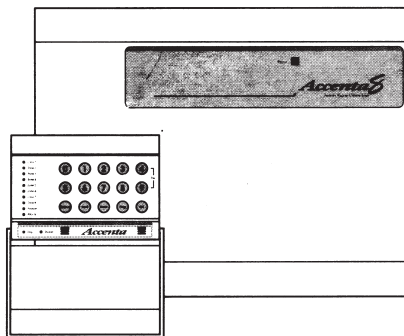
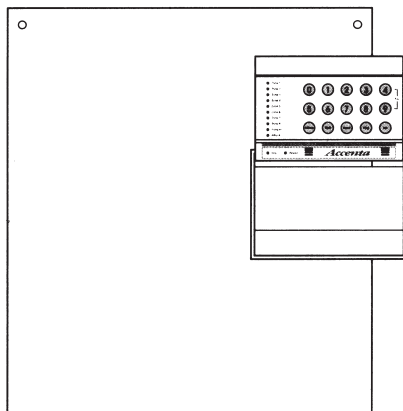




## Intruder Alarm Control System - Engineering Information



Accenta 8 Polycarbonate CPU



Accenta 8 Steel CPU

**8<sub>z</sub>**

8 zones plus PA and tamper



Fire zone option



Up to 4 remote keypads with on board PA and illuminated keys



3 fully selectable part set programs



8 event memory recall, indicates first and subsequent alarms



6 digital outputs for a wire-in digital communicator, Red Care STU or dialler



Input for remote keyswitch or push to set switch



Chime on any zone



Service warning, programmable to indicate after system has been set 100-800 times

# Engineering Information



## Specifications

|                         |                                                                             |         |         |        |
|-------------------------|-----------------------------------------------------------------------------|---------|---------|--------|
| RKP Indication          | Zones 1-8, Tamper, Attack, Day, Power                                       |         |         |        |
| 8 Zones                 | Positive loop, programmable functions in each Program                       |         |         |        |
| Tamper                  | Negative loop, internal sounders in Day, Full alarm in Set                  |         |         |        |
| PA                      | Positive loop, always active                                                |         |         |        |
| Bell Output             | 12V, adjustable timer (1-99 mins) or continuous                             |         |         |        |
| Strobe Output           | 12V latching                                                                |         |         |        |
| Extension Speakers      | 16Ω (3 max) 130mA each                                                      |         |         |        |
| Exit/entry Timers       | Programmable 10-990 seconds                                                 |         |         |        |
| Zone Input Delay        | 250mS                                                                       |         |         |        |
| Set +Ve Output          | 0V in Day (Sinking 40mA)<br>12V in Set (Sourcing 10mA)                      |         |         |        |
| CPU Current Consumption | Standby 30mA<br>Alarm 50mA                                                  |         |         |        |
| RKP Current Consumption | Standby 40mA<br>Alarm 70mA                                                  |         |         |        |
| Low Voltage Output      | 13.8V dc stabilised (+/- 5%) up to 350mA                                    |         |         |        |
| Rechargeable Battery    | 1.2 - 6Ah                                                                   |         |         |        |
| Charge Voltage          | 13.8V dc (+/- 5%)                                                           |         |         |        |
| PCB Fuses               | 1 x 1.6A, 3 x 1A, 20mm quick blow                                           |         |         |        |
| Mains Input Fuse        | 125mA, 250V type T (anti-surge) type approved to IEC 127, part 2 sheet III. |         |         |        |
| Total Current Output    | 1Amp when supported by a fully charged battery                              |         |         |        |
| Mains Supply Voltage    | 230V (+/- 10%) 50Hz max load 0.2A                                           |         |         |        |
| Ambient Operating Temp  | 0°C to 40°C                                                                 |         |         |        |
| RKP Wiring              | 6 core - max distance 100 metres per keypad                                 |         |         |        |
| Dimensions              | Polycarbonate CPU                                                           | H 230mm | W 290mm | D 80mm |
|                         | Steel CPU                                                                   | H 305mm | W 286mm | D 82mm |
|                         | RKP                                                                         | H 85mm  | W 122mm | D 28mm |

## Installation Log

Site Address .....

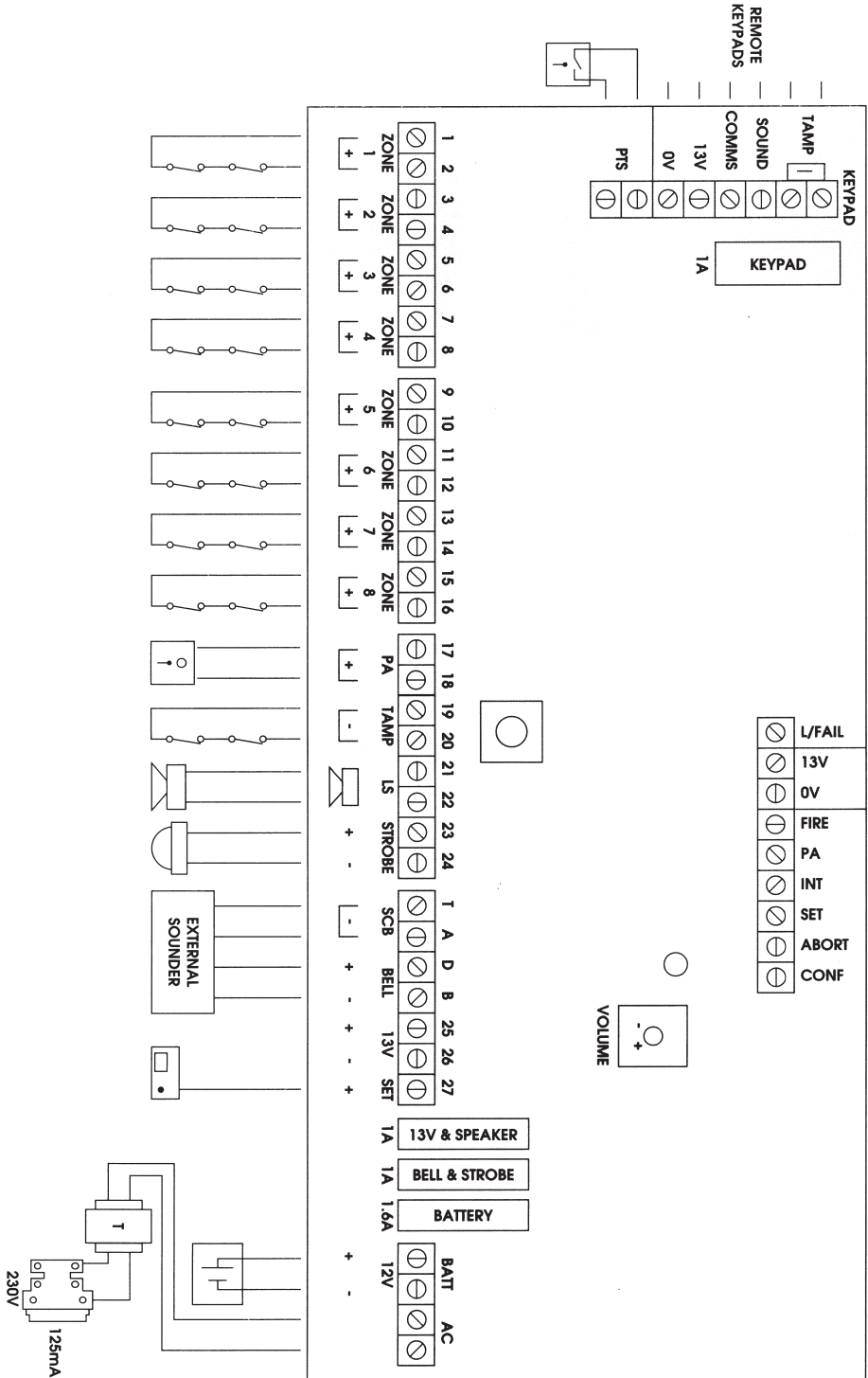
..... Contact Name .....

Telephone ..... Date of Installation .....

Complete the details below, including the exit mode and the zone type for each program.

|           | RESISTANCE | PROTECTION AND EQUIPMENT USED | PROGRAM 1 | PROGRAM 2 | PROGRAM |
|-----------|------------|-------------------------------|-----------|-----------|---------|
| EXIT MODE |            |                               |           |           |         |
| ZONE 1    |            |                               |           |           |         |
| ZONE 2    |            |                               |           |           |         |
| ZONE 3    |            |                               |           |           |         |
| ZONE 4    |            |                               |           |           |         |
| ZONE 5    |            |                               |           |           |         |
| ZONE 6    |            |                               |           |           |         |
| ZONE 7    |            |                               |           |           |         |
| ZONE 8    |            |                               |           |           |         |
| PA        |            |                               |           |           |         |
| TAMPER    |            |                               |           |           |         |

### Connection Diagram



## 1. INTRODUCTION

Accenta 8 is a range of microprocessor based, intruder alarm control systems designed to comply with the installation requirements of BS 4737 1986/87.

The system is controlled by a Central Processing Unit (CPU) which is available in either a polycarbonate or steel case. The CPU contains the transformer, battery, power supply, sounder/strobe circuitry and 6 digital output ports for use with a wire-in digital communicator, Red Care STU or dialler.

The system is operated by Remote Keypad (RKP). Up to 4 RKPs may be fitted to the system, each contain 12 miniature LED status indicators, a 15 button keypad array and a built in personal attack facility. The numerical keys 0-9 are illuminated to assist with night time operation or where the RKP is installed in an area of poor visibility.

All Accenta products bear the CE mark (93/68/EEC) which is your assurance that they have been designed and tested to conform to the EC, EMC Directive (89/336/EEC) and the Low Voltage Directive (73/23/EEC).

Please read through this manual and the Operating Instructions carefully before beginning any planning or installation work, checking that you fully understand every function of the system and its operation.

## 2. INSTALLATION

### 2.1 Installation Design

Carefully plan the position of each part of the alarm system and the cable runs. Detectors should be carefully sited with particular regard to the degree of coverage and the functional change of the zones in each program.

Detector positioning and zone allocation is also very important if confirmed alarm signalling is to be used (see section 4.10).

All of the system wiring is connected directly to the CPU which may be concealed inside a cupboard or loft space, but it must be installed within the protected premises and in a position which is convenient for a mains supply.

The RKPs should be mounted in positions which allows ease of operation for the system users, typically within the entry/exit route close to the final door and in the master bedroom. RKPs are wired using 6 core cable and connected either from keypad to keypad or directly back to the CPU.

A miniature sounder in the RKP produces keypad response tones, entry/exit tones and alarm warning tones. This sounder is designed to aid operation and setting of the system, but it should not be relied upon as the only internal sounder in the installation.

Additional internal sounders are recommended (see section 3.5), these will produce high volume alarm tones and low volume entry/exit tones. Sounders should be positioned to provide good sound distribution throughout the building and so that the exit tone is audible outside the main entry/exit door. This will enable the system operator to check that the system is setting correctly.

Finally note that the total current output of the control system (in alarm condition) is 1 Amp when supported by a fully charged battery. Carefully calculate the total current consumption of every part of the system including the CPU, RKPs, sounders, strobes, detectors and communicating devices, to ensure that this rating is not exceeded.

### 2.2 Fixing

#### Polycarbonate Cased CPU

Unscrew the **AC** transformer wires from the Printed Circuit Board (PCB) and then remove the PCB from the case. Fix the case to the wall in a horizontal position, initially using just the keyhole mounting slot.

The thin wall sections around the edges of the case may be cut away as required to allow cable entry and large round holes are also provided in the rear of the case.

Check for correct alignment and fix the case to the wall permanently with the appropriate screws or fixings through the remaining mounting holes in the four corners of the case.

On re-assembling the unit, the **AC** wires are not polarity conscious and may be connected either way round.

#### Steel Cased CPU

Fix the CPU case to the wall in a vertical position, initially using just the keyhole mounting slot.

Check for correct alignment and fix to the wall permanently with the appropriate screws or fixings through the remaining mounting holes in the four corners of the case.

A round 20mm knock out is available at the top of the case for use with 20mm electrical conduit.

Other cables may be brought in to the CPU through any of the entry points around the outside walls of the case and through the round holes in the rear.

There is no requirement to remove the Printed Circuit board (PCB) when installing the CPU, but if it's being removed or replaced for service, the **AC** wires to the PCB are not polarity conscious and may be connected either way round.

## RKPs

Separate the RKP back plate from the main RKP assembly by slackening the retaining screw and lifting the back clear of the front moulding.

There are two round cable entry holes in the rear centre of the back plate and thin wall sections around the edges which may be cut away as required using a sharp knife.

The back plate mounting holes are at 60mm centres which allow it to be fixed to a single gang electrical metal box. Alternatively the back plate may be fitted directly to the wall using appropriate screws and wall plugs or cavity fixings.

### THE PRINTED CIRCUIT BOARD SHOULD NOT BE REMOVED FROM THE FRONT MOULDING AND DOING SO MAY INVALIDATE THE WARRANTY.

Plug the cable(s) into the base and wire to the 6 way terminal block on the back of the RKP circuit board.

Re-fit the RKP to the back plate, hooking it onto the top holding clips. Check that the wiring does not foul the tamper switch/spring or the PCB support pillars. Re-secure the screw in the bottom of the case.

## 2.3 Wiring Multiple Remote Keypads

A single RKP is connected to the CPU using a 6 core cable (max 100 metres) connecting each terminal in the RKP to the corresponding terminal in the CPU.

Multiple RKPs may be physically wired directly back to the CPU or from keypad to keypad.

In either case the 0V supply, 13V supply, COMMS and SOUND connections must all be wired in parallel. The TAMP terminals in each RKP must be wired in a series loop to the TAMP terminals in the CPU so that operating the tamper switch on any RKP will cause a tamper alarm to be generated by the CPU.

## 2.4 CPU Wiring - Power Up

- 1) Check that the 12 factory fitted links are fitted into the terminals on the CPU circuit board at the positions marked.
- 2) Locate the 6 KEYPAD terminals at the top of the circuit board. Remove the TAMP link and then fully wire in at least one remote keypad.
- 3) Carefully fit the battery wires to the BATT terminals and connect the battery. The system will now go into alarm condition.
- 4) Enter the user 1 code (factory set at 0123). The alarm condition will cease and the **Tamper** indicator will show.

- 5) Fit the CPU front cover. As the tamper spring closes the system will go to Day mode. Return to the RKP, Press **Prog** and immediately enter the engineer code (9999). The **Attack** indicator will show. Remove the CPU cover again.
- 6) The system is now in engineer programming mode and may now be carefully and systematically wired. Connect each of the zones, the PA, and the tamper circuits which are series wired into the TAMP terminals 19 & 20. Finish by wiring additional RKPs, internal sounders, the external bell/sounder, strobe, 13V supplies and any communicating devices.
- 7) Connect the mains supply following the recommendations listed and then refer to the commissioning section.

## 2.5 Mains Connection

The mains supply should be connected using a 3 core cable of not less than 0.75mm<sup>2</sup> from a fused spur to the mains connector inside the CPU. The fused spur must be located close to the CPU and have a 2 Amp fuse.

### Polycarbonate Cased CPU

When wiring the polycarbonate CPU, the mains terminal block connector at the bottom right of the case may be removed from its mounting peg. After wiring, check that it is re-fitted securely. Once the mains power has been applied DO NOT attempt to remove the mains terminal block or the fuse contained within it.

### Steel Cased CPU

In this unit the mains terminal block connector is positioned towards the top left of the base and should not be removed during installation. This unit must be earthed. On completion of the installation, the earth tag to the front cover must be securely fitted.

### WARNING

The mains supply should only be connected by a technically competent person and according to the current IEE wiring regulations.

To avoid the risk of electrical shock you must always totally isolate the mains supply before opening the CPU cover.

### Mains Input Fuse

The mains fuse inside the CPU is located within the mains terminal block connector. Only replace this fuse with the correct value, which is 125mA, 250V type T (anti-surge) and of a type approved to IEC 127, part 2 Sheet III.

## 2.6 Final Commissioning

When all wiring is complete and the mains supply has been connected, a red **Power** indicator should be showing on all RKP's. The red LED on the CPU should also be lit. Re-fit the CPU cover to the case.

Check that all RKP covers are secure and detector covers are fitted. Press the **Reset** key. The system should go to Day mode, showing only the green **Day** and red **Power** indicators.

If any faults are present, refer to section 6 of this manual.

On completion of the installation the system should be thoroughly tested to ensure correct operation. Fill in the Installation Log at the front of this manual and retain it for future reference.

Finally explain the operation of the system to the end user, completing the Engineer Details section of the Operating Instructions.

## 2.7 Power Up Reset - Clear NVM

If the engineer code has been lost or forgotten or in extreme circumstances, where a software crash has occurred, it may be necessary to clear the Non Volatile Memory (NVM) and return to factory set conditions, proceed as follows:

- 1) Remove the mains supply and cause an alarm condition by removing the CPU cover.
- 2) Disconnect the battery. If self contained, the external sounders will operate.
- 3) Remove all wires from terminals 17 (PA) and 27 (SET +).
- 4) Fit a wire link between terminals 17 and 27 and apply power.
- 5) The system will power up with no alarm condition. Remove the wire link and replace the original wiring.
- 6) The RKP indicators will show in response to each of the zones and circuits as they operate. Refit the CPU cover checking that the **Tamper** indicator goes off.

When ALL of the zones and circuits become clear the system will go to Day mode and at that moment the NVM will be cleared and factory set conditions will apply.

- 7) The system may now be programmed, tested and re-commissioned.

## 3.

## PCB LAYOUT - TERMINAL DESCRIPTIONS

### 3.1 Zones

(Terminals 1 - 16)

As supplied, wire service links are fitted across each of the zones to represent a closed circuit. These are removed during installation as the zone wiring is connected but their positions are marked for future reference with a  symbol.

The majority of detection devices use normally closed contacts. These are connected together in a series loop to the required zone input. There are also a small minority of sensors that use normally open contacts (typically pressure mats). These should be connected in parallel together and finally wired between the required zone and the tamper circuit.

The function of each zone is fully programmable in each of the 3 Programs, for further information see section 4.1.

### 3.2 Fire Zone

(Zone 8)

If required zone 8 may be programmed as a fire zone. This will automatically exclude the availability of zone 8 from programs and normal security applications.

The fire zone will operate whether the system is Set or Unset and cause a distinctive internal sounder tone. The external sounders will pulse on and off at 2 second intervals and all RKP indicators will flash to attract attention.

### 3.3 PA

(Terminals 17 & 18)

Any quantity of normally closed type personal attack sensors may be wired in series and then connected to the PA circuit.

Operational in Day and Set, the PA circuit will cause a full alarm condition when activated including a PA communicator output. PA is indicated on the RKP as **Attack**.

### 3.4 Tamper Network

The tamper circuit is used to protect all wiring and detectors in the system from unauthorised access and includes the CPU and RKP covers.

The zone and PA tampers should be series wired and connected to the TAMP terminals 19 & 20. Terminals T & A are for the external bell/sounder tamper. The TAMP terminals at the top of the PCB are for the RKP tampers.

Tamper alarms which occur in the Day mode operate internal sounders only. Tamper alarms in Set cause a full alarm condition including an intruder communicator output.

Tamper is indicated on the RKP's by the **Tamper** indicator.

### 3.5 Internal Sounder

(Terminals 21 & 22)

Marked LS, this output delivers an audio signal to drive up to 3 x 16Ω extension speakers which should be wired in parallel. Fitted at various points throughout the installation each speaker provides high volume alarm tones and low volume entry/exit warning tones.

A control marked VOLUME next to the red power LED may be used to adjust the low volume entry/exit tones to suit environmental conditions.

### 3.6 Strobe Output

(Terminals 23 & 24)

Activated by all types of alarm condition, the STROBE output will continue to operate after reset of the external sounders.

The output will also remain active after entry of a **???** code and will not stop until the **Reset** key is pressed.

The strobe output is a 12V supply. Terminal 23 is permanently 12V and terminal 24 is switched 0V in alarm.

### 3.7 Bell Output

Terminals T A D B are for connection to the external bell or sounder. These terminals provide a power/hold-off supply, sounder trigger and tamper circuit to protect the external sounder housing.

The terminals are summarised as follows:

- T - -Ve tamper return (0V)
- A - -Ve supply (0V)
- D - +Ve supply (12V)
- B - -Ve sounder trigger (0V)

Where self contained/powered sounders are used, carefully follow the manufacturers instructions, matching each of the terminals to those above. For ease of installation, ADE sounders and modules use the same T A D B terminals.

Where a discrete bell or sounder is used, it should be connected to terminals D & B. Terminals T & A are then used for tamper for the sounder housing.

### 3.8 13V Supply

(Terminals 25 & 26)

The 13V output is to power detectors which require a voltage supply (PIRs, shock sensors etc). The supply is present at all times and may be used for a total load of up to 350 mA.

### 3.9 Set +

(Terminal 27)

This output, marked SET + is used in conjunction with latching type detectors. The output becomes 12V positive on correct Set of the system and is removed at the commencement of entry time or entry of a valid user code.

### 3.10 PTS

The PTS terminals adjoining the KEYPAD terminals have a dual function.

#### Push To Set

As supplied the PTS input may be connected to a Push To Set Switch. This can be a standard door bell push located outside the premises or a lock set switch fitted into the entry/exit door. After starting the exit timer the building is vacated. As the switch is then closed, a chime tone is produced and the system Sets.

Sometimes referred to as 'Terminate Set' this facility is mandatory for communicating systems under most Police Force Policies.

#### Remote Keyswitch

Alternatively the PTS terminals may be programmed as a keyswitch input and used with a remote keyswitch or lock switch. For security reasons it is recommended that a tamper proof switch is used and that the switch wiring is not accessible from outside the premises.

The keyswitch may be used to Set (open contacts) or Unset (close contacts) independently of RKPs. However in this situation the keyswitch may have to 'catch up' with the system. For example if the system is Set via an RKP, to Unset with the keyswitch, it would have to be momentarily turned to its Set position then returned to its Unset position.

The keyswitch will always Set program 1. It will also Unset the system or switch off an alarm activation. To Reset after an alarm and return to Day mode, the **Reset** key on the RKP will have to be pressed.

If the PTS terminals are not being used, they should be left programmed as PTS and should NOT be linked out.

### 3.11 Remote Keypad Connections

Remote keypads are wired to the 6 way terminal block located at the top of the PCB along side the PTS terminals.

The 0V supply, 13V supply, COMMS and SOUND connections must all be wired in parallel to the corresponding terminals in each RKP. The TAMP terminals provide a tamper loop circuit for protection of the RKP covers.

### 3.12 Fuses

There are four fuses mounted on the CPU circuit board, all are 20mm Quick Blow.

The top fuse marked KEYPAD is rated at 1 Amp and protects the RKP 13V supply.

The 13V & SPEAKER and BELL & STROBE outputs are each protected by a 1 Amp fuse as marked on the PCB.

The battery +Ve input line is protected by a 1.6 Amp fuse marked BATT on the PCB which will blow if excessive current is drawn from the battery or if the battery is reverse polarity connected during installation.

### 3.13 Battery Back Up

It is essential that the control system is used with a rechargeable 12V battery. Any rechargeable battery in the region of 1.2 to 6Ah may be used, but the capacity should be chosen to suit the installation.

The BATT terminals should be connected to the system battery only, and must not be connected to any other battery or used for any other form of power supply or distribution.

## 4.SYSTEM DESCRIPTION AND OPERATION

### 4.1 Programs & Zones

The Accenta 8 uses 3 Part Set routines known as Programs. In each Program the exit mode can be changed and the zones may be set up to have a different function.

The examples below show how 3 typical Programs could be used in a house:

Program 1 To arm all of the zones and become Set as the user leaves the property and closes the final door.

Program 2 To protect the perimeter of the property in the evening and become Set after say 20 seconds.

Program 3 To protect the downstairs areas of the house at night and become Set instantly and silently.

### Zone Functions Per Program

Timed This function would be used to protect the main entry/exit door or the first sensor in the entry route.

Opening the door or operating the sensor whilst the system is Set will start the entry timer and allow time to Unset the system.

Time Inhibit This is used for detectors located between the main entry/exit door or sensor and the RKP. On entry, once a *timed* zone has been operated and the entry timer started, the zone will be inhibited and allow access through to the keypad.

When the system is Set the zone is fully active and will cause an immediate alarm activation.

Immediate This function would be used for all zones that are not part of an entry route and will cause a full alarm condition when activated.

### Exit Modes Per Program

Timed A timed Program will become Set as the exit timer expires.

Final Door A final door program will Set 5 seconds after a *timed* zone has opened and closed.

If a timed zone is not operated during the exit period, the system will not Set.

Immediate An immediate Program will Set silently 3 seconds after the exit routine has been initiated.

### NOTE

If a Program is not selected when the user Sets the system, Program 1 will automatically Set. Therefore Program 1 is usually considered as the 'Full Set Program' containing all of the zones.

### 4.2 Operating The System

Day Mode This is generally considered as the period when the system is turned off, with only tamper and PA circuits being active. Day mode is indicated on RKP's by the green **Day** indicator.

To Set the System From the Day mode, enter a four digit user code. The system will start to Set Program 1. If another Program is not selected, Program 1 will arm according to its exit mode.

To Set a Program From the Day mode, enter a four digit user code. The system will start to Set Program 1. Press **Prog** followed by the Program number to be Set. A series of beeps will be produced acknowledging the Program number and the Program will start to Set according to its exit mode.

Faults During Setting Faults are shown by the **Zone** indicators, accompanied by a broken beep tone, one beep for zone 1, two beeps for zone 2 etc. All exit modes have their timer periods halted whilst zones are in fault.

To Omit Zones Enter a 4 digit user code and if required, select Program 2 or 3. Press **Omit**, the exit tone will stop and the zones that are about to be armed will be displayed. Key in the zone number(s) to be omitted which will flash to confirm selection. (Zones which have been programmed as omit prevent will give a reject tone.) When the selection is complete press **Set** and the exit tone will continue.

To Quick Set Pressing **Set** during the exit period will cause the exit tone to stop and the system to Set within 3 seconds.

To Unset the System Enter a user code and the system will return to Day mode. If the alarm has been activated then entering the code will stop the alarm and the cause of the alarm will be displayed.

Press **Reset** to clear the indication and return to Day mode. If the system has been programmed as 'engineer reset' it will lock out awaiting entry of an engineer code or anti-code (see section 4.9).

### 4.3 Entry & Exit Timers

The entry and exit timers are separately adjustable in increments of 10 seconds (10, 20, 30 seconds etc), and operate in all programs.

Therefore the timers need to be set up to cover the Program which has the longest entry and exit time periods.

### 4.4 Codes

There are 4 codes available, all are 4 digit and can be set to any code in the range 0000 to 9999.

User Code 1 Is usually considered to be the 'Managers' code. It can be used to Set and Unset the system and also has the authority to add, change or delete user code 2 and the duress code.

User Code 2 Can be used to Set and Unset the system

Duress Code Should be used in a hold up situation where there is pressure to Set or Unset the system. Entry of the code will allow the system to work normally but also generate a silent PA type alarm by operating the PA communicator output.

Engineer Code Accesses the Engineer Programming routine to allow the system to be programmed. The engineer code will not Set or Unset the system.

### 4.5 Code Tamper

During the Set and entry periods, entering an invalid user code will operate the code tamper. After nineteen incorrect keypushes a full alarm condition will be generated.

### 4.6 Keypad PA

Keys 4 and 9 on the remote keypad are marked **PA**. If these keys are depressed together, a full alarm condition will be generated. A keypad PA alarm is indicated on the RKP as **Attack**.

The keypad PA is operational in the Day and Set conditions.

### 4.7 Chime

Chime is a low security application for use when the system is Unset. When a zone that is set to chime is operated, the internal sounders will produce a low volume two stage warning tone and the **Zone** indicator will show. If required, the **Zone** indicator may be cancelled by pressing **Reset**.

Chime is particularly useful in a shop to warn of a customers presence or in a house to warn that a door or particular area has been accessed.

Any of the zones may be set to be on or off chime by pressing the **Chime** key and then keying in the required zone number to 'put it on' or 'take it off' chime. Key 0 to take all zones off chime. After a few seconds the system will automatically return to the Day mode.

### 4.8 Service Timer

Where the system is covered by a maintenance agreement with the installation company, the service timer may be used to alert the end user that a service is due. This is done by flashing the **Tamper** indicator on for 2 seconds and then off for 2 seconds.

The service time period is controlled by the number of Set/Unset events, which are programmable in 100 event increments between 100-800.

To set the timer, calculate the average system usage. Setting and Unsetting counts as 1 event, so if the system was used on average twice a day, a timer setting of 700 would indicate after approximately 12 months.

It should be noted that when the **Tamper** indicator is flashing as a service warning, this does NOT prevent normal system operation.

To reset the timer during a service or maintenance visit, the timer must be momentarily disabled then re-set to the required setting.

### 4.9 Engineer Reset - Anti Code Reset

If the system has been programmed to be engineer reset, after an alarm it will lock out and the RKP will continually display the cause of the alarm. The engineer would then be required to attend the site and use the engineer code to reset the system.

Where anti-code reset has also been enabled, the RKP will still show the alarm cause and also display a 4 digit 'quote code' by sequentially flashing zone indicators 1-8.

At this point the end user would contact the engineer. After determining the cause of the alarm and deciding that an engineer call was not necessary, a 6 digit anti-code would be given to the user which would reset the system.

This anti-code is generated from a small computer program which is installed at most UK Alarm Receiving Centres, or alternatively can be run on a PC by the engineer.

Security of the anti-code reset system is maintained by a 2 digit site code which is set up in the anti-code generator programme. The same 2 digit site must also be set up in the control panel during installation.

#### 4.10 Confirmed Alarms

Confirmed alarm signalling allows the Alarm Receiving Centre to determine that an alarm signal is more likely to be genuine than false, and thus may result in a higher level of Police response.

Accenta 8 offers a 'sequentially confirmed' system of monitoring zones. Where 2 or more zones have been independently triggered whilst the system is in alarm, the confirmed communicator output will operate.

Any type of zone (*Timed*, *Time Inhibit* or *Immediate*) which causes the system to go to alarm will act as the first zone in the sequentially confirming process. To complete the process an *Immediate* zone must then be violated.

It should also be noted that confirmed alarm systems must be designed and installed in accordance with NACOSS NACP 14 (Code of Practice for Intruder Alarm Systems Signalling to Alarm Receiving Centres).

#### 4.11 Double Knock

Double knock may be used to reduce the incidence of false alarms and may be programmed to any zone whose detector is believed to be at risk from environmental interference.

The first time a double knock zone operates, a 10 minute timer will start. If during that time the same zone or any other zone operates, an alarm occurs. If the first zone remains open constantly then an alarm will occur after 10 seconds.

*Timed* zones and *Time Inhibit* zones that operate during entry are not treated as double knock even if selected.

#### 4.12 System Flags and Options

A system flag is basically a switch which is set to be on or off, for example 'engineer reset'. An option is where a choice of two features is available, for example where the PTS input can be used as Push To Set or Remote Keyswitch.

The following system flags and options can be programmed from the engineering mode, menu 6:

|                                 |           |
|---------------------------------|-----------|
| Silent PA Alarm                 | On or Off |
| RKP PA Alarm                    | On or Off |
| Engineer Reset                  | On or Off |
| Anti-Code Reset                 | On or Off |
| Push to Set or Remote Keyswitch |           |
| Zone 8 Security or Fire         |           |
| External Bells in Fire          | On or Off |

#### 4.13 Non Volatile Memory (NVM)

The NVM circuit will retain all programmed information and the alarm memory in the event of power fail, disconnection or system faults and thereby provide the system with a high degree of security.

Where the engineer code has been lost or forgotten it will be necessary to clear the NVM. This procedure is given in section 2.7.

#### 4.14 Auto Reset and Re-arm

In alarm condition the sounders will operate for the programmed bell duration. The sounders will then shut down but the strobe will continue to operate.

Each circuit is then scrutinised and if clear will be re-armed. Any circuit in fault condition is automatically omitted.

#### 4.15 Factory Set Conditions

|                       |                                                                                           |
|-----------------------|-------------------------------------------------------------------------------------------|
| User Code 1           | 0123                                                                                      |
| User Code 2           | Not programmed                                                                            |
| Duress Code           | Not programmed                                                                            |
| Engineer Code         | 9999                                                                                      |
| Exit Time             | 30 seconds                                                                                |
| Entry Time            | 30 seconds                                                                                |
| Bell Duration         | 20 minutes                                                                                |
| Bell Delay            | No Delay                                                                                  |
| Omit Prevent Zones    | None                                                                                      |
| Double Knock Zones    | None                                                                                      |
| Program 1             | Zone 1 - timed<br>Zone 2 - time inhibited<br>Zone 3 to 8 - immediate<br>Exit mode - timed |
| Program 2             | Disabled                                                                                  |
| Program 3             | Disabled                                                                                  |
| Service Timer         | Disabled                                                                                  |
| Silent PA Alarm       | No                                                                                        |
| RKP PA Alarm          | Yes                                                                                       |
| Engineer Reset        | No                                                                                        |
| Anti Code Reset       | No                                                                                        |
| Remote Keyswitch      | No                                                                                        |
| Fire Zone             | No                                                                                        |
| External Bell in Fire | No                                                                                        |
| Alarm Memory          | Empty                                                                                     |

## 5. REMOTE SIGNALLING EQUIPMENT

### 5.1 Input and Output Terminals

The 9 terminals grouped together along the edge of the PCB have been provided for connection to remote signalling equipment such as a digital communicator, Red Care STU or auto dialler.

**L/FAIL** This is a Telephone Line Fail input which is held at approximately 6V by the CPU circuitry. The input is activated when pulled to 0V by the telephone line fault output of the communicator. This is usually a voltage free relay or open collector transistor.

When a telephone line fault occurs in the Day mode all RKP's will flash the **Tamper** indicator rapidly at the rate of approximately every 1/2 second, an alarm condition will not be generated. This indication will **???** and remain on if the line fault clears. Once clear it may be reset with the **Reset** key.

A telephone line fault which occurs while the system is Set will not cause an alarm condition but any bell delay which is programmed will be cancelled and any intruder alarm which is triggered will operate instant sounders.

**13V - 0V** These terminals provide a 13V supply for the communicator up to a total load of 200mA. The output is protected by a 250mA thermal fuse. If this fuse operates it may be reset by removing the load and allowing a few seconds for it to recover.

**OUTPUT PORTS** The 6 terminals described below are transistor outputs which are held at 12V and can source up to 10mA. Each output falls to 0V when it operates and can sink up to 40mA.

These outputs would normally be connected directly to the input channels of wire in type communicators and STUs.

Alternatively each output can be used to drive a relay (coil resistance >400Ω) connected between the output terminal and the 13V supply terminal. The relay will energise when the output port operates. It is recommended that a back EMF protection diode is used in parallel with the relay coil.

- |              |                                                                                                            |
|--------------|------------------------------------------------------------------------------------------------------------|
| <b>FIRE</b>  | The fire output operates when the fire zone (zone 8) is triggered.                                         |
| <b>PA</b>    | The PA output operates when a PA alarm is triggered or a duress code is used.                              |
| <b>INT</b>   | The intruder output operates when an intruder condition is triggered whilst the system is set.             |
| <b>SET</b>   | The set output switches to 0V whenever the system becomes set and is used to indicate opening and closing. |
| <b>ABORT</b> | Operates when an intruder alarm condition is switched off.                                                 |

**CONF** Operates when 2 independent zones are activated during the same alarm condition. See section 4.10

#### Important Notes

1. Each output has been configured as positive removed and will normally require the EPROM or NVM for the communicator or STU to be programmed as positive removed. However there may be differences between some pieces of equipment and some Alarm Receiving Centres (ARCs).
2. Where the communicator is powered from an external source, not the CPU and the outputs are being used without relays, the CPU and external power supply will require a commoned negative supply rail.
3. If the communicator is not fitted inside the CPU and abort is being used, care should be taken to ensure that the abort connection between the CPU and the communicator cannot be damaged or severed as this could cause the ARC to incorrectly filter an alarm signal.
4. It is very important that communicating systems are fully tested and that all signals are correctly received at the ARC when the system is installed and serviced.

### 5.2 Filtering of Intruder Alarms

A condition of most Police Force Policies and under the guidance of NACOSS NACP 14 (Code of Practice for Intruder Alarm Systems Signalling to Alarm Receiving Centres) is that all intruder alarm signals received by an Alarm Receiving Centre (ARC) must be filtered to establish their validity before passing to the Police.

The exact method of filtering should be decided according to the regional Police Force Policy and ARC procedures.

In general, Accenta 8 offers the following methods which could be used to filter an alarm:

**Set/Unset** A Set or Unset signal which is received by the ARC at around the same time as an intruder signal, can be used to filter the alarm.

**Abort Output** The abort output operates whenever a user code is entered or a keyswitch is used to switch off an intruder alarm condition. When an abort signal is received by the ARC at or around the same time as an intruder signal, the alarm can be filtered.

**Restore of the Intruder Output** The intruder alarm output is restored to 12V whenever a user code is entered or a keyswitch is used to switch off an intruder alarm condition. Where an intruder alarm signal is shortly followed by a restore at the ARC, this can be used to filter the alarm.

## 6. FAULTS

Fault conditions are often the result of minor installation errors or misinterpretation of the equipment being installed. The following points outline the most common installation and commissioning faults.

- 1) If a tamper or PA fault is present on the system, it will go to a lock out condition (showing the appropriate indication). The RKP's will not produce any audible response tones and the system will not operate until the fault has been found and rectified.
- 2) The most common cause of a zone not responding to detectors is incorrect wiring. Normally closed detectors must be wired together in a series loop before connecting in to the appropriate ZONE terminals. Tamper's are series wired in the same manner.
- 3) Where a permanent zone fault is showing and the loop resistance is found to be in order, the most probable cause is a short circuit between the zone wiring and the tamper wiring.

When measured with a meter the resistance between the zone and tamper wiring should be infinitely high.

- 4) If totally lost as to the cause of a fault, remove ALL wiring from the CPU (except the RKP's). Re-fit the 11 service links into the zone, PA and tamper terminals and test the system. Never fit links to any positions other than those marked on the PCB.

In a system using multiple RKP's, if a fault is believed to be keypad related, it may be beneficial to disconnect the RKP's and re-connect and test them one at a time.

- 5) Where a particular program does not appear to operate, check that an exit mode has been programmed.

Where individual zones do not work, check that they have been correctly enabled and set up within the program.

If no zones appear to operate when tested but show on the RKP as the system is Unset, check that a bell delay has not been programmed.

- 6) Before testing or replacing any fuses, ALL power must be removed. Fuses which fail continually are almost certainly the result of a short circuit or low resistance across the output.

Remove all wiring and check for low resistances with a multimeter. Blown fuses are very seldom caused by faulty equipment.

- 7) Finally whenever working close to the mains supply or connector, you should exercise extreme caution. The mains supply should be isolated before the CPU cover is opened.

## 7. ENGINEER PROGRAMMING

The Accenta 8 may be programmed to suit a wide variety of installations. The information below shows the programmable options available and how to change them.

Once the programming mode has been accessed, each section may be changed in any order. As each section is completed the system will automatically return to the programming mode.

### To Enter Engineering Programming

The system should be in Day mode with the Day (and Power) indicator showing:

Press **Prog** All indicators show

Enter the engineer code

**?** **?** **?** **?** **Attack** indicator shows

The system is now in the engineer programming mode.

### Alarm Tests

Press **0** **Tamper and Attack** indicators show

The system is now in the test routine.  
Press the following keys for the required tests.

|                   |                                                                                                                               |                  |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------|------------------|
| <b>1</b>          | Set + Ve Test                                                                                                                 | <b>0</b> to stop |
| <b>2</b>          | Strobe Test                                                                                                                   | <b>0</b> to stop |
| <b>3</b>          | External Bell/Sounder Test                                                                                                    | <b>0</b> to stop |
| <b>4</b>          | Low Volume Internal Sounder Test                                                                                              | <b>0</b> to stop |
| <b>2</b> <b>4</b> | High Volume Internal Sounder Test                                                                                             | <b>0</b> to stop |
| <b>5</b>          | Walk Test. During the test the internal sounder will beep and the respective <b>Zone, Tamper, Attack</b> indicator will show. | <b>0</b> to stop |

Press **Reset** to return to programming mode

or **6** to enter the communicator output tests.

All **Zone** indicators will momentarily flash. Press the following keys for the required tests.

|          |                        |                  |
|----------|------------------------|------------------|
| <b>1</b> | Fire Output            | <b>0</b> to stop |
| <b>2</b> | PA Output              | <b>0</b> to stop |
| <b>3</b> | Intruder Output        | <b>0</b> to stop |
| <b>4</b> | Open/Close Output      | <b>0</b> to stop |
| <b>7</b> | Abort Output           | <b>0</b> to stop |
| <b>8</b> | Confirmed alarm Output | <b>0</b> to stop |

Press **Reset** twice to return to programming mode.

### Exit Timer

Press **1** **Zone 1 and Zone 2** indicators show

Enter the required time in 10 second increments, divided by 10.  
Eg 10 seconds ÷ 10 = 1, so enter 01.

10 seconds = 01

20 seconds = 02

30 seconds = 03 etc.

On entering the 2 digits, the system returns to programming mode.

### Entry Timer

Press **2** **Zone 1 and Zone 2** indicators show

Enter the required time in 10 second increments, divided by 10.  
Eg 10 seconds ÷ 10 = 1, so enter 01.

10 seconds = 01

20 seconds = 02

30 seconds = 03 etc.

On entering the 2 digits, the system returns to programming mode.

### External Bell/Sounder Timer

Press **3** **Zone 1 and Zone 2** indicators show

Enter the required time in minutes.

01 = 1 minute

20 = 20 minutes

99 = 99 minutes etc.

00 = continuous sounder operation

On entering the 2 digits, the system returns to programming mode.

### External Bell/Sounder Delay

Press **4**

**Zone 1 and Zone 2**  
indicators show

Enter the required delay time in minutes.

01 = 1 minute

20 = 20 minutes etc.

99 = continuous bell delay

00 = no bell delay

On entering the 2 digits, the system returns to programming mode.

### Service Timer

Press **5**

**Zone** indicators 1 to 8  
flash momentarily

The current setting of the timer is  
then displayed

**Zone 1** indicator = 100 set/unset events (key 1)

**Zone 2** indicator = 200 set/unset events (key 2)

**Zone 8** indicator = 800 set/unset events (key 8)

No Zone indicators = timer disabled (key 0)

Select the required timer setting by pressing the appropriate key and checking the indication.

Press **Reset** to return to programming mode.

#### To Reset the Service Timer

To reset the service timer during maintenance visits, follow the instructions above to disable the timer and then re-set it to the required setting.

### System Flags and Options

Press **6**

**Zone** indicators 1 to 8  
flash momentarily

The current setting of the flags is  
then displayed

Press the keys below to toggle the flag on or off. Check the associated **Zone** indicator to confirm selection.

Indicator On = flag On

Indicator Off = flag Off

Silent PA Alarm Press **1**

RKP PA Alarm Press **2**

Engineer Reset Press **3**

Anti-code Reset Press **4**

Remote Keyswitch Press **5**

Zone 8 as Fire Press **6**

External Bells in Fire Press **7**

Press **Reset** to return to programming mode.

#### Notes

1. Flag 5 controls the function of the PTS input. If the flag is set (on) PTS will function as a remote keyswitch. If the flag is not set (off) the PTS input will work as a Push to Set.
2. Flag 7 automatically enables flag 6.  
Flag 4 automatically enables flag 3.

### Double Knock Zones

Press **7**

**Zone** indicators 1 to 8 flash  
momentarily

The zones currently set up as  
Double Knock are then  
displayed

Key in each zone number to select or de-select the zone as  
Double Knock. Key 0 to de-select all zones

Press **Reset** to return to programming mode.

### Code Changes

Press **8** **Zone** indicators 1, 2, 3 and 4 flash

Press **1** to change User Code 1

Press **2** to change User Code 2

Press **3** to change the Duress Code

Press **9** to change Engineer Code

Key in the new 4 digit code or

Press **Omit** to remove user Code 2 or the Duress Code

A series of rapid blips will be heard and the system will return to programming mode.

### Notes

If a low pitched 'dull' tone is heard when a code is entered, the code has been rejected and maybe already in use.

### Set Up Site Code

Press **9** **Zone 1** and **Zone 2** indicators show

Enter the required 2 digit site code. This must be the same site code as for the anti-code generator.

On entering the 2 digits, the system returns to programming mode.

### Alarm Memory Recall

Press **Chime** The last 8 alarm events will now be scrolled and displayed

The sounder will beep as each new condition is shown

Press **1** to view the last (newest) event

Press **2** to view the previous event etc.

Press **8** to view the oldest event.

Press **Chime** to continue scrolling events.

Press **Reset** to stop the events being scrolled and return to the programming mode, or wait for the scrolling to stop and automatically return to programming mode.

### Notes

- 1 When viewing an event, the first alarm condition is shown by a flashing indicator. Subsequent zones which have triggered are shown by a steady indicator.
- 2 If the **Day** indicator shows in any of the alarm events, the alarm condition occurred in the Day mode.
- 3 If the alarm event shows as a blank display then that event is 'empty'.

### Omit Prevent Zones

Press **Omit** The **Zone** indicators will show the zones currently set up as omit prevented

Key in each zone number to select or de-select the zone as Omit Prevented. Key in 0 to de-select all zones.

Press **Reset** to return to programming mode.

## Programs & Zones Set Up

### IMPORTANT NOTES

- 1 Immediate zones are set up by making the zone used, but not Timed or Time Inhibited.
- 2 The exit mode cannot be set up if there are no used zones in the program.
- 3 Programs which are not given an exit type are disabled.

Press  **Zone** indicators 1, 2 and 3 flash

Press   or  The program number selected will be displayed by a flashing zone indicator.

The same program number will be shown as each change to the program is completed.

### Used Zones

Press  to display the Used zones - Key in each zone number to select or de-select the zone. Key in 0 to de-select all zones.

Press  to complete the set up of Used zones.

### Timed Zones

Press  to set up the Timed Zones. Use the same method as above to set up the zones.

Press  to complete the set up of Timed zones.

### Time Inhibit Zones

Press  to set up the Time Inhibit Zones. Use the same method as above to set up the zones.

Press  to complete the set up of Time Inhibit zones.

### Exit Mode

Press  to display the exit mode.

**Zone 1** indicator = Timed Exit (Key 1)

**Zone 2** indicator = Final Door Set (Key 2)

**Zone 3** indicator = Immediate Set (Key 3)

No indicators = Program Disabled (Key 0)

Select the exit mode by pressing the appropriate key.

Press  to complete the Exit Mode set up.

Press  once to return to the 3 flashing **Zone** indicators and select a different program, or twice to return to the programming mode.

## To Exit from Engineer Programming

After completing tests and programming, the **Attack** indicator should be showing:

Press 

The system will return to Day mode with the **Day** (and **Power**) indicator showing

## Reset to Factory Set Conditions

From engineer programming mode - with the **Attack** indicator showing.

Press  twice

The system will return to Day mode with factory set conditions re-instated.



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