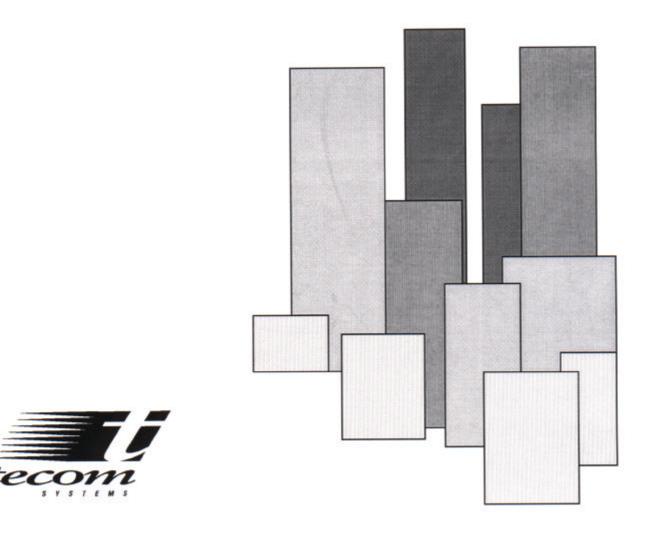
The Challenger

Version 6 User Guide



| Installation Company | | | | |
|----------------------|--|--|--|--|
| Name: | | | | |
| Telephone: | | | | |
| Fascimile: | | | | |
| Contact: | | | | |
| | | | | |
| Monitoring Company | | | | |
| Name: | | | | |
| Telephone: | | | | |
| Fascimile: | | | | |
| Contact: | | | | |

The Challenger is Designed and Manufactured by:

Tecom Systems Pty. Ltd A.C.N. 005 523 562 8/36 New Street Ringwood 3134 Victoria Australia Telephone: 03 9879 6422 Facsimile: 03 9879 4774

CONTENTS

Function included in your system Glossary4 Liquid Crystal Display 6 Keypad 6 Indicator Lights 7 Using a PIN 8 YES/NO How to activate the Duress Facility9 YES/NO How to arm your system YES/NO With TOGGLE option14 YES/NO How to disarm your system With OFF/ON option17 YES/NO YES/NO YES/NO How to acknowledge a Local Alarm 22 How to reset an alarm25

CONTENTS

Function included in your system

| | ow to display menu options | | |
|-------------------|---------------------------------------|-----------------------------|----------------------|
| | w to exit a menu option | | |
| Menu Options: | | | |
| | nel Status | 29 | YES/NO |
| 2 Int | outs Unsealed | 30 | YES/NO |
| 3 In | outs in Alarm | 31 | YES/NO |
| | outs Isolated | | YES/NO |
| 5 Hi | story | 33 | YES/NO |
| 6 Te | st Report | 34 | YES/NO |
| | al For Service | | YES/NO |
| 8 Fil | m Counters | 37 | YES/NO |
| 9 Inj | out Text | 38 | YES/NO |
| | plate | | YES/NO |
| 11 De | -Isolate | 40 | YES/NO |
| 12 Te | st Input | 41 | YES/NO |
| | art Auto Access Test | | YES/NO |
| 14 Pro | ogram Users | 43 | YES/NO |
| | me and Date | | YES/NO |
| 16 Do | oor Data | 51 | YES/NO |
| | able/Disable Service Tech | | |
| | eset Cameras | 52 | YES/NO |
| 19 Ins | | | |
| 20 Do | oor and Lift Groups | 53 | YES/NO |
| | oliday | | YES/NO |
| 22 O _I | pen Door | Not des | cribed in this guide |
| 23 Ur | nlock, Lock, Disable and Enable Doors | Not described in this guide | |
| | int History | | YES/NO |
| | | | |
| User Record | | 57 | |

THE CHALLENGER

The Challenger panel combines sophisticated design with versatility. It is easy to use and this, together with it's many other features, makes The Challenger the leader in it's field.

The Challenger can be programmed to function in a number of different ways. The way that your system functions depends on the requirements of your organization and on the way those requirements have been achieved via the programming.

The User Guide provides details of all the procedure variations, including the different responses from *The Challenger*. It should be noted however, that the procedures and *Challenger* responses will be consistent throughout one system. For example, if a list is presented in a particular way in one function, it will be presented in the same way in all other functions.

The terminology used to describe the various parts of your building or security system has been programmed specifically for your organization. Your system may not however have all the features detailed in this guide, or it may incorporate additional features which are detailed separately in the user guides for that equipment.

It should be remembered that some of your system features may not be authorized to all users and will therefore not be available to all.

It is important that you regularly test your system to ensure that all equipment is operating correctly.

GLOSSARY

ACCESS CONTROL : The control of entry to, or exit from a security area.

ACCESS : The condition of an area or building when it is occupied and when the security system

has been set so that normal activity does not set off an alarm.

ALARM : The state of a security system when an armed input device is activated. eg. A door lock

is broken causing a siren to sound. The alarm signal (siren, flashing light etc.) and the

circumstances which cause it, will depend on the system programming.

AREA : A section of a building which has specific security requirements. The Challenger allows

a building to be divided into 16 areas of differing security requirements. Each area is identified by a number and name. eg. 1. Office, 2. Workshop, 3. Boardroom etc.

ARMED : The condition of an input, an area or a building, when a change in the status of any input

(from sealed to unsealed) will cause an alarm.

An area or building is only armed when it is unoccupied. Some inputs may remain armed

continually.

ARMING STATION : A device which is the user's control panel for security functions for an area(s) or for

access points (doors).

The arming station may be a Challenger console, or any other device which can be used

to perform security functions such as arm/disarm, open doors etc.

CURSOR : A flashing underline character on the liquid crystal display which indicates where the

next character entered on the keypad, will appear.

DGP : (Data Gathering Panel) A device which collects data from other security devices within

an area, and transfers it to the main control panel.

DURESS : A situation where a user is being forced to breach the system security (eg. forced at

gunpoint to open a door).

The Challenger Duress Facility allows a signal to be activated (eg. notification to a security station) by a user. This is done by entering on a keypad, a duress digit in

conjunction with a PIN.

INPUT : An electrical signal from a security device (Input Device) to *The Challenger* system.

Each input device is identified by a number and text. eg. Reception Hold Up Button,

6. Fire Door.

ISOLATE : See Sealed/Unsealed/Isolated.

LCD : (Liquid Crystal Display) The part of an arming station where messages or programming

input are displayed.

LED : (Light Emitting Diode) A light indicator, on an arming station, which conveys a

condition. eg. Area in Alarm, communications fault etc.

LOCAL ALARM : An alarm which is transmitted only within a building, and occurs when an area is

occupied.

The circumstances which cause a local alarm can be checked and rectified by personnel on site and it is therefore unnecessary for the alarm to be relayed to a remote monitoring

station.

GLOSSARY

SECURE

ON-LINE / OFF-LINE : Operational/ Not Operational.

A device may be off-line due to a malfunction in the device itself or a disconnection

from the control.

: A 4-10 digit number given to, or selected by a user. It is necessary to enter a PIN on PIN

The Challenger keypad as a pre-requisite to performing most Challenger functions. In The Challenger programming, the PIN is associated with a user number which

identifies the PIN holder to the system.

: An installation which monitors whether an alarm has occurred in a security system. A REMOTE MONITORING

remote monitoring station is located away from the building/area it monitors.

: Describes the condition of an input device. **SEALED**

The input device is NOT activated. eg. door closed. Sealed

Unsealed: The input device is activated. eg. door open.

Isolated: The input device has been inhibited from indicating sealed or unsealed

: The condition of an area or building when it is armed (security turned on) and

status. It is excluded from functioning as part of the system.

unoccupied.

: A situation where an arming station or associated wiring are tampered with, or **TAMPER**

accidentally damaged.

UNSEALED The Challenger Tamper Facility activates a signal (eg. flashing light) when Tamper **ISOLATED**

occurs.

: See Sealed/Unsealed/Isolated. **UNSEALED**

: A number which is associated with a user's PIN or card to identify the user to The USER NUMBER

Challenger.

THE CHALLENGER CONSOLE

The Indicator Lights

There are a number of red indicator lights (or LEDs) on the Challenger console.

These lights, together with the information shown on the display, allow you to determine the system status at a glance. Not all indicator lights are available on all arming stations.

Area Lights:

The area lights, one for each of the possible security areas, indicate the status of the particular area.

Light ON : Indicates that the area is unoccupied and armed.

Light OFF : Indicates that the area is occupied and the security system has been set to allow normal

access.

Light FLASHING : Indicates that an alarm has occurred in the area.

System Alarm Lights:

The system alarm lights indicate a breach of security. One of the system alarm lights will flash when an alarm has occurred. (An areas armed light will also flash to indicate the location of the alarm).

ACCESS Alarm light : Will flash when an alarm has occurred in an area which is occupied and the

security system has been set to allow normal access.

CAROLINE Alarm light: Will flash when an alarm has occurred in an area which is occupied and the

security system has been set to allow normal access.

24 HOUR Alarm light: Will flash when an alarm has occurred in an area where an input device has been

programmed for 24 hour monitoring.

SECURE Alarm light : Will flash when an alarm has occurred in an area which is unoccupied and

armed.

TAMPER Alarm light: Will flash when an alarm has occurred due to tamper.

System Faults:

Any system faults will be displaced on the arming station consoles.

Comms Fail : Will display if there is a failure in the communications between The Challenger and a

remote monitoring station.

RAS Fail : Will display if a remote arming station is off-line.

DGP Fail : Will display if an access controller or data gathering panel is off-line.

Battery Fail : Will display if the auxiliary battery power is found to be low on cutover to battery after

mains power is lost.

USER IDENTIFICATION

As a user, you are identified by a Personal Identification Number (PIN).

The PIN is a 4 to 10 digit number given to, or selected by a user. It can be any combination of numbers between 0 and 9.

In The Challenger programming, your PIN is associated with a user number which identifies you to The Challenger.

When a PIN is used, the programming ensures that the only functions performed will be those authorized to the specific PIN holder. This is achieved by a feature which groups functions together to create *alarm groups*.

There are many alarm group and each one is allotted a specific set of functions. Your PIN is then assigned an alarm group and will therefore perform only the functions of that alarm group.

Also, time zones are allotted to each alarm group. this means that the functions of an alarm group can be further controlled by the time.

The Challenger can therefore be programmed so that a PIN may be used to perform any function or combination of functions during any time period.

- eg. An alarm group for Managers may allow access to all Challenger user operations at all times.
 - An alarm group for a night shift worker may allow a PIN to be used only to open a door between 11pm and 7am.

Using a PIN:

When you enter your PIN on The Challenger keypad, each key pressed will be indicated by * on the display.

Input of an incorrect code, or a code which is not valid at the particular arming station, will result in 7 quick beeps from the console.

See Also: Programming Users - Menu Option 14

DURESS

A duress facility is available on The Challenger but will operate only if your system has been programmed to use it.

The duress facility is a device which will activate a silent signal to security personnel.

If you are asked, under threat, to breach your system security (eg. being forced to open a door), you are able to do so in a way that will also activate the system duress facility.

This is done by using a duress digit in conjunction with your PIN.

```
The duress digit is the last digit of your PIN, plus one (1). eg. PIN = 1234 - duress digit = 5
```

PIN = 2222 - duress digit = 3
If the last digit of your PIN is 9, then the duress digit is 0.

To Activate Duress:

1 2 3 ~ Enter all but the last digit of your PIN.

~ Enter the duress digit.

OFF ~ Press

ENTER ~ Press

When duress has been activated, the display will show:

...,There Are No Alarms In This Area Code:

Reset Duress:

To reset the duress facility (ie. Turn off the signal), enter a valid PIN code. The display will return to *There Are No Alarms In This Area* etc. The ..., will be removed.

Notes: 1. If Duress was activated under conditions which are no longer valid (false alarm), and it has been reset, it is important that you contact your monitoring company to ensure that no further action is taken by them.

2. Use of your PIN with the duress digit will still activate the functions associated with the PIN.

DOOR OPENING OPTION

A Challenger console may be used to open a door, by entering a door code.

Your door code is related to your PIN. It varies, depending on whether your PIN has been programmed to allow you to arm/disarm your system, as well as open doors.

To open a door:

The bottom line of the display must show:



1 2 3 4 ~ Enter your door code.

ENTER ~ Press (this will open the door only)

r OFF ~ Press (this will disarm the security and open the door)

r ON ~ Press (this will arm the security and open the door)

If the door is only allowed to be opened for a preset time, the display will show.

eg. Suppressed Code:

If the door is closed prior to the end of the max. open time the, the *Suppressed* will be removed from the display and the concole will sound the warning buzzer for 3 seconds indicate that the door is no longer suppressed.

If the door is not closed at the end of the suppression time, the display will show.

eg. Suppression Ending Code:

The concole will sound the warning buzzer for a preset time to enable you to close the door or re-enter your PIN to extend the suppression time.

Notes: 1. If the console sounds 7 quick beeps when you enter your door code, an invalid code has been entered, or the code is not valid at this arming station.

2. A door code will only open doors programmed to be opened by that code.

The arming procedure is used (when leaving the premises) to set devices in your system to cause an alarm should there be a change in their condition. You are turning on the security for an area or building which is unoccupied.

- The arming procedure will vary depending on how your system is programmed. The option applicable to your system will be identified in this User Guide.
- Each arming station controls specific areas.
 Only those areas controlled by an arming station can be armed at that arming station.
- Each PIN will only be authorized to arm specific areas.

 When an arming procedure is used, only those areas assigned to the PIN will be armed.
- It is not possible to arm an area with an unsealed input.

 If at any time during the arming process the console sounds 7 quick beeps and displays the word *unsealed*, refer to the section on Unsealed Inputs.
- After an area is armed you will have a pre-set time to exit the area before an alarm occurs.

Procedure I - OFF/ON Option Specified

To arm the system, you must specify that you are leaving an area, by using the ON key.

Arming Procedure:

1. Before commencing, the display must show:

There Are No Alarms In This Area Code:

2. 1 2 3 4

Enter your PIN

ON

~ Press

- 3. The result of step 2 will depend on:
 - Whether the system has been programmed to display the areas assigned to your PIN.
 - Whether the areas to be armed are sealed. (See Unsealed Inputs).

Areas not displayed:

If your system has not been programmed to display the areas assigned to your PIN, any of those areas which were disarmed, will now be armed (provided all inputs were sealed).

The display will return to that shown in step 1.

The area light(s) will illuminate when the arming procedure has been successful.

Areas displayed:

If the areas assigned to your PIN are displayed, any of those areas which are disarmed will be listed.

eg.

0-All 1, Office 2, Boardroom 3, Workshop Enter Area:

From this display you have several options:

a/ Arm all areas

0

- Enter

ENTER

Press

This will arm all the areas assigned to your PIN and which were not already armed.

The display will return to that shown in step 1.

b/ Arm individual areas

? ~ Enter the area number

ENTER ~ Press

This will arm the selected area immediately and remove it from the display.

If there are more areas than can be shown on the display the list will now show the next area.

You may arm any of the areas listed by selecting them in this way.

When arming is complete, press ENTER to return to the display shown in step 1.

c/ Cancel the function

ENTER ~ Press

This will cancel the function and return you to the display shown in step 1. If you have already armed areas prior to using this function, the areas will remain armed.

d/ Display more areas

NEXT ~ Press

This will display the next disarmed areas in the list and update the information. Select from these areas to arm the individual area (as shown in b/ above) or continue to press **NEXT** to view all the areas and return to the first display.

4. The area light(s) will illuminate when the arming procedure has been successful.

Procedure II - TOGGLE Option Specified

Check the area armed lights to ensure that the area(s) you wish to arm are not armed already.

Arming Procedure:

1. Before commencing, the display must show:

There Are No Alarms In This Area Code:

2. 1 2 3 4

Enter your PIN

ENTER

Press

3. The result of step 2 will depend on:

- Whether the system has been programmed to display the areas assigned to your PIN.

- Whether the areas to be armed are sealed. (See Unsealed Inputs).

Areas not displayed:

If your system has not been programmed to display the areas assigned to your PIN, any of those areas which were disarmed, will now be armed (provided all inputs were sealed).

The display will return to that shown in step 1.

The area light(s) will illuminate when the arming procedure has been successful.

Areas displayed:

If the areas assigned to your PIN are displayed, any of those areas which are disarmed will be listed.

eg.

0-All 1, Office 2, Boardroom 3, Workshop Enter Area:

From this display you have several options:

a/ Arm all areas

0 ~ Enter

ENTER ~ Press

ALL_ON ~ Press

This will arm all the areas assigned to your PIN and which were not already armed.

The display will return to that shown in step 1.

or

b/ Arm individual areas

? Enter the area number

Depending on how your system has been setup, you may have to press the Enter key after the area number.

optional **ENTER** ~ Press

This will arm the selected area immediately and remove it from the display.

If there are more areas than can be shown on the display the list will now show the next area.

You may arm any of the areas listed by selecting them in this way.

When arming is complete, press ENTER to return to the display shown in step 1.

c/ Cancel the function

ENTER ~ Press

This will cancel the function and return you to the display shown in step 1. If you have already armed areas prior to using this function, the areas will remain armed.

d/ Display more areas

NEXT ~ Press

This will display the next disarmed areas in the list and update the information. Select from these areas to arm the individual area (as shown in b/ above) or continue to press **NEXT** to view all the areas and return to the first display.

4. The area light(s) will illuminate when the arming procedure has been successful.

Disarming your system is turning off those devices which would cause an alarm if they were left on when the building is occupied.

Note that the security system is not necessarily turned off but that other devices may still operate which will cause an alarm under different circumstances.

Disarming changes your system to *Access*. ie. The area/building is occupied and the security system has been set to allow normal access.

- The disarming procedure will vary depending on how your system is programmed. The option applicable to your system will be identified in this User Guide.
- Each arming station controls specific areas.
 Only those areas controlled by an arming station can be disarmed at that arming station.
- Each PIN will only be authorized to disarm specific areas.
 When a disarming procedure is used, only those areas assigned to the PIN will be disarmed.
- If at any time during the disarming process the console sounds 7 quick beeps and displays the word unsealed, refer to the section on Unsealed Inputs.
- On entering the area, the system will allow you a pre-set time to disarm before an alarm occurs.
- If there is a current alarm condition when you disarm your system, the alarm will be reset. To determine the cause of the alarm, use the function *Quick Alarm History*.

Procedure I - OFF/ON Option Specified

To disarm the system, you must specify that you are entering an area, by using the OFF key.

Disarming Procedure:

1. Before commencing, the display must show:

Thare Are No Alarms In This Area Code:

2. 1 2 3 4

~ Enter your PIN

OFF

~ Press

- 3. The result of step 2 will depend on:
 - Whether the system has been programmed to display the areas assigned to your PIN.
 - Whether the areas to be disarmed are sealed. (See Unsealed Inputs).

Areas not displayed:

If your system has not been programmed to display the areas assigned to your PIN, any of those areas which were armed, will now be disarmed (provided all inputs were sealed). The display will return to that shown in step 1.

Areas displayed:

If the areas assigned to your PIN are displayed, any of those areas which are armed will be listed.

eg.

0-All 1, Office 2, Boardroom 3, Workshop Enter Area:

From this display you have several options:

a/ Disarm all areas

0

~ Enter

OFF

~ Press

This will disarm all the areas assigned to your PIN and which were not already disarmed. The display will return to that shown in step 1.

b/ Disarm individual areas

?

Enter the area number

Press

This will disarm the selected area immediately and remove it from the display. If there are more areas than can be shown on the display the list will now show the next area. You may disarm any of the areas listed by selecting them in this way.

When disarming is complete, press ENTER to return to the display shown in step 1.

c/ Cancel the function

ENTER ~ Press

This will cancel the function and return you to the display shown in step 1. If you have already disarmed areas prior to using this function, the areas will remain disarmed.

d/ Display more areas

NEXT

Press

This will display the next armed areas in the list and update the information. Select from these areas to disarm the individual area (as shown in b/ above) or continue to press NEXT to view all the areas and return to the first display.

The area light(s) will extinguish when the disarming procedure has been successful.

Procedure II - TOGGLE Option Specified

Check the areas lights to ensure that the area(s) you with to disarm are not disarmed already.

Disarming Procedure:

1. Before commencing, the display must show:

Thare Are No Alarms In This Area Code:

- 2. 1 2 3 4
- ~ Enter your PIN
- ENTER
- ~ Press
- 3. The result of step 2 will depend on:
 - Whether the system has been programmed to display the areas assigned to your PIN.
 - Whether the areas to be disarmed are sealed. (See Unsealed Inputs).

Areas not displayed:

If your system has not been programmed to display the areas assigned to your PIN, any of those areas which were armed, will now be disarmed (provided all inputs were sealed).

The display will return to that shown in step 1.

The area light(s) will extinguish when the disarming procedure has been successful.

Areas displayed:

If the areas assigned to your PIN are displayed, any of those areas which are armed will be listed.

eg.

0-All 1, Office 2, Boardroom 3, Workshop Enter Area:

From this display you have several options:

a/ Disarm all areas

0

Enter

ENTER

Press

This will disarm all the areas assigned to your PIN and which were not already disarmed. The display will return to that shown in step 1.

b/ Disarm individual areas

?

~ Enter the area number

Depending on how your system has been setup, you may have to press the Enter key after the area number.

optional

ENTER

~ Press

This will disarm the selected area immediately and remove it from the display.

If there are more areas than can be shown on the display the list will now show the next area.

You may disarm any of the areas listed by selecting them in this way.

When disarming is complete, press ENTER to return to the display shown in step 1.

c/ Cancel the function

ENTER ~ Press

This will cancel the function and return you to the display shown in step 1. If you have already disarmed areas prior to using this function, the areas will remain disarmed.

d/ Display more areas

NEXT

Press

This will display the next armed areas in the list and update the information. Select from these areas to disarm the individual area (as shown in b/ above) or continue to press NEXT to view all the areas and return to the first display.

The area light(s) will extinguish when the disarming procedure has been successful.

UNSEALED INPUTS (When arming/disarming your system)

It is not possible to arm (or disarm, if your system is programmed that way) an area unless all the inputs in that area are sealed, as an unsealed input would usually set off an alarm. For example, all the doors and windows must be closed.

If any input is unsealed when you try to arm or disarm an area, *The Challenger* console will sound 7 quick beeps and will display the unsealed inputs.

Unsealed inputs are listed either:

One at a time

eg. Unsealed 6. Front Door NEXT or ENTER

or

As a list of numbers

eg. Unsealed 6, 7, 9. Input No:

From either display:

NEXT ~ Update the list of unsealed inputs and display the next inputs in the list (if any)

or ? ENTER ~ Display the input name in full.

or ENTER ~ Exit the function and return to the display shown when you were attempting to arm the system.

After you have determined which inputs are unsealed, you must seal them (eg. close door) then exit this display and try again to arm or disarm the system.

Note: If you are unable to seal an input, refer to Isolate Input - Menu Option 10.

See Also:

Arming Your System
Disarming Your System
Isolate Input - Menu Option 10

A local alarm is one which occurs when an area is occupied. The circumstances causing the alarm need to be checked and can possibly be rectified without the need to contact a remote monitoring station.

The alarm is therefore transmitted only within the building and not relayed to a remote monitoring station.

eg. A local alarm could be caused by opening a fire door which is monitored 24 hours a day.

When a local alarm occurs:

- The console will emit a continuous tone until the local alarm is acknowledged.
- The display will show the following:

,LocalAlarm Code:

To determine the cause of the alarm:

ENTER ENTER ~ Press (twice)

The inputs causing the alarm are listed either:

One at a time eg. Local Alarm A4, Rear Fire Door NEXT or ENTER

As a list of numbers eg.

Local Alarm A4, A5, A9. Input No:

From either display:

or

ENTER ~ Acknowledge the local alarm (see below).
 NEXT ~ Update the list of inputs and display the next inputs in the list (if any).
 Or ? ENTER ~ Display the input name in full.

Acknowledge the local alarm:

You must acknowledge the local alarm to stop the console tone.

0 ~ Enter
ENTER ~ Press

This will acknowledge all local alarms, stop the tone and return the display to There Are No Alarms In This Area.

LOCAL ALARM

Reset the local alarm:

To ensure the local alarm does not recur, you must rectify whatever was causing it. (eg. close door)

The A preceding the input number on the display will be shown only on inputs where the local alarm has not been acknowledged.

Re-alarm:

If your system has been programmed with a reminder on local alarms, it will re-alarm after a pre-set time unless the cause has been fixed. It will continue to re-alarm, regardless of acknowledgment each time, unless the alarm cause is fixed.

When a re-alarm does occur, the letter preceding the input number will not be shown.

See Also:

Alarm

Panel Status - Menu Option 1 Inputs in Alarm - Menu Option 3

ALARM

Alarm is the state of your security system when a device has been activated by a breach of security.

When an alarm occurs:

- An area light will flash to indicate which area the alarm is coming from.
- The display will show the following message on the second line:

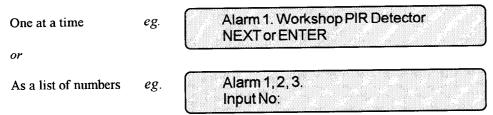


Note: When an alarm occurs, There Are No Alarms In This Area is removed from the top line.

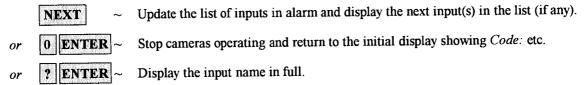
Inputs in Tamper Alarm will be displayed with a T in front of the input number.

To determine the cause of the alarm:

The inputs causing the alarm are listed either:



From either display:



ALARM

Reset an Alarm:

1. Before commencing, the display must show:

Code:

2. 1 2 3 4

Enter your PIN

ENTER

~ Press

- 3. If the reset function is successful:
 - The area light stops flashing and returns to the state it was in before the alarm occurred.
 - The display will show:

There Are No Alarms In This Area Code:

Notes:

- 1. If the alarm conditions are no longer valid (false alarm), and the alarm has been reset, it is important that you contact your monitoring company to ensure that no further action is taken by them.
- 2. If you are unable to reset an alarm because of a faulty input, refer to the section on Isolate Input Menu Option 10.
- 3. If you reset an alarm before determining it's cause, you may use the function *Quick Alarm History* to check alarm details.
- 4. You can only reset an alarm for an area which is assigned to your PIN. If you are unable to reset the alarm, ensure that the flashing *area* light is for an area you can access with your PIN. If not, your attempt to reset the alarm will result in you arming/disarming the system.

See Also: Local Alarm

Panel Status - Menu Option 1 Inputs in Alarm - Menu Option 3 Qucik Alarm History

QUICK ALARM HISTORY

This function provides a list of past alarm events.

It is a fast and simple way to determine the location of the input which caused an alarm. This information may be necessary where you have to reset an alarm without first checking the cause.

1. Before commencing, the display must show:

There Are No Alarms In This Area Code:

Note: You cannot access alarm history if there is currently an alarm condition.

2. ENTER ENTER ~ Press (twice)

The display will show the following details of each alarm: (The most recent alarm is shown first)

The time the alarm occurred as hour, minutes, seconds - HH:MM:SS.

The date the alarm occurred as day, month, year - DD:MM:YY.

The type and location of the alarm.

eg. LocalAlamInput1,13:23:4126/06/92 "1"-Text

3. From the history display it is possible to :

NEXT ~ Move backwards through the history, one event at a time.

or ENTER ~ Exit the history and return to the display showing

There Are No Alarms In This Area

or Display the name of the input where the alarm occurred.

See Also: History - Menu Option 5

THE CHALLENGER MENU

The Challenger menu has 24 options available for performing various functions. Some of the functions are specific only to certain installations, while others may not be authorized to you. It is therefore unlikely that you will see all the menu options when you access the menu, but only those which have been programmed to be available when your PIN is used.

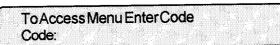
To display the menu options available to you:

1. Before commencing, ensure that the prompt below is shown on the bottom line of the display:



2. MENU ~ Press

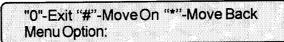
The display will show:



3. 1 2 3 4 ~ Enter your PIN

ENTER ~ Press

The display will show:



4. ENTER ~ Move forwards one by one through the menu options.

or MENU * ~ Move backwards one by one through the menu options.

or 0 **ENTER** \sim Exit the menu and return to the display shown in step 1.

Note: When scrolling through, each menu option will be displayed.

eg. 10-Isolate Input Menu Option:

Selecting a Menu Option:

Note: The option need not be shown on the display. If you know the option number you need not move to it to select it.

Exit a menu option:

ENTER ~ Press

This will return you to the menu.

THE CHALLENGER MENU

Exit the Menu:



This will return you to the original display shown in step 1 of how to display menu items.

Notes: 1. If you access the menu and do not use any keys for two minutes, the menu will be exited. It is good practice to ensure you exit the menu using **0 ENTER** rather that the time out facility. If anyone else uses the menu before it times out, the functions they use would be logged against your PIN.

- 2. If you attempt to select an option which is not authorized to your PIN, the display will show the message: You are unauthorized for this function
- 3. Although you may be authorized to access a menu option, you may not be allowed to access all the information it provides. You will only be allowed to access information on the areas assigned to your PIN.

This function is used to list any inputs which are in alarm, in tamper alarm, isolated or unsealed.

There are menu options available which display each of these conditions separately, however this option may be used to check on all inputs which need attention.

The status is shown by the letter preceding the input number:

A = Alarm An alarm has occurred at this input and it should be acknowledged and reset. Refer to the

section - Alarm.

T = Tamper Alarm An alarm has occurred at this input due to tamper or accidental damage. The alarm should

be acknowledged and reset. Refer to the section - Alarm.

i = Isolated The input has been excluded from functioning as part of the security system and is probably

broken or faulty.

U = Unsealed The input is activated and needs to be checked and sealed if necessary to ensure security is

maintained. eg. Close door.

No inputs in alarm, tamper alarm, isolated or unsealed:

The display will show:

No Alarms, Tampers, Isolates, Unsealed Press ENTER

ENTER ~ Return to the menu.

or NEXT ~ Update the status.

Inputs in alarm, tamper alarm, isolated or unsealed are listed either:

One at a time eg. Summaryu2. Front Door Contact NEXT or ENTER

or

As a list of numbers eg. Summaryu1, A3, T4, i5, i9. Input No:

From either display:

NEXT ~ Update the list of inputs and display the next inputs in the list (if any).

or **ENTER** ~ Return to the menu.

or ? ENTER ~ Display the input name in full.

See Also: Inputs Unsealed - Menu Option 2

Inputs in Alarm - Menu Option 3 Inputs Isolated - Menu Option 4

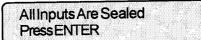
INPUTS UNSEALED - Menu Option 2

This function is used to display all unsealed inputs. eg. Door open.

The function would be used to determine whether you need to check an input in order to maintain security. eg. Close the door.

No inputs unsealed:

The display will show:



ENTER

Return to the menu.

or NEXT

Update the status.

Unsealed inputs are listed either:

One at a time

eg.

Unsealed 4. PIR In Managers Office NEXT or ENTER

or

As a list of numbers

eg.

Unsealed 1, 2, 6. Input No:

From either display:

NEXT

Update the list of inputs and display the next inputs in the list (if any).

or

ENTER

~ Return to the menu.

or

? ENTER -

Display the input name in full.

See Also: Panel Status - Menu Option 1

This function is used to display details of all inputs which are in alarm and tamper alarm.

Alarms should be acknowledged and reset - Refer to the section - Alarm.

No inputs in alarm:

The display will show:

No Alarms PressENTER

ENTER

Return to the menu.

NEXT

Update the status.

Inputs in alarm are listed either:

One at a time

eg.

Alarm 3. Fire Escape Door **NEXT or ENTER**

or

As a list of numbers

eg.

Alarm 1, T2, 6. Input No:

From either display:

NEXT

Update the list of inputs and display the next inputs in the list (if any).

ENTER

Return to the menu.

? ENTER

Display the input name in full.

Note:

Tamper alarms are identified by T preceding the input number.

See Also:

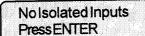
Panel Status - Menu Option 1

Alarm

This function is used to display details of all isolated inputs. An isolated input is one which is excluded from functioning as part of the security system. It would be isolated because it is faulty or broken and by isolating it you would stop it causing an alarm. This function would therefore be used to determine which inputs are not operational and need attention.

No isolated inputs:

The display will show:



ENTER

~ Return to the menu.

or NEXT

Update the status.

Isolate inputs are listed either:

One at a time

eg.

Isolated 4. Beam Across Loading Bay

NEXT or ENTER

or

As a list of numbers

eg. | Isolated 1,2,6.

Input No:

From either display:

NEXT

Update the list of inputs and display the next inputs in the list (if any).

or

ENTER

~ Return to the menu.

or ? ENTER

Display the input name in full.

See Also: Panel Status - Menu Option 1

HISTORY - Menu Option 5

This function is used to display past events of system history, including alarms, access to the menu etc. It can help you determine events such as the time that an alarm occurred, the time it was reset and who reset it, the time the system was disarmed in the morning etc.

The events are displayed in reverse chronological order ie. the last event is the first shown.

Example of one event:

MenuAccess RAS 1, 13:49:23 26/11/92 "0"-Exit "1"-Txt

The top line of the display shows:

- The time of the event in hours, minutes, seconds HH:MM:SS.
- The date of the event as day, month, year DD/MM/YY.
- The type of event eg. Menu Entered.
- The location of the event eg. RAS 1 = Remote Arming Station 1.

The second line of the display shows the options available regarding the history events list:

MENU ★ ~ Move forwards through the list.

or ENTER ~ Move backwards through the list.

or 9 ~ Jump backwards 10 events.

or 0 ~ Exit history and return to the menu.

or 1 ~ Display the English text for some history events (user names and alarm inputs).

See Also: Quick Alarm History.

TEST REPORT - Menu Option 6

SECURE TEST REPORT: This option is used to display the results of the *Secure Test* which is done on specific inputs to see if they were operating correctly. The inputs are those that are programmed to be included in testing, and which operate when a building is unoccupied.

All inputs tested successfully:

The display will show:



ENTER

~ Return to the menu.

or NEXT

Update the status.

Untested inputs will be listed either:

One at a time

eg.

Untested Secure 17. Rear Door Contact NEXT or ENTER

or

or

As a list of numbers eg.

Untested Secure 9, 14, 17. Input No:

From either display:

NEXT

Update the list of untested inputs and display the remaining inputs in the list (if any).

or E

ENTER

Exit the function and return to the menu.

or

? ENTER

Display the input name in full.

See Also:

Secure Test.

ACCESS TEST REPORT: This function is used to determine the results of the Access Test which is done on specific inputs and cameras to see if they were operating correctly. The inputs are those that have been programmed to be included in testing and which operate when a building is occupied. All the cameras are tested.

Inputs:

The untested inputs will be listed either:

One at a time

eg. Untested Access 25. Reception Hold Up
NEXT or ENTER

or

As a list of numbers eg. Untested Access 25, 26, 27.

Input No:

From either display:

NEXT ~ Update the list of inputs and display the remaining inputs in the list (if any).

or ENTER ~ Display camera test results if applicable, otherwise return to the menu.

or ? ENTER ~ Display the full input name.

Note: Where an input is displayed as untested, it could mean that it has not been tested because it was missed, or, because it was faulty and could not be tested.

Cameras:

The results of camera tests will be displayed provided that the user conducting the access test has been programmed to test cameras.

All cameras tested successfully or no cameras in system:

The display will show:

All Cameras Have Tested Successfully Press ENTER

ENTER ~ Return to the menu.

Untested cameras will be listed:

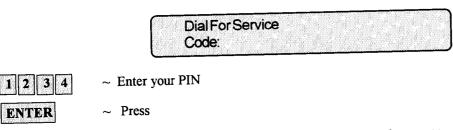
eg. Cameras Not Tested : 1, 2.
Press ENTER

ENTER ~ Return to menu.

See Also: Access Test

DIAL FOR SERVICE - Menu Option 7

This function is used to instruct THE CHALLENGER panel to dial up the remote service center to allow programming changes to be made over the telephone network.



The Challenger panel will dial the pre-programmed service telephone number and attempt to connect to the remote service modern. If it fails on the 1st try, it will redial upto a max. of 6 attempts.

The panel will automatically drop the line if there has been no keys pressed by the remote servive operator within the last 2 minutes.

FILM COUNTERS - Menu Option 8

This function is used to display the current frame number position on each of the security camera films.

If you maintain a log on frame counts it will indicate whether the cameras have operated since they were last checked.

ENTER

Return to the menu.

- Notes: 1. If a camera is fitted with a *film out* detector and that camera does not have a film in it, the frame count will be displayed as OUT.

 OUT will be removed when film is loaded.
 - 2. A possible 4 cameras may be displayed. Any of the 4 camera positions which does not have a camera fitted will display the frame count as '----'.
 - 3. A frame count may be from 0 to 9999.

This function is used to display the text which is provided as a description of the inputs in your system.

The inputs will be listed either:

One at a time eg. Input: 1. RearDoor Input No:

As a list of numbers eg.

Input: 1,2,3,4,5,6,7 InputNo:

From either display:

NEXT ~ Display the remaining inputs in the list (if any).

or **ENTER** ~ Exit the function and return to the menu.

or ? ENTER ~ Display the input name in full.

ISOLATE INPUT - Menu Option 10

This function is used to isolate inputs ie. exclude them from functioning as part of the security system.

An input would be isolated because it is faulty or broken and by isolating it, you would stop it causing an alarm.

The function provides a list of unsealed inputs for you to select an input to isolate. A faulty or broken input is usually unsealed, however, sealed inputs may also be isolated if you know the input number.

No Unsealed Inputs:

The display will show:

All inputs are Sealed Isolate No:

? ENTER ~

Isolate the selected input.

or ENTER

Return to the menu.

Unsealed inputs will be listed either:

One at a time

eg.

eg.

Unsealed 4. PIR In Managers Office

Isolate No:

or

As a list of numbers

Unsealed 1, 2, 4. Isolate No:

From either display:

? ENTER ~

Isolate the selected input (this will remove the input from the display and replace it with

the next unsealed input in the list - if any).

or NEXT

Update the list of inputs and display the remaining inputs in the list (if any).

or ENTER

Return to the menu.

Note:

- 1. If the unsealed inputs are shown as a list of numbers, it is not possible to display the name of the input.
- 2. If an attempt is made to isolate an input which is already isolated, the request appears as if it is processed but it is not logged in the history and the input remains isolated.
- 3. As soon as an input which is in alarm is isolated, the alarm is reset.

See Also:

De-Isolate Input.

DE-ISOLATE INPUT - Menu Option 11

This function is used to de-isolate inputs ie. Return them back to functioning as part of the security system.

An input is isolated because it is faulty or broken and when it is repaired, it must be de-isolated.

The function provides a list of isolated inputs for you to select an input to de-isolate. Inputs which are unsealed are shown on the list with U in front of the input number. It should be noted that de-isolating an unsealed input may cause an alarm.

No Isolated Inputs:

The display will show:

All Inputs are De-isolated Press ENTER

ENTER

Return to the menu.

Isolated inputs will be listed either:

One at a time eg. Isolated 4, Beam Across Loading Bay Delsolate:

or

As a list of numbers eg.

Isolated 1, 2, 4. Delsolate:

From either display:

? ENTER ~ De-isolate the selected input (this will remove the input from the display and replace it with the next isolated input in the list - if any).

or NEXT | 1t with the next isolated input in the list - if any).

Update the list of inputs and display the remaining inputs in the list (if any).

or **ENTER** ~ Return to the menu.

See Also: Isolate Input

This function is used to test an individual input device to determine if it is operating correctly.

The display will show:

TestIndividualInput: Input No:

ENTER

~ Return to the menu.

or ? ENTER

Test the selected input.

If you selected an input, one of four responses may be given:

a/ The input is sealed

eg. | Input 12 is SEALED Press ENTER

b/ The input is unsealed eg.

Input 12 is UNSEALED PressENTER

c/ There is a faulty condition due to cable tamper. The cabling to the input shows an open circuit.

eg. Input 12 is OPEN
PressENTER

d/ There is a faulty condition due to cable tamper. The cabling to the input shows a SHORT circuit.

eg. Input 12 is SHORT
Press ENTER

From each of these displays:

ENTER ~ Return to the original menu option display.

Notes: 1. If an input is unsealed, open or short, the console will emit a continuous tone. When the status of the input is changed to sealed, the display will be updated and the tone will stop.

- 2. If the input is isolated when a test is requested on it, the system will de-isolate the input, conduct the test then return the input back to isolated.
- 3. There is a pre-determined time in which to complete the test. If the test is not completed within this time, the option is exited.

See Also:

Secure Test Access Test

START AUTO ACCESS TEST - Menu Option 13

This function starts the access test.

PROGRAM USERS - Menu Option 14

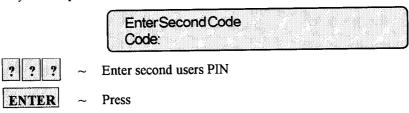
This function allows you to add, delete or change a user.

Your system may of been setup to require two authorised users to enter this menu.

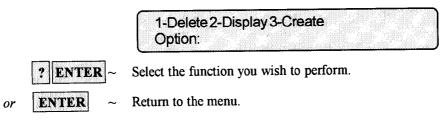
The user programming includes a record of:

- The user's alarm group which determines which Challenger functions can be controlled by, or are authorized to, that user. eg. Manager, Staff etc.
 - Note: Your own alarm group may or may not allow you to program PIN codes. If it does allow use of the function, there may still be restrictions on which alarm groups you are allowed to update.
- The users *door group* which determines which doors and what times the user can have access through these doors.
- The users lift group which determines which floors and what time the user can have access to the floors.
- The user's name (some users only).
- The Challenger user number. This is a number between 1 and 8190 which is used by the system to link a PIN or card to the functions it will perform and the doors it can enter.

If your system requires two users to access (dual custody) this option, the display will show:



The display will show:



- Note: 1: Only the 1st 200 users can have there name programmed to there user number.
 - 2: Only the 1st 1000 users can have a PIN assignd to them.
 - 3: Users 1 to 1000 can have a PIN and/or card.
 - 4: Users 1001 to 8190 can only have a card.

DELETE A USER

1. The display will show:

Delete User User No:

2. You may delete the user by entering the system user number.

? ? ?

~ Enter the user number.

ENTER

~ Press

This will delete the user.

3. You can repeat step 2 to deleate other users or

ENTER ~ Return to the display shown in step 1.

- Notes: 1. A master code cannot be deleted.
 - 2. You cannot delete a user unless your alarm group authorized you to do so.

DISPLAY A USER

1. The display will show:

Display User User No:

2. ? ? ~ Enter the system user number.

ENTER ~ Press

3. The display will show the user's alarm group.

eg *-View,AlmGrp:12,Forman PressENTER:

ENTER ~ Press

4. The display will show the user's door group.

eg Door Group: 2 Press ENTER

ENTER ~ Press

5. The display will show the user's lift group.

eg LiftGroup: 1
PressENTER

ENTER ~ Press

6. The display will show the user's name (if any and the user number is 200 or less).

eg "ENTER"-Next Letter, "*"-End Ann Brown

ENTER ~ Press

7. The display will show the user's PIN (if any and user number is 1000 or less).

eg PinCode: 1234 PressENTER

ENTER ~ Return to the display shown in step 1.

CREATE (and CHANGE) A USER

The procedure to create a user may vary depending on whether yor are creating a user higher than 200 or higher than 1000.

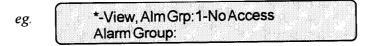
1. The display will show.



? ? ~ Select the system user number to create or change.

ENTER ~ Press.

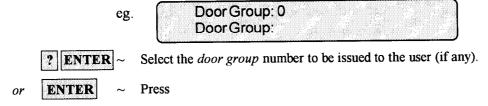
2. The display will show the user's alarm group.



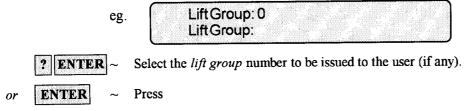
NEXT ~ Display the list of alarm groups that you can issue to a user (if any).

or Press Press

3. The display will show the user's door group.



4. The display will show the user's lift group.



5. If the user number that you are programming is higher than 1000, then all options available have been programmed and the display will return to step 1.

If the system has been programmed so that user's don't have name files or if you are programming a user higher than 200, skip to step 7.

6. The display will show.

"ENTER"-NextLetter, "*"-End

This allows you to enter a user's name of up to 16 characters, by using the text option on the keypad. Keys 1 to 9 have alphabetical characters printed above them. To enter a letter, press the key the number of times relative to the position of the letter. Both upper and lower case letters are available as well as the numerical values. Refer to Figure 2.

After entering a letter in the name, press ENTER to move the cursor to the next position.

? ENTER ~ Enter each letter of the user's name followed by ENTER.

or **ENTER** ~ To move the curser to the position after the name.

or MENU • ~ Save the name.

7. The display will show.

eg. PinCode: Code:

? ? ? ~ Enter the PIN for this user.

ENTER ~ Press

ENTER ~ Return to the display shown in step 1.

Notes: 1. You cannot create a user unless your access level authorizes you to do so.

- 2. You cannot program a PIN or user number that already exists.
- 3. You cannot program a PIN that will conflict with another user's duress code. (Refer to the section on Duress).
- 4. You cannot program a PIN that will conflict with another user's door code. (Refer to the section on Opening a Door).
- 5. A user who will be allowed to both open doors and arm/disarm the system, must have a PIN of at least 5 digits. (Refer to the section on Opening a Door).

Figure 2: Keypad Layout for entering text

| Key | 1st | 2nd | 3rd | 4th | 5th | 6th | 7th |
|-------|-------|--------------|----------|-----|------------|------------|--------------|
| 1 | A | B | C | 1 | a | b | c |
| 2 | D. | E | F | 2 | d | e | f |
| 3 | G . | H | I | 3 | g | h | i |
| 4 | J | K | L | 4 | j | k | 1 |
| 5 | M | N | O | 5 | m . | n | o |
| 6 | P . | Q | R . | 6 | p | q | r |
| 7 | S | Т. | U | 7 . | s | t | u |
| 8 | V . | W | X | 8 . | v . | w . | x |
| 9 | Y | Z . | sp | 9 . | y . | z | sp |
| 0 | •••• | - | & | 0 | | | & |
| (sp=s | pace) | | | | | | |

This function is used to program a new time and date.

The time and date are not visible during normal use of *The Challenger* however all internal functions are reliant on them.

A new date or time would only need to be programmed when *The Challenger* is first installed or if the time needs to be adjusted for daylight saving.

The time is programmed for a 24 hour clock.

1. The display will show:

Time & Date HH:MM DD/MM/YY, XXXday Hours:

(Where HH:MM DD/MM/YY, XXXday = the current time and date held by the system as hour, minute, day, month, year and day of the week.)

? ?

Select the correct hour.

ENTER

Update the hour and go the next display.

2. The display will show:

Time & Date HH: MM DD/MM/YY, XXXday Minutes:

? ?

Select the correct minutes.

ENTER

Update the minutes and go to the next display.

3. The display will show:

Time & Date HH:MM DD/MM/YY, XXXday Day.

? ?

- Select the correct day.

ENTER

Update the day and go to the next display.

4. The display will show:

Time & Date HH:MM DD/MM/YY, XXXday Month:

| 7 | 7

Select the correct month.

ENTER

Update the month and go to the next display.

TIME AND DATE - Menu Option 15

5. The display will show:

Time & Date HH:MM DD/MM/YY, XXXday Year:

? ?

Select the correct year.

ENTER

Update the year.

6. The seconds will automatically be set to zero and the correct day of the week will be calculated and you will be returned to the menu.

Note: You cannot exit this function halfway through. Press **ENTER** on each value that does not need to be changed until you return to the menu.

This function is used to program other devices which are connected to your system (called remote devices).

The programming of these devices determines how they will operate within *The Challenger* system. They cannot be programmed independently but must be programmed via a *Challenger* console.

The devices currently available are:

- Four Door Controller
- Single Lift Controller

The display will show:

Door Data Door No:

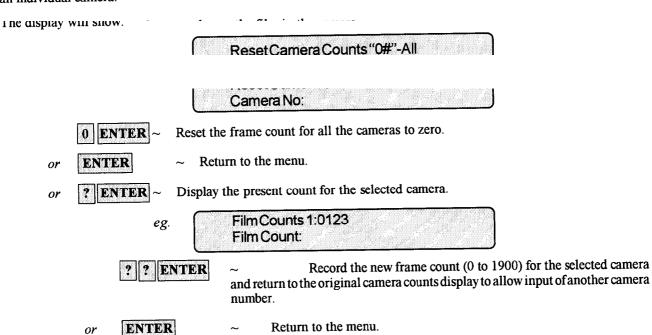
ENTER ~ Return to the menu

ENTER ~ Select the number of the remote unit you wish to program and the display will show:

Connecting... Enter to Abort

- Wait for the remote device to be connected (maximum 2 seconds) and the display will show the messages appropriate to that device - refer to separate programming guides for the individual devices.
- or **ENTER** Return to the menu.

This function is used to reset the film frame count on a security cameras to zero or to change the frame count number on an individual camera.



Groups, 1-Doors ∠, Litts Option:

? ENTER

~ Select the option you wish to perform.

or ENTER

~ Return to the menu.

DOOR GROUPS

Each *door group* contains list of all doors (64 doors) and the time zone for each door within the group. Authorised access is only valid durring the time zone.

1. The display will show:

Door Groups Group No:

9 9

~ Enter door group number.

ENTER ~

Press

2. The display will show.

eg. Door Grp 1 D1-00 D2-00 D3-** D4-** Enter Door:

? ?

~ Select door number.

ENTER

Press

3. The display will show.

eg. Door Grp 1 D3-** D4-** D5-03 D6-00 *-Dis,Tz-D3:

or | MENU *

~ Disable door for this *door group*.

? ? ENTER

Enter time zone number.

? ? ENTER

Select the next door to program.

or EN

ENTER

Return to step 1.

LIFT GROUPS

Each *lift group* contains a list of 64 floors and the time zone for each floor within the group. Authorised access to the floor is only valid durring the time zone.

1. The display will show:



? ? ~ Enter lift group number.

ENTER ~ Press

2. The display will show.

? ? ~ Select floor number.

ENTER ~ Press

3. The display will show.

MENU ★ ~ Disable floor for this *lift group*.

or ? ? ENTER ~ Enter time zone number.

? ? ENTER ~ Select the next floor to program.

or **ENTER** ~ Return to step 1.

This function allows you to record the date of holidays. The holidays recorded here may be used in conjunction with time zones to control access. eg. staff who are allowed access during normal week days can be denied access on weekdays declared a holiday.

The Challenger is capable of recording up to 24 holiday dates.

The display will show:

Holidays
Holiday No:

~ Record the holiday number.

ENTER ~ Press

The display will show the holiday number and the date of the holiday in numerics:

eg. Holiday 1: 00/00/00 Day:

? Record the day or the week for the new holiday.

ENTER ~ Press

The display will show the new day of the week:

eg. Holiday1: 26/00/00 Month:

? \sim Record the month for the new holiday.

ENTER ~ Press

The display will show the new month:

eg. Holiday 1: 26/01/00 Year:

? ? ~ Record the new year.

ENTER ~ Press

The display will show the new holiday date:

eg. Holiday 1: 26/01/92 Day:

NEXT ~ Display the next update screen for the day of the week for the next holiday number.

or \blacksquare Return to the first display shown to input the next holiday.

This function is used to instruct *The Challenger* panel to print all the system history from when the last print history command was issued (max 1260 events).

The display will show.

Print History Back To 00/00/93 Enter Day:

You may enter the day of the month to start printing from or if zero is entered for the day and month, the printer will start printing from the last un-printed history.

? ? ~ Enter the day of the month.

ENTER ~ Press.

ENTER ~ Press (to skip this field)

The display will show:

or

Print History BackTo 00/00/93
Enter Day:

? ? ~ Enter the month of the year.

ENTER ~ Press

ENTER ~ Press (to skip this field)

The display will show:

Print History Back To 00/00/93
Enter Day:

? ? ~ Enter the year.

ENTER ~ Press

ENTER ~ Press (to skip this field)

The printer will start printing from the date specified.

Note: The Challenger will not print if the printer is not ready, eg. OFF LINE, OUT OF PAPER, etc.

USER RECORD

Use this page to record details of the relevent users for your system.

It is suggested you use pencil to complete these details. By erasing obsolete users you can then keep the record up to date and compact.

| User Number | Alarm Group | Door Group | Lift Group | Name |
|---|-------------|------------|------------|------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| •••• | | | | |
| ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

© Tecom Systems Pty. Ltd. 1993