

Concept 2000 Programmers Manual

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Introduction

Congratulations on your purchase of the **Concept 2000 Security Management System**.

The **Concept 2000** is an intelligent, versatile security management system that is fully compatible with industry standard detection devices and communication protocols. It has been designed to cater for almost all security applications with its performance and programming limited only by your own imagination.

Concept 2000 offers eight User Areas, one System Area, one Tamper/24Hr Area, sixteen Alarm and Tamper Zones, two Siren Drivers and four Auxillaries as its standard configuration.

Concept 2000 includes limited Access Control functions as part of the standard package and is complete with its own power supply and standby battery often offered as extras with other products.

Expandability is a breeze with add on Zone Expansion Modules optionally enlarging the Concept 2000 to ninety-six (96) Individual detection Zones. User Terminals may be increased to eight (8) for ease of customer operation or as Access Control points for doors.

In short, **Concept 2000** provides the excellent price/performance you've come to expect from Inner Range.

And **Concept 2000** is easy to use. All User interface information is displayed in "plain English" with step by step procedures clearly defined. There's even a HELP key for people that get really stuck and need a little prompting.

Designed for the Customer, **Concept 2000** is the ultimate "user friendly" system with its slimline Terminals, hidden Control equipment and powerful customer features available at the touch of a button.

Designed for the Installer, **Concept 2000** is easy to install using a four-wire LAN, easy to programme in "plain English" and quick to service with de-mountable cable connections and removable chassis components.

Thank you for buying an Inner Range product, proudly designed and manufactured in Australia, by Australians.

General Information

This manual assumes the reader is familiar with the Concept 2000 Users Manual. If you have not read the Concept 2000 Users Manual you may experience difficulty in understanding some of the basic terms and concepts referred to in this manual.

The Concept 2000 security management system may be programmed in one of three ways:-

Using the keypad at any of the system's Terminals
Over a telephone line using an appropriate modem
Using a lap top computer plugged into the Control Board UART

Installation and commissioning of the system requires the following steps:-

Installing the Concept 2000 system
Testing of the installation
Programming the Concept 2000
Programming and testing the dialler operations

For installers already familiar with programming, the Quick-Pro programming tutorial shows the basic steps needed for testing and programming.

This manual is designed to be used as a reference guide for Concept 2000 programmers. Whilst we recommend that the entire manual is read from cover to cover, many installers will only read relevant sections when the need arises. The section on Quick-Pro should always be read as it will provide the programmer with a good overview of all programming requirements.

All programming may be performed at any of the system's Terminals however, only the Installer Code (User 001) will be able to gain access to the programming level of the Concept 2000. **The factory default Installer Code is 01.**

The programming of all User Codes, except User 001, may only be performed by the Master Code. The Master Code holder has almost the same level of access as the Installer except for programming. The Master Code holder can disable the Installer Code, for system security, but cannot change or view the code. **The factory default Master Code is 00.**

Quick-Programming Guide

After the Concept 2000 system has been installed and tested, it needs to be programmed according to the specific installation requirements.

It is assumed that a telephone line is connected, via a Mode 3 socket, even if the system is not being monitored. This enables remote service to be performed even on a system that is programmed for Local Alarm operation.

The following check list should assist the experienced programmer in getting a system up and running - fast.

- | | |
|--|---|
| Power up the system | Check that all Terminals are operational and default messages are being displayed in the LCD's. |
| Log on to a Terminal | Enter the Installer Code at a Terminal keypad and press <OK>. |
| Programme the Zone Names | Press <MENU>, <7>, <0>.
Press <OK> to start at Zone 01.
Enter the name of Zone 01.
Press the <DOWN> arrow and enter the name of Zone 02.
Repeat for all of the valid Zone Names |
| Programme the Zone Attributes | Press <OK> twice to view the current Zone Attributes.
Using the <UP> and <DOWN> arrows, remove the "T" Attribute from all 24 Hour Zones such as Fire Doors, Glass Break Detectors, etc.,
Remove the "E" Attribute flags from any Zones that may be alarmed as the client uses the Terminal to arm the system such as PIRS in the immediate vicinity. |
| Programme Areas using Default numbers | Press <MENU>, <7>, <1> to enter Area programming.
Press the <LEFT> arrow to enter Area Default number selections.
Decide which number to use for this Area's Default, select the number and press <OK> twice.
Use the <UP> and <DOWN> arrows to select all valid Areas not forgetting Area #0 and Area #9.
Return to Area programming by pressing <LEFT> arrow. |

Quick-Programming Guide cont...

Programme the Areas Step through all of the Area attributes either pressing <OK> to accept the default or make the required changes before pressing <OK>.
Remember to enter the Primary Zone number(s) of the very first Zone(s) to be alarmed on the Entry Path.
Set the Zone Control "E" flag for all Primary Zones and all other Zones that will be alarmed on the Entry Path.
Remove the Zone Control flags for any non-valid Zones by pressing <OFF>.
Repeat the process for all valid Areas.

Programme the Terminals Press <MENU>, <7>, <2> to enter Terminal programming.
Step through all of the Terminal attributes either pressing <OK> to accept the default or make the required changes before pressing <OK>.
Remember, the default Terminal number is the number of the Terminal which you are currently using.
At least one terminal should be programmed to accept Alarm and Level messages.
The Associated Area number should be programmed to be the Area closest to the Terminal.

Programme the Communications Press <MENU>, <7>, <3> to enter Communication programming.
Select the format and programme all of the necessary format attributes.
Press <MENU>, <7>, <3>, <LEFT> arrow and fine tune the modems performance according to the type of telephone line connected.

Programme the Miscellaneous functions . . Press <MENU>, <7>, <5> to enter Miscellaneous programming.
Set the number of days for the Zone Self-Test and the time the test will occur.

Press <END> to reset the communications buffer then log back on to the system and turn on Area #9 followed by Area #0.

Quick-Programming Guide cont...

If Area #9 or Area #0 will not arm, the Terminal will display the reason why.

Quickly ascertain what part of the programming needs rectifying, perform the changes and again try to arm the Areas.

When armed successfully and if the system is monitored by a Central Station, inspect review for any Dialler Hang-Up Errors and check with the Central Station to ensure that the transmissions were received correctly.

Arm all of the valid User Areas and walk test all of the Zones to ensure all alarms behave as expected and all communications arrive at the Central Station correctly.

Inspect Review and qualify the results of the test.

The system should now be working.

The sensible default settings offered with Concept 2000 allow the programmer to bring a new system on-line quickly.

The programmer may still need to "fine tune" the system to perform exactly to the customer's requirements especially when using the Access Control and Deadman features of the system.

Special application programming may still be required but can now be performed at leisure.

The points covered in Quick-Pro can be used as a check list for all installations to ensure that the basic programming requirements have been met.

Zones

Programming

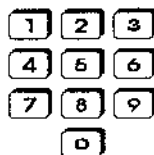
Access sequence:



Display:



Use the <digit> keys on the Terminal keypad to enter the number of the Zone you wish to programme.



Alternatively, use the <UP> or <DOWN> arrow keys to scroll through the available Zone numbers.



Press <OK> when done.



This facility allows the programmer to jump to the specific Zone number required when making programming changes. In larger systems, this saves a lot of time by not having to scroll through all of the Zone numbers available.

Name / Description

Function:

Programme a custom name to describe the Zone using a maximum of 24 characters.

Display:

(The default name of "Zone 01")



Name of Zone 01
ZONE 01

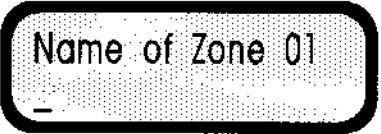
Press the <OFF> key to clear the bottom line of the display and return the cursor to the starting position.



Press the <ON> key to clear the bottom line of the display to the right of the cursor and including the cursor position.

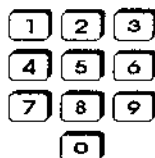


Display:



Name of Zone 01
_

Use the <digit> keys to select the letters or numbers required to describe the Zone.



Each digit key on the Terminal keypad contains all of the letters and numbers printed within the key boundary. Multiple presses of the same key will display the characters. The "0" key also contains punctuation characters and other useful symbols.

Name / Description continued

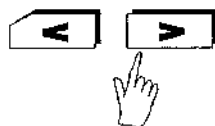
Press the <RIGHT> arrow to advance the cursor to the next input position or press the <LEFT> arrow to backspace if a mistake is made.



Display:
(example, "PIR ACCOUNTS OFFICE")



Press the <RIGHT> arrow to advance the cursor beyond the sixteenth character position and to complete the Zone name.



Display:



Press <OK> when done.



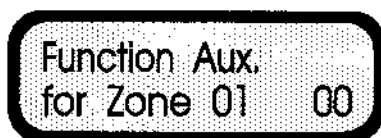
When programming Zone names greater than sixteen characters long, take care to use the <RIGHT> arrow to advance the cursor to the next display and continue to the end of the text already entered. We recommend that the default Zone name of Zones that are not connected is left as default to assist in any programming problems.

Function Auxiliary

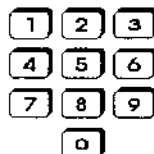
Function:

Programme an auxiliary number that will provide an output specifically related to the sealed and alarm condition of the Zone.

Display:
(Default - no selection)



Use the <digit> keys to enter the auxiliary number required for the Function auxiliary.



Press <OK> when done.



The default setting of 00 states that a Function auxiliary is not required for this Zone.

The auxiliary number 00 is invalid and is used extensively throughout this manual to disabled output features.

The Function auxiliary will only operate when the Zone has been assigned to at least one Area and the Area is armed.

The Function auxiliary output will energise when the Zone goes into alarm and will reset when any Area controlling the Zone is turned Off.

Full details of auxiliaries can be found in the "Auxiliary Assignments" table at the rear of this manual.

Attributes

Function:

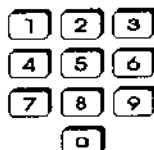
To programme individual performance characteristics of the Zone.

Display:
(Default flags "E T" are set.)



Use the < digit > keys to select the attributes for the Zone.

The < Y > or < 9 > key sets the attribute to YES and any other key equals NO or blank.



Press < OK > when done.



If the Zone is not used then all of these attributes must be cleared. This is easily performed by pressing the < OFF > key that will clear the entire line of all settings.

Zones that are used for twenty-four hour operation such as Fire Doors, Hold-Up buttons, etc., must have the "T" flag removed to prevent Zone Self-Test alarms.

Repeat the programming for all connected Zones.

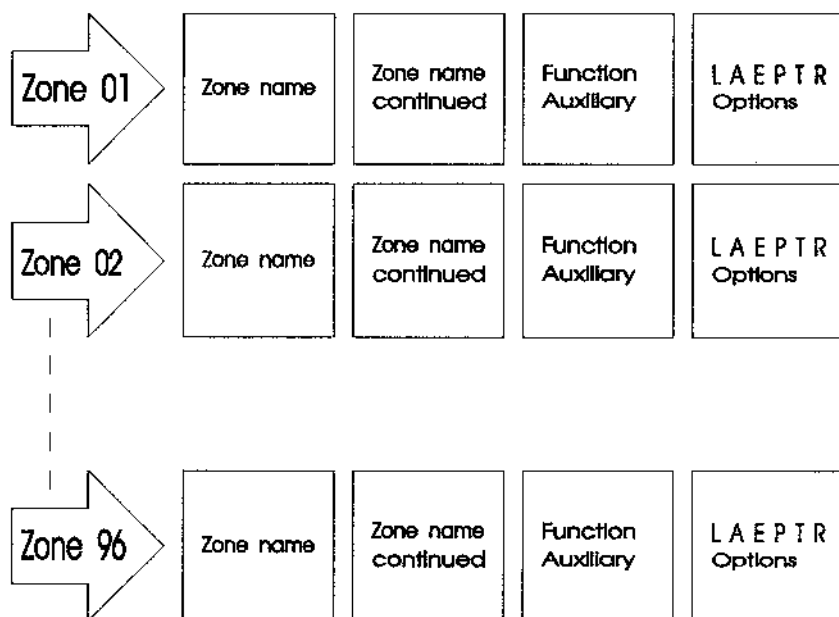
- | | |
|---|---|
| L | Lockout after Siren Time |
| A | Auto-Isolate if unsealed at the end of the Exit time |
| E | Test to ensure this Zone is sealed before arming the Area |
| P | Pulse count this Zone according to the Pulse Count / Pulse Timer settings |
| T | Test this Zone for activity according to the Zone Self-Test period |
| R | Re-trigger the Function Auxiliary output according to the Zone status |

Press < HELP > for on-line assistance with the Zone Control flags.

Attribute Map

All of the Zone programming modules are arranged in a structure that is similar to the squares of a chess board.

By using the <UP>, <DOWN>, <LEFT> and <RIGHT> arrow keys, access to individual modules is easily achieved.



With practise, Zone programming can become extremely fast and efficient with clever use of the available arrow keys.



Try using the <DOWN> arrow and programme all of the valid Zone names first.

Then press <OK> to advance to the Zone attributes and use <DOWN> and <OFF> to delete all of the flags for the invalid Zones. Remove the "T" flag from any twenty-four hour Zones.

Go back and modify the programming for any Zones that have special requirements such as Function Auxiliaries.

Area Defaults

Introduction

Concept 2000 programming can be made easier with the use of Area Defaults.

When programming a Concept 2000 system for the first time, the Areas have to be programmed according to the type of system operation required.

By using the default numbers, sensible attribute settings may be programmed into the Concept 2000's Areas.

The Area Default numbers available are:-

0 - Clear

This default number will clear all of the Area attributes and Zone Control flags except for the Area Name if it has been programmed.

1 - Local Alarm

This default number will set sensible Area attributes and Zone Control flags for Local Alarm operation.

2 - IR Fast / EarthNet / IEI Fast / Contact ID / Securitel (Serial Data)

This default number will set sensible Area attributes and Zone Control flags for communications using the above formats.

3 - Ademco Ext Fast / Securitel (Pin Data)

This default number will set sensible Area attributes and Zone Control flags for communications using the above formats.

Once default numbers have been used to initialise the Areas, any of the attribute settings may be changed manually to suit specific requirements.

For detailed information on the actual attribute settings available under the specific default numbers, refer to the Area Default table at the end of this manual.

Programming

Access:

MENU

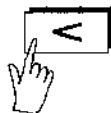
7

1

Display:
(Default - User Area #1)

Area to
program : 1

Press <LEFT> arrow to enter the Area
Default sub-menu.



Access to this feature is identical to the access procedure required for Area programming with the addition of the <LEFT> arrow.

When the programmer first enters Area programming, the default Area is always displayed as User Area #1.

Selection

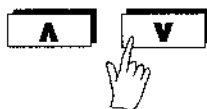
Function:

Selected the Default number required for this particular Area.

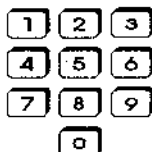
Display:
(Default - 0 = clear the Area)



Use the <UP> or <DOWN> arrow keys to select the Area number required.



Use the <digit> keys to select the default number required for this Area.



Press <OK> when done.



The LCD provides confirmation of the Area number you are about to default and the default setting you are about to use.

A second confirmation is requested in the following display but this process can be aborted at any time by pressing <END>.

Confirmation

Function:

Confirm that the selected Default number is required for this particular Area.

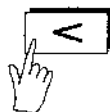
Display:
(Default - 2 = IR Fast, Contact ID, etc;)

Press OK to set
Area 1 to 2

Press <OK> to set the Area to the selected Default number and then continue with other Areas.



Press <LEFT> arrow when done and return to Area programming.



The LCD will not provide confirmation of the default setting and will always revert to the same entry display.

Exercise caution when proceeding to default additional Areas and ensure that the Area number displayed is the Area number required.

Press <END> at any time to abort Area default programming.

Areas

Programming

Access sequence:

MENU

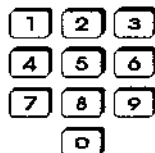
7

1

Display:

Area to
program : 1

Use the <digit> keys on the Terminal keypad to enter the number of the Area you wish to programme.



Alternatively, use the <UP> or <DOWN> arrow keys to scroll through the available Area numbers.



Press <OK> when done.



This facility allows the programmer to jump to the specific Area number required when making programme changes.

Name / Description

Function:

Programme a custom Area name to describe the part of the premises that will be armed or disarmed. (Max 16 chars)

Display:
(Default name of "Area 1")



Name of Area 1
USER AREA 1

Press the <OFF> key to clear the bottom line of the display and return the cursor to the starting position.



OFF

Press the <ON> key to clear the bottom line of the display to the right of the cursor and including the cursor position.



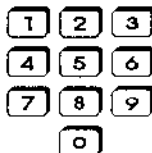
ON

Display:



Name of Area 1
_

Use the <digit> keys to select the letters or numbers required to describe the Area.



Each digit key on the Terminal keypad contains all of the letters and numbers printed within the keypad boundary. Multiple presses of the same key will display the characters. The "0" key also contains punctuation characters and other useful symbols.

Name / Description cont...

Press the <RIGHT> arrow to advance the cursor to the next input position or press the <LEFT> arrow to backspace if a mistake is made.



Display:
(Example, "ADMINISTRATION")

Name of Area 1
ADMINISTRATION

Press <OK> when done.



AREA 0 and AREA 9 DEFAULT NAMES

Display:
(Default name for Area 0)

Name of Area 0
TAMPER AREA

Display:
(Default name for Area 9)

Name of Area 9
SYSTEM AREA



As can be seen from the default names used in Area 0 and Area 9, the names of the Areas should be chosen to describe the part of the system that will be armed when the Area is turned on.

Area 0 will arm all of the Zone Tamperers and Area 9 will arm all of the System's internal alarms called Inputs.

Siren Time

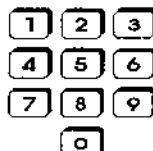
Function:

Programme the time, in minutes, that the system's Siren Outputs will operate when a Zone with the Zone Control "S" flag set is alarmed.

Display:
(Default Siren Time of 10 minutes)

Siren time for
Area 1 : 10 min.

Use the <digit> keys to select the Siren Time required from 0 to 99 minutes.



Press <OK> when done.



The Siren Time sets the amount of time, in minutes, that the Internal (S1) and External (S2) Siren outputs of the Concept 2000 will operate. The Siren outputs will only operate for this Area if a Zone included as part of this Area has alarmed that has the Zone Control "S" flag set.

If the alarmed Zone also has the Zone Control "E" flag set then the sirens will not operate until the end of the Entry Time.

Under this condition, the sirens will not operate if the Area is turned OFF during the Entry Delay period.

The Siren Time also governs the energised duration of the Siren Auxiliary for the individual Area.

Entry Time (Not applicable to Areas 0 & 9)

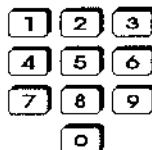
Function:

Programme the Entry Delay time for this Area that will be applied to all Zones controlled by this Area that have the Zone Control "E" flag set.

Display:
(Default Entry Time of 30 seconds)



Use the <digit> keys to select the Entry Time required from 0 to 99 seconds.



Press <OK> when done.



The Entry Delay time will only start when an alarm is generated from a Zone controlled by this Area that has been programmed to be a Primary Zone.

Generally, Primary Zones will also have the Zone Control "E" flag set as they would be part of the normal entry path.

The Entry Delay time also governs the energised duration of the Delay Auxiliary for the individual User Area.

Exit Delay (Not applicable to Areas 0 & 9)

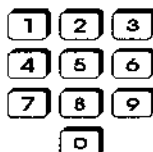
Function:

Programme the Exit Delay time for this Area that will be applied to all Zones controlled by this Area.

Display:
(Default Exit Time of 60 seconds)

Exit time for
Area 1 : 60 sec.

Use the <digit> keys to select the Exit Time required from 0 to 99 seconds.



Press <OK> when done.



The Exit Delay time will only start when the Area has been successfully armed.

All Zones controlled by the Area are included in the Exit Delay time permitting multiple egress paths.

The Exit Delay time also governs the energised duration of the Delay Auxiliary for the individual User Area.

Siren Cards

Function:

Programme the System Modules that will energise their Siren Outputs when the Area is alarmed by a Zone with the Zone Control "S" flag set.

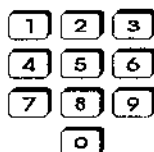
Display:

(Default S-Card is the Control Module)



Use the <digit> keys to select the Siren Cards for this Area.

The <Y> or <9> key sets the selection to YES and any other key equals NO or blank.



Press <OK> when done.



The Control Module, and every Zone Expansion module in the Concept 2000 system, has their own Siren outputs labelled Internal (S1) and External (S2).

It is recommended that the Siren outputs are selected to be in close proximity of the Area generating the alarm.

S-Card #1	Control Module	
S-Card #2	Zone Expansion Module #1	(Zones 17-32)
S-Card #3	Zone Expansion Module #2	(Zones 33-48)
S-Card #4	Zone Expansion Module #3	(Zones 49-64)
S-Card #5	Zone Expansion Module #4	(Zones 65-80)
S-Card #6	Zone Expansion Module #5	(Zones 81-96)

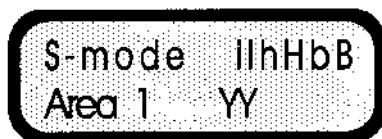
Siren Mode

Function:

Programme the mode of operation for the Siren Cards selected.

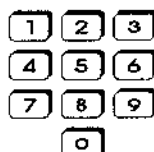
Display:

(Default S-Mode is S1-Instant, S2-Instant)



Use the <digit> keys to select the Siren Mode for this Area.

The <Y> or <9> key sets the selection to YES and any other key equals NO or blank.



Press <OK> when done.



The Siren Mode controls how the selected Siren Card outputs will perform when the Area is alarmed by a Zone with the Zone Control "S" flag set.

Each system module has two siren outputs labelled S1-Internal and S2-External.

The lower case characters represent the S1-Internal Siren output and the upper case characters represent the S2-External Siren output.

i	INSTANT	S1 operates immediately
I	INSTANT	S2 operates immediately
h	HOLDOFF	S1 operates after the Area receives a second alarm
H	HOLDOFF	S2 operates after the Area receives a second alarm
b	BACKUP	S1 operates on dialler failure
B	BACKUP	S2 operates on dialler failure

Delay Auxiliary (Not applicable to Areas 0 & 9)

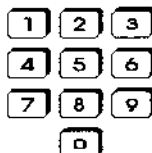
Function:

Programme an Auxiliary output that will energise during the Entry and Exit Delay periods.

Display:
(Default shows no output selected)

Delay auxiliary
for Area 1 : 00

Use the <digit> keys to select the auxiliary number required for a Delay auxiliary.



Press <OK> when done.



The Delay auxiliary will energise during the Entry and Exit Delay periods.

Auxiliary numbers between 01 and 96 are valid even though they may not appear on the system.

An Auxiliary number of 00 disables the facility.

DO NOT connect Auxiliary outputs directly to peripheral devices, always interface peripherals with relays.

Full details of Auxiliary numbers can be found in the "Auxiliary Assignment" table at the rear of this manual.

Siren Auxiliary

Function:

Programme an Auxiliary output that will energise during the Siren Time.

Display:
(Default shows no output selected)

Siren auxiliary
for Area 1 : 00

Use the <digit> keys to select the auxiliary number required for a Siren auxiliary.



Press <OK> when done.



The Siren auxiliary will energise for the duration of the Siren Time. Auxiliary numbers between 01 and 96 are valid even though they may not appear on the system.
An Auxiliary number of 00 disables the facility.
DO NOT connect Auxiliary outputs directly to peripheral devices, always interface peripherals with relays.
Refer to "Auxiliary Assignments" for details of the system modules on which the Auxiliary outputs appear.
Siren Auxiliaries are generally used to interface with 12VDC audible devices such as screamers.

Alarm Auxiliary

Function:

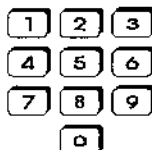
Programme an Auxiliary output that will energise when the Area is alarmed and will remain energised until the Area is turned OFF.

Display:

(Default shows no output selected)

Alarm auxiliary
for Area 1 : 00

Use the <digit> keys to select the auxiliary number required for an Alarm auxiliary.



Press <OK> when done.



The Alarm auxiliary will energise when the Area receives an alarm from a Zone with the Zone Control "X" flag set.

The Alarm auxiliary will reset when the Area is turned OFF or, if the Auxiliary is reset by another system function.

Auxiliary numbers between 01 and 96 are valid even though they may not appear on the system.

An Auxiliary number of 00 disables the facility.

DO NOT connect Auxiliary outputs directly to peripheral devices, always interface peripherals with relays.

Refer to "Auxiliary Assignments" for details of the system modules on which the Auxiliary outputs appear.

Alarm Auxiliaries are generally used to interface with Strobe lights.

Tamper Auxiliary (Applicable to Area 0 only)

Function:

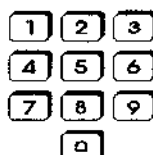
Programme an Auxiliary output that will energise when Area 0 receives a Tamper Alarm.

Display:

(Default shows no output selected)

Tamper auxiliary
for Area 1 : 00

Use the <digit> keys to select the auxiliary number required for a Tamper auxiliary.



Press <OK> when done.



The Tamper auxiliary will energise when Area 0 receives a tamper from a Zone with the Zone Control "T" flag set.

The Tamper auxiliary will reset when Area 0 is turned OFF or, if the auxiliary is reset by another system function.

Auxiliary numbers between 01 and 96 are valid even though they may not appear on the system.

An Auxiliary number of 00 disables the facility.

DO NOT connect Auxiliary outputs directly to peripheral devices, always interface peripherals with relays.

Refer to "Auxiliary Assignments" for details of the system modules on which the Auxiliary outputs appear.

Close Auxiliary

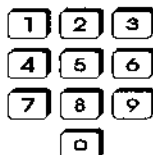
Function:

Programme an Auxiliary output that will energise when the Area is turned ON and will reset when the Area is turned OFF.

Display:
(Default shows no output selected)

Close auxiliary
for Area 1 : 00

Use the <digit> keys to select the auxiliary number required for a Close auxiliary.



Press <OK> when done.



The Close Auxiliary will energise when the Area is turned ON and the Exit Delay period has expired.

This Auxiliary will reset when the Area is turned OFF or, if the Auxiliary is reset by another system function.

Auxiliary numbers between 01 and 96 are valid even though they may not appear on the system.

An Auxiliary number of 00 disables the facility.

DO NOT connect Auxiliary outputs directly to peripheral devices, always interface peripherals with relays.

Refer to "Auxiliary Assignments" for details of the system modules on which the Auxiliary outputs appear.

Primary Zones (Not applicable to Areas 0 & 9)

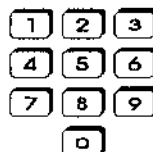
Function:

Programme the Zone(s) that will be the very first Zone(s) to alarm under the normal, authorised entry conditions for this Area.

Display:
(Default shows no Primary Zones selected)



Use the <digit> keys to select the Primary Zone number(s) required for this Area.



Press <OK> when done.



Primary Zone(s) must be programmed if the Area is required to have an Entry Delay period.

Up to five Primary Zones may be programmed for five different entry points to the Area.

A Primary Zone must be the very first Zone that is alarmed during a normal authorised entry.

Primary Zones usually have the Zone Control "E" flag set.

Sub Areas (Not applicable to Areas 0 & 9)

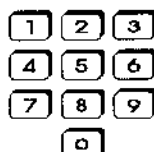
Function:

Programme the number of a User Area that will be controlled by this Area.

Display:
(Default shows no Sub Area selected)



Use the <digit> keys to select the User Area number that will be controlled by this Area.



Press <OK> when done.



Sub Areas are User Areas that are controlled by other User Areas.
A Sub Area will unconditionally turn OFF when any Area in control of the Sub Area is turned OFF.
A Sub Area will turn ON when all Areas controlling the Sub Area are turned ON.
When all Areas controlling the Sub Area are turned ON, then the Sub Area may be operated independantly of the controlling Areas.

Zone / Input Selection

Function:

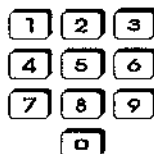
Select a specific Zone for programming within this Area.

Display:

(Default selection of Zone 01)

Zone to program
in Area 1: 01

Use the <digit> keys on the Terminal keypad to enter the number of the Zone you wish to programme.



Press <OK> when done.



INPUT CONTROL SELECTION AREA 9

Display:

(Default selection of Input 001)

Input to program
in Area 9: 001



Zone / Input Selection is useful for the programmer to jump to a specific Zone / Input for the Area.

We recommend, when programming systems for the first time, all of the available Zones are inspected for their correct Zone Control flag settings.

Familiarisation with the Area default programming is a must.

Zone / Input Control Flags

Function:

Programme the Zone Control flags to include Zone(s) in the Area and, once included, how the Area will process alarms received from the Zone(s).

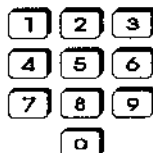
Display:

(Default settings of the Zone Control Flags)

Zone 01 ACRSXME
Area 1 Y YYY

Use the < digit > keys to select the Zone Control Flags for this Zone in this Area.

The <Y> or <9> key sets the selection to YES and any other key equals NO or blank.



Press <OK> when done.



CONTROL FLAGS FOR AREA 0 & 9

Display:

(Default Zone Control Flags for Area 0)

Zone 01 ATCRSXM
Area 0 Y YYY

Display:

(Default Input Control Flags for Area 9)

Input 001 ACRSXM
Area 9 Y YYY



The Zone Control Flags are a very important part of the Concept 2000 programming and we recommend that their purpose is fully understood.

Each Zone in the Concept 2000 system may be included in more than one User Area.

When a Zone is controlled by more than one User Area, each Area may be programmed to perform differently when alarms are received from the Zone.

Study the Zone Control Flag explanations and remember, the same Zone may be processed differently depending on which Area is armed at the time.

A

When the "A" flag is set, this Zone will be included in this Area and any alarms received will be processed.

T

When the "T" flag is set, Tamper Area only, this Zone will have all of its Tamper alarms processed by Area 0.

C

When the "C" flag is set, this Zone will have all of its alarms communicated via the on-board dialler.

R

When the "R" flag is set, this Zone will have all of its alarm restorals communicated via the on-board dialler.

S

When the "S" flag is set, any alarms received from this Zone will activate the selected Siren Card outputs.

X

When the "X" flag is set, any alarms received from this Zone will activate the Alarm auxiliary number programmed for this Area.

M

When the "M" flag is set, any alarms received from this Zone will be broadcast to the system's LAN network for the alarm to be displayed at the system Terminals.

E

When the "E" flag is set, any alarms received from this Zone will be delayed for the duration of the Entry Delay time providing that a Primary Zone was alarmed first.

Help - Zone / Input Control Flags

Function:

Provides Help information to the programmer on the Area Name, the Zone Name and the usage of the Zone Control Flags.

Press <HELP> when programming the Zone Control Flags for any Area.



Display:

(Top line - current Area Name
Bottom line - current Zone Name)



Press <HELP> again for Zone Control Flag descriptions.



Display:

(Bottom line scrolls through the flags)



Press <HELP> again to return to the programming of the Zone Control Flags for the Zone.



Attribute Map

All of the Area programming modules are arranged in a structure that is similar to the squares of a chess board.

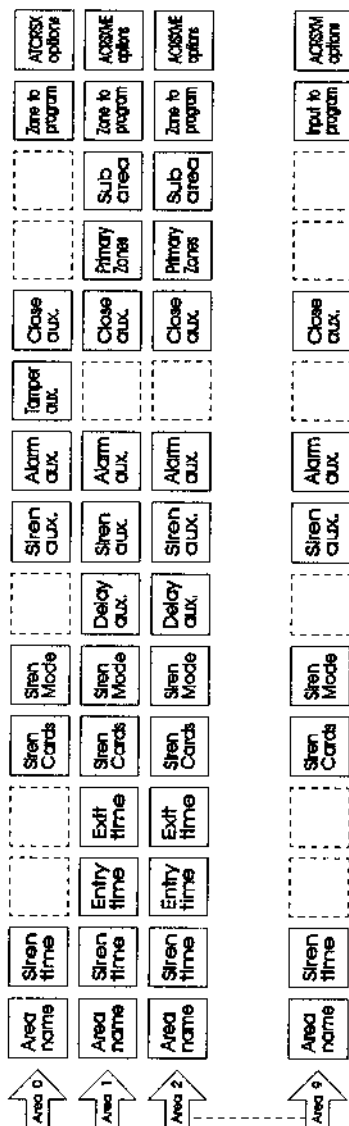
By using the <UP>, <DOWN>, <LEFT> and <RIGHT> arrow keys, access to the individual modules is easily achieved.

With practise, Area programming can become extremely fast and efficient with clever use of the available arrow keys.

Areas may also be programmed using the available factory default settings.

These defaults will programme the majority of the Area attributes to sensible settings depending on the type of operation required.

For further information refer to Area Default programming within this manual.



TERMINALS

Programming

Access:

MENU

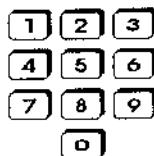
7

2

Display:
(Default is the current Terminal)

Terminal to
program : 1

Use the <digit> keys on the Terminal keypad to enter the number of the Terminal you wish to programme.



Alternatively, use the <UP> or <DOWN> arrow keys to scroll through the available Terminal numbers.



Press <OK> when done.



This facility allows the programmer to jump to the specific Terminal number required when making programme changes. The default Terminal number will be presented as the actual number of the Terminal at which you are currently programming. Caution should be exercised when using the UP or DOWN arrows to select a Terminal number as all eight locations will be displayed even if they do not exist.

Area Status Display

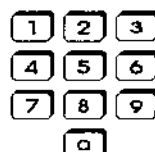
Function:

Programme the Terminal to display the status of a specified User Area.

Display:
(Default - No)

Display one Area
for Terminal 1 N

Use the <Y> or <9> key to set the selection to YES.
Use any other key to set the selection to NO or blank.



Press <OK> when done.



This selection will cause the Terminal to display, as its default message, the name of the selected Area on the top line of the LCD and the ON or OFF status of the Area on the bottom line of the LCD. This selection is not recommended for Terminals positioned in public areas where unauthorised persons can see the status of the alarm. When the Concept 2000 is used as an access control system, this selection can be very useful to the User as to whether the door may or may not be opened.

Alarm Display

Function:

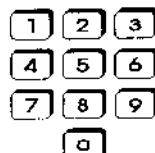
Programme the Terminal to display any Zone or Input Alarms received by Areas that have been broadcast to the system's LAN.

Display:
(Default - No)

Display Alarms
for Terminal 1 Y

Use the <Y> or <9> key to set the selection to YES.

Use any other key to set the selection to NO or blank.



Press <OK> when done.



This selection will cause the Terminal to display any Zone or Input Alarms received by an Area from a Zone or Input with the Zone Control "M" flag set.

The Terminal will "beep" the presence of an alarm and scroll the alarm information on the bottom line of the LCD.

At least one Terminal should be programmed to display the alarm information.

The alarm message has priority over the Terminal's default message. Terminals can buffer up to ten alarm messages, one message per Area of the system.

Level Display

Function:

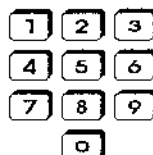
Programme the Terminal to display any system Level Alarms generated from the System Area.

Display:
(Default - Yes)

Display Levels
for Terminal 1 Y

Use the <Y> or <9> key to set the selection to YES.

Use any other key to set the selection to NO or blank.



Press <OK> when done.



This selection will cause the Terminal to display any Level Alarms generated from the System Area.

Level Alarms are extremely high priority alarms that should always be displayed by at least one Terminal on the system.

A Level Alarm has priority over all other alarm or default messages.

Some of the Level Alarms available are:-

BATTERY IS LOW
POWER HAS FAILED
WARNING LOST MODULE

Power off too long or battery is faulty
The mains input supply is still off
A system module is not communicating

Custom Message Display

Function:

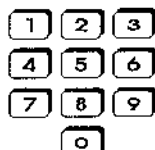
Programme the Terminal to display a Custom Message as its default display.

Display:
(Default - Yes)

Display Custom
for Terminal 1 Y

Use the <Y> or <9> key to set the selection to YES.

Use any other key to set the selection to NO or blank.



Press <OK> when done.



This selection will cause the Terminal to display, as its default message, a Custom message which may be programmed by the installer. Custom messages may only be programmed via a modem over the telephone line or when programmed on-site with a PC connected to the UART via a computer interface .

Display Custom Message should not be selected if the Terminal is to be used in conjunction with a keyswitch as the message is generally scrolling.

"Ready" Status Display

Function:

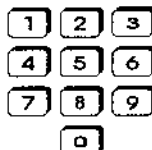
Programme the Terminal to display "System Ready" as its default display.

Display:
(Default - No)

Display 'ready'
for Terminal 1 N

Use the <Y> or <9> key to set the selection to YES.

Use any other key to set the selection to NO or blank.



Press <OK> when done.



This selection will cause the Terminal to display "System Ready" as its default message with the System Time & Date on the top line of the Terminal LCD.

This message is often used when a Terminal is installed in Public areas as no information relating to the system status is displayed.

As this message is very short and does not scroll the LCD, it is the recommended message selection for use with keyswitch operations.

"System Ready" requires both the Display Custom and the Display One Area attributes to be cleared.

Associated Area

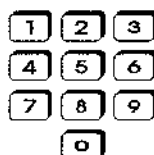
Function:

Programme the Terminal default operations to be associated with a specific User Area.

Display:
(Default - User Area #1)



Use the <digit> keys to select the Associated Area number.



Press <OK> when done.



The Associated Area number will cause the Terminal to "assume" that this Area is to be used as the default Area for this Terminal.

All other Areas may still be operated from this Terminal by Users with the necessary permissions.

The same Associated Area number may be applied to more than one Terminal.

This feature may be used to present the multiple Area User with different default Areas to operate according to the Terminal he/she logs on at.

Associated Area controls -

Display One Area

Keyswitch Zone

Assume One Area (User Codes)

Lock Auxiliary

Lock Auxiliary

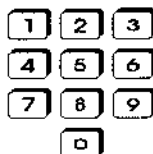
Function:

Programme an auxiliary number that will provide a timed, 6 second output for operating electronic door locks.

Display:
(Default - no selection)

Lock Auxiliary
for Term. 1 : 00

Use the <digit> keys to enter the auxiliary number required for a Lock Auxiliary.



Press <OK> when done.



This feature enables the access control facilities of the Concept 2000 by providing a timed, 6 second, Lock Auxiliary output.

Each Terminal may be programmed for a Lock Auxiliary allowing for a maximum of eight electronically controlled doors.

If Terminals are installed either side of the same door then both Terminals may be programmed to have the same Lock Auxiliary number.

Lock Auxiliaries will only operate if the Terminal's Associated Area is turned Off and the Associated Area can be operated by the User.

Full details of Auxiliary numbers can be found in the "Auxiliary Assignment" table at the rear of this manual.

Lamp Auxiliary

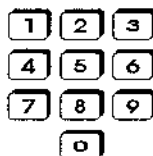
Function:

Programme an auxiliary number that will provide an output that operates in unison with the Terminal LCD backlight.

Display:
(Default - no selection)



Use the <digit> keys to enter the auxiliary number required for a Lamp Auxiliary.



Press <OK> when done.



Each Terminal may have a Lamp Auxiliary programmed that is generally used to interface with external lighting.

The Lamp Auxiliary will energise and de-energise in unison with the Terminal LCD backlight and is useful for controlling external lighting when the Terminal has been installed in a poorly lit location.

Lamp Auxiliaries are sometimes used for exit only lighting rather than using the Delay Auxiliary which will energise during both Entry and Exit Delay periods.

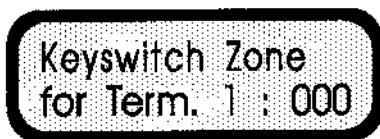
Full details of Auxiliary numbers can be found in the "Auxiliary Assignment" table at the rear of this manual.

Keyswitch Zone

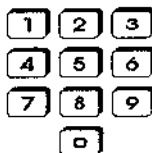
Function:

Programme a Zone number as a Keyswitch Zone that will be used to arm and dis-arm the Terminal's Associated Area.

Display:
(Default - no selection)



Use the < digit > keys to enter the Zone number required for a Keyswitch Zone.



Press <OK> when done.



Only one Keyswitch Zone may be programmed per Terminal and it is recommended that the Terminal's default display is not scrolling. Keyswitch Zones are used to arm this Terminal's Associated Area rather than entering a User Code at the Terminal keypad.

LEVEL MODE

Zone numbers 001 - 096 directly relate to the system Zone numbers.
A dual position, On/Off keyswitch is required for correct operation.
User code operation will NOT OVERRIDE the keyswitch position

EDGE MODE

Zone numbers 101 - 196 relate to the system Zone numbers + 100.
A spring return, or momentary, keyswitch is required for correct operation.
Generally used for remotely arming the Associated Area with FM buttons.
Normal User Code operation is available when using this mode.

All Area Status Display

Function:

Programme the Terminal to display the ON/OFF status of all valid User Areas as the default display.

System User Default Display:
(Not a programming display)



All Terminals may be programmed to display the On/Off status of all valid User Areas.

This Terminal default message is automatically achieved when the following Terminal attributes are set to "N".

Display One Area	=	N
Display Custom	=	N
Display "Ready"	=	N

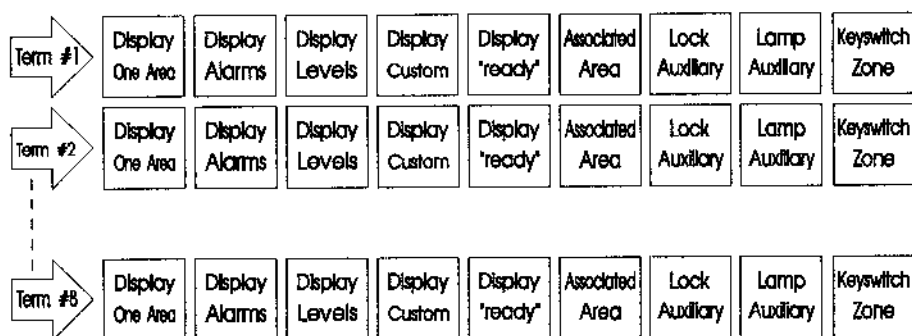
This feature provides the User with an "at a glance" view of the current status of the system.

This is also another default display recommended for use with Key-switch Zones as the display is not scrolling.

Attribute Map

All of the Terminal programming modules are arranged in a structure that is similar to the squares of a chess board.

By using the <UP>, <DOWN>, <LEFT> and <RIGHT> arrow keys, access to individual modules is easily achieved.



With practise, Terminal programming can become extremely fast and efficient with clever use of the available arrow keys.

Communications

Introduction

The communications module of the Concept 2000 utilises the system's on-board Modem and Control Board Uart.

MODEM	=	MOdulator / DEModulator
UART	=	Universal Asynchronous Receive Transmit

The on-board Modem may be programmed to communicate in a variety of formats and the UART may be programmed to operate various peripheral devices.

In some instances, the protocol selected for communications will prevent the UART from being used for other peripherals.

Sub-Sections

For ease of reference, this section of the manual has been sub-sectioned into the various protocols and formats available.

Protocols and Formats

Local Alarm	No communications
Personal	Calling private telephone numbers
IR-Fast	Generic, full duplex dialler protocol
IEI Fast	Proprietary release IEI (Aust) Pty Ltd
Ademco Ext. Fast	DTMF protocol
Ademco Contact ID	DTMF protocol
Securitel	Serial and PIN protocol
EarthNet Direct Line	Generic, full duplex, high security protocol
E6600 Direct Line	Proprietary release IEI (Aust) Pty Ltd

Modem Set-up

Fine tuning the Modem to recognise the Telephone Line tones

Peripheral Interfaces

Programming the UART for connection to various interfaces

Remote Diagnostics and Service

Dialling the system remotely for diagnostics, programming and service

Software Version

The Concept 2000 system supports a variety of protocols that are commonly used throughout the security industry.

It would be impossible to support all versions of protocols within the same software version and, as a result, there are several software versions available for the operation of the system.

To ascertain the software version currently installed in your Concept 2000 system, perform the following operation.

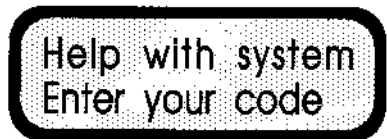
If you are already logged on to the Concept 2000 system, press <END> to log off.



Press <HELP> for the Concept 2000 system log on help message.



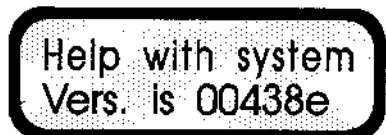
Display:



Press the <RIGHT> arrow to speed up the scrolling message until close to the end of text.



Display: The current software version number.



Formats

Alternatively, you may remove the lid from the Concept 2000 Control Module and find the software version number clearly identified on the chip installed in the PROGRAMME socket.

The software version number is followed by a letter.

This letter indicates which communications formats are available with this software version number and are detailed as follows:-

S = Standard

Local
Personal
Ademco Ext. Fast
Ademco Contact ID
IR-Fast
Securitel

I = IEI

Local
Personal
Ademco Ext. Fast
Ademco Contact ID
IR-Fast
IEI Fast (Proprietary release from I.E.I. (Aust) Pty Ltd)

E = EarthNet

Local
Personal
Ademco Ext. Fast
Ademco Contact ID
IR-Fast
EarthNet Direct Line
E6600 Direct Line (Proprietary release from IEI (Aust) Pty Ltd)

Once the correct software version number has been ascertained, proceed with the programming of the communications section.

Local Alarm

Local Alarm Operation

Concept 2000 may be programmed to operate as a Local Alarm system and have all communication features disabled.

When programming the system in this manner, a telephone line is not required.

Recommended Configuration

Even though the system is not required to report alarms via a telephone line, it is strongly recommended that a telephone line connection still be made to the system so that remote service support and system diagnostics can still be performed via a remote modem.

Control Board UART

The Control Board UART is available for peripheral devices such as printers as all communications over the telephone line are disabled.

Default Programming

Use **Area Default #1** for **Local Alarm** operation.

Alternatively, all Zone Control "C" and "R" flags may be removed manually from all Areas including Area #0 and Area #9.

The following Modem Setup options must also be programmed to prevent the modem from attempting to communicate.

Trigger Dialler On Isolates	N
Report Entry Path	N
Time Report Period	N

The following options should also be programmed accordingly

Callback Phone	optional
Client Phone	optional
Force Ringback on Answer	optional
Rings to Answer Phone	35

Programming

Access:

MENU

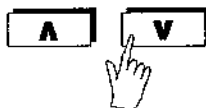
7

3

Display:
(Default - may not be Dialler)

Current type :
Dialler

Press the <UP> or <DOWN> arrow keys to scroll through the formats available and select Local Alarm.



Display:

Current type :
Local Alarm

Press <END> to set the format to Local Alarm and reset the communications buffer.



This format selection effectively disables the modem and prevents any form of communication.

It is recommended, that even though the system is to be set for Local Alarm operation, a telephone line is still connected and the format is selected as *Dialler*.

Remote Support

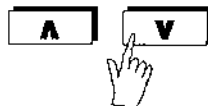
Function:

Programme the system for Local Alarm operation but enable remote service facilities.

Display:
(Default - may not be Dialler)

Current type :
Dialler

Press the <UP> or <DOWN> arrow keys to scroll through the formats available and select Dialler.



Display:

Current type :
Dialler

Press <END> to set the format to Dialler and reset the communications buffer.



This selection will enable the modem to answer the telephone line for remote service support and diagnostics.

REMEMBER:

Trigger Dialler On Isolates	N
Report Entry Path	N
Time Report Period	N

Dialler

Dialler Reporting

Concept 2000 may be programmed to report alarm conditions to telephone numbers that are either connected to sophisticated receiving equipment or private telephones.

In this mode, the modem uses its tone decoding features to ascertain whether the telephone call has been answered by "listening" for the call to be answered.

When the call is answered, Concept 2000 will transmit audible communication tones according to the communication format selected.

Control Board UART

The Control Board UART is available for peripheral devices such as printers, etc., as all communications are provided over the telephone line.

Default Programming

It is recommended that Area Default numbers be used for programming all of the dialler formats.

Alternatively, all of the required Zone Control "C" and "R" flags can be programmed manually.

Default Number	Function
Area Default #0	Clears the Area of all default settings
Area Default #1	Sets the Area for Local Alarm operation
Area Default #2	Sets the Area for IR Fast, Contact ID, IEI Fast
Area Default #3	Sets the Area for Ademco Ext. Fast

All other Modem Setup and Dialler attributes are required to be programmed according to your system requirements.

Each communication format selected may require additional programming according to the type of equipment employed by the Central Station.

Refer to the further instructions on your selected format.

Programming

Access:

MENU

7

3

Display:
(Default - may not show Dialler)

Current type :
Dialler

Press the <UP> or <DOWN> arrow keys to scroll through the communication modes available and select Dialler.

▲

▼



Display:
(Dialler selected)

Current type :
Dialler

Press <OK> when done.

OK



This attribute instructs the Concept 2000 modem to enter the Dialler mode of operation.

In this mode, the modem will attempt to transmit all alarm conditions, that have been programmed to be reported, to the Primary or Backup telephone numbers in accordance with the Modem Setup attributes and the programmed communication format.

Client Code

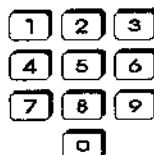
Function:

Programme the Client Code that will be transmitted as the system identification with all transmissions.

Display:
(Default - no Client Code entered)



Use the <digit> keys to enter the Client Code used for system identification.



Press <OK> when done.



This attribute sets the Client Code that will be transmitted with every communication to identify the system.

Client Codes are generally issued by the Central Station and, depending on the communication format selected, may be programmed in either decimal or hexadecimal.

Personal format does not require this attribute to be set as the system will not be communicating with a sophisticated receiver, however, it may be programmed for record keeping purposes.

Dialler formats supporting hexadecimal Client Codes will require multiple key presses to achieve digits.

Primary number

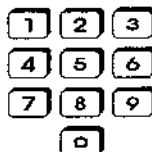
Function:

Programme the Primary telephone number the modem will call to transmit any alarm information.

Display:
(Default - no entry)



Use the <digit> keys to enter the Primary telephone number.



Press <OK> when done.



This attribute sets the Primary, or first, telephone number the modem will call to transmit any alarm information.

A blank entry, in any telephone number fields, will cause the modem to ignore the attribute.

After the fourth unsuccessful attempt, the modem will cycle automatically between the Primary and Backup telephone numbers.

Backup number

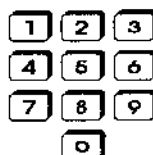
Function:

Programme the Primary telephone number the modem will call if the Primary number is unsuccessful.

Display:
(Default - no entry)



Use the <digit> keys to enter the Backup telephone number.



Press <OK> when done.



This attribute sets the Backup telephone number the modem will call to transmit any alarm information if the attempt made to the Primary number failed.

A blank entry, in any telephone number fields, will cause the modem to ignore the attribute.

After the fourth unsuccessful attempt, the modem will cycle automatically between the Primary and Backup telephone numbers.

Callback number

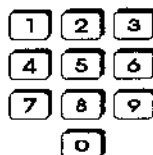
Function:

Programme the telephone number the modem will call back to if the modem answers the telephone line.

Display:
(Default - no entry)



Use the <digit> keys to enter the Callback telephone number.



Press <OK> when done.



This attribute sets the telephone number that the modem will call back to for remote service and diagnostics.

If the correct number of rings is detected, the modem will answer an incoming call and prompt the caller for a password.

If a valid password is entered, the modem will hang up the line and dial the Callback number which is generally a dedicated, service support number.

This feature is a further guard against computer "hackers" gaining access to the system.

Client number

Function:

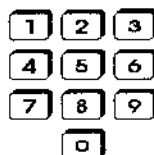
Programme the number of the telephone line that the system is actually connected to.

**** Record purposes only ****

Display:
(Default - no entry)



Use the <digit> keys to enter the Client telephone number.



Press <OK> when done.



This attribute is for record purposes only and will not be used by the modem during communications.

The Client telephone number should be the actual number of the telephone line the system is connected to.

When systems are connected to telephone lines that form part of rotary groups, unless the actual number is known, difficulty may be experienced in accessing the system remotely.

PABX Access

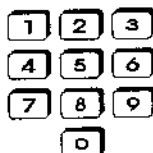
Function:

Programme the prefix number the modem must dial to gain access to an outside line when connected to an extension.

Display:
(Default - no entry)



Use the < digit > keys to enter the PABX access number.



Press <OK> when done.



This attribute sets the prefix number the modem must dial to gain access to an outside line when the system is connected to an extension of a telephone switchboard.

The modem's tone decode facilities are disabled for this attribute and the system will wait for the duration of the *PABX Dialtone Wait* time before proceeding to dial the Primary or Backup numbers.

Exercise caution when connecting systems to switchboard extensions as difficulties may be experienced during power failures and when trying to access the system remotely.

Format Selection

Function:

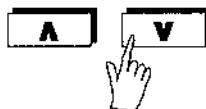
Programme the communication format the modem will use to transmit any alarm information.

Display:
(Default - may not show Contact ID)



Dialler format :
Contact ID

Press the <UP> or <DOWN> arrow keys to scroll through the Dialler formats available and make your selection.



Display:
(shows IR Fast selection)



Dialler format :
IR fast

Press <OK> when done.



This attribute instructs the modem which communication format to use for the transmission of information.

For further information on your format selection, refer to the relevant section in this manual.

Personal Dialling

Personal Reporting

Concept 2000 may be programmed to report alarm conditions to private telephone numbers that are not connected to sophisticated receiving equipment.

In this mode, the modem uses its tone decoding features to ascertain whether the telephone call has been answered within the *Ringin*g Progress Wait time.

When the call is answered, Concept 2000 will transmit audible, oscillating tones to the receiving party indicating an alarm.

Control Board UART

The Control Board UART is available for peripheral devices such as printers, etc., as all communications are provided over the telephone line.

Default Programming

It is recommended that **Area Default #1** for **Local Alarm** operation is used and then the Zone Control "C" flags are programmed manually into the specific Zones that are to be reported.

Zone Control "R" flags are generally excluded to prevent the modem from reporting restores.

The following Modem Setup attributes must also be programmed to prevent the modem from attempting to communicate.

Trigger Dialler on Isolates	N
Report Entry Path	N
Time Report Period	N

All other Modem Setup and Dialler attributes are required to be programmed according to your system requirements.

Programming

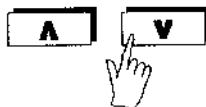
Function:

Programme the communication format the modem will use to transmit any alarm information.

Display:
(Default - may not show Contact ID)

Dialler format :
Contact ID

Press the <UP> or <DOWN> arrow keys to scroll through the formats available and select Personal.



Display:
(Selection of Personal)

Dialler format :
Personal

Press <END> to set the modem to use the Personal format and reset the communications buffer.



The modem has now been set to use the Personal communications format.

The modem will expect to be answered by a normal telephone line and will generate an oscillating, audible tone indicating an alarm condition.

IR Fast

IR Fast Format

Concept 2000 may be programmed to communicate with Central Stations employing IR Fast receivers.

IR Fast is the generic protocol of Concept 2000 and is an extremely powerful, fast, reliable communication platform using full duplex operations.

IR Fast can report every Zone status along with each and every system status available in the Concept 2000 and can receive instructions back from the Central Station like *Time & Date settings, Command Back, Uploads, etc.*, to name but a few.

Up to 512 individual User Codes may be transmitted using this format.

Contact your Central Station as to whether they operate IR Fast receivers.

Control Board UART

The Control Board UART is available for peripheral devices such as printers, etc. as all communications are provided over the telephone line.

Default Programming

It is recommended that **Area Default #2** for **IR Fast** operation is used.

This default setting will assume that all Zone and all System alarms are to be transmitted.

You may manually remove the Zone Control "C" and "R" flags for any Zones or Inputs you wish to exclude from reporting.

All other Modem Setup attributes are required to be programmed according to your system requirements.

Programming

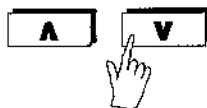
Function:

Programme the communication format the modem will use to transmit any alarm information.

Display:
(Default - may not show Contact ID)

Dialler format :
Contact ID

Press the <UP> or <DOWN> arrow keys to scroll through the formats available and select IR Fast.



Display:
(Selection of IR Fast)

Dialler format :
IR fast

Press <OK> when done.



The modem has now been set to use the IR Fast communications format.

The modem will expect to be answered by IR Fast receivers transmitting the IR Fast handshake to begin communication sessions.

Bell 103

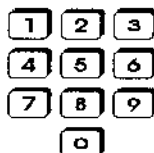
Function:

Programme the modem to accept Bell 103 or CCITT carrier frequencies from the IR Fast receiver.

Display:
(Default - CCITT selected)

Use Bell 103
format N

Use the <Y> or <9> key to set the selection to YES.
Use any other key to set the selection to NO or blank.



Press <END> to set the modem to use the IR Fast format and reset the communications buffer.



This attribute instructs the modem whether to use the Bell 103 or CCITT standard for modem carrier tones.

Contact your Central Station to enquire as to which standard they are using.

This attribute setting will also dictate the standard you will need to use for your own service support modem when remotely accessing the system.

IEI Fast

IEI Fast Format

Concept 2000 may be programmed to communicate with Central Stations employing IEI E82-RP-2 receivers supporting revision 20 software.

IEI Fast is a proprietary protocol of I.E.I. Australia Pty Ltd.

Concept Software version numbers must have the "I" suffix.

IEI Fast is a versatile, reliable communication platform using pulse width tone generation.

IEI Fast can report every Zone status along with each and every system status available in the Concept 2000.

Up to 512 individual User Codes may be transmitted using this format.

Contact your Central Station as to whether they operate IEI Fast receivers.

Control Board UART

The Control Board UART is available for peripheral devices such as printers, etc. as all communications are provided over the telephone line.

Default Programming

It is recommended that **Area Default #2** for **IR Fast** operation is used.

This default setting will assume that all Zone and all System alarms are to be transmitted.

You may manually remove the Zone Control "C" and "R" flags for any Zones or Inputs you wish to exclude from reporting.

All other Modem Setup attributes are required to be programmed according to your system requirements.

Programming

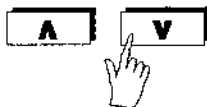
Function:

Programme the communication format the modem will use to transmit any alarm information.

Display:
(Default - may not show Contact ID)

Dialler format :
Contact ID

Press the <UP> or <DOWN> arrow keys to scroll through the formats available and select IEI Fast.



Display:
(Selection of IEI Fast)

Dialler format :
IEI fast

Press <END> to set the modem to use the IEI Fast format and reset the communications buffer.



The modem has now been set to use the IEI Fast communications format.

The modem will expect to be answered by IEI Fast receivers transmitting the IEI Fast handshake to begin communication sessions.

Ademco Ext. Fast

Ademco Ext. Fast Format

Concept 2000 may be programmed to communicate with Central Stations employing Ademco 685 receivers.

Ademco Ext Fast is a reliable communication platform using DTMF tones and permitting up to sixteen alarm points and various system messages.

Concept 2000 can report every Zone status along with each and every system status available but, due to the limitations of this format, the information has to be considerably mapped down.

Up to 16 individual User Codes may be transmitted using this format.

Contact your Central Station as to whether they operate Ademco 685 receivers.

Control Board UART

The Control Board UART is available for peripheral devices such as printers, etc. as all communications are provided over the telephone line.

Default Programming

It is recommended that **Area Default #3** for **Ademco Ext. Fast** operation is used.

This default setting will assume that all Zone and all General system alarms are to be transmitted and will "map down" the information.

You may manually remove the Zone Control "C" and "R" flags for any Zones or Inputs you wish to exclude from reporting.

All other Modem Setup attributes are required to be programmed according to your system requirements.

Programming

Function:

Programme the communication format the modem will use to transmit any alarm information.

Display:
(Default - may not show Contact ID)

Dialler format :
Contact ID

Press the <UP> or <DOWN> arrow keys to scroll through the formats available and select Ademco Ext. Fast.



Display:
(Selection of Ademco Ext. Fast)

Dialler format :
Ademco ext. fast

Press <OK> when done.



The modem has now been set to use the Ademco Ext. Fast communications format.

The modem will expect to be answered by Ademco 685 receivers transmitting the Ademco handshake to begin communication sessions.

Checksum

Function:

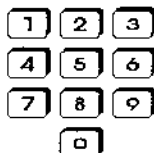
Programme the modem to transmit the information using a checksum rather than sending two identical rounds.

Display:
(Default - not selected)

Send one round
and checksum N

Use the <Y> or <9> key to set the selection to YES.

Use any other key to set the selection to NO or blank.



Press <OK> when done.



This attribute instructs the modem to transmit the information once with a checksum.

Early versions of Ademco 685 receivers required the same information to be sent twice and if the two transmissions were identical a "kissoff" or acknowledge tone would be sent.

Later revisions of the receiver allow a single transmission accompanied by a checksum for error detection.

Contact your Central Station to enquire as to which standard they are using.

Multiple Client Codes

Function:

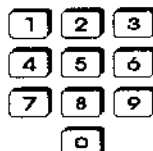
Programme the modem to transmit separate client codes for the various number of Areas used by Concept.

Display:
(Default - not selected)

Multiple client
code reporting N

Use the <Y> or <9> key to set the selection to YES.

Use any other key to set the selection to NO or blank.



Press <END> to set the modem to use the Ademco Ext. Fast format and reset the communications buffer.



This attribute instructs the modem to send a different client code for each Area of the Concept 2000 that is turned On or Off.

The Client Code will be incremented by one for each Area reporting to the Central Station.

eg:	Client Code	1230	= Area 9
		1231	= Area 0
		1232	= Area 1
		1233	= Area 2
		1234	= Area 3
		1235	= Area 4
		1236	= Area 5
		1237	= Area 6
		1238	= Area 7
		1239	= Area 8

Ademco Contact ID

Ademco Contact ID Format

Concept 2000 may be programmed to communicate with Central Stations employing Ademco 685 receivers that have been upgraded to support the Contact ID format.

Ademco Contact ID is a reliable communication platform using DTMF tones and permits the reporting of all Concept 2000 Zone and System alarms.

Up to 4096 individual User Codes may be transmitted using this format which easily caters for the Concept 2000's maximum of 512.

Contact your Central Station as to whether they operate Ademco 685 receivers employing the Contact ID upgrade.

Control Board UART

The Control Board UART is available for peripheral devices such as printers, etc. as all communications are provided over the telephone line.

Default Programming

It is recommended that **Area Default #2** for **IR Fast** operation is used.

This default setting will assume that all Zone and all System alarms are to be transmitted and will send the necessary Group and ID numbers used by this format.

You may manually remove the Zone Control "C" and "R" flags for any Zones or Inputs you wish to exclude from reporting.

All other Modem Setup attributes are required to be programmed according to your system requirements.

Programming

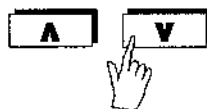
Function:

Programme the communication format the modem will use to transmit any alarm information.

Display:
(Default - may not show IR Fast)

Dialler format :
IR fast

Press the <UP> or <DOWN> arrow keys to scroll through the formats available and select Contact ID.



Display:
(Selection of Contact ID)

Dialler format :
Contact ID

Press <OK> when done.



The modem has now been set to use the Contact ID communications format.

The modem will expect to be answered by Ademco 685 receivers transmitting the Ademco handshake to begin communication sessions.

Multiple Client Codes

Function:

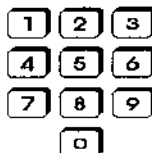
Programme the modem to transmit separate Client Codes for the various number of Areas used by Concept.

Display:
(Default - not selected)

Multiple client
code reporting N

Use the <Y> or <9> key to set the selection to YES.

Use any other key to set the selection to NO or blank.



Press <OK> when done.



This attribute instructs the modem to send a different Client Code for each Area of the Concept that is turned On or Off and is included for communication with Central Stations that do not employ the Ademco Contact ID Group Number.

The Client Code will be incremented by one for each reporting Area.

eg:	Client Code	1230	= Area 9
		1231	= Area 0
		1232	= Area 1
		1233	= Area 2
		1234	= Area 3
		1235	= Area 4
		1236	= Area 5
		1237	= Area 6
		1238	= Area 7
		1239	= Area 8

Securitel

Securitel Interface

Concept 2000 supports communications over the Telecom Securitel Network via the use of a **NESS Serial SIU**, model number **MON-5200**.

The NESS MON-5200 must be purchased with **SIU LINK SOFTWARE** and addressed to disregard NESS 5000 control panels. This is achieved by *Ness Security Products* pre-programming the MON-5200 address of **P200 to 3**.

The NESS MON-5200 is then fully programmable from any of the Concept 2000 Terminals.

NESS SIU's without SIU LINK SOFTWARE will not work.
Concept Software version numbers must have the "s" suffix.

Control Board UART

The communications module uses the Control Board UART to interface with the SIU via a Securitel Interface Cable, model number **IRF-2000**.

As the Control Board UART is being employed for Securitel communications, it is not possible to connect any other peripheral devices such as printers.

For full details on installing and connecting the NESS SIU, refer to the Concept 2000 installation manual.

Default Programming

Use **Area Default #2** for Securitel **Serial Data** Communications.

Use **Area Default #3** for Securitel **PIN Data** Communications.

If Area Default #3 has been used for PIN Data then the following Area #9 Inputs must have the Zone Control "C" and "R" flags removed.

Input #142	General Comms Backup
Input #143	General UART Problems
Input #144	General Zone Self-Test
Input #145	General Report Timer
Input #146	General Manual Comms Test

Programming

Access:

MENU

7

3

Display:
(Default - may not be Dialler)

Current type :
Dialler

Press the <UP> or <DOWN> arrow keys to scroll through the formats available and select Direct Line.

▲

▼



Display:
(Direct Line selected)

Current type :
Direct Line

Press <OK> when done.

OK



This selection instructs the Concept 2000 communications module to enter the Direct Line mode of operation.

In this mode, the communications module is constantly "listening" for interrogation tones and will respond accordingly.

This is very different to the Dialler operation when the communications module will only activate when there is an event to report.

Hard ID

Function:

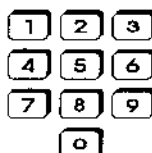
Programme the Securitel Hard ID in hexadecimal from 0001 to FEFF.

Display:
(Default - no Client Code entered)



Use the <digit> keys to enter the Hard ID required for the SIU.

Valid ID = 0001 to FEFF only



Press <OK> when done.



This attribute sets the HARD ID that will be transmitted to the Central Station as system identification.

The Securitel HARD ID may be programmed, in hexadecimal, between **0001** and **FEFF**.

HARD ID codes are normally issued by the Central Station or the Securitel Agencies.

If Securitel Agencies are receiving communications but the system's HARD ID is being received as 0000, then the problem is that the MON-5200 address P200 has not been correctly set to 3 and the Concept 2000 is unable to update the HARD ID.

As the Client Code is a hexadecimal number, multiple presses of the keys will be required to achieve digits.

NESS MON-5200 SIU is available directly from *Ness Security Products, Inner Range Pty Ltd* or any accredited *Inner Range* agents.

Format selection

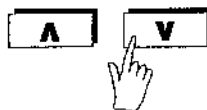
Function:

Programme the communications module to accept the Securitel format.

Display:
(Default - factory selection)

Direct format :
Debug terminal

Press the <UP> or <DOWN> arrow keys to scroll through the formats available and select Securitel.



Display:
(Securitel selected)

Direct format :
Securitel

Press <OK> when done.



The communication module has now been instructed to process data in the Securitel format using the Control Board UART.

The UART cannot be used for any other peripheral devices.

Open/Close Reporting

Function:

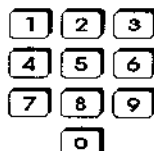
Programme the SIU to transmit Open/Close reports using the Serial Data channel.

Display:
(Default - factory selection)

Use serial data
for open/close N

Use the <Y> or <9> key to set the selection to YES.

Use any other key to set the selection to NO or blank.



Press <OK> when done.



This attribute sets the use of the Serial Channel for all Open/Close Inputs in Area #9.

These Area #9 Inputs are numbered from #150 to #160 inclusive. Up to 253 User Codes may also be reported via the Serial Data channel.

If this attribute is set to "N", then all Open/Close reports will be sent using PIN #9 and no User Code identification is possible.

Alarm Reporting

Function:

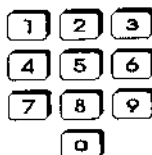
Programme the SIU to transmit Alarm reports using the Serial Data channel.

Display:
(Default - factory selection)

Use serial data
for zones N

Use the <Y> or <9> key to set the selection to YES.

Use any other key to set the selection to NO or blank.



Press <OK> when done.



This attribute sets the use of the Serial Channel for all Zone alarms, restores, isolates and tampers.

If this attribute is set to "N" then all Zone alarms and restores will be sent using PINS #1 thru #8 and all Zone tampers will be sent using PIN #12.

Zone isolations can only be sent using the Serial Data channel and will depend on the selection of the attribute "*Trigger Dialler on Isolates*" found in the chapter - *Modem Setup*.

Central Stations that cannot accept Serial Data will not be able to receive Zone isolations.

Long Reports

Function:

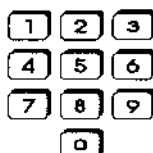
**Programme the SIU to transmit
Long reports only when using
PIN Data communications.**

Display:
(Default - factory selection)



Use the <Y> or <9> key to set the selection to YES.

Use any other key to set the selection to NO or blank.



Press <OK> when done.



This attribute instructs the communications module to force the SIU to only send Long Reports.

Long Reports will always include the status of all fifteen PINS and is only applicable when sending PIN Data.

If this attribute is set to "N", the SIU will decide whether Long Reports or Short Reports should be sent.

Pins #8 and #9

Function:

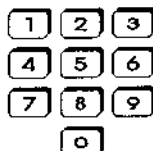
**Programme the SIU to transmit
Open/Close reports using PIN
#8 or PIN #9.**

Display:
(Default - factory selection)



Use the <Y> or <9> key to set the selection
to YES.

Use any other key to set the selection to NO or
blank.



Press <END> to reset the communications
module and enable the SIU.



This attribute sets whether PIN #8 or PIN #9 will be used for the
transmission of the Open/Close reports.

The default setting of "N" will transmit the Open/Close reports using
PIN #9.

Changing the attribute to "Y" will transmit the Open/Close reports
using PIN #8.

Modem Setup adjustments

For correct operation of the Securitel interface, some of the Modem Setup attributes may need to be adjusted to suit your installation requirements.

Please refer to the chapter - *Modem Setup* and check the following attributes:-

Zone Retriggers
Trigger Dialler on Isolates
Report Entry Path
Time Report Period (hr)

IMPORTANT

When Concept 2000 systems, using the Securitel format, are accessed remotely via a modem, the Control Board UART is required for communications with the calling Technician.

This will cause the Central Station to receive a PIN #15 alarm - Control Panel Failure.

It is strongly recommended that the Central Station is advised of your intended action prior to remotely accessing the system.

PIN #15 will reset when the remote service support session has ended.

EarthNet Direct Line

EarthNet Requirements

Concept 2000 supports communications over the Telecom Private Line network to Central Stations employing the **EarthNet Direct Line** system.

No additional hardware or interfaces are required for EarthNet Direct Line communications.

The Concept 2000 system may still be accessed for remote service support and diagnostics. Consult your Central Station for further details.

Software version numbers must have the "e" suffix.
Direct Line termination must be on pins 2 & 6 of the 611 Mode Socket

Control Board UART

The Control Board UART is available for peripheral devices such as printers as all communications are provided over the Telecom line connection.

Default Programming

Use **Area Default #2** for **EarthNet Direct Line** communications.

EarthNet Direct Line and **IR Fast** formats are generic protocols of the Concept 2000 system. As a result, very little programming is required as these formats will report each and every status generated by the operating system along with 512 User Code identifications.

Encryption Keys

If the Concept 2000 system has already communicated with a Central Station using the **IR Fast** format, then the encryption keys must be reset before the system is transferred to EarthNet Direct Line.

Contact your Central Station for the appropriate procedures.

Programming

Access:

MENU

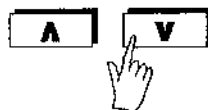
7

3

Display:
(Default - may not be Dialler)

Current type :
Dialler

Press the <UP> or <DOWN> arrow keys to scroll through the formats available and select Direct Line.



Display:
(Direct Line selected)

Current type :
Direct Line

Press <OK> when done.



This selection instructs the Concept 2000 modem to enter the Direct Line mode of operation.

In this mode, the modem is constantly "listening" for interrogation tones and will respond accordingly.

This is very different to the Dialler operation when the modem will only activate when there is an event to report.

Client Code

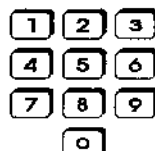
Function:

Programme the system client code in hexadecimal from 0001 to FFFF.

Display:
(Default - no entry)



Use the < digit > keys to enter the Client Code required for the system.



Press < OK > when done.



This attribute sets the Client Code to be stored for the system and may be programmed from 0000 to FFFF.

The Client Code entered here is not transmitted to the Central Station and is for reference purposes only.

Client Codes must be issued by the Central Station and are programmed into the EarthNet Network and are not required to be programmed into the local systems.

As the Client Code may be entered in hexadecimal, multiple key presses are required to achieve digits.

Format selection

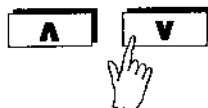
Function:

Programme the communications module to accept the EarthNet format.

Display:
(Default factory selection)

Direct format :
Debug terminal

Press the <UP> or <DOWN> arrow keys to scroll through the formats available and select EarthNet.



Display:
(EarthNet selected)

Direct format :
EarthNet

Press <OK> when done.



This attribute instructs the modem to process data in the EarthNet format and to permanently output modem carrier to the Private Line connection.

The UART is available for other peripheral devices.

Modem Setup adjustments

For correct operation of the EarthNet reporting protocol, some of the Modem Setup attributes may have to be adjusted to suit your installation requirements.

Please refer to the chapter - *Modem Setup* and check the following attributes:-

Zone Retriggers
Trigger Dialler on Isolates
Report Entry Path
Time Report Period

Central Station Procedures

EarthNet is a generic protocol of the Concept 2000 system and requires very little programming if Area Defaults are employed.

When EarthNet has been programmed as described and the system has been connected to the Private Line, the remainder of the initialisation must be performed by the Central Station.

The Central Station will enable the associated EarthNet Scanner with the Client Code and then "initialise" the system by downloading the Central Station encryption key.

The Concept 2000 will automatically upload the network time and date and will transmit any information that may exist in the communication buffer.

Once EarthNet communications are established, the Central Station may remotely perform all system operations.

Any functions performed by Central Station personnel will be logged in the Concept 2000 Review Memory as User ID #99.

Test the system by asking the Central Station staff to turn On and Off various Areas, Auxiliaries, Sirens, etc.,

Modem Setup

The Modem Setup attributes are used to "fine tune" or customise the performance of the modem's ability to decode the tones available on the connected telephone line.

The majority of Australian telephone exchanges have been upgraded and now support DTMF dialling tones, however, some older exchange districts, private networks and overseas exchanges do not.

The Modem Setup attributes allow the programmer to cater for these various circumstances.

Tone Decoding

Concept 2000 incorporates tone decode features that are capable of detecting modern dial tone, busy tone, ring tone, etc.

Concept 2000 will not detect the old decadic dial tone still used in some of the older exchange districts.

Concept 2000 can be programmed to dial telephone numbers using either DTMF tones or decadic pulse dialling sequences.

The type of telephone line connected and whether Concept 2000 can recognise the tones may be tested from any one of the system's Terminals and is explained in full detail in the *Concept 2000 Installation Manual*.

Programming

Access:

MENU

7

3

Display:

Current type :
Dialler

Press <LEFT> arrow to enter the Modem Setup attributes sub-menu.



If you have entered Communication Programming by pressing <MENU>, <7>, <3> and the default display does not show the "Current Type:" as "Dialler", use the <UP> or <DOWN> arrow keys to show "Dialler" as the selection before pressing the <LEFT> arrow.

"Current Type:" selections other than "Dialler" will place you in the attribute settings for UART communications which are covered in detail further in this manual.

If the <LEFT> arrow has already been pressed, simply press <MENU>, <7>, <3> again rather than logging off the system.

PABX Access Mode

Function:

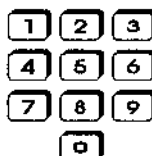
Programme the dialler to dial the PABX Access number using DTMF tones or decadic pulses.

Display:
(Default - decadic pulses)

Tone dial for
PABX access N

Use the <Y> or <9> key to set the selection to YES.

Use any other key to set the selection to NO or blank.



Press <OK> when done.



This attribute instructs the modem to use DTMF tones or decadic pulses when dialling the PABX Access number.

Some PABX systems will accept a DTMF tone for external line access and then, when connected to the outside line, decadic pulses are required to dial the telephone number.

This procedure may also occur in reverse.

Exchange Line Dialling

Function:

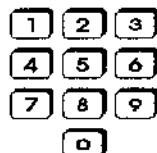
Programme the dialler to dial the reporting telephone numbers using DTMF tones or decadic pulses.

Display:
(Default - decadic pulses)



Use the <Y> or <9> key to set the selection to YES.

Use any other key to set the selection to NO or blank.



Press <OK> when done.



This attribute instructs the modem to use DTMF tones or decadic pulses when dialling the telephone numbers programmed as the reporting numbers.

The reporting numbers are all other programmed telephone numbers except the PABX Access number.

The Concept 2000 system should have already been tested to ascertain whether the modem can reliably decode the dial tone available.

Selecting DTMF for an exchange line that cannot accept DTMF will cause communications failures.

Isolate Reporting

Function:

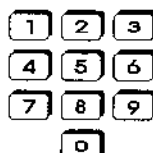
Programme the dialler to report the Isolation of any system Zones or Inputs.

Display:
(Default - non reporting of Isolate)

Trigger dialler
on Isolates N

Use the <Y> or <9> key to set the selection to YES.

Use any other key to set the selection to NO or blank.



Press <OK> when done.



This attribute determines whether the modem will report the isolated status of any Zone or Input to the programmed numbers.

Some Central Stations do not want to receive isolation reports whereas others do require the absolute status of the system.

Securitel PIN Data requires this attribute to be set to "N".

Local Alarm and **Personal** format programming that has been configured to support remote service and diagnostics requires this attribute to be set to "N".

Entry Path Reporting

Function:

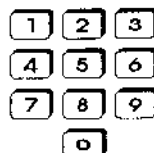
Programme the dialler to report the alarms generated by Zones programmed to be on the Entry Path.

Display:
(Default - non reporting of Entry Zones)



Use the <Y> or <9> key to set the selection to YES.

Use any other key to set the selection to NO or blank.



Press <OK> when done.



This attribute determines whether the modem will report the alarms generated by Zones that are programmed as Entry Delay Zones.

Some Central Stations do not want to receive any alarms generated during a normal entry procedure whereas others require all alarms to be reported.

Local Alarm and **Personal** format programming that has been configured to support remote service and diagnostics requires this attribute to be set to "N".

Multiple Alarm Reports

Function:

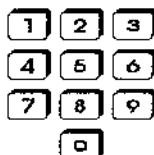
Programme the dialler to report multiple alarms received from the same Zone or to report only a single Zone alarm.

Display:
(Default - single alarm report)

Zone re-triggers
for dialler N

Use the <Y> or <9> key to set the selection to YES.

Use any other key to set the selection to NO or blank.



Press <OK> when done.



This attribute instructs the modem whether to report all Zone alarms/restores as they are received, or, only send a single alarm for each Zone irrespective of the amount of times the Zone actually goes into alarm.

Some Central Stations will only accept a single alarm from any Zone connected to the system whereas other Central Stations will accept systems that provide multiple alarm information.

When this attribute is set to "Y", the Concept 2000 will store all alarms in sequence in the communications buffer and will report these alarms in the same order they were received.

Normal Tone Dialling

Function:

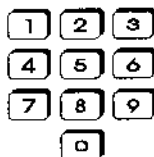
Programme the dialler to a special character to signify the start of transmission after DTMF tone dialling.

Display:
(Default - generate the # character)



Use the <Y> or <9> key to set the selection to YES.

Use any other key to set the selection to NO or blank.



Press <OK> when done.



This attribute was primarily included for the older style of telephone exchanges that exist in New Zealand.

Certain equipment will perform DTMF to decadic conversions and, as a result, require a special character to be generated that signifies the end of DTMF dialling and the beginning of DTMF transmission.

This attribute uses the DTMF "#" tone as the delimiter and is generally not required with modern telephone equipment.

Force Ring-Back

Function:

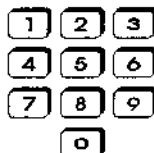
Programme the dialler to call the **Ring-Back** number when the system is remotely accessed over the telephone line.

Display:
(Default - disable ring-back)

Force ring-back
on answer N

Use the <Y> or <9> key to set the selection to YES.

Use any other key to set the selection to NO or blank.



Press <OK> when done.



This attribute sets one of the security levels available for remote service access to the system.

By programming this attribute to "Y", the modem will hang up and dial the programmed Call-Back number after the telephone line has been answered and the correct password has been entered.

The Call-Back number is normally a telephone number dedicated to the service company's remote support modem.

This feature prevents computer hackers from gaining remote access to the system and trying to decipher passwords.

Review Printer

Function:

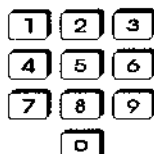
Programme the communication module to enable the control board UART for output to a peripheral printer.

Display:
(Default - UART disabled)



Use the <Y> or <9> key to set the selection to YES.

Use any other key to set the selection to NO or blank.



Press <OK> when done.



This attribute instructs the system to enable the control board UART for output to a peripheral device, normally a serial printer.

The UART is a single, asynchronous output that may be connected to a single peripheral device and, as a result, when a Securitel interface is connected there is no connection available for any other serial device.

In other Dialler and Direct Line formats, where the UART is not used for a specific communication interface, the system will multi-task between the UART and the modem and attached printers will appear to "wait" in a dormant state and then catch up.

Printer Alarms

Function:

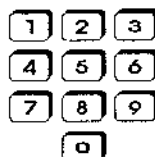
Programme the communication module to send <BELL> codes to the UART and sound the attached printer's beeper.

Display:
(Default - disable beep)

Beep for Review
printer N

Use the <Y> or <9> key to set the selection to YES.

Use any other key to set the selection to NO or blank.



Press <OK> when done.



This attribute instructs the modem to output BELL codes to the UART with all ALARM/RESTORE and OPEN/CLOSE events.

This attribute is only effective if the previous Review Printer attribute has been set to "Y".

The BELL code is the standard ASCII code \$07h and is accepted by the majority of printers.

Time Report Period

Function:

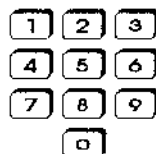
Programme the communication module to send a Test Report according to the duration, in hours, selected.

Display:
(Default - disable Test Report)



Use the <digit> keys to set the duration, in hours, between the transmission of Test Reports.

A setting of 000 disables this feature.



Press <OK> when done.



This attribute instructs the modem to generate a Test Report every time the programmed Time Report Period expires and then only when the Time Report Area is On.

Time Report Periods between 001 and 255 hours are valid.

The Time Report Period is reset with any successful communication.

Test Reports are generally used to prove the integrity of the telephone line connection when dialler formats are employed for alarm communication.

Time Report Area

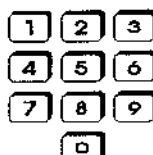
Function:

Programme the Area number for the Area that must be turned On for the Time Report Period to operate.

Display:
(Default - Area 9)

Area On for time
report : 9

Use the < digit > keys to set the Area number of the Area required to be On for the transmission of Test Reports.



Press <OK> when done.



This attribute sets the number of the Area that must be turned on for the Time Report Period to commence.

The default number of Area #9 suggests that the Time Report Period is always enabled as this Area should always remain on.

By selecting a valid User Area #1 to #8, the Time Report Period would be disabled during the time the client is on the premises and will prevent the system from taking the telephone line.

When the client turns On the programmed User Area, the Time Report Period will commence.

Maximum Dial Attempts

Function:

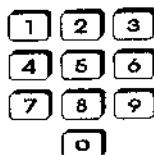
Programme the maximum number of attempts the system will make to communicate a reportable event.

Display:
(Default - 6 attempts)



Maximum dial
attempts : 006

Use the < digit > keys to set the maximum number of attempts the system will make to communicate.



Press <OK> when done.



This attribute sets the maximum number of times the modem will pick up the telephone line and dial the Primary and Backup telephone numbers.

The maximum number of dial attempts is a legal requirement of Telephone companies throughout the world.

Telecom Australia permits a maximum of 10 attempts.

Backup Attempts

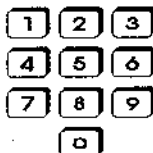
Function:

Programme the number of attempts the system will make to communicate before instigating backup procedures.

Display:
(Default - 4 attempts)

Attempts before
backup : 004

Use the <digit> keys to set the number of attempts the system will make to communicate before backup.



Press <OK> when done.



This attribute sets the number of times the modem will attempt to communicate any messages before Input #142 in Area #9 is alarmed.

The Comms Backup Auxiliary will also activate, if a valid auxiliary number has been programmed, along with any siren outputs that have been programmed with the S-Mode "Bb" flags set.

Input #142 will restore and the Comms Backup Auxiliary will be deactivated on the next successful communication.

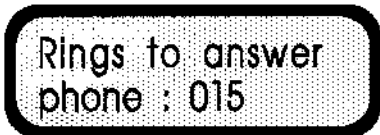
This feature will only operate if the number of attempts is set equal to or less than the Maximum Dial Attempts.

Rings To Answer

Function:

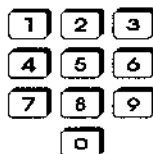
Programme the number of times the telephone line will ring before the system will answer the call.

Display:
(Default - 15 rings)



Rings to answer
phone : 015

Use the < digit > keys to set the number of times the telephone line will ring before being answered by the system.



0 disables the answering feature.

Press <OK> when done.



This attribute sets the number of times the telephone must ring before the modem will pick up the line and answer the call.

The number of rings will be counted for values programmed between 1 and 20 and when the number is reached the call will be answered.

Programming a value of 35 initiates the Fax Bypass mode of operation where the modem "listens" to the line for 1-2 rings and then expects silence for a minimum period of 45 seconds. The next ring detected, between 45 and 90 seconds, will force the modem to answer the call immediately.

No ring detected between 45 and 90 seconds will reset the feature.

Handshake Wait Time

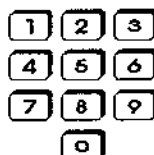
Function:

Programme the number of seconds the system will wait to receive a Handshake tone after dialling the number.

Display:
(Default - 30 seconds)

Handshake wait
time : 030 sec

Use the <digit> keys to set the Handshake Wait Time in seconds.



Press <OK> when done.



This attribute sets the number of seconds the modem will wait for a Handshake tone from the Central Station receiver.

The wait time will start after the dialling of the telephone number has been completed or, alternatively, the time will start when the call has been answered and the ring tone has stopped as programmed in the *Reset H/S Wait whilst Ringing* attribute.

Telecom Australia require this attribute not to exceed 30 seconds.

Primary Dialtone Wait

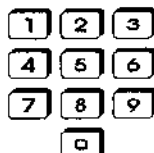
Function:

Programme the number of seconds the system will wait to decode a valid exchange line dial tone before dialling.

Display:
(Default - 3.5 seconds)

Primary dialtone
wait : 03.5 sec

Use the <digit> keys to set the Primary Dial Tone Wait time in seconds.



Press <OK> when done.



This attribute sets the number of seconds the modem will wait for dial tone before commencing to dial the Primary and Backup telephone numbers.

In some older telephone districts there could possibly be quite a delay before dial tone is presented to the telephone line.

This attribute may be overridden by the *Dial Early If Get Dial Tone* attribute if the decoding of dial tone is successful.

PABX Dialtone Wait

Function:

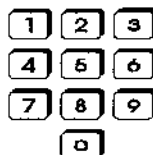
Programme the number of seconds the system will wait to for a valid PABX tone before dialling the access number.

Display:
(Default - 3.5 seconds)



PABX dialtone
wait : 03.5 sec

Use the <digit> keys to set the PABX Dial
Tone Wait time in seconds.



Press <OK> when done.



This attribute sets the number of seconds the modem will wait for dial tone before commencing to dial the PABX Access number.

In some of the older style of PABX systems there could possibly be quite a delay before dial tone is presented to the extension.

This attribute fixes a PABX wait period and will not be overridden by any of the tone decode facilities of the Concept 2000.

Ringing Progress Wait

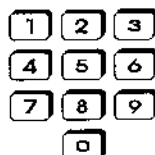
Function:

Programme the number of seconds the system will wait to detect ring tone after dialling the Primary number.

Display:
(Default - 15 seconds)

Ringing progress
wait : 15.0 sec

Use the <digit> keys to set the Ringing Progress Wait time in seconds.



Press <OK> when done.



This attribute sets the number of seconds the modem will wait, after completing the dialling sequence, to detect the presence of ring tone.

If ring tone is not detected within this period the modem will hang up the telephone line and try dialling the number again.

Comms Backup Auxiliary

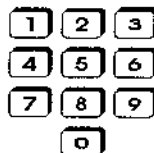
Function:

Programme an auxiliary number for an output to energise if the dial attempts reaches the attempts before backup.

Display:
(Default - 00 disabled)

Comms backup
auxiliary : 00

Use the <digit> keys to enter the auxiliary number required to operate as a Communications Backup Auxiliary.



Press <OK> when done.



This attribute allows the programmer to select an auxiliary number that will energise if the *Attempts Before Backup* is reached.

The Comms Backup Auxiliary will reset, de-energise, on the next successful communication.

The setting of 00 disables this feature.

Full details of Auxiliaries numbers can be found in the "Auxiliary Assignments" table at the rear of this manual.

Early Dialling

Function:

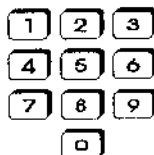
Programme the communications module to proceed early with dialling if dial tone is decoded successfully.

Display:
(Default - No disabled)

Dial early if
get dial tone N

Use the <Y> or <9> key to set the selection to YES.

Use any other key to set the selection to NO or blank.



Press <OK> when done.



This attribute instructs the modem to implement its tone decode facilities and try to decode dial tone.

If dial tone is successfully decoded, the modem will proceed to call the Primary or Backup telephone numbers without waiting for the *Primary Dial Tone Wait* period to expire.

Setting this attribute to "N" forces the modem to wait for the full period programmed by the *Primary Dial Tone Wait*.

Decoding dial tone takes approximately 600 milliseconds which represents substantial savings in "wait time" durations.

No Dialtone Abort

Function:

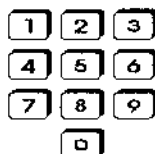
Programme the communications module to hang up and try again if dial tone is not decoded successfully.

Display:
(Default - No disabled)



Use the <Y> or <9> key to set the selection to YES.

Use any other key to set the selection to NO or blank.



Press <OK> when done.



This attribute instructs the modem to implement its tone decode facilities and hang up the line if dial tone has not been decoded successfully by the end of the *Primary Dial Tone Wait* period.

Setting this attribute to "N" will force the modem to "blind dial", irrespective of dial tone, at the end of the *Primary Dial Tone Wait* period.

Setting this attribute to "N" is a common setting for exchanges lines with decadic pulse dialling.

Wrong Tone Abort

Function:

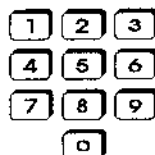
Programme the communications module to hang up and try again if a tone other than dial tone is decoded.

Display:
(Default - No disabled)



Use the <Y> or <9> key to set the selection to YES.

Use any other key to set the selection to NO or blank.



Press <OK> when done.



This attribute instructs the modem to implement its tone decode facilities and hang up the line if any other tone, other than dial tone, has been decoded successfully.

Setting this attribute to "N" will force the modem to ignore any other tones other than dial tone.

Setting this attribute to "N" is a common setting for exchanges lines with decadic pulse dialling.

Hang Up on Busy

Function:

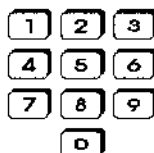
Programme the communications module to hang up and try again if busy tone is decoded after dialling.

Display:
(Default - No disabled)



Use the <Y> or <9> key to set the selection to YES.

Use any other key to set the selection to NO or blank.



Press <OK> when done.



This attribute instructs the modem to implement its tone decode facilities, after dialling the Primary or Backup numbers, and hang up the line if busy, or engaged tone has been decoded successfully.

Setting this attribute to "N" will disable the early hang up process and force the modem to wait the duration of the *Handshake Wait Time*.

Setting this attribute to "N" is a common setting for exchange lines with decadic pulse dialling as the call progress noise can sometimes be interpreted as a busy tone.

Hang Up on No Ring

Function:

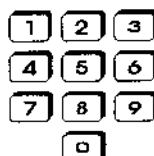
Programme the communications module to hang up and try again if ring tone is not decoded after dialling.

Display:
(Default - Ycs enabled)



Use the <Y> or <9> key to set the selection to YES.

Use any other key to set the selection to NO or blank.



Press <OK> when done.



This attribute instructs the modem to implement its tone decode facilities, after dialling the Primary or Backup numbers, and hang up the line if ring tone has not been decoded successfully within the *Ringling Progress Wait* period.

Setting this attribute to "N" will disable the early hang up process and force the modem to wait the duration of the *Ringling Progress Wait* time.

Some receivers will answer the phone immediately and before the modem has had a chance to decode ring tone. If a handshake signal is not received within the *Ringling Progress Wait* time, the modem will hang up the line and try again.

Reset Handshake Wait

Function:

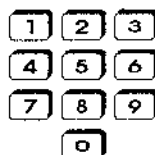
Programme the communications module to reset the Handshake wait time whilst ring tone is being decoded.

Display:
(Default - Yes enabled)

Reset H/S wait
whilst ringing Y

Use the <Y> or <9> key to set the selection to YES.

Use any other key to set the selection to NO or blank.



Press <OK> when done.



This attribute instructs the modem to reset the *Handshake Wait* time whilst ring tone is detected.

Setting this attribute to "N" will force the *Handshake Wait* time to commence after the dialling of the Primary or Backup numbers.

If a handshake signal is not received during the *Handshake Wait Time* the modem will force a hang up and try again.

Caution: If this attribute is set to "Y" and, for any reason a wrong number is reached that does not time out and stop the ring tone after the standard 90 seconds, the Concept 2000 will not hang up the line and may be "locked up" for extended periods.

Peripheral Connections

Concept 2000 supports communications with serial peripheral devices that may be connected to the Control Board UART via the associated interface cables.

As with any serial communication devices, there are certain parameters that need to be programmed to enable the devices to talk to each other.

Serial communications performed via the Concept 2000's Control Board UART may be selected to support the following speeds:-

01 =	300	baud	
02 =	600	baud	
03 =	1200	baud	
04 =	2400	baud	
05 =	4800	baud	
06 =	9600	baud	(default setting)

The parity settings are fixed at **8** bits, **N**o parity, **1** stop bit

The communication speed can be programmed from the "Direct Line" sub-menu explained in the following pages. The Concept 2000 provides other selections available under the "Current Type:" attribute as follows:-

EarthNet

Direct Line communications system explained in this manual.

Alarms Printer

This selection causes all alarms programmed for communications to print an English language message on a serial printer connected to the UART via a printer interface cable.

Wait Printer

This setting is used for testing purposes only and should not be programmed.

Securitel

Medium security communications path explained in this manual.

E68000

Proprietary release Direct Line format available from I.E.I. (Aust) Pty Ltd

Debug Terminal

Laboratory testing only and should not be programmed

Interfaces

All peripherals connected to the Control Board UART must be attached using the correct interface. Damage resulting from the use of incorrect interfaces will void your warranty. A full range of interfaces are available from Inner Range or any of its accredited agents.

Printer Interface - IRP2000

The Printer Interface, IRP-2000, attaches to the UART and provides RS-232 serial communications. The default communication settings are 9600,8,N,1 and is presented to the printer as a "male" DB25 connector. Control leads supported are TX, GRND and DTR with DTR used as a flow control input from the printer to detect "paper out", "offline" or other printer problems.

Computer Interface - IRU2000

The Computer Interface, IRU-2000, attaches to the UART and provides RS-232 serial communications. The default communication settings are 9600,8,N,1 and is presented to the computer as a "female" DB25 connector. Control leads supported are TX, RX and GRND using XON/XOFF flow control.

Securitel Interface - IRF2000

The Securitel Interface, IRF-2000, attaches to the UART and provides RS-232 serial communications to a NESS Serial SIU MON-5200. The default communication settings do not need to be changed and the connection is presented on a compatible header.

The only other peripheral setting that may be mentioned is the "Edit Character" that is required for non-destructive forward spaces when the Concept 2000 is accessed via the telephone line using a remote modem.

This Edit Character has been defaulted to "06" which is the character most commonly used by the majority of PC's, modems and terminals.

If you experience difficulty with displaying text on your remote terminal screen, check that your emulation is set to ADDS or similar.

If the problem still arises, consult your technical reference guide on the terminal you are using and make the necessary programme changes to the Concept 2000 system.

Programming

Access:

MENU

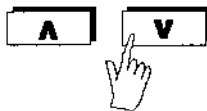
7

3

Display:
(Default - may not be Dialler)

Current type :
Dialler

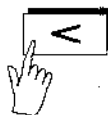
Press the <UP> or <DOWN> arrow keys to scroll through the formats available and select Direct Line.



Display:
(Direct Line selected)

Current type :
Direct Line

Press <LEFT> arrow to enter the Direct Line sub-menu controlling the UART communication speeds.



This selection instructs the Concept 2000 modem to enter the Direct Line mode of operation and then, by pressing the <LEFT> arrow, enters the sub-menu that allows the programming of the UART interface communication speeds.

REMEMBER to reset the communication "Current Type:" to its original setting after you exit this attribute module.

UART Baud Rate

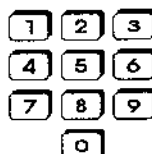
Function:

Programme the UART interface speed to match the interface speed of the peripheral device.

Display:
(Default - 9600 baud)



Use the <digit> keys to enter the number representing the baud rate required for the UART.



Press <OK> when done.



This attribute sets the communication speed that will be used by the Control Board UART.

The parity settings are fixed at **8** bits, **No** parity, **1** stop bit

Valid selections are:-

01 =	300	baud	
02 =	600	baud	
03 =	1200	baud	
04 =	2400	baud	
05 =	4800	baud	
06 =	9600	baud	(default setting)

Remote Edit Character

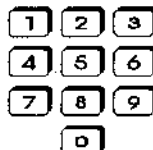
Function:

Programme the system client code in hexadecimal from 0001 to FFFF.

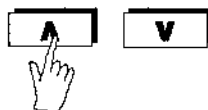
Display:
(Default - "06")

Edit char. for
remote : 06

Use the <digit> keys to enter the number required for the non-destructive, forward space character that suits your remote terminal.



Press <UP> or <DOWN> arrow to return to "Current Type:" and reset the selection back to the original.



This attribute sets the ASCII character required by your remote terminal for the non-destructive forward space character.

This setting does not normally require changing if your terminal has been configured to emulate an ADDS type terminal.

REMEMBER to reset the communication "Current Type:" to its original setting after you exit this attribute module.

Day Timers

Programming

Access:

MENU

7

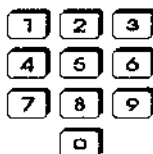
4

Display:

(Default is Day Timer 1)

Day Timer
to program : 1

Use the <digit> keys on the Terminal keypad to enter the number of the Day Timer you wish to programme.



Alternatively, use the <UP> or <DOWN> arrow keys to scroll through the available Day Timer numbers.



Press <OK> when done.



There are five (5) individual Day Timers available in the Concept 2000 system.

This facility allows the programmer to jump to the specific Day Timer number required when making programming changes.

Day Timers may be programmed as a User Code attribute to provide restricted operation of User Codes.

Auxiliary

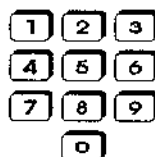
Function:

To programme an auxiliary number that will energise at the Set Time and de-activate at the Off Time.

Display:
(Default is Day Timer disabled)

Auxiliary for
Timer 1 : 00

Use the <digit> keys on the Terminal keypad to enter the auxiliary number required for the Day Timer auxiliary.



Press <OK> when done.



This feature enables this Day Timer for operation and will provide an auxiliary output that will energise at the Set Time and de-activate at the Off Time.

Valid auxiliary numbers are 01-96 and a physical connection is not required.

A setting of 00 will disable the Day Timer.

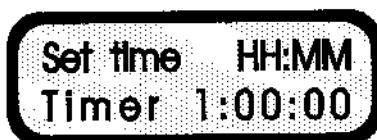
If a physical connection of an auxiliary output is not required to interface with peripheral equipment but the Day Timer is required to be active, we recommend that auxiliary number #71 is used for Day Timer #1, auxiliary #72 is used for Day Timer #2, etc.

Set Time

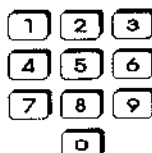
Function:

To programme the time of day that the Day Timer will use to energise its auxiliary output.

Display:
(Default is no selection)



Use the <digit> keys on the Terminal keypad to enter the time, in hours and minutes, the Day Timer will turn on or Set.



Press <OK> when done.



This feature programmes the time of day the Day Timer will use to turn On and energise its auxiliary output.

The time of day is entered in a twenty-four clock and is valid for times 00:01 to 23:59.

There must be a minimum of one minute difference between the Set Time and the Off Time for the Day Timer to function correctly.

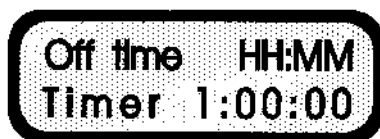
When used in conjunction with User Codes, the User Codes are considered as valid or operational when the Day Timer auxiliary is in the energised state.

Off Time

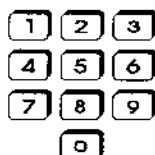
Function:

To programme the time of day that the Day Timer will use to de-activate its auxiliary output.

Display:
(Default is no selection)



Use the <digit> keys on the Terminal keypad to enter the time, in hours and minutes, the Day Timer will turn Off.



Press <OK> when done.



This feature programmes the time of day the Day Timer will use to turn Off and de-activate its auxiliary output.

The time of day is entered in a twenty-four clock and is valid for times 00:01 to 23:59.

There must be a minimum of one minute difference between the Set Time and the Off Time for the Day Timer to function correctly.

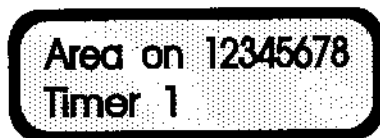
When used in conjunction with User Codes, the User Codes are considered as invalid or non-operational when the Day Timer auxiliary is in the de-activated state.

Auto Arming

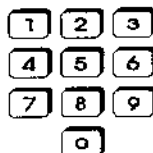
Function:

To programme the User Areas that the Day Timer will be able to Auto-arm.

Display:
(Default is no selection)



Use the <Y> or <9> keys on the Terminal keypad to select the User Areas required to be Auto-armed by the Day Timer.



Press <OK> when done.



This feature programmes the User Areas that the Day Timer will arm at the programmed Set Time.

Day Timers will not turn User Areas off.

Auto-arming will turn on the selected Area, irrespective of the status of the Zones within the Area and will cause the Area to alarm should the Zones be unsealed.

In the case of Sub-Areas, the Day Timer will ignore the status of any other Areas that may be controlling the Sub-Area and will arm the Sub-Area unconditionally.

Weekdays

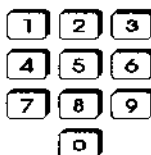
Function:

To programme the days of the week required for the operation of the Day Timer.

Display:
(Default is no selection)

Days for SMTWFS
Timer 1

Use the <Y> or <9> keys on the Terminal keypad to select the days of the week that are required for the Day Timer to be active.



Press <OK> when done.



This feature allows the programmer to select the specific days of the week that the Day Timer will operate.

This feature is particularly useful when the Day Timer is used for controlling User Code access as personnel may have restricted access by time of day and day of the week.

In the domestic application, Day Timers may be used to operate pool pumps, sprinklers, etc., that are only required once a week.

If you require the DayTimer to be operational immediately, especially for User Codes, the programmed Day Timer Auxiliary must be turned "ON" via the Installation Testing Menu.

Miscellaneous

Programming

Access:

MENU

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5

Display:

Days between
Zone Test: 00

Concept 2000 has a number of miscellaneous programming options that can be used to further enhance the systems performance.

Zone Self-Test

Concept 2000 may be programmed to ensure that all Zones are working and alarming on a regular basis and the alarms are being received by the respective Concept 2000 system modules.

You may programme the number of days between the Zone Self-Test and the time of day that any Zones failing the Self-Test will be stamped in Review Memory and the system user is notified.

Pulse Count selection

You may programme the number of pulses required for Pulse Count Zones and the period in which these pulses must occur.

Deadman Timer

You may programme the period between Deadman Timer warnings and the auxiliary number required to energise if the Deadman Timer period reaches its sixty second warning.

Auxiliary Links

You may link auxiliary outputs across the system's modules so that one auxiliary output will follow another.

Zone Self-Test Period

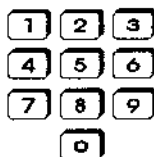
Function:

Programme the number of days between Zone Self-Tests.

Display:
(Default is Self-Test disabled)

**Days between
Zone Test: 00**

Use the <digit> keys on the Terminal keypad to enter the number of days between the Zone Self-Test periods.



Press <OK> when done.



This feature enables the Concept 2000's automatic Zone Self-Test period.

Valid numbers of days are 1-99 and a setting of 00 disables the Self-Test function.

The automatic Zone Self-Test expects to receive an alarm from all Zones, with the Zone attribute "T" flag set, within the Self-Test period and irrespective of whether Areas controlling the Zones are On or Off.

If an alarm is not received during this period, Input #144 in Area #9 will be alarmed and the failed Zones will be stamped in Review Memory.

Self-Test Time

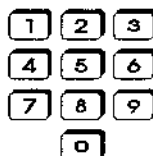
Function:

Programme the time of day for any Self-Test failures.

Display:
(Default is 09:00 hrs)



Use the <digit> keys on the Terminal keypad to enter the time of day for the Zone Self-Test that the results will be stamped in Review Memory and the user notified of any failures.



Press <OK> when done.



This feature allows the programmer to select the time of day that the Zone Self-Test will take place.

We recommend that the time selected is when the system user is most likely to be on the premises so that the appropriate action may be taken.

Both Pass and Fail results will be stamped in Review Memory.

If the Self-Test fails, the Zone name(s) of all failures will be listed in Review Memory and Input #144 in Area #9 will be alarmed.

This Input may be programmed, the same as any other Input, for the appropriate action to occur.

Pulse Count Setting

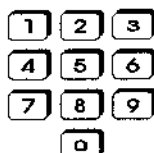
Function:

Programme the maximum number of pulses per Area for Pulse Count Zones.

Display:
(Default is 2 pulses)

**Max. pulses for
Pulse zones : 2**

Use the <digit> keys on the Terminal keypad to enter the maximum number of pulses required for any Area containing Pulse Count Zones.



Press <OK> when done.



This feature allows the programmer to set the maximum number of pulses required, on a per Area basis, before an alarm will be generated from Pulse Count Zones.

Valid number of pulses is 2-4.

The pulse count level may be reached by a single Zone alarming on multiple occasions or more than one Zone in the same Area going into alarm.

The Pulse Count number is the total number of alarms received from any Pulse Count Zones in the same Area and received within the Pulse Count Period.

Pulse Count Period

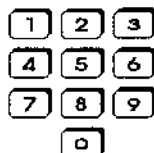
Function:

Programme the number of seconds in which to receive the maximum pulses.

Display:
(Default is 120 seconds)

**Pulse count
period : 120 sec**

Use the <digit> keys on the Terminal keypad to enter the maximum number of seconds required in which to receive the programmed number of alarm pulses.



Press <OK> when done.



This feature sets the time period during which the maximum number of pulses has to be reached before an alarm will be triggered and is valid between 10 - 255 seconds.

The Pulse Count Period timer starts when the first alarm is received from a Pulse Count Zone.

If further Pulse Count Zone alarms are not received and the maximum number of pulses is not reached during the Pulse Count Period then this timer will reset and no alarm will be triggered.

All Pulse Count Zone alarms are stamped in Review Memory.

The Pulse Count Period applies to every Area on an individual basis.

Deadman Timer

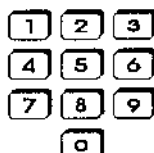
Function:

Programme the number of minutes between Deadman Timer requests.

Display:
(Default is disabled)

**Deadman Timer
period : 000 min**

Use the <digit> keys on the Terminal keypad to enter the maximum number of minutes required between Deadman Timer requests.



Press <OK> when done.



This feature sets the time period, in minutes, between Deadman Timer requests for the User to enter a valid code at the designated system Terminals.

Any valid code entered at the Terminal, at any time, will reset the Deadman Timer period.

At the expiration of the timer period, the User has sixty seconds in which to enter a valid User Code before an alarm is triggered in the corresponding Area #9 Input.

The Deadman Timer period is programmable from 001-999 minutes.

A setting of 000 minutes disables the feature.

Deadman Auxiliary

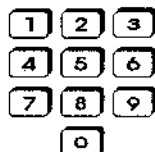
Function:

Programme the auxiliary number required to operate as a Deadman auxiliary.

Display:
(Default is no selection)



Use the <digit> keys on the Terminal keypad to enter the auxiliary number required for the Deadman Timer auxiliary.



Press <OK> when done.



This feature allows the programmer to select an auxiliary number that will energise at the start of the Deadman request.

The Deadman auxiliary will energise during the sixty second period that requires the User Code to be entered and is commonly used to interface with peripheral warning devices in environments where the Terminal beeper cannot be heard.

If a User presses any key on the selected Terminal keypad, the auxiliary will reset, however, a valid code must be entered to prevent the alarm from being triggered.

A setting of 00 disables any auxiliary output.

Auxiliary Links

Function:

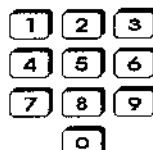
Programme the auxiliary numbers required to be linked in their operations.

Display:

(Default is no link selected)



Use the <digit> keys on the Terminal keypad to enter the two auxiliary numbers required to be linked.



Press <OK> when done.



This feature enables the programmer to link auxiliary outputs together to perform the same function.

The first auxiliary number entered is the "master" and the second auxiliary number is the "slave".

The auxiliary link is a one way link only, master to slave and there are five (5) separate auxiliary links.

An example of this application is in larger systems where an Area requires more than one Alarm auxiliary and they are required at opposite ends of the premises. The Control Module auxiliary #17 may be linked to a Zone Expander Module auxiliary #36 at the other end of the building and both auxiliaries will operate identically.

Pulse Timers

Programming

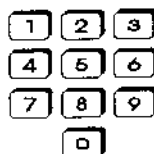
Access:



Display:
(Default is Pulse Timer 1)



Use the <digit> keys on the Terminal keypad to enter the number of the Pulse Timer you wish to programme.



Alternatively, use the <UP> or <DOWN> arrow keys to scroll through the available Pulse Timer numbers.



There are five (5) individual Pulse Timers available in the Concept 2000 system.

This facility allows the programmer to jump to the specific Pulse Timer number required when making programming changes.

Pulse Timers may be programmed to reset or de-activate any auxiliary in the system irrespective of how they were energised.

Auxiliary

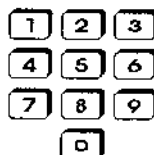
Function:

To programme the auxiliary number that will de-activate at the end of the programmed Pulse Time.

Display:
(Default is Pulse Timer disabled)

**Aux to operate
for Timer 1 : 00**

Use the <digit> keys on the Terminal keypad to enter the auxiliary number required for the Pulse Timer auxiliary.



Press <OK> when done.



Programming an auxiliary number enables this Pulse timer for operation whereas a setting of 00 disables the feature.

Valid auxiliary numbers are 01-96 and a physical connection is not required.

The Pulse Timer auxiliary number is usually the same number as an auxiliary that has been chosen for another system function and that is required to be reset after the programmed Pulse Time.

Time Period

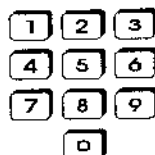
Function:

To programme the required time period, in seconds, that will elapse before the Pulse Timer auxiliary is de-activated.

Display:
(Default is no selection)



Use the <digit> keys on the Terminal keypad to enter the time period, in seconds, required for the Pulse Timer.



Press <OK> when done.



This feature enables the programmer to gain finer control over the reset times for auxiliaries and is valid from 1-99 seconds.

The Pulse Time period will reset, de-activate, the programmed auxiliary number after the expiration of this period.

Any auxiliary that has been chosen for another system function can be reset after the programmed Pulse Time.

An example would be a Lock Auxiliary, which has a standard default period of six (6) seconds, but when also programmed to be a Pulse Auxiliary could be reset after three (3) seconds.

Serial Terminal

Operation

Introduction

The Inner Range Serial Terminal, IRS-2000, is the latest in the Concept 2000 product range and allows common, consumer type Credit Cards to be used to control access to the Concept 2000 system. The Credit Card may be any card chosen by the user which has a magnetic stripe such as Bank Card, Visa Card, Master Card, American Express, etc.,.

Each User in the Concept 2000 system may have an optional card of their choice. The User's Credit Card is programmed into the system along the same lines as a normal User Code. The Credit Card may be used as the sole method of access or may be complimented to include a PIN number if required. The User simply "swipes" the card at their card at the Serial Terminal, or enters a PIN number followed by the card swipe, and access to the system is granted.

All User Code attributes available to PIN Users are also available to Card Users for example, a Card User may be defined as a "Lock Only User" and when the Credit Card is swiped the door will open without having to press any keys.

Card reading Terminals comprise of two distinct parts, the Serial Terminal, IRS-2000 which looks and operates identically to a standard IRT-2000 Terminal and the magnetic swipe reader which connects directly to the Serial Terminal via a short cable.

Card reading Serial Terminals are fully compatible with existing Concept 2000 systems with a FREE software upgrade if required. The same software upgrade will allow the use of up to 480 Users, cards or PINS, if the Expanded Memory option is installed.

Operation

A Credit Card is treated the same as an eight (8) digit PIN. When the default display is shown in the Terminal LCD, "swiping" a Credit Card is the same as entering an eight digit PIN and pressing <OK>. If the Credit Card is recognised as a legal User access to the system is allowed and the operation proceeds exactly the same as if a legal code had been entered.

Operation cont...

Some Users may be programmed to have a PIN in addition to the use of a Credit Card. The User enters their PIN first and then "swipes" the Credit Card which will complete the full code sequence and automatically press <OK>. Note that <OK> is not required to be pressed by the User. In this instance, the User Code length is also eight digits, four (4) digits for the PIN and four (4) digits from the card itself.

Cards with the same information encoded on the magnetic strip may be used by more than one User by changing the PIN number for each individual.

Individual Users may require two codes for different system operations. For example, the User's first code may be Credit Card operation only and is used for opening the various doors controlled by the Concept 2000 during office hours. A single "swipe" of the card will provide the easiest operation. However, the same User may have a second code that comprises of a PIN plus the Credit Card which is used to arm and dis-arm the system's Areas. The same Credit Card is put to very convenient use.

Programming a Credit Card into the system is extremely easy. Simply enter the "Change Codes" Menu mode at any of the system's Card Reading Terminals and select the display that requests the entry of the User's code number. Now instead of entering the digits for the code at the Terminal keypad, simply "swipe" the desired Credit Card through the magnetic strip reader. The Credit Card is now programmed. If a PIN is desired to be used in conjunction with a Credit Card, simply enter the PIN prior to "swiping" the card.

Technical

The eight digit number representing the Credit Card is calculated by reading information contained on Track #2 of the magnetic strip. Track #2 normally contains information such as the account number, the expiry date and other miscellaneous information. This information is condensed into an eight digit code by the Card Reading Terminal. It is almost impossible to deduce this eight digit code even with knowledge of the card's account number and other details due to the proprietary method used. The PIN number, of course, is not contained on the card and provides even greater security.

Specifications

Terminal Dimensions, flush mount	185mm x 120mm x 10mm
Terminal Dimensions, surface mount	185mm x 120mm x 31mm
Card Reader Dimensions	100mm x 33mm x 33mm
Cable length, Reader to Terminal	300mm
Current drain, No backlight	60mA typical
Current drain, Backlight on	75mA typical
Number of Card combinations	854 million
Card feed speed	0.1 to 1.5milliseconds
Card feed force	100g typical
Operating temperature	0 to 50 degrees C
Magnetic head life	300,000 minimum typical
Read error rate (1-1000 passes)	0.1% typical
Card type	Any Credit Card conforming to JIS B 9560 type 1 or ISO 2894

Specifications may be subject to change without notice.

The Card Reader and the associated Terminal are not recommended to be installed in direct sunlight or rain.

Remote Access

Introduction

Concept 2000 systems that have a telephone line connection and that are programmed to answer an incoming call, may be accessed remotely via a modem.

Hardware Requirements

The minimum hardware required is a dumb **Computer Terminal** and a **Modem** that supports 300 baud, alternatively, a **PC** with a **Modem** that supports 300 baud.

Software Requirements

No special software from Inner Range is required as all of the command prompts are generated from the Concept 2000.

Some programmers may prefer to use a personal computer instead of a dumb Computer Terminal and, if this is the case, a communications software package such as Telix, Mirror, Procomm, etc., is required.

Other Requirements

You will need to know the **actual telephone number** the Concept 2000 is connected to.

You will need to know whether the Concept 2000 has been programmed to answer the phone after a certain **number of rings** or whether it has been programmed for **Fax Bypass**.

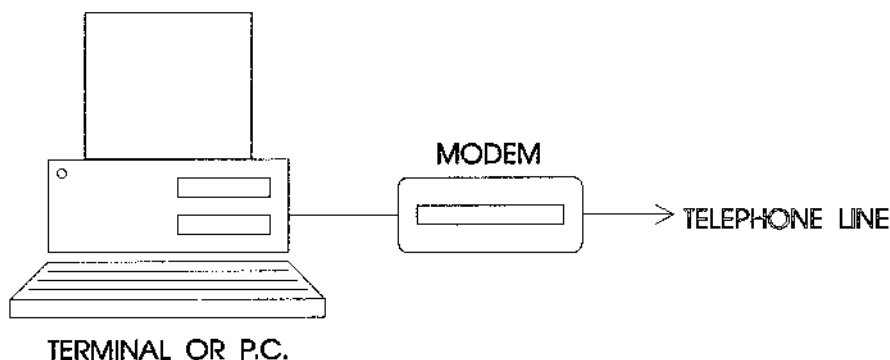
You will need to know whether the Concept 2000 has been configured to report in either **Bell 103** or **CCITT** modem format.

And, most important, you will need to know the **Installer Code** for access to the system.

If you know the **Master Code**, you will be able to log on to the system with limited capabilities.

Getting Started

Connect your Terminal or PC to your modem and your modem to the telephone line. When all connections are in place, turn on the power.



Check to see if your modem is responding by typing "AT". You should see the "AT" characters echoed to your screen.

Press <return> or <enter>.

The modem should respond with "OK".

If the modem does not respond, check either your cabling or your modem setup.

If you did not see the "AT" characters but you did see the "OK" response, try typing "ATE1 <return>". This is the Hayes command to enable echo.

If the modem responded with a "0" instead of "OK", try typing "ATV1 <return>". This is the Hayes command for enabling the result codes to be sent as words.

If the Concept 2000 system you are going to call is set for **CCITT** communications then type "ATB0 <return>".

If the Concept 2000 system you are going to call is set for **Bell 103** communications then type "ATB1 <return>".

For programmers using communications software with a PC, we recommend that you check the modem initialisation string for the correct setup.

Dialling the Concept 2000

Baud Rate

Once the modem is correctly responding to your Terminal/PC, you must set the communications baud rate.

All Concept 2000 panels communicate using:-

300 baud, 8 bits, 1 stop bit, No parity.

Both your Terminal/PC and your modem should be set to **300,8,N,1**.

Emulation

We recommend that your Terminal/PC is configured to emulate an **ADDS** style of Terminal for correct interpretation of the ASCII characters.

Programmers using communications software such as Telix should ensure that the received **backspace** character is set to be **non-destructive**.

Dialling

You need to know whether the Concept 2000 has been programmed to **count the number of rings** or it is in **Fax Bypass** mode.

For tone dialling enter "**ATDT <telephone number> <return>**".

For pulse dialling enter "**ATDP <telephone number> <return>**".

Count mode

The Concept 2000 will answer the call after counting the programmed number of rings.

Fax Bypass

Listen for 1 - 2 ring bursts from the modem speaker then hang up the modem immediately.

Wait 45 seconds and call the number again.

The Concept 2000 will now answer the call immediately.

Password Access

Once the Concept 2000 has answered the call, the programmer will be presented with a **CONNECT** result code.

This result code indicates that your modem and the Concept 2000 has successfully established carrier and the communication session has begun.

Press <return> or <enter>.

The Concept 2000 now responds with the prompt **Password ?**

Use the numeric keys on your keyboard and enter the **Installer Code** or **Master Code**, followed by <return>.

You will notice that the # symbol is echoed back to your terminal for every digit that you press.

Command prompt

If the Installer Code has been entered correctly the Concept 2000 will respond with the prompt **Command:**

Ringin Back message

If the Concept 2000 has been programmed to *Ringback on answer*, you will be presented with the message **Ringin back...**and the phone line will be hung up immediately.

The Concept 2000 will dial the programmed Call Back number which should be the same number as the telephone line your modem is currently connected to.

Within a few seconds, the **RING** message should be seen on your terminal and, if your modem has been programmed to auto-answer, the call should be established and the **CONNECT** prompt should be displayed.

If your modem does not auto-answer, try typing "ATA <return>" whilst the **RING** message is being displayed.

Command prompt

With the **Command:** prompt on your screen, type "Z".

The Concept 2000 will respond by displaying the menu options available to the programmer.

@	End session
A	Review events
B	Hangup and re-dial
C	Remote Terminal
D	Display programming
F	Update custom message
G	Leave message

Menu selections are only available with **UPPER CASE** characters. Any lower case or non-valid characters will cause the menu to be re-displayed.

@	<i>Concept 2000 will hang up the line and end the session</i>
A	<i>Concept 2000 will output its Review memory to your terminal</i>
B	<i>Concept 2000 will hang up and dial the Callback number</i>
C	<i>Concept 2000 will connect you to Terminal #1 of the system</i>
D	<i>Concept 2000 will output its programmed information</i>
F	<i>Concept 2000 will permit you to change the default Custom Message</i>
G	<i>Concept 2000 will permit you to leave a message for a User</i>



Your Terminal or PC should be set up to emulate an **ADDS** type terminal for correct character pagination and tabulation.

Your "received backspace" should be set as non-destructive.

End session

As with any communications session, there is always a correct way to instruct both parties that the session has ended.

In Concept 2000 communication sessions, this is achieved by sending the @ character as the instruction to hang up the telephone line.

When the @ character is used, Concept 2000 will stamp its review memory with the time and date followed by the message:-

1CAE Aug 17 12:29:36 Hangup all OK

Communications can be unintentionally terminated for other reasons and will result in error messages being stamped in the Concept 2000's Review Memory.

The telephone connection may drop out, or the self-timeout period may expire.

The correct method for intentional session termination is the @ character found on most keyboards above the number 2 key.

To transmit this character, hold the <SHIFT> key down and, at the same time, press the <2> key.

At **Command :**

Type <SHIFT> + <2>

Disp **NO CARRIER**

The **NO CARRIER** message is generated by your own modem indicating that the connection with the remote unit has been lost and the telephone line has been hung up..

Review Memory Dump

Concept 2000 can output the entire contents of its Review Memory to your Terminal or PC.

At **Command :**

Type **A** (Must be in Upper Case)

Concept 2000 will now output its Review Memory:-

1CAE	Aug 17	12:29:36	Answered phone
1CA8	Aug 17	09:41:52	Hangup all OK
1CA2	Aug 17	09:41:09	Decadic dial #01
1C9C	Aug 17	09:41:09	ADMINISTRATION Off - SALLY
1C96	Aug 17	09:41:07	SALLY logged in at terminal 4

Memory address Date Time Review event description

for technical
reference only

Review Memory is displayed with the newest event first and then scrolls backwards, in reverse order, through the older events.

Programmers using a PC and communications software will have the ability to capture the Review Memory and save the information to a file for later viewing.

Review Memory is a powerful, chronological event history that can be used to check the operation and programming of the entire system.

Stop / Start

Press **<SPACEBAR>** to halt the Review Memory output and press again to resume the output.

END

Press **<SPACEBAR>** to halt the Review output and then press **<ESCAPE>** to return to the **Command :** prompt.

Hangup and Re-dial

Concept 2000 can be instructed to terminate the current session and then dial back using the number programmed as the Call Back number.

This facility will sometimes help if the current connection is bad or noisy and by re-establishing the call from the other end may assist in curing the problems.

Systems that are accessed via long distance telephone calls can be forced to call back the programmer and save costs.

At **Command :**

Type **B (Must be in Upper Case)**

Disp **Ringing back...**



The Concept 2000 will only dial the pre-programmed Call Back number entered in Communication programming.

- The Call Back number will only be dialled once whether the call was successful or not.

It is recommended that your Terminal/modem or PC/modem is connected to a dedicated Call Back telephone number.

Try setting your modem to auto-answer by entering "**ATS0=1 <return>**". This will set most modems to answer the call after one ring burst.

If auto-answer does not work, enter "**ATA <return>**" when **RING** appears on your screen.

Remote Terminal

When a communications session has been successfully established, the programmer may log on to the system as if the modem was connected directly to the Concept 2000 system's Terminal #1.

At **Command :**

Type **C** (Must be in Upper Case)

As soon as the character **C** has been entered, the modem is logged on to the Concept 2000 system as Terminal #1.

A **<return>** or **<enter>** is not required and these keys now represent the Concept Terminal's **<OK>** key.

Proceed immediately to enter any valid code using the keyboard digit keys and press **<return>** when done.

You will notice immediately that the text you are now receiving from your modem is in the identical format to that of a Concept 2000 Terminal display.

Any function that can be accessed at the Terminal may now be accessed over the telephone line.



When you are remotely logged on to the system, your client cannot use Terminal #1 however, any other Terminals connected to the system may still be used.

Exercise extreme caution when engaging in extended communication sessions as your modem is now using the telephone line and the Concept 2000 will not be able to report any alarm conditions until you finish the session and hang up.

Keyboard Commands

The following information details what keyboard key presses are required to achieve the equivalent functions on the Concept Terminal keypad.

Keyboard sequence

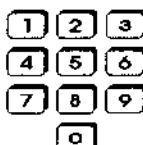
A - Z

0 - 9

a - z

(Lower case a - z is available when Concept systems are called remotely via modems.)

Concept Terminal



<CNTRL> + H



<CNTRL> + O



<CNTRL> + Q



<RETURN> or <ENTER>



<CNTRL> + S



<CNTRL> + D



<CNTRL> + E



<CNTRL> + X



<CNTRL> + N



<CNTRL> + F



Display Programming

The Concept 2000 system may also display or "dump" its current programming via the telephone line.

At **Command :**

Type **D (Must be in Upper Case)**

It is recommended that programmers using PC/modem equipment have turned on their capture buffers to store the information.

Programmers using Terminal/modem equipment may press **<SPACEBAR>** to stop and start the transmission or have a printer connected for a hard copy of the details.

The data will be displayed in the following sections:-

1. **General Information**
2. **User Code programming (excluding PIN numbers)**
3. **Area programming**
4. **Day Timer programming**
5. **Terminal programming**

Pressing the **<SPACEBAR>** will start/stop the information coming to the screen allowing the programmer a chance to view the details.

Pressing **<ESCAPE>** whilst the listing has been paused will cause the listing to resume at the beginning of the next section.

Any other key will resume the listing in the current section.

Display General Information

General Information

Version = 00438e The current software version number and the format suffix.

Client = 0023 The programmed Client Code.

Phone #s = 1234567 2324343 3453455 4564566 Ddwbrat IEZNCPB

Primary phone

Backup phone

Callback phone

Client phone

D	Dial early if get dial tone
d	Abort dial if no dial tone
w	Abort dial if wrong tone
b	Hang up if line busy
r	Hang up if no ring
a	Reset handshake whilst ringing
t	Tone dial for number
I	Trigger dialler on Isolates
E	Report Entry path
Z	Re-trigger Zones
N	Normal tone dialling
C	Force Ringback on answer
P	Review printer enabled
B	Beep for Review printer

The letters following the telephone numbers indicate whether the relevant dialler options have been set to YES. If the letter is not displayed, the option is set to NO.

Direct Line The current type of communications selected.

Ademco Ext. Fast The currently selected dialler format.

Securitel The currently selected direct line format.

Display User Code programming

User Code programming

Codes are:

000k	12345678	IRFDA9EW	1	6	USER 00
001k	12345678	IRFDA9EW	1	6	USER 01
002k	123	IRF	1	6	JOHN
003k	1		1L	6	ANDREW
004k	5	IRF	1 D	6	HARRY
005k			1	6	USER 05
006k			1	6	USER 06
007k			1	6	USER 07
008k			1	6	USER 08
009c	12345678	IRDA9EW	1	6	SALLY
010k			1	6	USER 10
011k			1	6	USER 11
012k			1	6	USER 12
013k			1	6	USER 13
014k			1	6	USER 14
015k	12345678	IRDA9EW	1LD	12345 6	DEMO

k Keypad entry code
 c Card Reader code
 12345678 Areas allowed for this code

I Isolate menu option allowed
 R Review menu option allowed
 F Turn Off Areas allowed
 D Deadman menu option allowed
 A Altering User Codes allowed
 9 Control of Areas #0 & #9 allowed
 E Isolate Zones on Exit allowed
 W Walk-Testing Areas allowed

1 Assume one Area
 L Lock only User
 D This is a Duress Code
 12345 Time Zones for this User
 1-6 LCD scroll rate for this User

Programmed User name

Display Area programming

Area programming

The programmed information for every defined Area will be listed along with all Zone, or Inputs in the case of Area #9, that belong to the Area.

The listing is a common format for all Areas even though some of the listed options are in fact not available for some Areas especially Areas #0 and #9.

Area options that are unavailable are still displayed but are shown as not selected.

The listing is self-explanatory and is displayed as follows:-

ADMINISTRATION is area 1

Sirens = 1 il
Siren time = 10
Entry time = 25
Exit time = 60
Delay aux. = 09
Siren aux. = 17
Alarm aux. = 18
Tamp. aux. = 00
Close aux. = 00
Sub-area = 0
Primaries = 01,07,00,00,00

001	A	CRSXME	00	FRONT FOYER DOORS	S
002	A	CRSXME	00	PIR RECEPTION	S
003	A	CRSXM	00	PIR JIM'S OFFICE	A
004	A	CRSXM	00	PIR COMPUTER ROOM	A
005	A	CRSXM	00	DOOR TO WAREHOUSE	S
006	A	CRSXM	00	PIR GENERAL ACCOUNTS	S
007	A	CRSXME	00	REAR STAFF ENTRY DOOR	S
009	A	CRSXM	00	BOARDROOM DOORS	A
010	A	CRSXM	00	PIR BOARDROOM EAST	S
011	A	CRSXM	00	PIR BOARDROOM WEST	S
012	A	CRSXM	00	DOOR TO ARCHIVES	S
013	A	CRSXME	00	PIR REAR ENTRY FOYER	S
016	A	CRSXM	00	P.E. BEAM SERVICE LAB	S

Display Area Options

The operation and programming of Areas using the **Zone Control Flags** is covered in detail under **Area Programming** in this manual.

For ease of reference the Zone Control Flags are repeated.

A	Process alarms for this Zone in this Area
T	Process tamper for this Zone in this Area (Area #0 only)
C	Send communications for this Zone
R	Send restorals for this Zone
S	Sound the siren outputs for this Zone
X	Energise the Area's Alarm auxiliary for this Zone
M	Broadcast an alarm Message for this Zone
E	Include this Zone in the Area's Entry path
00	The Function Auxiliary programmed for this Zone

The text following the **Zone Control Flags** is the **Zone/Input Name** which is followed by a single character representing the current status of the Zone/Input.

S	Sealed
T	Tamper
A	Alarm

Area #0 information will also display the Zone attribute programming for all of the valid Zones.

L	Lockout the Zone at the end of Siren Time
A	Auto-Isolate the Zone if it is un-sealed on Exit
E	Test the Zone for a sealed status on Exit
P	Pulse count this Zone
T	Self-Test this Zone
R	Re-trigger this Zone's Function auxiliary.



The Zone Name will generally appear in upper case characters and can only be programmed this way if it has been entered from one of the system's Terminals.

Both upper and lower case characters are permitted when the system is programmed remotely via a modem.

Display Day Timer programming

Day Timer programming

The programmed information for every defined Day Timer will be listed.

Timer 1	45	12:00 to 05:00	12345678	SMTW
Auxiliary number				
Set Time				
Off Time				
		Areas to turn On		
			Days of the week to operate	



Only valid Day Timers will be displayed, that is Day Timers that have a valid auxiliary number programmed.

Valid auxiliary numbers are 01-96 and a setting of 00 will disable the Day Timer.

The SET time and the OFF time must be at least 1 minute different.

The days of the week are displayed for all days the timer will operate and are not displayed if the timer is inactive for that day.

Display Terminal programming

Terminal programming

The programmed Information for all Terminals will be listed.

Terminal 1	SALZR	ADMINISTRATION
Terminal number		
S	Display one area for this terminal	
A	Display alarm messages for this terminal	
L	Display level messages for this terminal	
Z	Display custom message for this terminal	
R	Display ready message for this terminal	
	The Associated Area for this terminal	

Lock aux	= 00	The auxillary number for a Lock auxiliary
Lamp aux	= 00	The auxillary number for a Lamp auxiliary
Key zone	= 000	The Zone number of the Keyswitch Zone to be used for this Terminal's Associated Area. (Edge/Level)



Valid auxiliary numbers are 01-96 and a setting of 00 will disable the auxiliary feature.

Valid "Level Mode" Zone numbers are 01-96 and a Zone selection of 00 will disable the keyswitch feature.

Valid "Edge Mode" Zone numbers are 101-196 and a Zone selection of 00 will disable the keyswitch feature.

At least one system Terminal should be programmed to accept alarm messages and level messages.

CONCEPT 2000

Contact ID Supplement

Ademco Contact ID Format utilisation

Ademco Contact ID is a dialler reporting format released by Ademco that is far more suitable for use with the Concept 2000 than the popular, but now rather dated, Ademco Extended Fast format.

The main advantages of this format are:-

- **No mapping is required at the panel. Simply select "Contact ID" as the reporting format.**
- **Can report all information from the Concept 2000 including all Area #9 Inputs, 512 User Codes and the ten (10) individual Area openings and closings.**
- **Contact ID can be supported by any Ademco 685 receiver with the appropriate hardware/software upgrade for as little as \$80.00 (Contact Ademco for details).**
- **Reasonably fast format with the use of checksum.**

Contact ID is similar to other slow formats in that only one item of information is reported per transmission. A checksum is also sent to ensure the transmission is only sent once when there are no errors. The format uses the traditional DTMF tone signalling and each transmission adopts the following format:-

RG CCCC 18 QXYZ GG PPP K

where :	RG	Receiver number and Line Card number
	CCCC	Is the 4 digit Client Code
	18	Contact ID identifier (sent as 18)
	Q	Event qualifier
	XYZ	Event Code
	GG	Group Number
	PPP	Alarm point or User Code
	K	Checksum (15 - (Sum mod 15))

The Event Qualifier and the Event Code specify the type of message and, for your convenience, have been pre-defined in the Concept 2000 software.

Format utilisation cont...

The Group Code indicates which Area the information relates to or which Area is being opened or closed. Group Codes #00 to #09 represent Areas #0 to #9 respectively.

The Alarm Point number represents the Zone number. Zones #01 to #96 are represented by Alarm Point numbers #01 to #96 respectively and will be reported with Group Codes #00 to #08 depending from which Area the alarm was generated.

Area #9 Inputs #001 to #150 are represented by Alarm Point numbers #001 to #150 with a Group Code #09.

For open and close transmissions the Alarm Point number is replaced with the User ID number. User ID numbers #000 to #511 are represented by Alarm Point numbers #000 to #511 respectively.

Note:	User #000	<i>Master User ID</i>
	User #001	<i>Installer User ID</i>
	User #096	<i>Day Timer User ID</i>
	User #097	<i>Keyswitch User ID</i>
	User #098	<i>Power Reset User ID</i>
	User #099	<i>Control Room User ID</i>
	User #100-127	<i>Reserved for future use.</i>

To select the dialler format of Contact ID for the Concept 2000, simply select "Contact ID" as the desired format in dialler programming. The appropriate Area Default number #2 should be used, the same number used for IR Fast.

Please note that like the IR Fast format, there is little point in enabling "general" type Input alarms and restores for communications because the Contact ID format can report the specific item that caused the alarm. For this reason, the Area #9 Inputs #129 to #138 inclusive and Input #141 are not normally enabled for dialler reporting when using this format. By using the same Area Default number as IR Fast, #2, these "general" Inputs will not be enabled.

IMPORTANT

Published documentation regarding the implimentation of the Contact ID format refers to the format using hexadecimal numbers. This is not the case, at the time of this publication, as all numbers transmitted using the Contact ID format have been confirmed by Ademco as DECIMAL ONLY.

Format utilisation cont...

Listed below are some typical Contact ID transmissions, excluding the checksum, for various types of alarms generated by Concept 2000. The Concept 2000 descriptions of these alarms are also shown.

The English message text, as would be printed by an Ademco 685 receiver is also provided.

The Customer Client ID #1234 has been used for the example transmissions.

Ademco 685 Receiver message and text

Concept 2000 transmission

Zone Alarms

18 1234 E140 01 C001	*ALARM* - General Alarm - 001	Alarm	Zone 01	Area 1
18 1234 E140 01 C002	*ALARM* - General Alarm - 002	Alarm	Zone 02	Area 1
18 1234 E140 01 C003	*ALARM* - General Alarm - 003	Alarm	Zone 03	Area 1

Note: All of the above alarms occurred in Area 1 with a Group Code 01

Tamper Alarms

18 1234 E144 00 C001	*ALARM* - Sensor Tamper - 001	Tamper	Zone 01	Area 0
18 1234 E144 00 C002	*ALARM* - Sensor Tamper - 002	Tamper	Zone 02	Area 0
18 1234 E144 00 C003	*ALARM* - Sensor Tamper - 003	Tamper	Zone 03	Area 0

Note: All of the above alarms occurred in Area 0, the Tamper Area

Tamper Restores

18 1234 R140 00 C001	RESTORE - Sensor Tamper - 001	Restore	Zone 01	Area 0
18 1234 R140 00 C002	RESTORE - Sensor Tamper - 002	Restore	Zone 02	Area 0
18 1234 R140 00 C003	RESTORE - Sensor Tamper - 003	Restore	Zone 03	Area 0

Area 9 Inputs

18 1234 E145 09 C001	*ALARM* - Exp. Module Tamper - 001	Alarm	Control Cabinet Tamper
18 1234 E145 09 C002	*ALARM* - Exp. Module Tamper - 002	Alarm	Control Internal Siren Tamper
18 1234 E145 09 C003	*ALARM* - Exp. Module Tamper - 003	Alarm	Control External Siren Tamper
18 1234 E301 09 C004	TROUBLE - AC Power	Alarm	Control AC Power Failure
18 1234 E302 09 C005	TROUBLE - System Low Battery	Alarm	Control Low Battery warning
18 1234 E140 09 C006	*ALARM* - General Alarm - 006	Alarm	Control LAN Fuse fail
18 1234 E140 09 C007	*ALARM* - General Alarm - 007	Alarm	Control Detector Fuse fail
18 1234 E143 09 C008	*ALARM* - Exp. Module Fail - 008	Alarm	Control LAN Fail

18 1234 E145 09 C009	*ALARM* - Exp. Module Tamper - 009	Alarm	Terminal 1 Cabinet Tamper
18 1234 E121 09 C010	*PANIC* - Duress	Alarm	Terminal 1 Duress
18 1234 E421 09 C011	ACCESS - Access Denied - User 011	Alarm	Terminal 1 Code Attempts
18 1234 E102 09 C012	*EMERG* - Fail to Check In - 012	Alarm	Terminal 1 Deadman Timeout
18 1234 E140 09 C013	*ALARM* - General Alarm - 013	Alarm	Terminal 1 Spare
18 1234 E140 09 C014	*ALARM* - General Alarm - 014	Alarm	Terminal 1 Spare
18 1234 E140 09 C015	*ALARM* - General Alarm - 015	Alarm	Terminal 1 Spare
18 1234 E143 09 C016	*ALARM* - Exp. Module Fail - 016	Alarm	Terminal 1 LAN Fail

18 1234 E145 09 C017	*ALARM* - Exp. Module Tamper - 017	Alarm	Terminal 2 Cabinet Tamper
18 1234 E121 09 C018	*PANIC* - Duress	Alarm	Terminal 2 Duress
18 1234 E421 09 C019	ACCESS - Access Denied - User 019	Alarm	Terminal 2 Code Attempts
18 1234 E102 09 C020	*EMERG* - Fail to Check In - 020	Alarm	Terminal 2 Deadman Timeout
18 1234 E140 09 C021	*ALARM* - General Alarm - 021	Alarm	Terminal 2 Spare
18 1234 E140 09 C022	*ALARM* - General Alarm - 022	Alarm	Terminal 2 Spare
18 1234 E140 09 C023	*ALARM* - General Alarm - 023	Alarm	Terminal 2 Spare
18 1234 E143 09 C024	*ALARM* - Exp. Module Fail - 024	Alarm	Terminal 2 LAN Fail

Format utilisation cont...

18 1234 E145 09 C025	*ALARM* - Exp. Module Tamper - 025	Alarm	Terminal 3 Cabinet Tamper
18 1234 E121 09 C026	*PANIC* - Duress	Alarm	Terminal 3 Duress
18 1234 E421 09 C027	ACCESS - Access Denied - User 027	Alarm	Terminal 3 Code Attempts
18 1234 E102 09 C028	*EMERG* - Fail to Check In - 028	Alarm	Terminal 3 Deadman Timeout
18 1234 E140 09 C029	*ALARM* - General Alarm - 029	Alarm	Terminal 3 Spare
18 1234 E140 09 C030	*ALARM* - General Alarm - 030	Alarm	Terminal 3 Spare
18 1234 E140 09 C031	*ALARM* - General Alarm - 031	Alarm	Terminal 3 Spare
18 1234 E143 09 C032	*ALARM* - Exp. Module Fail - 032	Alarm	Terminal 3 LAN Fail
18 1234 E145 09 C033	*ALARM* - Exp. Module Tamper - 033	Alarm	Terminal 4 Cabinet Tamper
18 1234 E121 09 C034	*PANIC* - Duress	Alarm	Terminal 4 Duress
18 1234 E421 09 C035	ACCESS - Access Denied - User 035	Alarm	Terminal 4 Code Attempts
18 1234 E102 09 C036	*EMERG* - Fail to Check In - 036	Alarm	Terminal 4 Deadman Timeout
18 1234 E140 09 C037	*ALARM* - General Alarm - 037	Alarm	Terminal 4 Spare
18 1234 E140 09 C038	*ALARM* - General Alarm - 038	Alarm	Terminal 4 Spare
18 1234 E140 09 C039	*ALARM* - General Alarm - 039	Alarm	Terminal 4 Spare
18 1234 E143 09 C040	*ALARM* - Exp. Module Fail - 040	Alarm	Terminal 4 LAN Fail
18 1234 E145 09 C041	*ALARM* - Exp. Module Tamper - 041	Alarm	Terminal 5 Cabinet Tamper
18 1234 E121 09 C042	*PANIC* - Duress	Alarm	Terminal 5 Duress
18 1234 E421 09 C043	ACCESS - Access Denied - User 043	Alarm	Terminal 5 Code Attempts
18 1234 E102 09 C044	*EMERG* - Fail to Check In - 044	Alarm	Terminal 5 Deadman Timeout
18 1234 E140 09 C045	*ALARM* - General Alarm - 045	Alarm	Terminal 5 Spare
18 1234 E140 09 C046	*ALARM* - General Alarm - 046	Alarm	Terminal 5 Spare
18 1234 E140 09 C047	*ALARM* - General Alarm - 047	Alarm	Terminal 5 Spare
18 1234 E143 09 C048	*ALARM* - Exp. Module Fail - 048	Alarm	Terminal 5 LAN Fail
18 1234 E145 09 C049	*ALARM* - Exp. Module Tamper - 049	Alarm	Terminal 6 Cabinet Tamper
18 1234 E121 09 C050	*PANIC* - Duress	Alarm	Terminal 6 Duress
18 1234 E421 09 C051	ACCESS - Access Denied - User 051	Alarm	Terminal 6 Code Attempts
18 1234 E102 09 C052	*EMERG* - Fail to Check In - 052	Alarm	Terminal 6 Deadman Timeout
18 1234 E140 09 C053	*ALARM* - General Alarm - 053	Alarm	Terminal 6 Spare
18 1234 E140 09 C054	*ALARM* - General Alarm - 054	Alarm	Terminal 6 Spare
18 1234 E140 09 C055	*ALARM* - General Alarm - 055	Alarm	Terminal 6 Spare
18 1234 E143 09 C056	*ALARM* - Exp. Module Fail - 056	Alarm	Terminal 6 LAN Fail
18 1234 E145 09 C057	*ALARM* - Exp. Module Tamper - 057	Alarm	Terminal 7 Cabinet Tamper
18 1234 E121 09 C058	*PANIC* - Duress	Alarm	Terminal 7 Duress
18 1234 E421 09 C059	ACCESS - Access Denied - User 059	Alarm	Terminal 7 Code Attempts
18 1234 E102 09 C060	*EMERG* - Fail to Check In - 060	Alarm	Terminal 7 Deadman Timeout
18 1234 E140 09 C061	*ALARM* - General Alarm - 061	Alarm	Terminal 7 Spare
18 1234 E140 09 C062	*ALARM* - General Alarm - 062	Alarm	Terminal 7 Spare
18 1234 E140 09 C063	*ALARM* - General Alarm - 063	Alarm	Terminal 7 Spare
18 1234 E143 09 C064	*ALARM* - Exp. Module Fail - 064	Alarm	Terminal 7 LAN Fail
18 1234 E145 09 C065	*ALARM* - Exp. Module Tamper - 065	Alarm	Terminal 8 Cabinet Tamper
18 1234 E121 09 C066	*PANIC* - Duress	Alarm	Terminal 8 Duress
18 1234 E421 09 C067	ACCESS - Access Denied - User 067	Alarm	Terminal 8 Code Attempts
18 1234 E102 09 C068	*EMERG* - Fail to Check In - 068	Alarm	Terminal 8 Deadman Timeout
18 1234 E140 09 C069	*ALARM* - General Alarm - 069	Alarm	Terminal 8 Spare
18 1234 E140 09 C070	*ALARM* - General Alarm - 070	Alarm	Terminal 8 Spare
18 1234 E140 09 C071	*ALARM* - General Alarm - 071	Alarm	Terminal 8 Spare
18 1234 E143 09 C072	*ALARM* - Exp. Module Fail - 072	Alarm	Terminal 8 LAN Fail
18 1234 E145 09 C073	*ALARM* - Exp. Module Tamper - 073	Alarm	Zone Exp. 1 Cabinet Tamper
18 1234 E145 09 C074	*ALARM* - Exp. Module Tamper - 074	Alarm	Zone Exp. 1 Internal Siren Tamper
18 1234 E145 09 C075	*ALARM* - Exp. Module Tamper - 075	Alarm	Zone Exp. 1 External Siren Tamper
18 1234 E301 09 C076	TROUBLE - AC Power	Alarm	Zone Exp. 1 AC Power Failure
18 1234 E302 09 C077	TROUBLE - System Low Battery	Alarm	Zone Exp. 1 Low Battery warning
18 1234 E140 09 C078	*ALARM* - General Alarm - 078	Alarm	Zone Exp. 1 LAN Fuse fail
18 1234 E140 09 C079	*ALARM* - General Alarm - 079	Alarm	Zone Exp. 1 Detector Fuse fail
18 1234 E143 09 C080	*ALARM* - Exp. Module Fail - 080	Alarm	Zone Exp. 1 LAN Fail

Format utilisation cont...

18 1234 E145 09 C081	*ALARM* - Exp. Module Tamper - 081	Alarm	Zone Exp. 2 Cabinet Tamper
18 1234 E145 09 C082	*ALARM* - Exp. Module Tamper - 082	Alarm	Zone Exp. 2 Internal Siren Tamper
18 1234 E145 09 C083	*ALARM* - Exp. Module Tamper - 083	Alarm	Zone Exp. 2 External Siren Tamper
18 1234 E301 09 C084	TROUBLE - AC Power	Alarm	Zone Exp. 2 AC Power Failure
18 1234 E302 09 C085	TROUBLE - System Low Battery	Alarm	Zone Exp. 2 Low Battery warning
18 1234 E140 09 C086	*ALARM* - General Alarm - 086	Alarm	Zone Exp. 2 LAN Fuse fail
18 1234 E140 09 C087	*ALARM* - General Alarm - 087	Alarm	Zone Exp. 2 Detector Fuse fail
18 1234 E143 09 C088	*ALARM* - Exp. Module Fail - 088	Alarm	Zone Exp. 2 LAN Fail
18 1234 E145 09 C089	*ALARM* - Exp. Module Tamper - 089	Alarm	Zone Exp. 3 Cabinet Tamper
18 1234 E145 09 C090	*ALARM* - Exp. Module Tamper - 090	Alarm	Zone Exp. 3 Internal Siren Tamper
18 1234 E145 09 C091	*ALARM* - Exp. Module Tamper - 091	Alarm	Zone Exp. 3 External Siren Tamper
18 1234 E301 09 C092	TROUBLE - AC Power	Alarm	Zone Exp. 3 AC Power Failure
18 1234 E302 09 C093	TROUBLE - System Low Battery	Alarm	Zone Exp. 3 Low Battery warning
18 1234 E140 09 C094	*ALARM* - General Alarm - 094	Alarm	Zone Exp. 3 LAN Fuse fail
18 1234 E140 09 C095	*ALARM* - General Alarm - 095	Alarm	Zone Exp. 3 Detector Fuse fail
18 1234 E143 09 C096	*ALARM* - Exp. Module Fail - 096	Alarm	Zone Exp. 3 LAN Fail
18 1234 E145 09 C097	*ALARM* - Exp. Module Tamper - 097	Alarm	Zone Exp. 4 Cabinet Tamper
18 1234 E145 09 C098	*ALARM* - Exp. Module Tamper - 098	Alarm	Zone Exp. 4 Internal Siren Tamper
18 1234 E145 09 C099	*ALARM* - Exp. Module Tamper - 099	Alarm	Zone Exp. 4 External Siren Tamper
18 1234 E301 09 C100	TROUBLE - AC Power	Alarm	Zone Exp. 4 AC Power Failure
18 1234 E302 09 C101	TROUBLE - System Low Battery	Alarm	Zone Exp. 4 Low Battery warning
18 1234 E140 09 C102	*ALARM* - General Alarm - 102	Alarm	Zone Exp. 4 LAN Fuse fail
18 1234 E140 09 C103	*ALARM* - General Alarm - 103	Alarm	Zone Exp. 4 Detector Fuse fail
18 1234 E143 09 C104	*ALARM* - Exp. Module Fail - 104	Alarm	Zone Exp. 4 LAN Fail
18 1234 E145 09 C105	*ALARM* - Exp. Module Tamper - 105	Alarm	Zone Exp. 5 Cabinet Tamper
18 1234 E145 09 C106	*ALARM* - Exp. Module Tamper - 106	Alarm	Zone Exp. 5 Internal Siren Tamper
18 1234 E145 09 C107	*ALARM* - Exp. Module Tamper - 107	Alarm	Zone Exp. 5 External Siren Tamper
18 1234 E301 09 C108	TROUBLE - AC Power	Alarm	Zone Exp. 5 AC Power Failure
18 1234 E302 09 C109	TROUBLE - System Low Battery	Alarm	Zone Exp. 5 Low Battery warning
18 1234 E140 09 C110	*ALARM* - General Alarm - 110	Alarm	Zone Exp. 5 LAN Fuse fail
18 1234 E140 09 C111	*ALARM* - General Alarm - 111	Alarm	Zone Exp. 5 Detector Fuse fail
18 1234 E143 09 C112	*ALARM* - Exp. Module Fail - 112	Alarm	Zone Exp. 5 LAN Fail
18 1234 E140 09 C113	*ALARM* - General Alarm - 113	Alarm	Spare Card
18 1234 E140 09 C114	*ALARM* - General Alarm - 114	Alarm	Spare Card
18 1234 E140 09 C115	*ALARM* - General Alarm - 115	Alarm	Spare Card
18 1234 E140 09 C116	*ALARM* - General Alarm - 116	Alarm	Spare Card
18 1234 E140 09 C117	*ALARM* - General Alarm - 117	Alarm	Spare Card
18 1234 E140 09 C118	*ALARM* - General Alarm - 118	Alarm	Spare Card
18 1234 E140 09 C119	*ALARM* - General Alarm - 119	Alarm	Spare Card
18 1234 E140 09 C120	*ALARM* - General Alarm - 120	Alarm	Spare Card
18 1234 E140 09 C121	*ALARM* - General Alarm - 121	Alarm	Spare Computer Card
18 1234 E140 09 C122	*ALARM* - General Alarm - 122	Alarm	Spare Computer Card
18 1234 E140 09 C123	*ALARM* - General Alarm - 123	Alarm	Spare Computer Card
18 1234 E140 09 C124	*ALARM* - General Alarm - 124	Alarm	Spare Computer Card
18 1234 E140 09 C125	*ALARM* - General Alarm - 125	Alarm	Spare Computer Card
18 1234 E140 09 C126	*ALARM* - General Alarm - 126	Alarm	Spare Computer Card
18 1234 E140 09 C127	*ALARM* - General Alarm - 127	Alarm	Spare Computer Card
18 1234 E140 09 C128	*ALARM* - General Alarm - 128	Alarm	Spare Computer Card
18 1234 E140 09 C129	*ALARM* - General Alarm - 129	Alarm	General Duress
18 1234 E140 09 C130	*ALARM* - General Alarm - 130	Alarm	General Code Attempts
18 1234 E140 09 C131	*ALARM* - General Alarm - 131	Alarm	General Deadman Timeout
18 1234 E140 09 C132	*ALARM* - General Alarm - 132	Alarm	General Cabinet Tamper
18 1234 E140 09 C133	*ALARM* - General Alarm - 133	Alarm	General Siren Tamper
18 1234 E140 09 C134	*ALARM* - General Alarm - 134	Alarm	General Fuse Failure
18 1234 E140 09 C135	*ALARM* - General Alarm - 135	Alarm	General Not Defined
18 1234 E140 09 C136	*ALARM* - General Alarm - 136	Alarm	General Isolate

Format utilisation cont...

18 1234 E140 09 C137	*ALARM* - General Alarm - 137	Alarm	General A.C. Failure
18 1234 E140 09 C138	*ALARM* - General Alarm - 138	Alarm	General Low Battery Warning
18 1234 E306 09 C139	TROUBLE - Programming Changed	Alarm	General Options Change
18 1234 E140 09 C140	*ALARM* - General Alarm - 132	Alarm	System Reset
18 1234 E140 09 C141	*ALARM* - General Alarm - 133	Alarm	General LAN Failure
18 1234 E350 09 C142	TROUBLE - Communication Trouble	Alarm	General Comms Backup
18 1234 E336 09 C143	TROUBLE - Local Printer	Alarm	General UART Problems
18 1234 E307 09 C144	TROUBLE - Self Test Failure	Alarm	General Zone Self Test Failure

18 1234 E602 08 C145	TEST - Periodic	Alarm	General Report Timer
18 1234 E601 08 C146	TEST - Manually Triggered	Alarm	General Manual Comms Test
18 1234 E309 08 C147	TROUBLE - Battery Test Failure	Alarm	General Battery Test Failure
18 1234 E354 08 C148	TROUBLE - Fail to Communicate	Alarm	General Comms Attempts
18 1234 E140 09 C149	*ALARM* - General Alarm - 149	Alarm	General Battery Update
18 1234 E140 09 C150	*ALARM* - General Alarm - 150	Alarm	General On/Off

Area Openings

18 1234 E402 00 U001	OPENING - Group - 001	Open	Area 0 by User 001
18 1234 E402 01 U036	OPENING - Group - 036	Open	Area 1 by User 036
18 1234 E402 02 U055	OPENING - Group - 055	Open	Area 2 by User 055
18 1234 E402 03 U033	OPENING - Group - 033	Open	Area 3 by User 033
18 1234 E402 04 U033	OPENING - Group - 033	Open	Area 4 by User 033
18 1234 E402 05 U012	OPENING - Group - 012	Open	Area 5 by User 012
18 1234 E402 06 U435	OPENING - Group - 435	Open	Area 6 by User 435
18 1234 E402 07 U499	OPENING - Group - 499	Open	Area 7 by User 499
18 1234 E402 08 U098	OPENING - Group - 098	Open	Area 8 by System Reset
18 1234 E402 09 U099	OPENING - Group - 099	Open	Area 9 by Control Room

Area Closings

18 1234 R402 00 U001	CLOSING - Group - 001	Close	Area 0 by User 001
18 1234 R402 01 U036	CLOSING - Group - 036	Close	Area 1 by User 036
18 1234 R402 02 U055	CLOSING - Group - 055	Close	Area 2 by User 055
18 1234 R402 03 U033	CLOSING - Group - 033	Close	Area 3 by User 033
18 1234 R402 04 U033	CLOSING - Group - 033	Close	Area 4 by User 033
18 1234 R402 05 U012	CLOSING - Group - 012	Close	Area 5 by User 012
18 1234 R402 06 U435	CLOSING - Group - 096	Close	Area 6 by Day Timer
18 1234 R402 07 U499	CLOSING - Group - 097	Close	Area 7 by Keyswitch
18 1234 R402 08 U098	CLOSING - Group - 098	Close	Area 8 by System Reset
18 1234 R402 09 U099	CLOSING - Group - 099	Close	Area 9 by Control Room

Zone Bypass

18 1234 E570 01 C001	BYPASS - Zone Bypass - 001	Isolate	Zone 01
18 1234 E570 01 C002	BYPASS - Zone Bypass - 002	Isolate	Zone 02
18 1234 E570 01 C003	BYPASS - Zone Bypass - 003	Isolate	Zone 03
18 1234 R570 01 C001	RESTORE - Zone Bypass - 001	Recall	Zone 01
18 1234 R570 01 C002	RESTORE - Zone Bypass - 002	Recall	Zone 02
18 1234 R570 01 C003	RESTORE - Zone Bypass - 003	Recall	Zone 03

Note: All of the above events occurred in Area 1

Input Bypass

18 1234 E572 09 C001	BYPASS - 24 Hour Bypass - 001	Isolate	Control Cabinet Tamper
18 1234 E572 09 C002	BYPASS - 24 Hour Bypass - 002	Isolate	Control Internal Siren Tamper
18 1234 E572 09 C003	BYPASS - 24 Hour Bypass - 003	Isolate	Control External Siren Tamper
18 1234 R572 09 C001	RESTORE - 24 Hour Bypass - 001	Recall	Control Cabinet Tamper
18 1234 R572 09 C002	RESTORE - 24 Hour Bypass - 002	Recall	Control Internal Siren Tamper
18 1234 R572 09 C003	RESTORE - 24 Hour Bypass - 003	Recall	Control External Siren Tamper

Note: All of the above events occurred in Area 9

Refer to the Ademco Contact ID documentation for further details on this format.

Error Messages

Communication Hang Up Errors

The Concept 2000's Review Memory records certain Dialler information as an audit trail of the Dialler's performance. This information is extremely helpful and may be used as a reference for fault finding communication problems. All events saved in Review Memory are time and date stamped.

One of the most useful items recorded is a Hang-Up Error number.

Whenever the Dialler hangs up the telephone line it always records, in Review Memory, the result of the communication, or non-communication, as a Hang-Up Error number. Some of the more common Hang-Up Error numbers are saved in Review Memory as a text message. The message, if present, will be displayed to the right of the Hang-Up Error number.

Hang-up error = 0 - *all OK*

This indicates that the Dialler received a legal hang-up sequence from the Central Station equipment. This is the normal hang-up sequence.

Hang-up error = 11 - *no dial-tone*

No dial-tone was decoded prior to dialling. This error will only occur if the "Abort on no dial-tone" option was enabled and dial-tone was not detected within the "Dial-tone wait time" (normally 3.5 secs). This could arise from the line being cut, the line not connected properly or if the dial-tone present was an old style dial-tone that cannot be decoded by the Concept 2000. Check the dial-tone present and the programming of the Modem setup attributes.

Hang-up error = 12

A busy tone or a congestion tone was decoded prior to dialling. This error indicates that whilst the Dialler was waiting for dial-tone, a busy or congested tone was decoded.

Hang-up error = 20

This error indicates the Concept 2000 has dialled the programmed telephone number but did not receive a handshake from the Central Station within the "Handshake wait time" (normally 30 secs). Check that the correct telephone number has been programmed and was dialled successfully.

Hang-up error = 21

This error indicates that dial-tone was received after the telephone number had been dialled. It indicates that the telephone line was not seized successfully in the first place or the line dropped out for some reason during dialling.

Communication Hang Up Errors cont...

Hang-up error = 22 - *line engaged*

This error indicates that busy tone or congestion tone was received after the telephone number had been dialled. This may be caused by the Central Station equipment being busy at the time or the exchange being genuinely engaged due to high traffic at the time. It may also indicate that the Concept 2000 is not dialling the telephone number in the first place. Check that the telephone number is actually being dialled and that the call is getting through to the intended destination.

Hang-up error = 23

This error indicates that the Concept 2000 has dialled the telephone number and has waited for the "Ring tone detect time" (normally 8 secs) without receiving either a ringing progress tone or a handshake from the Central Station equipment. This error could occur if the Concept 2000 has been programmed to dial without waiting for dial-tone and dialling had commenced prior to the line being seized correctly. This error could also occur if the number dialled was completely the wrong number and a non-existent service was reached.

Hang-up error = 2A

This error indicates that the Concept 2000 has been programmed for Personal format and after having dialled the telephone number programmed, the call was detected as being unanswered by the recipient party.

Hang-up error = 2F

This error indicates that the Concept 2000 dialled the telephone number and received a legal IR Fast format handshake but the modem could not connect with the remote modem. This may be caused by incorrect modem configuration or incompatibility between the modem formats. Check with the Central Station as to which format they are using, CCITT V21 or BELL 103 and make the necessary programme changes.

Hang-up error = 31

This error indicates that the Central Station was reached successfully and communication was established using the IR Fast format. The Concept 2000 did not receive any instructions from the Central Station receiver after waiting on-line for 30 seconds and hung up. Check that the Comms Link pins next to the Control Board UART have not been cut or that a UART interface has not been temporarily removed.

Hang-up error = 32

This error indicates that the Central Station was reached successfully and communication was established using the IR Fast format. The Concept 2000 received too many characters from the Central Station to process. This may possibly be caused by excessive line noise and will usually correct itself on the next attempt.

Hang-up error = 33

This error indicates that the Central Station was reached successfully and communication was established using the IR Fast format. The Concept 2000, during its communication session, lost carrier from the Central Station for a period exceeding 4 seconds. This may be caused by the telephone line being cut, the exchange dropping out or the Central Station not hanging up its modem and terminating the communication session correctly.

Communication Hang Up Errors cont...

Hang-up error = 34

This error indicates that the Central Station was reached successfully and communication was established using the IR Fast format. The Concept 2000 then detected a possible internal hardware fault preventing any transmission. This fault should be reported to Inner Range immediately.

Hang-up error = 35

This error indicates that the Central Station was reached successfully and communication was established using the IR Fast format. The Concept 2000 then detected a possible internal software error preventing the correct interpretation of Central Station commands. This fault should be reported to Inner Range immediately.

Hang-up error = 38

This error indicates that the Concept 2000 has established a communication session after answering the telephone on an incoming call or after it has dialled the "Ringback number". A valid pass-code was not entered successfully within 3 attempts.

Hang-up error = 39

This error indicates that the Concept 2000 has established a communication session after answering the telephone on an incoming call or after it has dialled the "Ringback number". A valid pass-code was not entered within 30 seconds of establishing the session.

Hang-up error = 3E

This error indicates that the Central Station was reached successfully and communication was established using the Ademco Ext. Fast format. The Concept 2000 received the correct initial handshake but has not received acknowledgement to alarm data that has been transmitted. This could be caused by the telephone line being cut during the transmission of alarm data.

Hang-up error = 40

This error indicates that the Concept 2000 has answered the telephone line on an incoming call but has not detected a legal modem tone. This can be caused by any other party calling the Concept 2000 without the use of a modem.

Hang-up error = 41

This error indicates that successful communications have been established with the Central Station but the length of on-line time for the phone call has exceeded 10 minutes.

Hang-up error = \$1A

This error indicates that the Concept 2000 was programmed to use the I.E.I. Fast format without the necessary software version number installed. Check the selection of the format required or update the Programme I.C. with the correct software version number.

Tables

Area Attribute Defaults

The following table lists the Area default settings applied when Area Default Numbers are used for initial programming.

Area Attribute Default Table	User Area			Area #0			Area #9		
	1	2	3	1	2	3	1	2	3
Area Name (Area 1 shown only)	USER AREA 1			TAMPER AREA			SYSTEM AREA		
Siren Time (minutes)	10			10			10		
Exit Delay (seconds)	60			Not applicable			Not applicable		
Entry Delay (seconds)	30			Not applicable			Not applicable		
Siren Cards	1			1			1		
Siren Mode	11			11			11		
Delay Auxiliary	00			Not applicable			Not applicable		
Siren Auxiliary	00			00			00		
Alarm Auxiliary	00			00			00		
Tamper Auxiliary	Not applicable			00			Not applicable		
Close Auxiliary	00			00			00		
Primary Zones	00,00,00,00,00			Not applicable			Not applicable		
Sub-Area	0			Not applicable			Not applicable		
Zone/Input to Program	01			01			001		

Area Default Number #0 is not listed as this default will clear all attributes and Zone Control Flags except for the Area Name if it has been programmed.



Remember to turn the Area Off after any programming changes have been made.

Any programming changes will not be applied until the Area is turned Off and then back On.

Zone Control Flag Defaults

The following tables list the default settings applied to the Area Zone Control Flags when Area Default Numbers are used for initial programming.

USER AREAS		Area Default #1							Area Default #2							Area Default #3						
Zone Control Flags ->		A	C	R	S	X	M	E	A	C	R	S	X	M	E	A	C	R	S	X	M	E
01	Zone 01	Y			Y	Y	Y		Y	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y	
02	Zone 02	Y			Y	Y	Y		Y	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y	
03	Zone 03	Y			Y	Y	Y		Y	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y	
The default name of "Zone ##" is applied to all configured Zones from 01 through 96.																						
96	Zone 96	Y			Y	Y	Y		Y	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y	

TAMPER AREA		Area Default #1						Area Default #2						Area Default #3								
Zone Control Flags ->		A	T	C	R	S	X	M	A	T	C	R	S	X	M	A	T	C	R	S	X	M
01	Zone 01		Y			Y	Y	Y		Y	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y
02	Zone 02		Y			Y	Y	Y		Y	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y
03	Zone 03		Y			Y	Y	Y		Y	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y
The default name of "Zone ##" is applied to all configured Zones from 01 through 96.																						
96	Zone 96		Y			Y	Y	Y		Y	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y

It can be seen from the two tables above that the defaults applied to the User Areas and the Tamper Area are identical except for slight differences in the Zone Control Flags.

Area Default Number #0 is not listed as this default will clear all attributes and Zone Control Flags except for the Area Name if it has been programmed.

The main differences in using the Area Default Numbers occur in Area #9 and are detailed in the following table.

Zone Control Flag Defaults cont...

Default Zone Control Flag Table for Area #9.

	SYSTEM AREA	Area Default #1						Area Default #2						Area Default #3					
		A	C	R	S	X	M	A	C	R	S	X	M	A	C	R	S	X	M
	Zone Control Flags ->																		
001	Control Cabinet Tamper	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y
002	Control Internal Siren Tamper (S1)	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y
003	Control External Siren Tamper (S2)	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y
004	Control A.C. Mains Failure	Y				Y	Y					Y	Y						Y
005	Control Low Battery	Y				Y	Y	Y	Y			Y	Y						Y
006	Control LAN Fuse Failure	Y				Y	Y	Y	Y			Y	Y						Y
007	Control Detector Fuse Failure	Y				Y	Y	Y	Y			Y	Y						Y
008	Control LAN Failure																		
009	Terminal 1 Cabinet Tamper	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y
010	Terminal 1 Keypad Duress	Y						Y	Y					Y					
011	Terminal 1 Code Attempts	Y				Y	Y	Y				Y	Y						Y
012	Terminal 1 Deadman Timeout	Y				Y	Y	Y				Y	Y						Y
013	Terminal 1 Reader Tamper	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y
014	Terminal 1 Spare																		
015	Terminal 1 Spare																		
016	Terminal 1 LAN Failure	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y
017	Terminal 2 Cabinet Tamper	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y
018	Terminal 2 Keypad Duress	Y						Y	Y					Y					
019	Terminal 2 Code Attempts	Y				Y	Y	Y				Y	Y						Y
020	Terminal 2 Deadman Timeout	Y				Y	Y	Y				Y	Y						Y
021	Terminal 2 Reader Tamper	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y
022	Terminal 2 Spare																		
023	Terminal 2 Spare																		
024	Terminal 2 LAN Failure	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y

Zone Control Flag Defaults cont...

Default Zone Control Flag Table for Area #9 continued.

	SYSTEM AREA	Area Default #1						Area Default #2						Area Default #3					
		A	C	H	S	X	M	A	C	R	S	X	M	A	C	H	S	X	M
025	Terminal 3 Cabinet Tamper	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y
026	Terminal 3 Keypad Duress	Y						Y	Y					Y					
027	Terminal 3 Code Attempts	Y					Y	Y	Y				Y	Y					Y
028	Terminal 3 Deadman Timeout	Y					Y	Y	Y				Y	Y					Y
029	Terminal 3 Reader Tamper	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y
030	Terminal 3 Spare																		
031	Terminal 3 Spare																		
032	Terminal 3 LAN Failure	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y
033	Terminal 4 Cabinet Tamper	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y
034	Terminal 4 Keypad Duress	Y						Y	Y					Y					
035	Terminal 4 Code Attempts	Y					Y	Y	Y				Y	Y					Y
036	Terminal 4 Deadman Timeout	Y					Y	Y	Y				Y	Y					Y
037	Terminal 4 Reader Tamper	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y
038	Terminal 4 Spare																		
039	Terminal 4 Spare																		
040	Terminal 4 LAN Failure	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y
041	Terminal 5 Cabinet Tamper	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y
042	Terminal 5 Keypad Duress	Y						Y	Y					Y					
043	Terminal 5 Code Attempts	Y					Y	Y	Y				Y	Y					Y
044	Terminal 5 Deadman Timeout	Y					Y	Y	Y				Y	Y					Y
045	Terminal 5 Reader Tamper	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y
046	Terminal 5 Spare																		
047	Terminal 5 Spare																		
048	Terminal 5 LAN Failure	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y

Zone Control Flag Defaults cont...

Default Zone Control Flag Table for Area #9 continued.

	SYSTEM AREA	Area Default #1						Area Default #2						Area Default #3					
		A	C	R	S	X	M	A	C	R	S	X	M	A	C	R	S	X	M
049	Terminal 6 Cabinet Tamper	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y
050	Terminal 6 Keypad Duress	Y						Y	Y					Y					
051	Terminal 6 Code Attempts	Y					Y	Y	Y				Y	Y					Y
052	Terminal 6 Deadman Timeout	Y					Y	Y	Y				Y	Y					Y
053	Terminal 6 Reader Tamper	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y
054	Terminal 6 Spare																		
055	Terminal 6 Spare																		
056	Terminal 6 LAN Failure	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y
057	Terminal 7 Cabinet Tamper	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y
058	Terminal 7 Keypad Duress	Y						Y	Y					Y					
059	Terminal 7 Code Attempts	Y					Y	Y	Y				Y	Y					Y
060	Terminal 7 Deadman Timeout	Y					Y	Y	Y				Y	Y					Y
061	Terminal 7 Reader Tamper	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y
062	Terminal 7 Spare																		
063	Terminal 7 Spare																		
064	Terminal 7 LAN Failure	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y
065	Terminal 8 Cabinet Tamper	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y
066	Terminal 8 Keypad Duress	Y						Y	Y					Y					
067	Terminal 8 Code Attempts	Y					Y	Y	Y				Y	Y					Y
068	Terminal 8 Deadman Timeout	Y					Y	Y	Y				Y	Y					Y
069	Terminal 8 Reader Tamper	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y
070	Terminal 8 Spare																		
071	Terminal 8 Spare																		
072	Terminal 8 LAN Failure	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y

Zone Control Flag Defaults cont...

Default Zone Control Flag Table for Area #9 continued.

	SYSTEM AREA	Area Default #1						Area Default #2						Area Default #3					
		A	C	R	S	X	M	A	C	R	S	X	M	A	C	R	S	X	M
073	Zone Exp. 1 Cabinet Tamper	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y
074	Zone Exp. 1 Int. Siren Tamper (S1)	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y
075	Zone Exp. 1 Ext. Siren Tamper (S2)	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y
076	Zone Exp. 1 A.C. Mains Failure	Y					Y	Y					Y	Y					Y
077	Zone Exp. 1 Low Battery	Y					Y	Y	Y	Y			Y	Y					Y
078	Zone Exp. 1 LAN Fuse Failure	Y					Y	Y	Y	Y			Y	Y					Y
079	Zone Exp. 1 Detector Fuse Failure	Y					Y	Y	Y	Y			Y	Y					Y
080	Zone Exp. 1 LAN Failure	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y
081	Zone Exp. 2 Cabinet Tamper	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y
082	Zone Exp. 2 Int. Siren Tamper (S1)	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y
083	Zone Exp. 2 Ext. Siren Tamper (S2)	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y
084	Zone Exp. 2 A.C. Mains Failure	Y					Y	Y					Y	Y					Y
085	Zone Exp. 2 Low Battery	Y					Y	Y	Y	Y			Y	Y					Y
086	Zone Exp. 2 LAN Fuse Failure	Y					Y	Y	Y	Y			Y	Y					Y
087	Zone Exp. 2 Detector Fuse Failure	Y					Y	Y	Y	Y			Y	Y					Y
088	Zone Exp. 2 LAN Failure	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y
089	Zone Exp. 3 Cabinet Tamper	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y
090	Zone Exp. 3 Int. Siren Tamper (S1)	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y
091	Zone Exp. 3 Ext. Siren Tamper (S2)	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y
092	Zone Exp. 3 A.C. Mains Failure	Y					Y	Y					Y	Y					Y
093	Zone Exp. 3 Low Battery	Y					Y	Y	Y	Y			Y	Y					Y
094	Zone Exp. 3 LAN Fuse Failure	Y					Y	Y	Y	Y			Y	Y					Y
095	Zone Exp. 3 Detector Fuse Failure	Y					Y	Y	Y	Y			Y	Y					Y
096	Zone Exp. 3 LAN Failure	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y

Zone Control Flag Defaults cont...

Default Zone Control Flag Table for Area #9 continued.

	SYSTEM AREA	Area Default #1						Area Default #2						Area Default #3					
		A	C	R	S	X	M	A	C	R	S	X	M	A	C	R	S	X	M
097	Zone Exp. 4 Cabinet Tamper	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y
098	Zone Exp. 4 Int. Siren Tamper (S1)	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y
099	Zone Exp. 4 Ext. Siren Tamper (S2)	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y
100	Zone Exp. 4 A.C. Mains Failure	Y					Y	Y					Y	Y					Y
101	Zone Exp. 4 Low Battery	Y					Y	Y	Y	Y			Y	Y					Y
102	Zone Exp. 4 LAN Fuse Failure	Y					Y	Y	Y	Y			Y	Y					Y
103	Zone Exp. 4 Detector Fuse Failure	Y					Y	Y	Y	Y			Y	Y					Y
104	Zone Exp. 4 LAN Failure	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y
105	Zone Exp. 5 Cabinet Tamper	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y
106	Zone Exp. 5 Int. Siren Tamper (S1)	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y
107	Zone Exp. 5 Ext. Siren Tamper (S2)	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y
108	Zone Exp. 5 A.C. Mains Failure	Y					Y	Y					Y	Y					Y
109	Zone Exp. 5 Low Battery	Y					Y	Y	Y	Y			Y	Y					Y
110	Zone Exp. 5 LAN Fuse Failure	Y					Y	Y	Y	Y			Y	Y					Y
111	Zone Exp. 5 Detector Fuse Failure	Y					Y	Y	Y	Y			Y	Y					Y
112	Zone Exp. 5 LAN Failure	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y
113	Spare Card																		
114	Spare Card																		
115	Spare Card																		
116	Spare Card																		
117	Spare Card																		
118	Spare Card																		
119	Spare Card																		
120	Spare Card																		

Zone Control Flag Defaults cont...

Default Zone Control Flag Table for Area #9 continued.

	SYSTEM AREA	Area Default #1						Area Default #2						Area Default #3					
		A	C	R	S	X	M	A	C	R	S	X	M	A	C	R	S	X	M
121	Lap Top Interface																		
122	Lap Top Interface																		
123	Lap Top Interface																		
124	Lap Top Interface																		
125	Lap Top Interface																		
126	Lap Top Interface																		
127	Lap Top Interface																		
128	Lap Top Interface																		
129	General Duress													Y	Y				
130	General Code Attempts													Y	Y				
131	General Deadman Timeout													Y	Y				
132	General Cabinet Tamper													Y	Y	Y			
133	General Siren Tamper													Y	Y	Y			
134	General Fuse Failure													Y	Y	Y			
135	General Not Defined													Y	Y				
136	General Isolate													Y	Y				
137	General A.C. Mains Failure																		
138	General Low Battery													Y	Y	Y			
139	General Options Change	Y						Y						Y					
140	General System Reset																		
141	General LAN Failure													Y	Y	Y			
142	General Communications Backup							Y	Y		Y	Y	Y	Y	Y		Y	Y	Y
143	General UART Problems																		
144	General Zone Self-Test Failure	Y					Y	Y	Y				Y	Y	Y				Y

Zone Control Flag Defaults cont...

Default Zone Control Flag Table for Area #9 continued.

	SYSTEM AREA	Area Default #1						Area Default #2						Area Default #3					
		A	C	R	S	X	M	A	C	R	S	X	M	A	C	R	S	X	M
145	General Time Report							Y	Y					Y	Y				
146	General Manual Comms Test							Y	Y					Y	Y				
147	General Battery Test Failure	Y					Y	Y	Y	Y			Y	Y					Y
148	General Communications Attempts	Y					Y	Y			Y	Y	Y	Y			Y	Y	Y
149	General Battery Update							Y					Y	Y					Y
150	All Area Open/Close																		
151	Area #0 Open/Close							Y	Y	Y									
152	Area #1 Open/Close							Y	Y	Y									
153	Area #2 Open/Close																		
154	Area #3 Open/Close																		
155	Area #4 Open/Close																		
156	Area #5 Open/Close																		
157	Area #6 Open/Close																		
158	Area #7 Open/Close																		
159	Area #8 Open/Close																		
160	Area #9 Open/Close							Y	Y	Y									

Securitel Serial - Zone/Input Assignments

The following table provide the implementation details of the **Securitel Protocol Agreement - STANDARD** (Identifier byte 80h) for all Zone/Input messages.

Concept 2000 Message		Securitel Serial Point Number	Event Category
Zone 01	alarm	01	\$06
	alarm restore	01	\$08
	isolate	01	\$16
	isolate restore	01	\$18
	tamper	01	\$0E
	tamper restore	01	\$10
Zone 02	alarm	02	\$06
Zones 01-96 directly correspond to Securitel Inputs 01-96.			
Zone 96	alarm	96	\$06
	alarm restore	96	\$08
	isolate	96	\$16
	isolate restore	96	\$18
	tamper	96	\$0E
	tamper restore	96	\$10
Input 001 commences at Securitel Input 97.			
Input 001	alarm	97	\$06
	alarm restore	97	\$08
	isolate	97	\$16
	isolate restore	97	\$18
	tamper	97	\$0E
	tamper restore	97	\$10
Inputs 001-149 directly correspond to Securitel Inputs 97-245			
Input 149	tamper	245	\$0E
	tamper restore	245	\$10

Securitel Serial - Area Assignments

The following table provide the implementation details of the **Securitel Protocol Agreement - STANDARD** (Identifier byte 80h) for all Area Input messages.

Concept 2000 Message		Securitel Serial Point Number	Event Category Opening	Event Category Closing
Input 150	General Open/Close	User #	\$31	\$51
Input 151	Area 0 Open/Close	User #	\$32	\$52
Input 152	Area 1 Open/Close	User #	\$33	\$53
Input 153	Area 2 Open/Close	User #	\$34	\$54
Input 154	Area 3 Open/Close	User #	\$35	\$55
Input 155	Area 4 Open/Close	User #	\$36	\$56
Input 156	Area 5 Open/Close	User #	\$37	\$57
Input 157	Area 6 Open/Close	User #	\$38	\$58
Input 158	Area 7 Open/Close	User #	\$39	\$59
Input 159	Area 8 Open/Close	User #	\$3A	\$5A
Input 160	Area 9 Open/Close	User #	\$3B	\$5B

The Event Category for the Opening and Closing reports are sent with the associated User number where possible.

Concept 2000 User numbers **000 - 253** are sent as **User #001 - #254**.

Concept 2000 User numbers **254 - 511** are sent as **User #255**.

Securitel Serial Data only allows individual identification of 256 User numbers from 00 to FF hex which is 00 to 255 decimal.

Securitel PIN Data - Assignments

The following table provides the implementation details of the Concept 2000's Zones and Inputs when using Securitel PIN Data.

Concept 2000 Alarm Messages		Securitel PIN Number
Zones	01,09,17,25,33,41,49,57,65,73,81,89	01
Zones	02,10,18,26,34,42,50,58,66,74,82,90	02
Zones	03,11,19,27,35,43,51,59,67,75,83,91	03
Zones	04,12,20,28,36,44,52,60,68,76,84,92	04
Zones	05,13,21,29,37,45,53,61,69,77,85,93	05
Zones	06,14,22,30,38,46,54,62,70,78,86,94	06
Zones	07,15,23,31,39,47,55,63,71,79,87,95	07
Zones	08,16,24,32,40,48,56,64,72,80,88,96	08
Area Open/Close	(Inputs 150-160)	09
General Duress	(Input 129)	10
General Code Attempts	(Input 130)	11
Tamperers	(All Tamper Alarms)	12
General A.C. Fail	(Input 137)	13
Low Battery	(Input 138)	14
Control Panel Failure	(SIU generated alarm)	15

All Zone Numbers are mapped to the Securitel PINS according to the above table.

When the option "**Swap Pins 8 & 9**" is programmed to "Y" then the Area Open/Close will be sent on PIN #8 and the above listed PIN #8 Zone Numbers will be sent as PIN #9.

Zone Isolations are not sent when using Securitel PIN Data.

Securitel PIN Data - Miscellaneous Assignments

The following table provides the implementation details of other Concept 2000 Inputs when using Securitel PIN Data.

Input	Concept 2000 Input Description	Securitel PIN Number
129	General Duress	10
130	General Code Attempts	11
131	General Deadman Timeout	Not Reported
132	General Cabinet Tamper	12
133	General Siren Tamper	12
134	General Fuse Failure	Not Reported
135	General Not Defined	Not Reported
136	General Isolate	Not Reported
137	General A.C. Mains Failure	13
138	General Low Battery	14
139	General Options Change	Serial Only
140	General Reset	Not Reported
141	General LAN Failure	12
142	General Communications Backup	Serial Only
143	General UART Problems	Serial Only
144	General Zone Self-Test Failure	Serial Only
145	General Report Timer	Serial Only
146	General Manual Communications Test	Serial Only
147	General Battery Test Failure	Serial Only
148	General Communications Attempts	Serial Only
149	General Battery Update	Serial Only

Concept 2000 Input Numbers 001 to 128 may only be reported when using the Securitel Serial Data channel.

Auxiliary Assignments

Concept 2000 valid auxiliary numbers are 01-96 even though they may not appear as physical outputs on the hardware configuration installed.

Auxiliary number 00 is generally used to disable features or represents the non-selection of an auxiliary output.

Aux No.	System Module Location	Aux No.	System Module Location	Aux No.	System Module Location	Aux No.	System Module Location
01	Term #1 - Ax1	25	Zone Exp#1-Ax1	49	Zone Exp#4-Ax1	73	
02	Term #2 - Ax1	26	Zone Exp#1-Ax2	50	Zone Exp#4-Ax2	74	
03	Term #3 - Ax1	27	Zone Exp#1-Ax3	51	Zone Exp#4-Ax3	75	
04	Term #4 - Ax1	28	Zone Exp#1-Ax4	52	Zone Exp#4-Ax4	76	
05	Term #5 - Ax1	29	Zone Exp#1-Ax5	53	Zone Exp#4-Ax5	77	
06	Term #6 - Ax1	30	Zone Exp#1-Ax6	54	Zone Exp#4-Ax6	78	
07	Term #7 - Ax1	31	Zone Exp#1-Ax7	55	Zone Exp#4-Ax7	79	
08	Term #8 - Ax1	32	Zone Exp#1-Ax8	56	Zone Exp#4-Ax8	80	
09	Term #1 - Ax2	33	Zone Exp#2-Ax1	57	Zone Exp#5-Ax1	81	
10	Term #2 - Ax2	34	Zone Exp#2-Ax2	58	Zone Exp#5-Ax2	82	
11	Term #3 - Ax2	35	Zone Exp#2-Ax3	59	Zone Exp#5-Ax3	83	
12	Term #4 - Ax2	36	Zone Exp#2-Ax4	60	Zone Exp#5-Ax4	84	
13	Term #5 - Ax2	37	Zone Exp#2-Ax5	61	Zone Exp#5-Ax5	85	
14	Term #6 - Ax2	38	Zone Exp#2-Ax6	62	Zone Exp#5-Ax6	86	
15	Term #7 - Ax2	39	Zone Exp#2-Ax7	63	Zone Exp#5-Ax7	87	
16	Term #8 - Ax2	40	Zone Exp#2-Ax8	64	Zone Exp#5-Ax8	88	
17	Control Mod-Ax1	41	Zone Exp#3-Ax1	65	Aux Exp - Ax9	89	
18	Control Mod-Ax2	42	Zone Exp#3-Ax2	66	Aux Exp - Ax10	90	
19	Aux Exp - Ax3	43	Zone Exp#3-Ax3	67		91	
20	Aux Exp - Ax4	44	Zone Exp#3-Ax4	68		92	
21	Aux Exp - Ax5	45	Zone Exp#3-Ax5	69		93	
22	Aux Exp - Ax6	46	Zone Exp#3-Ax6	70		94	
23	Aux Exp - Ax7	47	Zone Exp#3-Ax7	71		95	
24	Aux Exp - Ax8	48	Zone Exp#3-Ax8	72		96	

User Number Defaults

Concept 2000 supports ninety-six (96) User numbers available to the customer with its standard memory configuration.

The User numbers are defaulted as follows:-

User Number	Default User Code	Default Name	Default Assignment
00	00	User 00	Master User
01	01	User 01	Installer
02	02	User 02	User ID #02
03	03	User 03	User ID #03
04	04	User 04	User ID #04
05	05	User 05	User ID #05
06	06	User 06	User ID #06
07	07	User 07	User ID #07
08	08	User 08	User ID #08
09	09	User 09	User ID #09
10	10	User 10	User ID #10
11	11	User 11	User ID #11
12	12	User 12	User ID #12
13	13	User 13	User ID #13
14	14	User 14	User ID #14
15	15	User 15	User ID #15
16-95	None	None	User ID #16 - #95
96	Reserved	Day Timer	User ID #96
97	Reserved	Keyswitch	User ID #97
98	Reserved	System Reset	User ID #98
99	Reserved	C/Room	User ID #99

By installing the Expanded Memory option, User numbers may be increased to 512.

100 - 127	Reserved for future use	User ID #100 - #127
128 - 512	None	User ID #128 - #512

Ademco Ext. Fast Mapping

When Concept 2000 is programmed to report using the Ademco Ext. Fast format, the Zones, Inputs and User Codes have to be mapped down to suit this style of transmission. This mapping has been pre-defined to help prevent confusion.

ALARM messages are sent with the 9th channel set to #7 - normal.

Alarm messages - Ademco 9th Channel = 7		Ademco Channel Number
Zones	01,09,17,25,33,41,49,57,65,73,81,89	01
Zones	02,10,18,26,34,42,50,58,66,74,82,90	02
Zones	03,11,19,27,35,43,51,59,67,75,83,91	03
Zones	04,12,20,28,36,44,52,60,68,76,84,92	04
Zones	05,13,21,29,37,45,53,61,69,77,85,93	05
Zones	06,14,22,30,38,46,54,62,70,78,86,94	06
Zones	07,15,23,31,39,47,55,63,71,79,87,95	07
Zones	08,16,24,32,40,48,56,64,72,80,88,96	08

ZONE BYPASS messages are sent with the 9th channel set to #3 - bypass.

Zone Bypass messages - Ademco 9th Channel = 3		Ademco Channel Number
Zones	01,09,17,25,33,41,49,57,65,73,81,89	01
Zones	02,10,18,26,34,42,50,58,66,74,82,90	02
Zones	03,11,19,27,35,43,51,59,67,75,83,91	03
Zones	04,12,20,28,36,44,52,60,68,76,84,92	04
Zones	05,13,21,29,37,45,53,61,69,77,85,93	05
Zones	06,14,22,30,38,46,54,62,70,78,86,94	06
Zones	07,15,23,31,39,47,55,63,71,79,87,95	07
Zones	08,16,24,32,40,48,56,64,72,80,88,96	08

Ademco Ext. Fast Mapping cont...

The following Area #9 Inputs are sent using a Duress report.

DURESS messages are sent with the 9th channel set to #1 - duress.

Duress messages - Ademco 9th Channel = 1		Ademco Channel Number
Input 129	General Duress	01
Input 130	General Code Attempts	02
Input 131	General Deadman Timeout	03
Input 132	General Cabinet Tamper	04
Input 133	General Siren Tamper	05
Input 134	General Fuse Failure	06
Input 135	General Not Defined	07
Input 136	General isolate	08

The following Area #9 Inputs are sent using a Duress report.

SYSTEM TROUBLE messages are sent with the 9th channel set to #6 - trouble

System Trouble messages - Ademco 9th Channel = 6		Ademco Channel Number
Input 137	General A.C. Failure	01
Input 138	General Low Battery	02
Input 139	General Options Change	03
Input 140	General System Reset	04
Input 141	General LAN Failure	05
Input 142	General Comms Backup	06
Input 143	General UART Problems	07
Input 144	General Zone Self-Test Failure	08

Ademco Ext. Fast mapping cont...

OPENING reports identify the User number in channel #1.

All other channels, including channel #9, set to #2.

CLOSING reports identify the User number in channel #1.

All other channels, including channel #9, set to #4.

User numbers - Identified in Ademco channel #1			Ademco Channel #1
User number	00	Master User	B
User number	01	Installer	C
User number	02,12,22,32,42,52,62,72,82,92		0
User number	03,13,23,33,43,53,63,73,83,93		1
User number	04,14,24,34,44,54,64,74,84,94		2
User number	05,15,25,35,45,55,65,75,85,95		3
User number	06,16,26,36,46,56,66,76,86		4
User number	07,17,27,37,47,57,67,77,87		5
User number	08,18,28,38,48,58,68,78,88		6
User number	09,19,29,39,49,59,69,79,89		7
User number	10,20,30,40,50,60,70,80,90		8
User number	11,21,31,41,51,61,71,81,91		9
User number	97	Keyswitch Zone	D
User number	98	System Reset	E
User number	99	Control Room	F

Ademco Ext. Fast can only report one Area for open/close. Only one of the Area #9 Inputs, 151-160 should be selected or, alternatively, the General Open/Close Input #150.

TEST REPORT messages are sent with the 9th channel set to #8.

All other channels are set to #5.

Test Reports will be sent if Area #9 Inputs #145 or #146 are alarmed.

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