages to separate account codes.
13.1.3.1.3.2	SIA Comb'd Evts	A menu entry that sets SMS reporting options so that events for separate account codes can be sent in the same message.
13.1.3.1.3.3	SIA area mods	A menu entry that allows area modifiers to identify partitions.
13.1.3.1.3.4	Contact ID	A menu entry that selects the Contact ID protocol
13.1.4	Partition Account Codes	A menu option that lists the account codes for each partition. The account code is sent when the relevant partition is reported. There are two sets of account codes. The first set assigns an account code to each report destination. The second set assigns an account code to each partition. If you attempt to use both sets, the partition account code takes precedence
13.1.5	Report Attempts	A menu entry that groups report options.
13.1.5.1	Max Report Attempts	A menu option that configures the number of attempts the CS7002 makes to send a report. This can be from 0 to 15.
13.1.5.2	FTC Report Attempts	A menu option that configures the number of attempts that can be made to a specific report destination before the Fail to Communicate condition is set. This can be from 1 to 15.
13.1.5.3	Max Reports in 24h	A menu option that configures the maximum number of reports that can be sent by the CS7002 in 24 hours. The CS7002 stops reporting when the number of messages in a 24 hours exceeds this number. This can be from 1 to 255. If set to 0, there is no limitation. This applies to SMS and TCP/IP.
13.1.5.4	Report Timeout	A menu option that configures the maximum length of time for each attempt by the CS7002 to report to each receiver. If the report is not successful during this time, the attempt is abandoned. This can be from 0 to 255 seconds.
13.1.5.5	Control Panel Timeout	A menu option that configures the maximum time during which the control panel must report an event. If the CS7002 report control is configured for secondary reporting and the control panel does not report the event during this time, the report control reports the event. This can be from 1 to 255 seconds. If set to 0, the option is disabled.
13.1.6	Backup Format	A menu option that configures the reporting format when using another device as backup. You must set the same reporting format on the backup device.
13.2	Up/Download	A menu entry that groups options used to control download sessions between the up/download software and the control panel.
13.2.1	Connection Type	A menu entry that selects a CSD or GPRS connection.
13.2.1.1	CSD	Circuit Switched Data. This communication is used to upload/download data. It is similar to a modem but it is wireless and built in to the CS7002.

Location	Term	Definition
13.2.1.2	GPRS	General Packet Radio Service. A global standard for wireless communications. It supports a range of bandwidths and can transmit and receive both small bursts and large amounts of data.
13.2.2	Phone Number	A menu option that sets the phone number of the PC running the upload/ download software.
13.2.3	IP Address	A menu option that configures the address of the selected TCP/IP receiver.
13.2.4	Site Initiated	A menu option that allows an upload/download session between the module and the PC to be initiated from a keypad.
13.2.5	Remote Initiated	A menu option that allows an upload/download session between the module and the PC to be initiated by the PC. The PC dials into the module. You must dial the data phone number to dial into the GSM for upload/download. This option is dependent on other options (*Allow Calls From, Auto-answer and Call Back Req'd*).
13.2.6	Allow Calls From	A menu option that answers calls from a known phone number only. To enable this option, you must enable *Remote Initiated* and program the phone number of the PC in *Up/Download>Phone Number*.
13.2.7	Auto-answer	A menu option that configures the CS7002 to automatically answer any incoming calls. To enable this option, you must enable Remote Initiated.
13.2.8	Call Back Req'd	A menu option that configures the CS7002 to call back the PC in order to initiate an upload/download session. To enable this option, you must enable Remote Initiated.
13.2.9	Auto U/D at Test Time	A menu option that configures the module to automatically dial the PC to initiate an upload/download session after an autotest. You must program the autotest on the control panel.
13.3.1	GSM	Global System for Mobile Communications. A global standard for wireless communications. It supports narrowband Time Division Multiple Access (TDMA). A menu entry that groups GSM connection options.
13.3.1.1	SIM PIN Code	A menu option that configures the code used to enroll the SIM card on the GSM network.
13.3.1.2	GSM Operator	A menu entry that groups information on the current GSM operator and allows a specific GSM operator to be manually selected.
13.3.1.2.1	Operator Selection	A menu option that configures the GSM network operator used by the module. Set this to 00000 to allow the SIM card automatically select a network operator. Alternatively, enter an operator ID code to manually select a network operator.
13.3.1.2.2	Current Operator	A menu option that displays the name of the automatically or manually selected GSM network operator. This option is valid only when the module is logged into the GSM network.
13.3.1.3	SMS Service Centre Address	A menu option that configures the SMS service centre phone number. Usually, this number should be left blank as it is dialled automatically by the SIM card. It should include the country code.
13.3.1.4	RSSI Value	Remote Signal Strength Indication Value. This is a measure of the RF reception and is similar to the indication on a mobile phone. A menu entry that displays the current RSSI value. The RSSI value is periodically updated when logged into the network. RSSI values range from 0 to 31 with 99 as unknown.

Location	Term	Definition
13.3.1.5	Bit Error Rate	A menu option that displays the current Bit Error Rate (BER). The BER value is periodically updated when the module is logged into the network. This information is used for verification purposes only. BER values range from 0% to 7%, with 99 as unknown. It is applicable to GPRS only.
13.3.1.6	Connection Fault	A menu entry that groups connection fault options. A connection fault occurs when the module cannot log into the GSM network.
13.3.1.6.1	Line Fault RF Level	A menu option that configures the acceptable level of the RSSI signal. If the signal falls below this level for the amount of time set in Line Fault Delay, a line fault is generated. This can be from 1 to 31. If set to 0, the setting is disabled.
13.3.1.6.2	Line Fault Delay	A menu option that configures the length of time the RSSI signal must be below the Line Fault RF Level before a line fault is generated. This can be from 0 to 255 seconds.
13.3.1.7	GSM Engine Info	A menu entry that groups information returned from the on-board GSM module on the GSM module.
13.3.1.7.1	Manufacturer	A menu option that contains the GSM Engine Manufacturer Identification.
13.3.1.7.2	Type	A menu option that displays the type of GSM modem used by the module.
13.3.1.7.3	Software Revision	A menu option that displays the current software version of the selected module.
13.3.1.7.4	Serial Number	A menu entry displays the serial number of the GSM modem used by the module. It is used for diagnostics only.
13.3.2	CSD	Circuit Switched Data. This communication is used to upload/download data. It is similar to a modem but it is wireless and built in to the CS7002.
13.3.2.1	Speed	A menu option that configures the baud rate for CSD/ GSM download. This setting must match the baud rate set on the PC modem.
13.3.2.2	Use V1.110	A menu option that enables V1.110 for site-initiated CSD GSM calls. Enable this option if the PC is on an ISDN line and is using an ISDN modem.
13.3.2.3	Mode	A menu option that configures the mode used for site initiated CSD GSM calls. If you are experiencing problems with upload/download, change this setting from transparent mode to non-transparent mode or vice versa.
13.3.3	Network	A menu entry that groups network options.
13.3.3.1	DHCP Assigned IP Address	A menu option that displays the IP address that is assigned to the CS7002 when it logs into the GPRS network.
13.3.3.2	PPP User ID	A menu option that configures the user ID for a PAP login. Contact the network provider to confirm if a PAP login is required and to obtain the user ID and password.
13.3.3.3	PPP Password	A menu option that configures the password for a PAP login. Contact the network provider to confirm if a PAP login is required and to obtain the user ID and password.
13.3.3.4	GPRS APN	A menu option that configures the GPRS access point name. Contact the network provider to obtain this name. This is a mandatory setting if using TCP/IP reporting.
13.3.3.5	GPRS APN 2	A *CS7002 GPRS Module* menu option that configures a second GPRS access point name. Contact the network provider to obtain this name. This is used if the connection cannot be made via *GPRS APN*.
13.3.3.6	Port Numbers	A menu entry that groups TCP/IP port options.

Location	Term	Definition
13.3.3.6.1	TCP/IP Alarm Port	A menu option that configures the number of the TCP/IP port to which polling and alarms are reported. The default is 9999 and under normal circumstances should not be changed.
13.3.3.6.2	U/D Port	A menu option that configures the number of the port used for upload/download.
13.3.4	Status Check	A menu entry that groups status messages for GSM events.
13.3.4.1	GSM Connection	A menu entry that groups GSM connection settings.
13.3.4.1.1	GSM Engine Comms	A menu option that indicates that communication with the GSM module is established.
13.3.4.1.2	SIM PIN Accepted	A menu option that indicates that the PIN number for the SIM card has been entered correctly.
13.3.4.1.3	Logged into GSM Network	A menu option that indicates that the GSM module is logged into the GSM network.
13.3.4.1.4	SIM PUK Required	A menu option that indicates that the SIM card has been blocked and a PUK code must be entered to unblock it. Put the card into a mobile phone and enter the PUK code. When the card has been unblocked put it back into the GPRS module.
13.3.4.1.5	Sending SMS	A menu option that indicates that the module is sending an SMS message over the GSM network.
13.3.4.1.6	Using GSM Audio	A menu option that indicates that the module is using GSM audio. The GSM audio channel is used when the panel reports through the voice channel of the GSM network.
13.3.4.1.7	Using GSM CSD	A menu option that indicates that the module is using GSM CSD.
13.3.4.1.8	GPRS Connected	A menu option that indicates that the module is logged into the GPRS network.
13.3.4.1.9	Good RSSI	A menu option that indicates that the current RSSI level is equal to or greater than the minimum signal quality level configured in *Line Fault RF Level*. If the RSSI level drops below this value a GSM line fault is indicated.
13.3.4.2	Power	A menu entry that groups power related status messages.
13.3.4.2.1	Battery Trouble	A menu option that indicates that there is a problem with the battery.
13.3.4.2.2	SM PSU Trouble	A menu option that indicates that there is a problem with its 3.8 V Switched Mode Power Supply Unit.
13.3.4.2.3	Bus Power Trouble	A menu option that indicates that there is a problem with power to the Bus.
13.3.4.3	Application	A menu entry that groups application related status messages.
13.3.4.3.1	Downloading	A menu option that indicates that downloading is taking place.
13.3.4.3.2	Download Starting	A menu option that indicates that downloading is about to start.
13.3.4.3.3	Reporting	A menu option that displays a status message when reporting is taking place.
13.3.4.3.4	Hit 24H Report Limit	A menu option that indicates that the maximum number of reports allowed in 24 hours has been reached. This applies to SMS and GPRS reports.
13.4	Model	A menu option that displays the current model of the selected module.
13.5	Version	A menu option that displays the current software version of the selected module.
13.6	Default Settings	A menu option that defaults the selected module to factory defaults.

13.5 Technical specifications

Power supply specifications	
Power supply voltage	12V ⎓ ±2%
Consumption - Standby	30 mA at 12V ⎓ ±2%
Consumption – Maximum via battery leads	2A at 12V ⎓ ±2%

General feature specifications		
PCB Size	Dimensions (width x height x depth)	97x102x24 mm
Environmental	Operating temperature	+0° C to + 49 °C
	Humidity	Max 93%
	Shipping Weight	115 g

Chapter 14: Reserved

Chapter 15: Setting up the CS7050

15.1 Overview

The CS7050 TCP/IP module is a dual microprocessor-controlled Internet/Intranet interface used to connect the CSx75 control panel to the OH Network Receiver. This interface allows any or all events from the CSx75 to be reported over the network. The CS7050 TCP/IP module features include:

- Four programmable report destinations (two TCP/IP receivers, two email addresses).

- Event reporting from eight partitions.

- Selectable reportable events for each partition.

- Control panel as backup.

- SIA reporting using TCP/IP.

- Contact ID reporting using TCP/IP.

- Email reporting in English and on POP server only.

- DHCP or fixed IP address.

- Upload/download may be initiated remotely or locally.

- Optional automatic download sessions. These normally follow test calls. Test call reporting can be switched off so that there is automatic download calls without test report calls.

15.2 Installing the CS7050 TCP/IP module
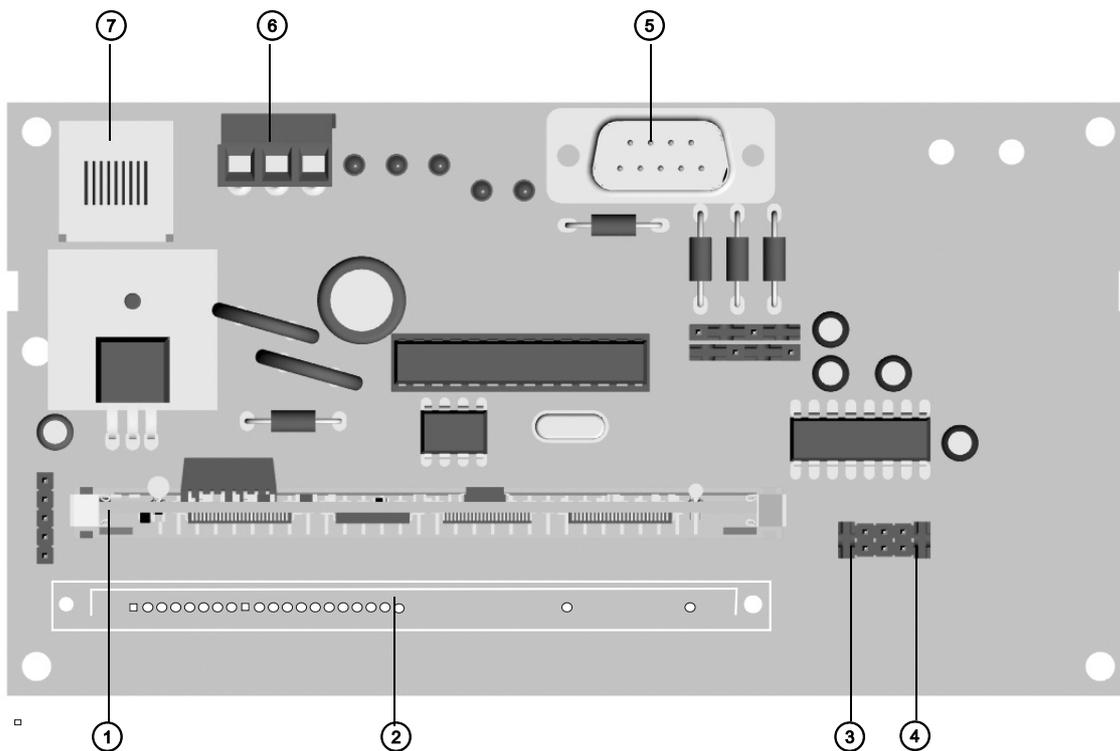
①	SIM pin 1	⑤	RS232
②	Modem pin 2	⑥	Connect to CSx75 panel
③	Processor to RS232 setting: position 9 &10	⑦	10BT ethernet
④	Processor to RS232 setting: position 3 & 4	⑧	Audio tap

For information on installing the CS7050 TCP/IP module in the various housings, see chapter A-4 *Installing a basic system*.

15.2.1 Wiring the CS7050 TCP/IP module

Table 15-1: CS7050 TCP/IP module terminal connections

Terminal	Description
+	Connect to the panel bus Aux+.
COM	Connect to the panel bus COM terminal.
DATA	Connect to the panel bus DATA terminal.
J16	Connect the Ethernet Jack J16 (10BT) to a 10BT Ethernet capable hub, router or gateway. Do not use a CASCADE or X port in crossover mode.

15.2.2 LED indicators

Table 15-2: CS7050 TCP/IP module LED indicators

LED	Description
DS1	*Flashes* each time the CS7050 has an opportunity to access the Aritech CSx75 bus. It should flash about twice a second.
DS3	*Flashes* when it is waiting for a communication from the Ethernet module.
DS4	*On* when waiting for a reply from a Aritech CSx75 bus device.
DS5	*Flashes* when the CS7050 gets a packet from the Ethernet module.
DS6	*On* when the bus has a message to send to the network.
✍ DS3 - DS6 are off if the system is initialized, normal and waiting for a new event to report.	
L1	(on SIM module) *Flashes* ON Ethernet Activity.
L2	(on SIM module) *Steady* ON when Ethernet Link is established with the 10BT cable.
DS2	The sixth LED is located toward the back of the board. It is used for hardware, and only glows dimly when connected to the CSx75 control panel.

15.3 Programming the CS7050 TCP/IP module

15.1 **TCP/IP Reporting**
- 15.1.1 **1 Receiver (1)** — *Receiver 2 Same as above*
  - 15.1.1.1 **IP Address**
  - 15.1.1.2 **Events**
    - 15.1.1.2.1 **Arm/Disarm/Alarm**
      - 15.1.1.2.1.1 Alarms
      - 15.1.1.2.1.2 Alarm Restores
      - 15.1.1.2.1.3 Opening/Closings
      - 15.1.1.2.1.4 Zone Bypass and Restores
    - 15.1.1.2.2 **Tamper/Trouble**
      - 15.1.1.2.2.1 Tampers and Restores
      - 15.1.1.2.2.2 Zone Trouble and Restores
      - 15.1.1.2.2.3 Expander Trouble and Restores
      - 15.1.1.2.2.4 Siren/Phone Faults and Restores
      - 15.1.1.2.2.5 RF Sensor Lost and Restores
      - 15.1.1.2.2.6 RF Low Battery and Restores
    - 15.1.1.2.3 **Power**
      - 14.1.1.2.3.1 Power Trouble and Restores
      - 14.1.1.2.3.2 Aux Overcurrent and Restores
    - 15.1.1.2.4 **Communications**
      - 15.1.1.2.4.1 Fail to Communicate
      - 15.1.1.2.4.2 Test Reports
    - 15.1.1.2.5 **Miscellaneous**
      - 15.1.1.2.5.1 Program/Download
      - 15.1.1.2.5.2 Zone Inactivity Monitor

15.2 **E-mail Reporting**
- 15.2.1 **Our E-mail Address**
- 15.2.2 **E-mail Accounts**
  - 15.2.2.1 **1 E-mail (1)** — *E-mail 2 Same as above*
    - 15.2.2.1.1 **E-mail Address**
    - 15.2.2.1.2 **Events**
      - 15.2.2.1.2.1 **Arm/Disarm/Alarm**
        - 15.2.2.1.2.1.1 Alarms
        - 15.2.2.1.2.1.2 Alarm Restores
        - 15.2.2.1.2.1.3 Opening/Closings
        - 15.2.2.1.2.1.4 Zone Bypass and Restores
      - 15.2.2.1.2.2 **Tamper/Trouble**
        - 15.2.2.1.2.2.1 Tampers and Restores
        - 15.2.2.1.2.2.2 Zone Trouble and Restores
        - 15.2.2.1.2.2.3 Expander Trouble and Restores
        - 15.2.2.1.2.2.4 Siren/Phone Faults and Restores
        - 15.2.2.1.2.2.5 RF Sensor Lost and Restores
        - 15.2.2.1.2.2.6 RF Low Battery and Restores
      - 15.2.2.1.2.3 **Power**
        - 15.2.2.1.2.3.1 Power Trouble and Restores
        - 15.2.2.1.2.3.2 Aux Overcurrent and Restores
      - 15.2.2.1.2.4 **Communications**
        - 15.2.2.1.2.4.1 Fail to Communicate
        - 15.2.2.1.2.4.2 Test Reports
      - 15.2.2.1.2.5 **Miscellaneous**
        - 15.2.2.1.2.5.1 Program/Download
        - 15.2.2.1.2.5.2 Zone Inactivity Monitor
- 15.2.3 **E-mail Server**
  - 15.2.3.1 Domain Name
  - 15.2.3.2 IP Address

15.3 **Account Codes**
- 15.3.1 **System Account Codes**
- 15.3.2 **Partition Account Codes**
  - 15.3.2.1 **1 Partition (1)** — *Partition 2-8 Same as above*
- 15.3.3 Receiver Number
- 15.3.4 Line Number

15.4 **Up/Download**
- 15.4.1 Site Initiated
- 15.4.2 Remote Initiated
- 15.4.3 Auto U/D at Test Time
- 15.4.4 IP Address

15.5 **Automation**
- 15.5.1 Enable Automation
- 15.5.2 IP Address

15.6 **Event Recorder**
- 15.6.1 Send Tags to Recorder
- 15.6.2 IP Address

15.7 **Options**
- 15.7.1 **Reporting**
  - 15.7.1.1 Report Format
  - 15.7.1.2 Control Panel is Backup
  - 15.7.1.3 Receiver 2 as Backup
  - 15.7.1.4 Receiver Polling
  - 15.7.1.5 Polling Time
- 15.7.2 **Network**
  - 15.7.2.1 Use DHCP
  - 15.7.2.2 Our IP Address
  - 15.7.2.3 Gateway IP Address
  - 15.7.2.4 Subnet Mask
  - 15.7.2.5 Network Timeout
  - 15.7.2.6 Max Network Attempt
  - 15.7.2.7 **Port Numbers**
    - 15.8.2.7.1 TCP/IP Alarm Port
    - 15.8.2.7.2 U/D Port
    - 15.8.2.7.3 E-mail Port
    - 15.8.2.7.4 Automation Port

15.8 Model
15.9 Version
15.10 Default Settings

You must enroll and default the module before you begin to program the system. For more information on enrolling and defaulting, see chapter B-1 *Enrolling modules*. You can program the CS7050 TCP/IP module using a keypad or UDx75 software. To program the CS7050 using a keypad, select *Installer Menu>CS7050 TCP/IP Module.*

15.3.1 Configuring TCP/IP reporting

The CS7050 TCP/IP module can report to two receivers. You can configure the events to be reported, the reporting format and the reporting connection parameters. The following example uses TCP/IP reporting to send primary reports for tamper events occurring in partition 1 to receiver 1 (IP address 122.168.1.1).

1. Navigate with the ↑↓ keys to *CS7050 TCP/IP Module>TCP/IP Reporting>Receiver (1)* and press **OK**.

2. Scroll to *IP Address* and press **OK**.

3. Enter **122.168.1.1** and press **OK**.

4. The keypad beeps once to confirm the change and returns to *IP Address*.

5. Scroll to *Events>Tamper/Trouble>Tampers and Restores* and press **OK**.

6. Press the relevant keys to include partition 1 in the tamper and restores event report.

7. The keypad beeps once to accept the change and returns to *Tampers and Restores*.

8. Navigate with the ↑↓ keys to *Options>Reporting>Report Format* and select the format relevant for your central station receiver.

9. Obtain the IP port and IP address, gateway and subnet mask for the CS7050 TCP/IP module:

    -   For Windows 9X / Windows ME, type *ipconfig* at the DOS prompt.

    -   For Windows 2000 / XP, type *ipconfig* at the COMMAND prompt.

10. Navigate with the ↑↓ keys to *Network* and press **OK**.

11. Scroll in turn to *Our IP Address*, *Gateway IP Address*, *Subnet Mask* and *Port Numbers* and enter the information obtained in step 9.

15.3.2 Configuring email reporting

Reporting to email addresses can include computers, cell phones, pagers and devices. You can configure the events to be reported, the reporting format and the reporting connection parameters. When using email reporting, you must configure the server settings and the CS7050 email address and port. The following example uses email reporting to send primary reports for alarms occurring on in partition 2 from **ouremail@myemail.com** to email address 1 (user1@myemail.com).

1. Navigate with the ↑↓ keys to *CS7050 TCP/IP Module>E-mail Reporting>Our E-mail Address* and press **OK**.

2. Enter **ouremail@myemail.com** and press **OK**.

3. The keypad beeps once to confirm the change and returns to *Our E-mail Address*.

4. Scroll to *E-mail Accounts>E-mail 1>E-mail Address* and press **OK**.

5. Enter **user1@myemail.com** and press **OK**.

6. The keypad beeps once to confirm the change and returns to *E-mail Address*.

7. Scroll to *Events>Arm/Disarm/Alarm>Alarms* and press **OK**.

8. Press the relevant keys to include partition 2 in the alarms report and press **OK**.

9. The keypad beeps once to accept the change and returns to *Alarms*.

10. Navigate with the ↑↓ keys to *Options>Reporting>Report Format* and select the format relevant for your central station receiver.

11. The keypad beeps once to accept the change and returns to *Report Format*.

12. Navigate with the ↑↓ keys to *E-mail Reporting>E-mail Server>Domain Name* and press **OK**.

13. Enter the domain name of the server to which reports are sent and press **OK**.

14. The keypad beeps once to accept the change and returns to *Domain Name*.

15. Scroll to *E-mail Server>IP Address* and press **OK**.

16. Enter the IP address of the server to which reports are sent and press **OK**.

17. The keypad beeps once to accept the change and returns to *IP Address*.

15.3.3 Configuring reporting options

The CS7050 TCP/IP module can send primary, backup and dual reports. The following steps explain how to configure each type of report.

1. Navigate with the ↑↓ keys to *CS7050 TCP/IP Module>Options>Reporting* and press **OK**.

2. To use another CS7050 receiver as backup, select *Receiver 2 as Backup>Enabled* and press **OK**.

3. To use the control panel as backup:

   - Select *Control Panel is Backup>Enabled* and press **OK**.

   - Enable autotest report on the control panel phone events and panel system events.

   - Ensure the reporting format used by the control panel is the same as that set in *Report Format*.

4. To configure dual reporting:

   - Select *Receiver 2 as Backup>Disabled* and press **OK**.

   - Select *Control Panel is Backup>Disabled* and press **OK**.

   - Enable all event categories on the control panel.

15.3.4 Configuring upload/download

To enable upload/download, you must configure the session initiation settings on the CS7050 TCP/IP module and specify the PC IP address and port. The upload/download access code is set on the control panel. The following example enables download sessions during test calls. The calls are initiated from a central station (IP address 192.37.57.3) using the TCP/IP alarm port.

1. Navigate with the ↑↓ keys to *CS7050 TCP/IP Module>Up/Download* and press **OK**.

2. Scroll to *Remote Initiated>Enabled* and press **OK**.

3. The keypad beeps once to accept the change and returns to *Remote Initiated*.

4. Scroll to *IP Address* and press **OK**.

5. Enter **192.37.57.3** and press **OK**.

6. The keypad beeps once to accept the change and returns to *IP Address*.

7. Scroll to *Auto U/D at Test Time>Enabled* and press **OK**.

8. The keypad beeps once to accept the change and returns to *Auto U/D at Test Time*.

9. Navigate with the ↑↓ keys to *Options>Network>Port Numbers* and press **OK**.

10. Scroll to *TCP/IP Alarm Port* and press **OK**.

11. Enter the number of the port and press **OK**.

12. The keypad beeps once to accept the change and returns to *TCP/IP Alarm Port*.

15.4 Glossary

Location	Term	Definition
15	CS7050 TCP/IP Module	A module that operates as an Ethernet communications module for reporting and upload/download.
15.1	TCP/IP Reporting	A menu entry that groups TCP/IP reporting options.
15.1.1.1	IP Address	A menu option that configures the address of the selected TCP/IP receiver.
15.1.1.2	Events	A menu entry that contains all configurable events for each receiver or email account. All partitions are enabled by default. Enabled events are formatted into one or more messages according to pre-configured settings and sent to the selected report destination or email address. Select the partition(s) to include for each event report. If the partition is not selected, no event from that partition reports via the network regardless of what is programmed elsewhere.
15.1.1.2.1	Arm/Disarm/Alarm	A menu entry that groups the events that are reported to the selected receiver.
15.1.1.2.1.1	Alarms	A menu option that sends a report to the selected receiver when an alarm occurs.
15.1.1.2.1.2	Alarm Restores	A menu option that sends a report to the selected receiver when the alarm has been restored after an alarm.
15.1.1.2.1.3	Opening/Closings	A menu option that sends a report to the selected receiver stating when the system is opened (disarmed) and closed (armed).
15.1.1.2.1.4	Zone Bypass and Restores	A menu option that sends a report to the selected receiver when a zone is bypassed. A report is also sent when the zone is restored (un-bypassed).
15.1.1.2.2	Tamper/Trouble	A menu entry that groups together the tamper and trouble events that are reported to the selected receiver.
15.1.1.2.2.1	Tampers and Restores	A menu option that sends a report to the selected receiver when a tamper occurs. A report is also sent when the tamper is no longer active.
15.1.1.2.2.2	Zone Trouble and Restores	A menu option that sends a report to the selected receiver when a zone trouble condition occurs. A report is also sent when the trouble condition is no longer active.
15.1.1.2.2.3	Expander Trouble and Restores	A menu option that sends an expander trouble and restore report to the selected receiver.
15.1.1.2.2.4	Siren/Phone Faults and Restores	A menu option that sends a report to the selected receiver when a siren or phone fault occurs. A restore report is sent when the fault is fixed.
15.1.1.2.2.5	RF Sensor Lost and Restores	A menu option that sends a report to the selected receiver when an RF sensor is missing. A restore report is sent to the central station when the receiver receives a valid signal from the lost transmitter.
15.1.1.2.2.6	RF Low Battery and Restores	A menu option that sends a report to the selected receiver when a low battery condition occurs in an RF sensor. A restore report is also sent when the low battery condition is no longer active.
15.1.1.2.3	Power	A menu entry that groups the power events that are reported to the selected receiver.
15.1.1.2.3.1	Power Trouble and Restores	A menu option that reports mains failure, mains restore, low battery and low battery restore events to the selected receiver.
15.1.1.2.3.2	Aux Overcurrent and Restores	A menu option that sends a report to the selected receiver when too much current is detected. A restore report is also sent when the overcurrent condition is fixed.

Location	Term	Definition
15.1.1.2.4	Communications	A menu entry that groups the communication events that are reported to the selected receiver.
15.1.1.2.4.1	Fail to Communicate	A menu option that reports a fail to communicate event to the selected report control.
15.1.1.2.4.2	Test Reports	A menu option that sends a test report to the selected receiver. The units can be set in days or hours.
15.1.1.2.5.1	Program/Download	A menu option and that reports programming and up/download events to the selected receiver.
15.1.1.2.5.2	Zone Inactivity Monitor	A menu option menu option that sends a report to the selected receiver when a zone inactivity event occurs.
15.2	E-mail Reporting	A menu entry that groups email reporting options.
15.2.1	Our E-mail Address	A menu option that configures the email address assigned to the CS7050 TCP/IP module. This is a mandatory setting for email reporting. The mail server must accept the domain name. Many mail servers reject emails from domains other than their own to prevent spamming.
15.2.2	E-mail Accounts	A menu entry that groups email account options.
15.2.2.1.1	E-mail Address	A menu option that configures the address of the selected email account. This must be a functional email account that is known to work. A large variety of devices can be utilised including computers, cell phones, pagers and devices.
15.2.2.1.2	Events	A menu entry that contains all configurable events for each receiver or email account. All partitions are enabled by default. Enabled events are formatted into one or more messages according to pre-configured settings and sent to the selected report destination or email address. Select the partition(s) to include for each event report. If the partition is not selected, no event from that partition reports via the network regardless of what is programmed elsewhere.
15.2.2.1.2.1	Arm/Disarm/Alarm	A menu entry that groups the events that are reported to the selected email account.
15.2.2.1.2.1.1	Alarms	A menu option that sends a report to the selected email account when an alarm occurs.
15.2.2.1.2.1.2	Alarm Restores	A menu option that sends a report to the selected email account when the alarm has been restored after an alarm.
15.2.2.1.2.1.3	Opening/Closings	A menu option that sends a report to the selected email account stating when the system is opened (disarmed) and closed (armed).
15.2.2.1.2.1.4	Zone Bypass and Restores	A menu option that sends a report to the selected email account when a zone is bypassed. A report is also sent when the zone is restored (un-bypassed).
15.2.2.1.2.2	Tamper/Trouble	A menu entry that groups the tamper and trouble events that are reported to the selected email account.
15.2.2.1.2.2.1	Tampers and Restores	A menu option that sends a report to the selected email account when a tamper occurs. A report is also sent when the tamper is no longer active.
15.2.2.1.2.2.2	Zone Trouble and Restores	A menu option that sends a report to the selected email account when a zone trouble condition occurs. A report is also sent when the trouble condition is no longer active.
15.2.2.1.2.2.3	Expander Trouble and Restores	A menu option that sends an expander trouble and restore report to the selected email account.

Location	Term	Definition
15.2.2.1.2.2.4	Siren/Phone Faults and Restores	A menu option that sends a report to the selected email account when a siren or phone fault occurs. A restore report is sent when the fault is fixed.
15.2.2.1.2.2.5	RF Sensor Lost and Restores	A menu option that sends a report to the selected email account when an RF sensor is missing. A restore report is sent to the central station when the receiver receives a valid signal from the lost transmitter.
15.2.2.1.2.2.6	RF Low Battery and Restores	A menu option that sends a report to the selected email account when a low battery condition occurs in an RF sensor. A restore report is also sent when the low battery condition is no longer active.
15.2.2.1.2.3	Power	A menu entry that groups the power events that are reported to the selected email account.
15.2.2.1.2.3.1	Power Trouble and Restores	A menu option that reports mains failure, mains restore, low battery and low battery restore events to the selected email account.
15.2.2.1.2.3.2	Aux Overcurrent and Restores	A menu option that sends a report to the selected email account when too much current is detected. A restore report is also sent when the overcurrent condition is fixed.
15.2.2.1.2.4	Communications	A menu entry that groups the communication events that are reported to the selected email account.
15.2.2.1.2.4.1	Fail to Communicate	A menu option that reports a fail to communicate event to the selected email account.
15.2.2.1.2.4.2	Test Reports	A menu option that sends a test report to the selected email account at pre-programmed intervals. The units can be set in days or hours.
15.2.2.1.2.5.1	Program/Download	A menu option that reports programming and up/download events to the selected email account.
15.2.2.1.2.5.2	Zone Inactivity Monitor	A menu option that sends a report to the selected email account when a zone inactivity event occurs.
15.2.3	E-mail Server	A menu entry that groups email server options.
15.2.3.1	Domain Name	A menu option that configures the domain name of the email server to which reports are sent.
15.2.3.2	IP Address	A menu option that configures the address of the selected email server.
15.3	Account Codes	A menu entry that groups account code options.
15.3.1	System Account Codes	A menu option that configures the SIA or Contact ID account numbers for each report receiver. SIA account numbers are 6 digits long. Contact ID account numbers are 4 digits long. They must be entered with extra zeros to the left. If you attempt to use both system account codes and partition account codes, the partition account codes take precedence.
15.3.2	Partition Account Codes	A menu option that lists the account codes for each partition. The account code is sent when the relevant partition is reported. There are two sets of account codes. The first set assigns an account code to each report destination. The second set assigns an account code to each partition. If you attempt to use both sets, the partition account code takes precedence.
15.3.3	Receiver Number	A menu option that configures the phone line receiver number associated with the receiver account.
15.3.4	Line Number	A menu option that configures the line number associated with the receiver account.
15.4	Up/Download	A menu entry that groups options used to control download sessions between the up/download software and the control panel.

Location	Term	Definition
15.4.1	Site Initiated	A menu option that allows an upload/download session between the module and the PC to be initiated from a keypad.
15.4.2	Remote Initiated	A menu option that allows an upload/download session between the module and the PC to be initiated by the PC. The PC dials into the module. You must dial the data phone number to dial into the GSM for upload/download. It is advisable to enable this setting only for a private network using a firewall.
15.4.3	Auto U/D at Test Time	A menu option that configures the module to automatically dial the PC to initiate an upload/download session after an autotest. You must program the autotest on the control panel.
15.4.4	IP Address	A menu option that configures the address of the PC running upload/download software.
15.5	Automation	A menu entry that groups automation options.
15.5.1	Enable Automation	A menu option that allows automation systems to control the system via the CS7050 TCP/IP module.
15.5.2	IP Address	A menu option that configures the address of the PC running automation software.
15.6	Event Recorder	A menu entry that groups event recorder options.
15.6.1	Send Tags to Recorder	This option is not used in Europe.
15.6.2	IP Address	A menu option that configures the address of the selected event recorder.
15.7.1	Reporting	A menu entry that groups TCP/IP reporting options.
15.7.1.1	Report Format	A menu option that configures the communicator format used to report to TCP/IP receivers. Consult the instructions for your central station receiver to determine which format is compatible.
15.7.1.2	Control Panel is Backup	A menu option. This allows the control panel to act as a backup to the CS7050. This means that when the CS7050 fails to send a report, it sends an expansion event to the control panel and the control panel sends the report instead.
15.7.1.3	Receiver 2 as Backup	A menu option that configures the module to send backup reports to its second TCP/IP receiver.
15.7.1.4	Receiver Polling	A menu option that configures the module to send polling messages to the report receivers.
15.7.1.5	Polling Time	A menu option that configures the TCP/IP polling time. This value must match the TCP/IP polling time set on a TCP/IP receiver. The value chosen is determined by the level of security required and the cost of data transmission. This can be from 1 to 255 seconds. If set to 0, the option is disabled.
15.7.2	Network	A menu entry that groups network options.
15.7.2.1	Use DHCP	A menu option that configures the CS7050 to use a dynamically assigned IP address. If this option is enabled, you should configure a Polling Time. If this option is disabled, configure *Our E-mail Address, Gateway IP Address* and *Subnet Mask*.
15.7.2.2	Our IP Address	A menu option that configures the IP address assigned to the module.
15.7.2.3	Gateway IP Address	A menu option that configures the IP address of the gateway used by the module. You must power down the CS7050 module and power it back up to initialize the new IP address.

Location	Term	Definition
15.7.2.4	Subnet Mask	A menu option that configures the subnet mask. This is typically 255.255.255.0. Contact the network administrator to confirm. All IP addresses up to and including the local gateway must be allowed. When using cable modem/DSL, this mask is the same as that used by the PC.
15.7.2.5	Network Timeout	A menu option that configures the maximum overall length of time by the CS7050 to report to each receiver. If the report is not successful during this time, the attempt is abandoned. This can be from 30 to 255 seconds.
15.7.2.6	Max Network Attempt	A menu option that configures the number of attempts the module makes to send a report. This can be from 1 to 15.
15.7.2.7	Port Numbers	A menu entry that groups TCP/IP port options.
15.8.2.7.1	TCP/IP Alarm Port	A menu option that configures the number of the TCP/IP port to which polling and alarms are reported. The default is 9999 and under normal circumstances should not be changed.
15.8.2.7.2	U/D Port	A menu option that configures the number of the port used for upload/download. The default is 9999 and under normal circumstances should not be changed.
15.8.2.7.3	E-mail Port	A menu option that configures the port number that the email server uses for email. The default is 0025 and under normal circumstances should not be changed.
15.8.2.7.4	Automation Port	A menu option that configures the number of the port used for automation. The default is 0000 and under normal circumstances should not be changed.
15.8	Model	A menu option that displays the current model of the selected module.
15.9	Version	A menu option that displays the current software version of the selected module.
15.10	Default Settings	A menu option that defaults the selected module to factory defaults.

15.5 Technical specifications

Power supply specifications	
Power supply voltage	13.8 V ⎓ ±2%
Consumption - Standby	90 mA
Consumption – Communicating	120 mA
General feature specifications		
PCB Size	Dimensions (width x height x depth)	153x84x25 mm
Environmental	Operating temperature	+0° C to + 40 °C
	Humidity	Max 93%
	Shipping Weight	455 g

Chapter 16: Setting up the CS7501

16.1 Overview

The CS7501 ISDN (integrated services digital network) dialler allows digital data to be sent over a standard phone line. It supports reporting over the **B** and **D** channels on ISDN.

16.2 Installing the CS7501 ISDN dialler
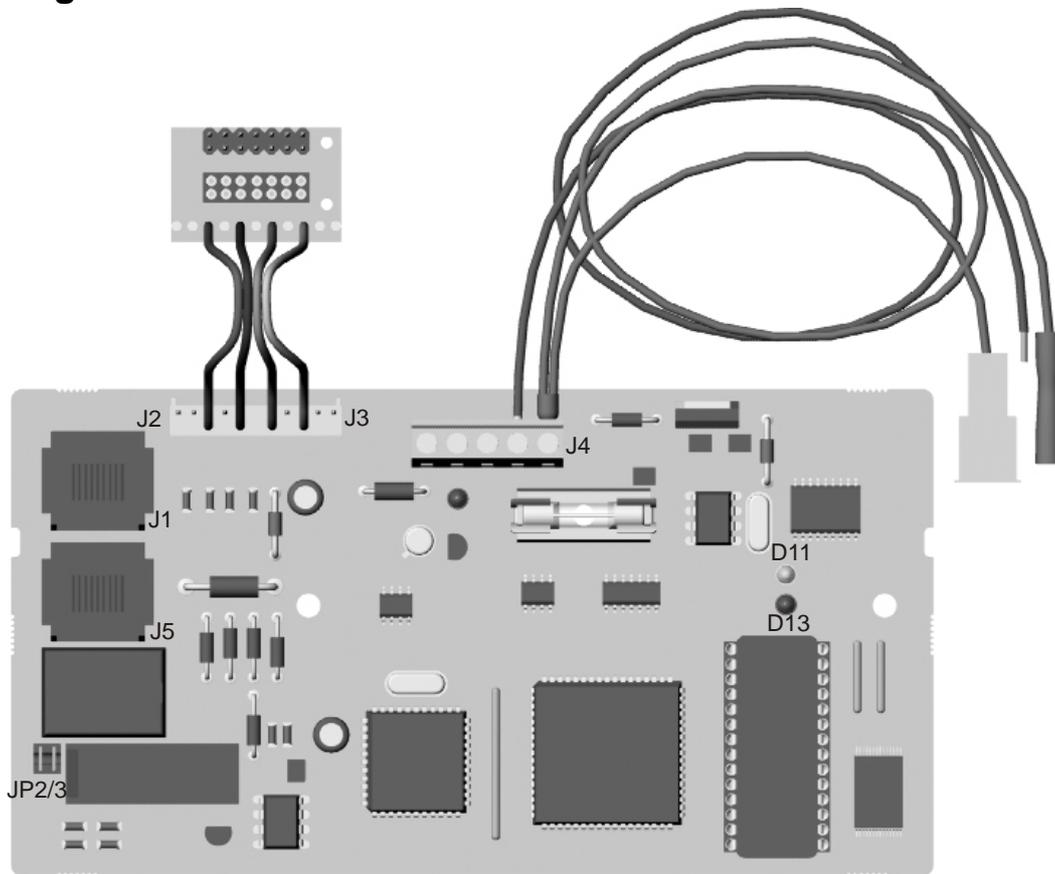
Part	Purpose	
J1	ISDN connector to receive the incoming signal.	
J2/J3	Bi-directional connector to the control panel. It connects the audio circuits to the control panel and CS534 to provide up/download and audio listen-in.	
J4	1 DAT	Connects to the DATA connection on the control panel
	2 COM	Connects to the COM connection on the control panel
	3 POS	Connects to the AUX+ connection on the control panel
	4 COM	Power connection using the black battery lead.
	5 PWR	Power connection using the red battery lead.
J5	ISDN connector for the outgoing signal.	
JP2/JP3	ISDN terminating resistors. The total impedance of the S0-bus should be 50 Ohm. The 2 jumpers JP2/3 should only be placed when the "priority relay" is used and when you have no EOL resistors on a device other than the CS7501.	
D11	Green LED ISDN communication status.	

D13	Red LED Panel communication status.	

16.2.1 LED indicators

LED	Status	Description
Green LED B channel reporting	Off	No activity.
	On	The CS7501 ISDN connection is in use.
	Flashing	The CS7501 is between calls or trying different destinations.
Green LED D channel reporting	Off	The CS7501 has no connection with the central station.
	On	The CS7501 is making a connection to the central station or busy with reporting events to central station.
	Flashing	The CS750 had a connection to the central station.
	Blinking	The CS7501 is waiting between reports.
Red LED	Off	The CS7501 is not communicating with the control panel.
	Blinking	The CS7501 is communicating with the control panel.

16.2.2 Mounting the CS7501 ISDN dialler
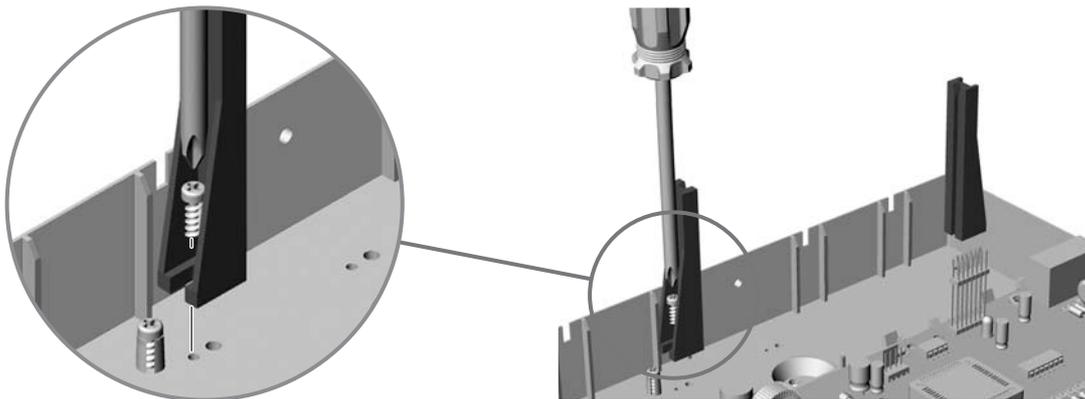
1. Mount the support pillars as shown.
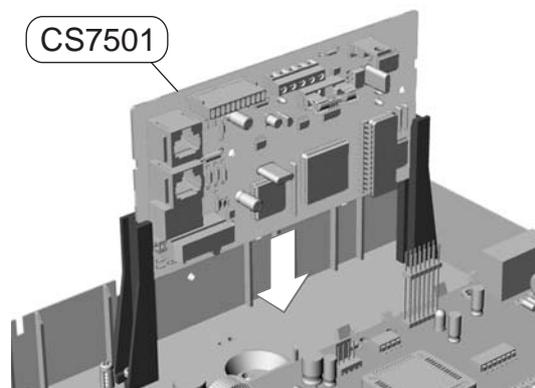
2. Slot the board into the support pillars.
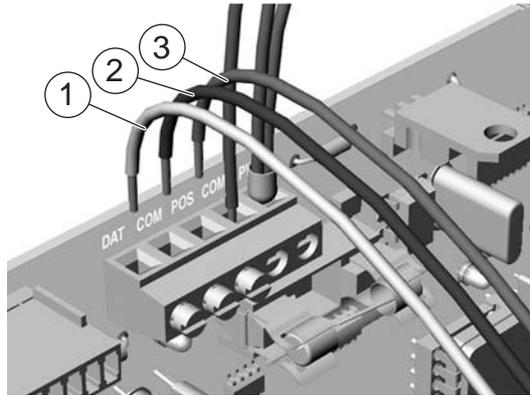
3. Connect the DATA, COM and POS bus connections on the CS7501 to the keypad bus

.
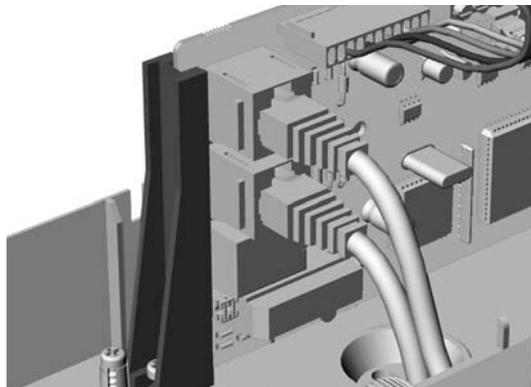
4. Connect the ISDN connections via the RJ45 connector.
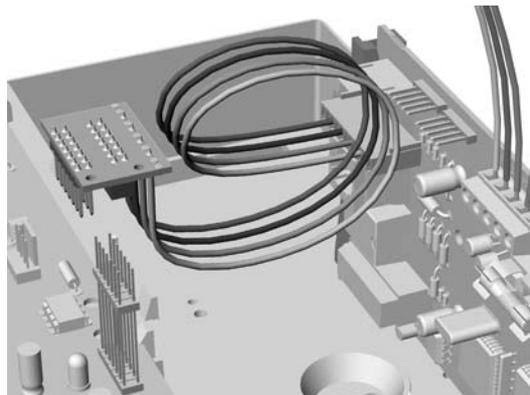
5. Plug the cable between the CS7501 and the panel. Ensure that the colour of the cable matches at each end.

Cables: Brown - Blue - Orange - Green.
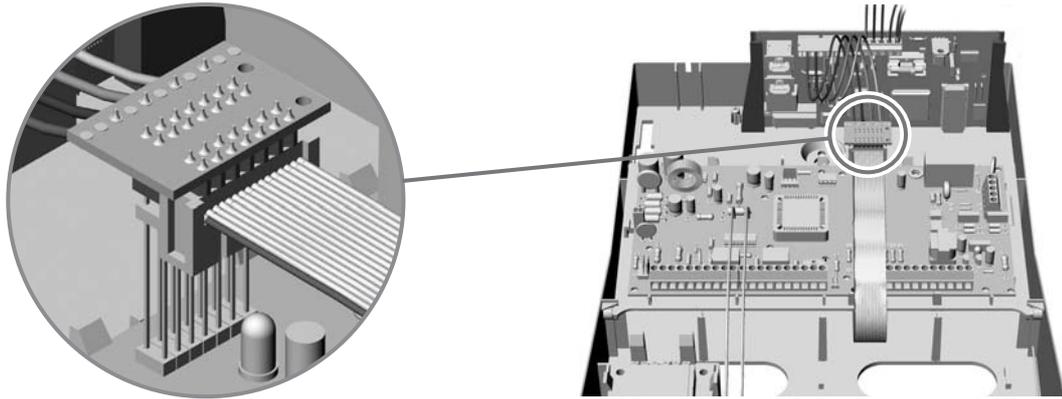
6. The CS7501 cannot be used with a CS535 voice module. However you can install a CS534 audio module using a ribbon cable as shown above. The coloured side of the ribbon cable should be on the lefthand side.
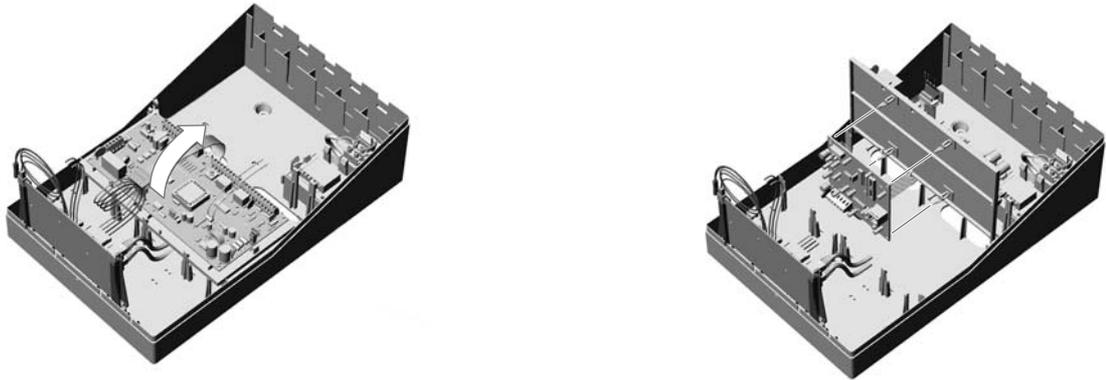
7. Place the CS534 under the tray in the panel box. The CS534 is mounted below the panel pcb. Lift the panel pcb and mount the CS534. Connect the ribbon cable underneath the board with the J7 connector.
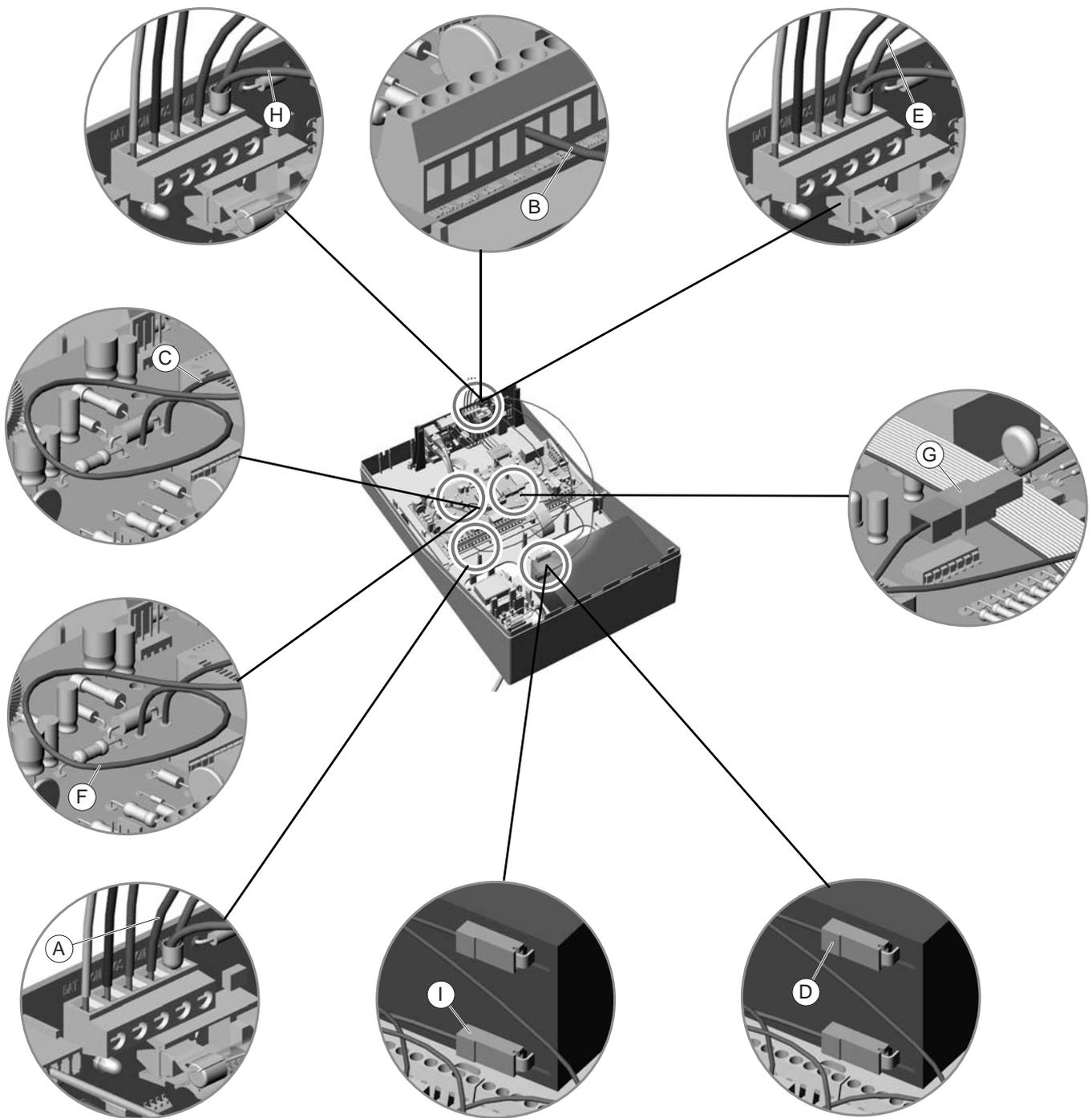
8. Connect the following:

- Connect the COM of the panel (A) to the COM of the ISDN dialler connection (B).

- Connect the battery COM cable of the panel (C) to the COM of the battery (D). §

- Connect the red POS Male connector (E) f rom the ISDN dialler (F) to the battery 12V connector of the panel (G).§

- Connect the red female POS connector (H) to the POS of the battery (I).

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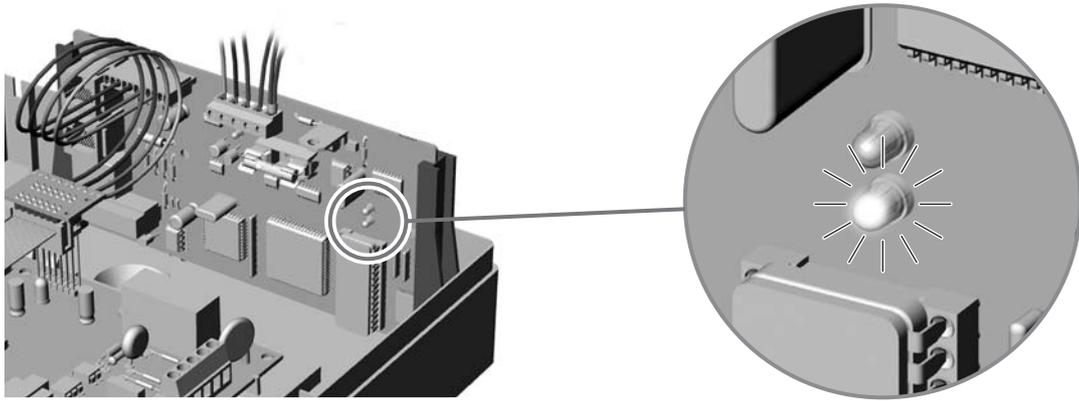
9. The red LED flashes when the CS7501 is powered up.

16.2.3 Wiring the battery leads

The battery leads should be wired to the panel battery as follows:

1. Connect the COM of the panel to the COM of the ISDN dialler connection.

2. Connect the battery COM cable of the panel to the COM of the battery.

3. Connect the red POS Male connector from the ISDN dialler to the battery 12V connector of the panel

4. Connect the red female POS connector to the POS of the battery.

5. The red LED flashes when the CS7501 is powered up.

For information on installing the CS7501 TCP/IP module in the various housings, see chapter A-4 *Installing a basic system.*

16.3 Programming the CS7501 ISDN dialler

16.1 Reporting
- 16.1.1 Phone Numbers
  - 16.1.1.1 Phone Number (1) — *Phone Number 2-4 Same as above*
    - 16.1.1.1.1 Phone Number
    - 16.1.1.1.2 Account Code
    - 16.1.1.1.3 Protocol
    - 16.1.1.1.4 Backup Control — *Version 3 only*
      - 16.1.1.1.4.1 Dial Attempts
      - 16.1.1.1.4.2 Dial Sequence
    - 16.1.1.1.5 Events
      - 16.1.1.1.5.1 Arm/Disarm/Alarm
        - 16.1.1.1.5.1.1 Alarms
        - 16.1.1.1.5.1.2 Alarm Restores
        - 16.1.1.1.5.1.3 Opening/Closings
        - 16.1.1.1.5.1.4 Zone Bypass and Restores
      - 16.1.1.1.5.2 Tamper/Trouble
        - 16.1.1.1.5.2.1 Tampers and Restores
        - 16.1.1.1.5.2.2 Zone Trouble and Restores
        - 16.1.1.1.5.2.3 Expander Trouble and Restores
        - 16.1.1.1.5.2.4 Siren/Phone Faults and Restores
        - 16.1.1.1.5.2.5 RF Sensor Lost and Restores
        - 16.1.1.1.5.2.6 RF Low Battery and Restores
      - 16.1.1.1.5.3 Power
        - 16.1.1.1.5.3.1 Power Trouble and Restores
        - 16.1.1.1.5.3.2 Aux Overcurrent and Restores
      - 16.1.1.1.5.4 Communications
        - 16.1.1.1.5.4.1 Fail to Communicate
        - 16.1.1.1.5.4.2 Test Reports
      - 16.1.1.1.5.5 Miscellaneous
        - 16.1.1.1.5.5.1 Program/Download
        - 16.1.1.1.5.5.2 Zone Inactivity Monitor
  - 16.1.2 Dial Attempts — *Version 4 and above only*
    - 16.1.2.1 ARC Dial Attempts
    - 16.1.2.2 FTC Dial Attempts
    - 16.1.2.3 Voice/Siren Dial Attempts
  - 16.1.3 Burglary & Trouble Telim Ch — *Version 4 and above only*
    - 16.1.3.1 When Disarmed
    - 16.1.3.2 When Armed
  - 16.1.4 Priority Reporting
  - 16.1.5 Priority Type
  - 16.1.6 Backup Control * — **Version 4 and above only*
- 16.2 Up/Download
  - 16.2.1 Phone Number
  - 16.2.2 Remote U/D When Armed
  - 16.2.2 Answer Delay
- 16.3 Options
  - 16.3.1 ISDN
    - 16.3.1.1 Connection Type
    - 16.3.1.2 MSN Phone Number
    - 16.3.1.3 D-Ch Polling
    - 16.3.1.4 D-Ch TEI
    - 16.3.1.5 D-Ch X.25 LCGN
    - 16.3.1.6 D-Ch X.25 LCN
  - 16.3.2 Listen-in
    - 16.3.2.1 CS534 Listen-in
    - 16.3.2.2 Answer Delay
  - 16.3.3 Volumes
    - 16.3.3.1 CS534 Listen-in
      - 16.3.3.1.1 Outgoing
      - 16.3.3.1.2 Incoming
    - 16.3.3.2 Up/Download
      - 16.3.3.2.1 Outgoing
      - 16.3.3.2.2 Incoming
- 16.4 Model
- 16.5 Version
- 16.6 Default Settings

You must enroll and default the CS7501 ISDN dialler before you begin to program the system. For more information on enrolling and defaulting, see chapter B-1 *Enrolling modules*. To program the CS7501, select *Installer Menu>CS7501 ISDN Dialler*.

16.3.1 Configuring phone reporting

The CS7501 ISDN dialler can report to four phone numbers. You can configure the events to be reported, the reporting format and the reporting connection parameters. The following example reports alarm events that occur to phone number 8888999, account code 445566 using SIA format.

1. Navigate with the ↑↓ keys to *CS7501 ISDN Dialler>Reporting>Phone Numbers* and press **OK**.

2. Scroll to *Phone Number 1>Phone Number* and press **OK**.

3. Enter 8888999 and press **OK**.

4. The keypad beeps once to accept the change and returns to *Phone Number.*

5. Scroll to *Account Code* and press **OK**.

6. Enter 445566 and press **OK**.

7. The keypad beeps once to accept the change and returns to *Account Code*

8. Scroll to *Protocol>SIA* and press **OK**.

9. The keypad beeps once to accept the change and returns to *Protocol*.

10. Scroll to *Events>Arm/Disarm/Alarm>Alarms* and press **OK**.

11. The keypad beeps once to accept the change and returns to *Alarms*.

16.3.2 Configuring AL2 supervised ISDN connection

If you are using the AL2 supervised ISDN connection, you must also program the D channel polling and D Channel Terminal Equipment identifier (TEI) options as well as the phone number, account code, protocol and events. The following example reports alarm events to phone number 02048888999, account code 55555 using the Alphacom X25 D-channel protocol.

1. Navigate with the ↑↓ keys to *CS7501 ISDN Dialler>Reporting>Phone Numbers* and press **OK**.

2. Scroll to *Phone Number 1>Phone Number* and press **OK**.

3. Enter 020488899 and press **OK**.

4. The keypad beeps once to accept the change and returns to Phone Number.

5. Scroll to *Account Code* and press **OK**.

6. Enter 55555 and press **OK**.

7. The keypad beeps once to accept the change and returns to *Account Code*

8. Scroll to *Protocol> Alphacom D-channel* and press OK.

9. The keypad beeps once to accept the change and returns to *Protocol*.

10. Scroll to *Events* and enable all events that must be reported to central station.

11. Navigate with the ↑↓ keys to *CS7501 ISDN Dialler>Options>ISDN>D-Ch Polling* and press **OK**.

12. Scroll to *D-Ch Polling>5 min*. and press **OK**.

13. The keypad beeps once to accept the change and returns to *D-Ch Polling*.

14. Scroll to *D-Ch TEI>8* and press **OK**.

15. The keypad beeps once to accept the change and returns to *D-Ch TEI*.

✐ *Default are all events enabled in dialer.*

16.3.3 Uploading and downloading

There are two methods for up/downloading , call back or start u/d with code.

When using the CS534, the ISDN dialler differentiates between these two methods.

•   For listen-in via call back, the ISDN listens for 5 seconds to check if a DTMF tone *0* was entered for a period of 1 second.

•   If no DTMF tone was recognised the ISDN starts an up/download session.

16.3.3.1 Time synchronisation

The CS7501 automatically corrects the time and date on the panel when the difference is more then 5 minutes between the panel time and ISDN network. This is done on every communication with the B-channel.

16.3.3.2 Call back

The panel is set up to call back the central station in order to initiate an upload/download session. When the central station calls the panel, the panel answers the call and then hangs up. After approximately a short period, the CS7501 calls the central station back.

To use the CS7501 ISDN dialler for callback, you must configuring both the CS7501 and the control panel. The following example sets a four second delay before answering. A call back is required before the upload/download session begins.

1. Navigate with the ↑↓ keys to *CS7501 ISDN Dialler>Up/Download>Phone Number* and press **OK**.

2. Enter the panel phone number and press **OK**.

3. The keypad beeps once to accept the change and returns to *Phone Number.*

4. Navigate with the ↑↓ keys to *Control Panel>Communications>Central Station>Phone Prefix* and press **OK**.

5. Enter **#3** and press **OK**.

6. The keypad beeps once to accept the change and returns to *Phone Prefix*.

7. Scroll to *Up/Download>Rings to Answer* and press **OK**.

8. Select *0* and press **OK**.

9. The keypad beeps once to accept the change and returns to *Rings to Answer* .

10. Scroll to *Call Back Reqd>Active* and press **OK**.

11. The keypad beeps once to accept the change and returns to *Call Back Reqd.*

16.3.3.3 Start u/d with code

The user initiates the upload/download by selecting an option in the User menu.

1. Follow steps 1-6 above to set up the phone number and prefix.

2. When upload is required, the user selects *User Menu>Command Menu>Download>Answer U/D Call*.

16.4 Glossary

Location	Term	Definition
16	CS7501 ISDN Dialler	A module that operates as an ISDN communications module for reporting and upload/download.
16.1	Reporting	A menu entry that groups ISDN reporting options.
16.1.1	Phone Numbers	A menu entry that groups phone number reporting options.
16.1.1.1.1	Phone Number	A menu option that sets the phone number to which events are reported. The control panel can report to up to six phone numbers.

Location	Term	Definition
16.1.1.1.2	Account Code	A menu option that specifies the unique code sent from the modem in the control panel or dialler to the selected phone number. This code is used to identify and charge the user. Separate account codes can be set up for each phone number and each partition. This is also known as the account number.
16.1.1.1.3	Protocol	A menu option that configures the communicator format used to report to the selected phone number. Consult the instructions for your central station receiver to determine which format is compatible.
16.1.1.1.4	Backup Control	A menu entry that groups options that set the backup sequence of the ISDN telephone numbers.
16.1.1.1.4.1	Dial Attempts	A menu option that specifies the number of dial attempts that the module makes to the central station before attempting an alternative destination.
16.1.1.1.4.2	Dial Sequence	A menu option that specifies the order in which the configured phone numbers are dialled.
16.1.1.1.5	Events	A menu entry that contains all configurable events for each phone number.
16.1.1.1.5.1	Arm/Disarm/Alarm	A menu entry that groups the events that are reported to the selected phone number.
16.1.1.1.5.1.1	Alarms	A menu option that sends a report to the selected phone number when an alarm occurs.
16.1.1.1.5.1.2	Alarm Restores	A menu option that sends a report to the selected phone number when the alarm has been restored after an alarm.
16.1.1.1.5.1.3	Opening/Closings	A menu option that sends a report to the selected phone number stating when the system is opened (disarmed) and closed (armed).
16.1.1.1.5.1.4	Zone Bypass and Restores	A menu option that sends a report to the selected phone number when a zone is bypassed. A report is also sent when the zone is restored (un-bypassed).
16.1.1.1.5.2	Tamper/Trouble	A menu entry that groups the tamper and trouble events that are reported to the selected phone number.
16.1.1.1.5.2.1	Tampers and Restores	A menu option that sends a report to the selected phone number when a tamper occurs. A report is also sent when the tamper is no longer active.
16.1.1.1.5.2.2	Zone Trouble and Restores	A menu option that sends a report to the selected phone number when a zone trouble condition occurs. A report is also sent when the trouble condition is no longer active.
16.1.1.1.5.2.3	Expander Trouble and Restores	A menu option that sends an expander trouble and restore report to the selected phone number.
16.1.1.1.5.2.4	Siren/Phone Faults and Restores	A menu option that sends a report to the selected phone number when a siren or phone fault occurs. A restore report is sent when the fault is fixed.
16.1.1.1.5.2.5	RF Sensor Lost and Restores	A menu option that sends a report to the selected phone number when an RF sensor is missing. A restore report is sent to the central station when the receiver receives a valid signal from the lost transmitter.
16.1.1.1.5.2.6	RF Low Battery and Restores	A menu option that sends a report to the selected phone number when a low battery condition occurs in an RF sensor. A restore report is also sent when the low battery condition is no longer active.
16.1.1.1.5.3	Power	A menu entry that groups the power events that are reported to the selected phone number.
16.1.1.1.5.3.1	Power Trouble and Restores	A menu option that reports mains failure, mains restore, low battery and low battery restore events to the selected phone number.

Location	Term	Definition
16.1.1.1.5.3.2	Aux Overcurrent and Restores	A menu option that sends a report to the selected phone number when too much current is detected. A restore report is also sent when the overcurrent condition is fixed.
16.1.1.1.5.4	Communications	A menu entry that groups together the communication events that are reported to the selected phone number.
16.1.1.1.5.4.1	Fail to Communicate	A menu option that reports a fail to communicate event to the selected phone number.
16.1.1.1.5.4.2	Test Reports	A menu option that sends a test report to the selected phone number at pre-programmed intervals. The units can be set in days or hours.
16.1.1.1.5.5.1	Program/Download	A menu option that reports programming and up/download events to the selected phone number.
16.1.1.1.5.5.2	Zone Inactivity Monitor	A menu option that sends a report to the selected phone number when a zone inactivity event occurs.
16.1.2	Dial Attempts	A menu entry that groups dialling options.
16.1.2.1	ARC Dial Attempts	A menu option that specifies the number of dial attempts (1 to 15 attempts) that the communicator makes when reporting to the selected phone number.
16.1.2.2	FTC Dial Attempts	A menu option that specifies the number of dial attempts that are made by the GSM module to a specified phone number, before the Fail To Communicate condition appears.
16.1.2.3	Voice/Siren Dial Attempts	A menu option that specifies the number of dial attempts (1 to 15) that the communicator makes for voice dialing, pager or Siren Tone formats.
16.1.3	Burglary & Trouble Telim Ch	A menu option that specifies the TELIM channels to be used for burglary and trouble reports.
16.1.3.1	When Disarmed	A menu option that specifies the burglary and trouble TELIM channel used to report alarms while disarmed.
16.1.3.2	When Armed	A menu option that specifies the burglary and trouble TELIM channel used to report alarms while armed.
16.1.4	Priority Reporting	A menu option that enables priority reporting.
16.1.5	Priority Type	A menu option that configures the priority type used when priority reporting is enabled. If this option is set to *Check Free B-Ch*, the dialler disconnects calls to report alarms by attempting to free the B-channel. If it cannot free the channel, it disconnects the S0 bus. If this is set to *Always Disconnect*, the dialler disconnects calls to report alarms by disconnecting the S0 bus.
6.1.6	Backup Control	A menu option that configures the backup control for the GSM in SIA or CID or configures the ISDN to be backup for the GSM .
16.2	Up/Download	A menu entry that groups options used to control download sessions between the up/download software and the control panel.
16.2.1	Phone Number	A menu option that sets the phone number to which events are reported. The control panel can report to up to six phone numbers.
16.2.2	Remote U/D When Armed	A menu option that allows an upload/download session between the module and the PC to be initiated by the PC when the system is armed.
16.2.3	Answer Delay	A menu option that sets the number of seconds before the panel answers to start an upload/download session.
16.3.1	ISDN	A menu entry that groups ISDN connection options.

Location	Term	Definition
16.3.1.1	Connection Type	A menu option that specifies the type of ISDN connection. You can choose point to point or point to multipoint.
16.3.1.2	MSN Phone Number	Multiple Subscriber Number. You can have more then 1 telephone number on a single ISDN connection. MSN is only used in point to multipoint connection. If you can connect more then one device to the same ISDN connection, the MSN number is assigned to only one device. When you make a call to this number, only the device with the number assigned will answer. A menu option configures this device number.
16.3.1.3	D-Ch Polling	A menu option that configures D channel polling.
16.3.1.4	D-Ch TEI	A menu option that configures the D channel terminal equipment identifier.
16.3.1.5	D-Ch X.25 LCGN	A menu option that configures D-Ch X.25 LCGN. D-Ch X.25 LCGN is a logical channel group number. Contact the network provider to obtain this number. This can be from 0 to 255, the default is 0.
16.3.1.6	D-Ch X.25 LCN	A menu option that configures D-Ch X.25 LCN. D-Ch X.25 LCGN is a logical channel number. Contact the network provider to obtain this number. This can be from 1 to 255, the default is 0.
16.3.2	Listen-in	A menu entry that groups listen-in options. In order to use listen-in, a CS534 listen-in module must be installed and a microphone must be connected. When an alarm is generated and reported, the central station can listen to what is happening on the premises. Certain protocols (such as SIA, Contact ID and 200Bd FSK) have 'listen-in blocks' that are communicated with the alarm code and indicate that a listen-in session must be started.
16.3.2.1	CS534 Listen-in	A menu option that enables listen-in on the CS534 Listen-in module.
16.3.2.2	Answer Delay	A menu option that sets the number of seconds before the panel answers to start a listen-in session.
16.3.3	Volumes	A menu entry that groups options to adjust levels used with the CS534 listen-in module.
16.3.3.1	CS534 Listen-in	A menu option that configures the volume of incoming and outgoing communication with the CS534 Listen-in module.
16.3.3.2	Up/Download	A menu option that configures the volume of incoming and outgoing communication during an upload/download session.
16.4	Model	A menu option that displays the current model of the selected module.
16.5	Version	A menu option that displays the current software version of the selected module.
16.6	Default Settings	A menu option that defaults the selected module to factory defaults.

16.5 Technical specifications

Power supply specifications	
Power supply voltage	12V ⎓ ±2%
Consumption - Standby	30 mA at 12V ⎓ ±2%
Consumption – Maximum via battery leads	2A at 12V ⎓ ±2%
General feature specifications		
PCB Size	Dimensions (width x height x depth)	150x80x24 mm
Environmental	Operating temperature	+0° C to + 49 °C
	Humidity	Max 93%
	Shipping Weight	115 g

Chapter 17: Reading the event log

17.1 Overview
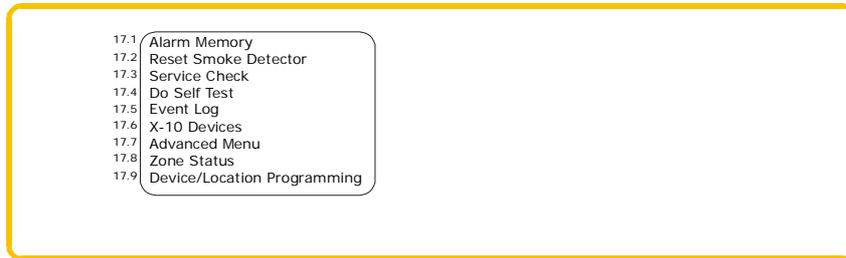
The event log displays the details of all the events that occur from when you turn the system on. A maximum of 512 events are held in the event log.

To read the event log:

1. Press **OK** at the system prompt and enter your installer code.

2. Navigate with the ↑↓ keys to *Commands* and press **OK**.

3. Scroll to *Event Log* and press **OK**.

4. The last event to be added to the log is shown. The > symbol indicates that the message must be scrolled horizontally.

5. Press **F3** to scroll to the right and view the rest of the event description. Table 17-1: *Event description* explains each part of the event description.

Alarm 3
168 17:32 >

Press **F3**

Alarm 3
25/9 028

   - In this case, an alarm occurred in zone 168 in partition 3 at 17:32. No report was sent to the central station. The event occurred on September 25. This is the twenty-eighth event in the log.

6. Press the ↑↓ keys to scroll through the events in the log.

Table 17-1: Event description

Event description	Explanation
L1	EventType PN PartitionName
L2	Zone/User Name UN/ZN HH:MM DD/MM LOG
EventType	The type of event that occurred.
PN	The number of the partition in which the event occurred.
PartitionName	The name of the partition in which the event occurred.
Zone/User Name	The zone name or user name.
UN/ZN	The user number, zone number or device number.
HH:MM	The hour and the minute the event occurred.
DD/MM	The day and month the event occurred.
LOG	The position of the event in the event log.

17.2 Event log events

Table 17-2: Event list

Event message	Explanation
Alarm	An alarm has been tripped.
Alarm Restore	See *Alarm* event message.
Autotest	An autotest message was sent to the central station.
B-Alarm	A full alarm on a B zone type that is considered a burglary alarm.
Box Tamper	A box tamper.
Box Tamper Restore	See *Box Tamper* event message.
Burglary	A burglary zone has been tripped.
Burglary Restore	See *Burglary* event message.
Bypass	A zone is bypassed.
Bypass Restore	See *Bypass* event message.
Cancel	The report to the central station has been cancelled. This occurs when a user enters a code after an alarm.
CleanMe	A smoke detector is dirty.
CleanMe Restore	See *CleanMe* event message.
Clock Set	A user set the date and time.
Close (arm)	Closing (arm) by a specific user.
Code Entry	The lock of the access reader has been triggered. The lock can be triggered by an accepted proximity card or by an Egress switch. An Egress switch is a button that can be pressed by a user to open the lock of the door. It can also be called Request-to-Exit (RTE). When the Code Entry option is activated, the reader sends a log message to the control panel, indicating that the lock has been triggered.
Data Lost	The panel has been unable to send alarm messages to the central station. The panel tries to send these messages a number of times as specified in the FTC (Dial attempts before Fail to Communicate). Any pending reportable events are lost.
Disarm from Alarm	A user disarmed the panel during an alarm.
Duress	A duress code entered by a user. An alarm message is sent to the central station.
Early Open	A user disarmed the system before the open time specified in the panel schedules.
End Download	The end of an up/download.
End Prog	End programming. The installer left programming mode.
End Walktest	See *Walktest* event message.
Enrolled	Modules are enrolled on the bus. The module numbers are recorded.
Exit Error	An exit door remained open after the exit delay expired.
Expander Trouble	A problem with an expander module.
Expander Trouble Restore	See *Expander Trouble* event message.
Expansion Event	A bus device generated an event to report conditions not described by other events.
Fail to Communicate	The control panel or module tried to send a message to a central station but failed.
Fire	A fire alarm has been tripped.

Table 17-2: Event list

Event message	Explanation
Fire Restore	See *Fire* event message.
First Open	The time at which the first area was opened.
Keypad Tamper	A keypad tamper.
Last Close	The time at which the last area was closed.
Late Close	A user disarmed the system after the closing time specified in the panel schedules.
Listen-in	The start of a listen-in session.
Log Full	The event log is full and the events must be reported to the up/download software. An event can also be sent to the central station.
Low Batt Restore	See *Low Battery* event message.
Low Battery	The standby battery for the control panel/expansion module is low.
Mains Fail Restore	See *Mains Failure* event message.
Mains Failure	The 220 V has disappeared.
Manual Fire	A manual fire alarm generated by pressing the keys **1** and **3** on the keypad.
Manual Test	A manual test call to the central station.
Medical (Aux2)	A medical alarm generated by pressing the keys **4** and **6** on the keypad.
Open (disarm)	Opening (disarm) by a specific user.
Output	An output has been activated or restored. The output number is logged. This is linked to the output module number.
Output Restore	See *Output* event message.
Output Trip	An output has been activated.
Over-current	An excessive amount of current has been drawn from one of the outputs.
Over-current Restore	See *Over-current* event message.
PA Panic Alarm	A personal attack alarm has been tripped.
Panic Keypad	A panic alarm generated by pressing the keys **7** and **9** on the keypad.
Partarm	See *Partial Arm* event message.
Partial Arm	Part arm of the system by a specific user.
Recent Closing	An alarm occurred within five minutes of the panel being armed.
Re-exit	A special feature of false alarm preventing.
Reset	A user has manually reset a smoke detector.
RF Jam Restore	See *RF Jammed* event message.
RF Jammed	RF jamming.
RF Low Battery	An RF transmitter has reported a low battery.
RF Low Battery Restore	See *RF Low Battery* event message.
Service End	End of the 'Installer on-site' (service mode).
Service Start	Start of the 'Installer on-site' (service mode).
Silent Panic	A silent panic alarm.
Siren Tamper	A siren tamper.

Table 17-2: Event list

Event message	Explanation
Siren Tamper Restore	See *Siren Tamper* event message.
Start Download	The start of an up/download.
Start Prog	Start programming. The installer entered programming mode.
Tamper	A tamper.
Tamper Restore	See *Tamper* event message.
Telephone Fault	Telephone line faults.
Telephone Fault Restore	See *Telephone Fault* event message.
Trouble	A trouble condition.
Trouble Restore	See *Trouble* event message.
Walktest	The start/end of a walktest.
Zone Inactive Restore	See *Zone Inactivity* event message.
Zone Inactivity	A zone inactivity monitoring event.
Zone Lost	An RF transmitter has lost the supervision with the wireless receiver. This happens when the transmitter has not reported its supervision message to the RF receiver within the long supervision window. See appendix 5.
Zone Lost Restore	See *Zone Lost* event message.
10 unsuccessful download attempts	This is a security feature. This event occurs if someone tries to hack into the system.

17.3 Glossary

Location	Term	Definition
17	Commands	A menu entry that groups options relating to issuing commands by the installer.
17.1	Alarm Memory	A menu option that displays a list of alarms and where they occurred. Only the alarms that have occurred during the last arm/disarm cycle are shown in the alarm memory log.
17.2	Reset Smoke Detector	A menu command that resets two-wire and four-wire smoke detectors and the Fire LED. For hardwired smoke detectors, the power supply to the smoke detectors is cut temporarily. RF smoke detectors have an auto reset because the RF communication is uni-directional (from RF detector to RF receiver). This command does not reset RF smoke detectors but should still be used to reset the Fire LED.
17.3	Service Check	A menu command that is used to verify service messages. The service message disappears when the installer enters and then leaves programming mode. If Master Code Resets Tamper Memory is enabled, a master user can reset the service message by entering a master user code.
17.4	Do Self Test	A menu command that performs the keypad LED and LCD test and the manual tests enabled in Diagnostics. The siren is activated during the tests if the *Manual Siren* menu option is enabled. Likewise, a manual test call is made to the central station if the *Manual Dialler Test* menu option is enabled.

Location	Term	Definition
17.5	Event Log	A menu command that is used to view the event log. The event log is a list of events that occur in the system, regardless of the armed state of the system. They are held in a sequential event buffer with a time and date stamp. When the log is full, it overwrites the oldest entries with new data. These events can later be viewed through downloading.
17.6	X-10 Devices	A menu option that lists the X-10 devices that can be turned ON/OFF.
17.7	Advanced Menu	A menu option that activates certain options in the installer menu structure.
17.8	Zone Status	A menu entry that indicates the zone status.
17.9	Device/Location Programming	A menu command that switches into backward compatible programming mode. This mode uses devices, locations and segments. In this mode: The OK/Menu key is used instead of the * key. The F2 key is used instead of the Exit key. Please note that the recommended programming method is to use the menu structure rather than devices and locations.

Chapter 18: Programming with the UDx75 software

18.1 Other methods of programming

You can program the system using the CS5500 keypad or the UDx75 software. This software allows you to download the programming information on the control panel to the computer running the UDx75 software, change it and upload the changes from the computer to the panel. It also allows you to view the program log and event log. To program the system using this software, you must connect the control panel to the computer.

18.2 Connecting the panel to the computer

You can connect the control panel to the computer either directly via the RS232 serial port or remotely via a modem.

18.2.1 Connecting using a serial port

Connecting via a serial port is useful if you are on site and want to connect directly to the alarm system.

The connection to the CS275, CS375, CS575or CS875 panel is made through the RS232 port using CS590 cable. The CS175 does not have an RS232 port. The connection to the CS175 is made through the CS586 module, which provides a standard RS232 bi-directional DB-9 connector. The CS586 can be used as a programming tool on any panel, as it is connected to the data bus. It stores control panel settings that can be up/downloaded using the keypad or a computer. For more information on reading data from the CS586, see chapter B-8 *Setting up the CS586*.

To use the UDx75 software with a direct connection:

1. Double click the icon for the software or click *Start>Programs>UDX75>UDX75*.

2. The *UDX75* window and the *UDX75 Master access* screen open.

3. Enter the operator name and password and click **OK**.

4. The *UDX75 Operator access* screen opens.

5. Enter the current operator and password and click **OK**.

6. To connect to the panel directly via the serial port, select *Download>Connect>Direct connect*. The *Connecting* message box opens.

7. To connect to the panel via a TCP/IP network, select *Download>Connect>Connect TCP/IP*. The *Reserved (TCPIP)* screen opens. Enter the TCP/IP address and click **OK**.

8. When you are finished uploading or downloading, select *Download>Disconnect*.

✍ *The default operator is Aritech and the default password is 1278. You may have to enter this twice.*

18.2.2 Connecting using a modem

You can connect the control panel to the computer remotely via a modem. This can be useful if you are not on site and want to connect to the alarm system.

You can connect normally or connect using answering machine defeat (AMD). If you use AMD, the automatically timed two-call-answer-machine-defeat sequence is used.

To use the UDx75 software with a modem connection:

1. Follow steps 1 - 5 in *Connecting using a serial port* above.

2. Make sure that the modem settings are correct. For more information about modem settings, see the *UDx75 Online Help*.

3. Select *Download>Connect> Connect Using AMD*.

4. A message box opens saying *Initializing modem*.

5. The computer connects to the panel.

6. When you are finished uploading or downloading, select *Download>Disconnect* or click the **Disconnect** icon.

18.3 Programming with upload/download software

Downloading allows you to read the existing programming data or the event log from the control panel. Uploading allows you to send programming data, that you have set up using the UDx75 software, from the computer to the control panel. When you program the system using UDx75, the keypad can be reset after the system is powered down. This prevents text getting lost.

Before you download or upload information, do the following:

1. Ensure that the relevant control panel options are programmed correctly. There are a minimum number of options that you must set before you can program the control panel using the up/download software. Table 18-1: *Required settings for up/downloading* lists the options and the values to enter.

2. Ensure that the up/download access code is the same in both the up/download software and the control panel. See chapter A-1 *Introducing the CSx75 system* for the correct default code.

3. If you are connecting remotely, make sure that the modem settings are correct. For more information about modem settings, see the *UDx75 Online Help*.

4. Connect to the panel via the serial port or modem.

5. Select *Download>Read all* to download all the data from the control panel. The computer downloads the data from the panel.

6. Select *Download>Send all* to upload all the data to the control panel. The computer uploads the data to the panel.

The data that is downloaded and the downloading speed depend on the *Send All/Read All* settings. The default number of strings sent to the keypad is 192 but it is possible to limit the number of strings sent. If the default number is reduced, download time decreases. For more information on setting up/download options, see the *UDx75 Online Help*.

Table 18-1: Required settings for up/downloading

Keypad menu option	Value
Serial Port>Connection Type	Home Automation
Serial Port>Speed	9600 Baud
Home Automation>Protocol	Binary
Home Automation>Transition Broadcasts	Ensure all options are set to *Off*. This is the default state.
Home Automation>Commands/Requests	Ensure all options are set to *On*. This is the default state.

18.3.1 Programming tasks

You can perform all available programming tasks using the UDx75 software. Table 18-2: *UDx75 menu paths* shows the UDx75 menu path for each task.

Table 18-2: UDx75 menu paths

Task	UDx75 menu option
Adding customer notes	View>Customers>Notes
Adding operators	Program>Setup>Add/Change operators
Backing up the database	Tools>Backup database
Changing a customer record	View>Customers>Single customer
Changing a master or operator password	Program>Change password
Changing operator rights	Program>Setup>Add/Change operators
Changing the additional phone settings	View>Control panel (Additional phone settings tab)
Changing the communicator codes	Advanced>4+2 Codes
Changing the download options	Program>Setup>Download options
Changing the partitions	View>Control panel (Partition tab)
Changing the report settings	View>Control panel (Phone numbers tab)
Changing the system 1 settings	View>Control panel (System 1 tab)
Changing the system 2 settings	View>Control panel (System 2 tab)
Changing the system 3 settings	View>Control panel (System 3 tab)
Changing the UDx75 settings	Program>Setup>Program setup
Changing the user arm/disarm codes	View>Control panel (Codes tab)
Compacting the database	Tools>Compact database
Connecting via the modem	Download>Connect >Connect or Download>Connect >Connect using AMD
Connecting via the serial port	Download>Connect>Direct connect
Copying a customer's panel settings	Program>Setup>Copy options
Deleting a customer record	View>Customers>Single customer
Deleting the event log	Download>Event log>Delete Event log
Downloading	Download>Send all
Downloading and updating the device list	Download>Device list>Enroll devices
Downloading the event log	Download>Event log>Read entire log
Exporting a database	Tools>Export database
Importing a database	Tools>Import database
Loading the default settings	Advanced>Default Control data
Logging in	Start>Programs>UDX75>UDX75
Printing a customer record list	Program>Print preview>Customer list
Printing a program log	Program>Print preview>Program log
Printing a programming worksheet	Program>Print preview>Programming worksheet

Table 18-2: UDx75 menu paths

Task	UDx75 menu option
Printing an operator list	Program>Print preview>Operator list
Printing customer notes	Program>Print preview>Notes
Printing the event log	Program>Print preview>Event log
Programming the CS1700	Expanders>CS1700>1
Programming the CS208/CS216	View>Control panel (Zones tab)
Programming the CS320	Expanders>CS320>1
Programming the CS507	Expanders>CS507>1
Programming the CS534	Expanders>CS534
Programming the CS535	Expanders>CS535
Programming the keypad text	Expanders>Keypad text
Programming the keypads	Expanders>Keypad options>Partition 1>Keypad 1
Programming the wireless receivers	Expanders>Wireless>1
Programming the zones	View>Control panel (Zones tab)
Repairing the database	Tools>Repair database
Restoring the database	Tools>Restore database
Retrieving and viewing a customer record	View>Customers>Single customer
Running diagnostics	Tools>Diagnostics
Setting auto call back options	Program>Setup>Auto callback
Setting customer account options	View>Customers>Account options
Setting the country and language	Program>Setup>Country/Language
Setting the download access	Advanced>Download options
Setting the format overrides	Advanced>Format overrides
Setting the outputs	Advanced>Auxiliary outputs
Setting the TCP/IP settings	Program>Setup>TCP/IP Settings
Setting the timed functions	Advanced>Timed functions
Setting the zone type	Advanced>Zone types
Setting up a customer record	View>Customers>Single customer
Setting up a modem	Program>Setup>Modem setup
Setting up answering machine defeat	Program>Setup>AMD setup
Specifying the direct connect settings	Program>Setup>Direct connect settings
Specifying the serial port settings	Advanced>Serial port settings
Switching operators	Program>Next operator
Uninstalling the software	Start>Settings>Control Panel
Uploading	Download>Read all
Viewing a customer record list	View>Customers>List
Viewing an operator list	Program>Setup>Add/Change operators

Table 18-2: UDx75 menu paths

Task	UDx75 menu option
Viewing the auto answer failures	View>Customers>Auto answer failures
Viewing the control panel settings	View>Control panel
Viewing the event log	Download>Event log>Read entire log
Viewing the keypad status	View>Keypad status

Section C

Reference

Chapter 1: Appendices

1.1 Appendix 1: Reporting fixed codes in Contact ID or SIA

Table 1-1: *Event codes* lists the event codes sent for different reports (if enabled) when using Contact ID or SIA formats. The numbers in brackets following the event is the number that is reported as the zone number. If there are no parentheses, the zone is **0**. An asterisk represents the first character from the event code of the zone that is bypassed or in trouble.

Table 1-1: Event codes

Report	Contact ID	SIA	Report	Contact ID	SIA
Manual test	601	RX	Keypad tamper	137	TA
Autotest	602	RP	Keypad panic(audible)	120	PA
Open (user number)	401	OP	Keypad panic (silent)	121	HA
Close (user number)	401	CL	Duress	121	HA
Cancel (user number)	406	OC	Keypad auxiliary 1	110	FA
Start program	627	LB	Keypad auxiliary 2	100	MA
End program	628	LX	RF sensor lost (zone number)	381	*T
Recent close (user number)	401	CR	RF sensor restore (zone number)	381	*R
Exit error (user number)	457	EE	Sensor low battery (zone number)	384	XT
Event log full	605	JL	Sensor battery restore (zone number)	384	XR
Fail to communicate	354	RT	Zone trouble (zone number)	380	*T
Expander trouble (device number)	333	ET	Zone trouble restore (zone number)	380	*R
Expander restore (device number)	333	ER	Zone tamper (zone number)	137	TA
Telephone fault	351	LT	Zone tamper restore (zone number)	137	TR
Telephone restore	351	LR	Zone bypass (zone number)	570	*B
Siren tamper (device number)	321	YA	Bypass restore (zone number)	570	*U
Siren restore (device number)	321	YH	Near Alarm (A/B Alarm)	138	BM
Aux power over current (device number)	312	YP	Early open/late close	451	OK
Aux power restore (device number)	312	YQ	Partial close	456	CF
Low battery (device number)	309	YT	Zone activity fault	391	NA
Low battery restore (device number)	309	YR	Zone activity restore	391	NS
Mains fail (device number)	301	AT	Fail to close	454	CI
Mains restore (device number)	301	AR	RF jamming	344	XQ
Box tamper (device number)	137	TA	RF jamming restore	344	XH
Box tamper restore (device number)	137	TR	Smoke detector clean me	393	YX

1.2 Appendix 2: Overview of module numbers

Every keypad, expansion module and wireless receiver module has a module number.

Module	Module number
CSx75	0
CS534 Two-way Listen-In	64
CS535	77
CS7002	78
CS7050	79
CS7501	76

1.2.1 CS1700 door swipe module

Table 1-2: CS1700 module numbers

Learn-in sequence	Module number	Learn-in sequence	Module number
1	113	9	121
2	114	10	122
3	115	11	123
4	116	12	124
5	117	13	125
6	118	14	126
7	119	15	127
8	120		

1.2.2 Keypads

Table 1-3: Keypad module numbers

Keypad	Part1	Part2	Part3	Part4	Part5	Part6	Part7	Part8
1	192	193	194	195	196	197	198	199
2	200	201	202	203	204	205	206	207
3	208	209	210	211	212	213	214	215
4	216	217	218	219	220	221	222	223
5	224	225	226	227	228	229	230	231
6	232	233	234	235	236	237	238	239
7	240	241	242	243	244	245	246	247
8	248	249	250	251	252	253	254	255

1.3 Appendix 3: Communicator formats

One of several communicator formats can be used to transmit to the receiver connected to phone number 1. Consult the instructions for your central station receiver to determine which format is compatible. Table 1-4: *Communicator formats* lists the selectable communication formats.

Table 1-4: Communicator formats

#	Format Description
1	Contact ID
2	SIA
3	SIA with area modifiers
4	Voice dialler with handshake and DTMF kiss-off
5	Reserved
6	4+2 with 1400/1900 double round parity
7	4+2 with 1400/1900 Checksum parity
8	4+2 with 2300/1800 double round parity
9	4+2 with 2300/1800 Checksum parity
10	Fast format 8 channel
11	Fast format 16 channel
12	Siren tone
13	Reserved
14	Reserved
15	Format over-rides (build your own format)
16	Reserved
17	200 Baud FSK (France Only)
18	200 Baud FSK Reversed (France Only)
19	XSIA
20	XSIA with area modifier
21- 255	Reserved

✍ *1.If you require a format other than those listed, set the override options in Communications>Format Override to build the appropriate format. In addition, select Format Override in Communications>Central Station>Phone Numbers>Phone Number n>Protocol.*

✍ *2.The voice dialer protocol does not generate an FTC (failure to communicate).*

1.4 Appendix 4: Service messages

The keypad displays service messages as a result of manual and automatic tests. Table 1-5: *Service messages* lists each message and outlines the action you should take to resolve the problem. When the keypad beeps due to a fault condition, press the # key to view the fault condition information.

Table 1-5: Service messages

Message	Definition	Action
Control Box Tamper	There has been interference with the control panel casing.	Ensure that the casing is mounted correctly on a flat surface and is not damaged. If there is no damage, close the casing securely.

Table 1-5: Service messages

Message	Definition	Action
Control Fail to Comm.	The control panel tried to send a message to the central station but failed.	Ensure that the phone line is connected properly. Use a test phone to check that the phone service is available. Ensure that the central station phone number, account and protocol options are correct.
Control Loss of Time	The control panel has had a total loss of power and the clock must be reset.	Reset the system clock and date.
Control Low Battery	The standby battery for the control panel is low.	The battery may need replacing. This may be a temporary condition caused by a long power failure.
Control Over-Current	The control panel has detected an excessive amount of current being drawn from one of the outputs and has disabled the output as a means of protection.	Check the system for wiring faults. An overcurrent message can be reset only by triggering the siren correctly, for example, by generating a tamper on a zone that activates the sirens. This is a security feature to ensure that the overcurrent message has disappeared and the sirens can work properly again.
Control Phone Trouble	The phone line connected to the control panel is not working properly.	Ensure that the phone line is connected properly. Use a test phone to check proper service.
Control Power Trouble	The mains power supply to the control panel is missing.	Reconnect the power supply and ensure it is working properly.
Control Siren Trouble	The connection to the control panel's siren is broken.	Repair the open circuit.
Expansion Aux. Comm. Fail	A reporting module tried to send a message to the central station but failed.	Ensure that the phone line is connected properly. Use a test phone to check that the phone service is available. Ensure that the central station phone number, account and protocol options are correct. Check that the module is connected and working.
Expansion Box Tamper	There has been interference with the casing of an expansion module.	Ensure that the casing is not damaged and is mounted correctly on a flat surface. If there is no damage, close the casing securely.
Expansion Low Battery	The standby battery in an expansion module is low.	The battery may need replacing. This may be a temporary condition caused by a long power failure.
Expansion Over-Current	The expansion module has detected an excessive amount of current being drawn from one of its outputs and has disabled the output as a means of protection.	Check the module for wiring faults.
Expansion Power Trouble	The mains power supply is not connected to an expansion module power supply.	Reconnect the mains power supply and ensure it is working properly.
Expansion Siren Trouble	The connection to an expansion module's siren is broken.	Repair the open circuit.
Expansion Trouble	An expansion module or keypad is not reporting to the control panel.	Ensure that the module is connected properly to the control panel.
Tamper Zone X	There is a problem with the wiring.	Check the zone and zone sensors for damage and repair any faults.
Zone Problem, Press OK	There is a problem with a zone or zones. Press **OK** to identify the zone(s) and the problem condition. One of the following messages is displayed when you press **OK**.	
	CleanMe A specific smoke detector (for example, DP721) is dirty. The panel detects a degree of pollution in the chamber of the fire/smoke detectors.	Clean the detection chamber of the smoke detector.

Table 1-5: Service messages

Message	Definition	Action
Lost	The system has not received RF sensor transmissions for a long period of time. Depending on how the system is programmed, this condition activates a service report. In addition, it may activate a tamper alarm if armed.	Ensure that the wireless zone module is receiving power and has not been tampered with. Repair any faults.
Low Battery	An RF sensor battery is low.	Replace the battery.
Short Loss	The system has not received RF sensor transmissions for a short period of time. This condition prevents arming.	Ensure that the wireless zone module is receiving power and has not been tampered with. Repair any faults.
Trouble	There is a problem with the wiring.	Check the zone and zone sensors for damage and repair any faults.

1.5 Appendix 5: Tasks summary

Table 1-6: System tasks

Task	Installer	Master user	User	No code	Condition*
Adjusting the LCD contrast		✓			
Answer an up/download call		✓	✓	✓	
Arm and disarm the system	✓*	✓	✓*		If authority allows.
Bypass a zone		✓*	✓*	✓*	If authority allows.
Configure home automation devices	✓	✓			
Control home automation devices	✓	✓	✓	✓	
Engineer tamper reset	✓	✓*			If enabled for master users.
Initiate an up/download call		✓	✓	✓*	If enabled for use without a code.
Perform a configured test	✓	✓	✓		
Perform a service check	✓	✓	✓	✓	
Perform a walktest		✓			
Program voice phone numbers	✓	✓			
Reset fire detector	✓	✓	✓	✓	
Set system date and time		✓			
Set user authority level		✓			
Set user codes	✓	✓	✓*		Only own code All codes for master user.
Switch to multi-area mode		✓	✓		
View the alarm memory	✓	✓	✓	✓	
View the event log	✓	✓			

1.6 Appendix 6: Word library words

Table 1-7: Word library

Alarm	Delay	Exterior	House	Microwave	Room	Smoke	Up
Area	Den	Fire	Infrared	Motion	Rumpus	Sound	Utility
Audio	Detector	Front	Instant	North	Safe	South	Vault
Back	Dining	Game	Interior	Nursery	Sensor	Stairs	Warehouse
Bathroom	Door	Garage	Junk	Office	Shock	Storage	West
Beam	Down	Glassbreak	Kitchen	Panic	Shop	Study	Window
Bedroom	Duress	Guest	Library	Pantry	Side	Tamper	Wing
Button	East	Hall	Light	Phone	Skylight	Television	Wireless
Ceiling	Emergency	Heat	Living	PIR	Sliding	Trouble	Yard
Closet	Exit	Holdup	Master	Porch	Small	TV	Zone

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