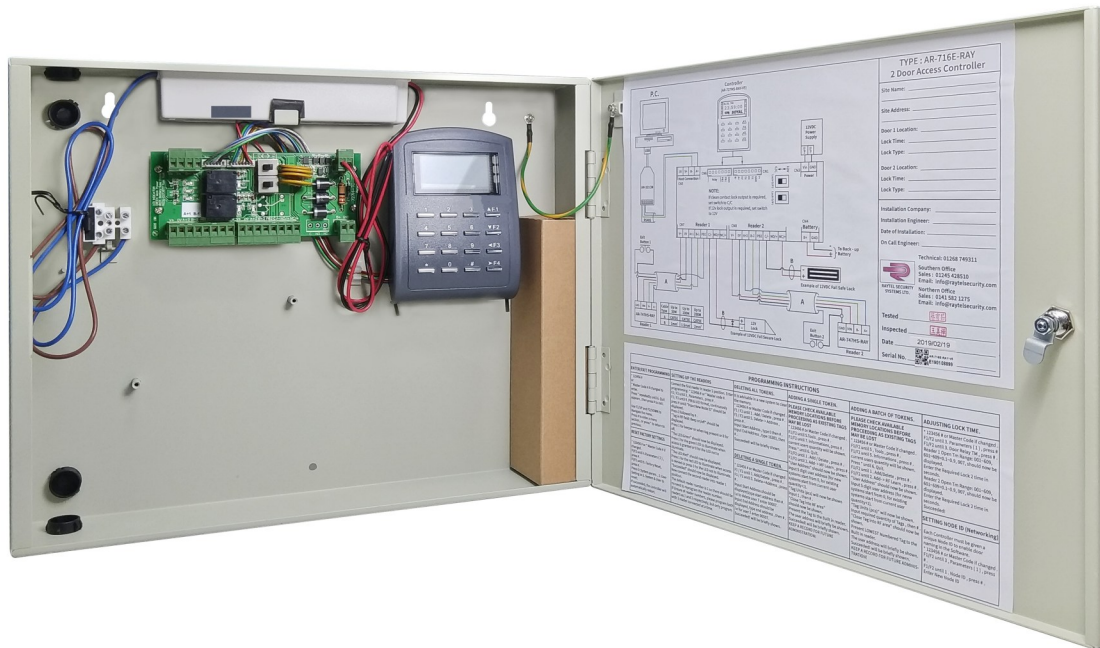


AR-716E-RAY-AJ

Boxed 2 Door Controller With Door Alarms

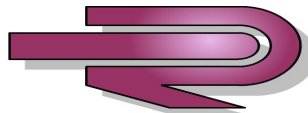
Installation and Programming Guide



AR-716E-RAY-AJ

1st June 2023

Version 1.2



RAYTEL SECURITY SYSTEMS

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**If this controller is being added to an existing set of networked controllers
Or is replacing an existing networked controller REFER to PAGE 25 to
ensure the controller is correctly identified in 701 Server.**

**** Note that at any point during programming pressing  repeatedly will
return the system to the QUIT menu. At this point press  to exit
programming****

SYSTEM OVERVIEW

The AR-716E-RAY-V5 Boxed Controller

The AR-716E-RAY-V5 is a versatile two door proximity controller that can be used as either a stand-alone or networked device.

Key Features:

- ☞ Built in Reader loop for token programming
- ☞ 16,384 User Card capacity.
- ☞ Alarm functions for both doors
- ☞ Optional Anti-Passback function
- ☞ Optional egress function
- ☞ Network capability up to 254 doors
- ☞ Optional lock output - 12VDC or Clean Contacts
- ☞ Adjustable lock output - Timed 0.1 to 600 seconds, Latched On/Latched Off
- ☞ Will run as stand-alone controller during Host Controller failure
- ☞ Buffer for storing up to 32,000 Transactions
- ☞ Real time clock
- ☞ 10x Auto Open Time zones in stand-alone mode
- ☞ Supports RS485 and TCP/IP protocols
- ☞ Battery management (when backup battery fitted)

AR-747HS-RAY Reader DIP Switch Settings

Before any AR-747HS-RAY readers are installed, it is recommended that the DIP switch settings on the back of the readers are checked.

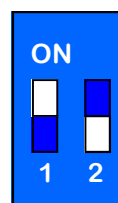
The default DIP switch settings for the AR-747HS-RAY reader are shown below.

If the DIP switch is set differently to the example below, the switch needs to be changed, and if the readers are powered up, they need to be powered down for the changes to take effect.

Please read "Setting up the Readers" on pages 12 & 13 and alternate reader configurations on page **XX**

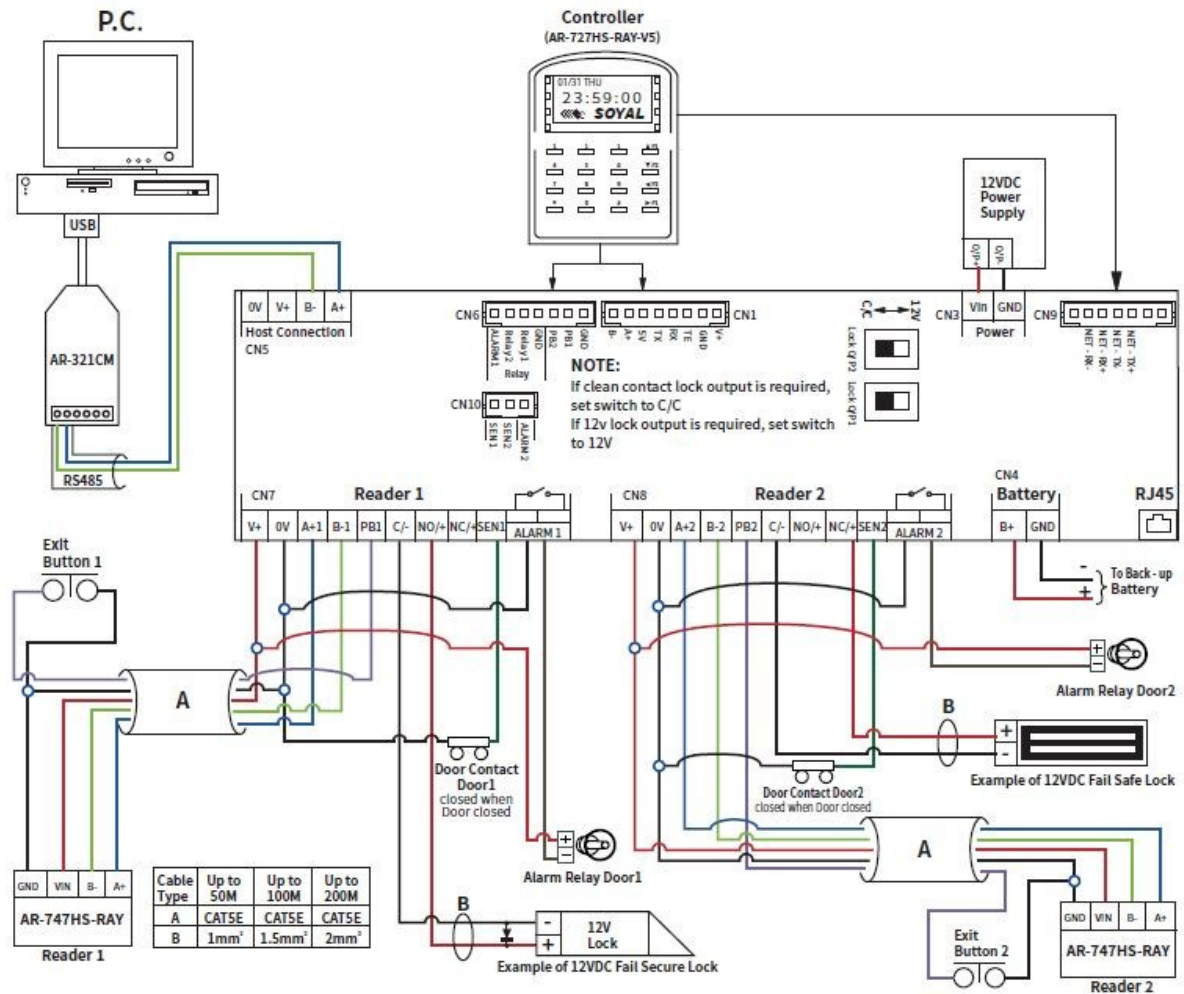
SW1	SW2	OUTPUT
ON	OFF	RS485

RS485



INTERFACE CONNECTIONS

Door 1 and Door 2 outputs can be clean contacts or powered outputs. The position of the slider switches on the pcb determines the type of output for each door.



Cable Type	Up to 50m	Up to 100m	Up to 200m
A	Cat5/6E	Cat5/6E	Cat5/6E
B	1mm ²	1.5mm ²	2.5mm ²

Suggested configurations and connections are shown above.

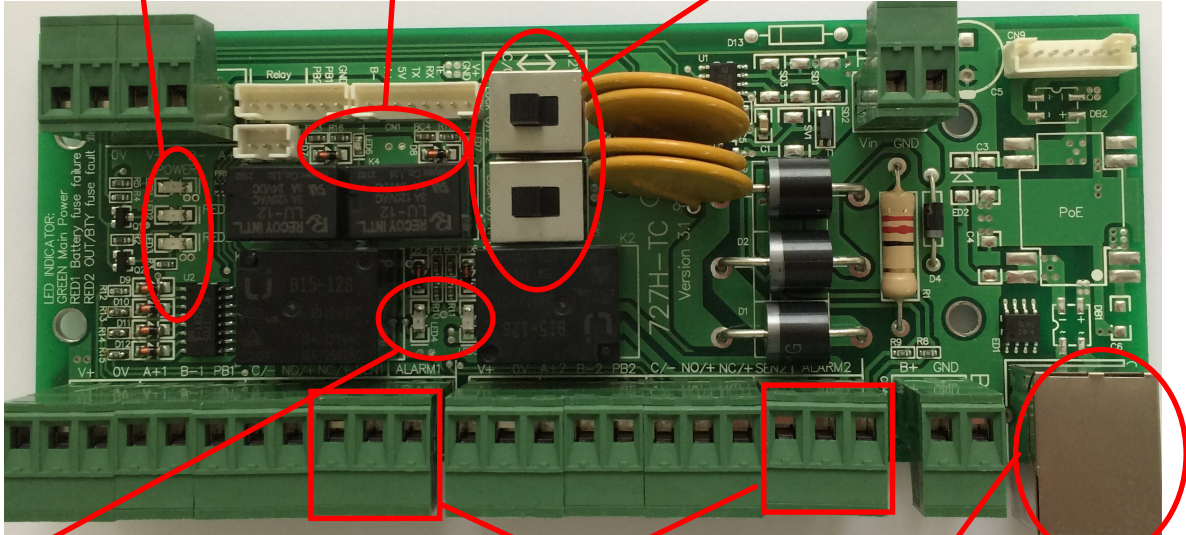
The controller has TCP/IP connectivity via the RJ45 connector and RS485 (A+ B-) connections Via the Host connections.

If Door alarms are not to be used we would recommend that SEN1 and SEN2 are linked directly to 0v to prevent unwanted alarms.

INTERFACE BOARD DETAILS

LED1 = Power On LED6 = Alarm Relay Door 1
 LED2 = Battery LED7 = Alarm Relay Door 2
 LED3 = Fault

Selector switches for clean contacts or 12V DC output

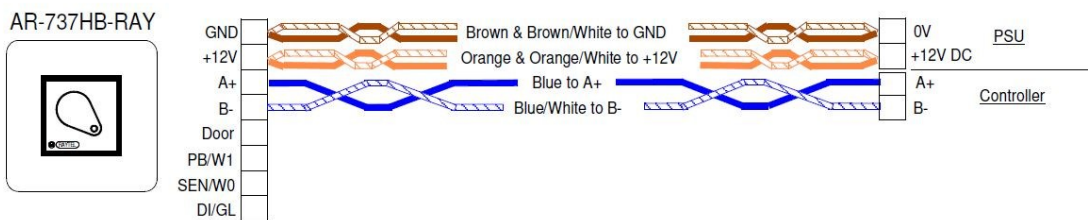


LED4 = Door Output Relay 1
 LED5 = Door Output Relay 2

Additional connections
 Door 1 & Door 2 Alarm
 Inputs and Outputs

TCP/IP RJ45 Connector

READER AND LOCK CONNECTIONS



We would recommend using Cat5/6 cable for the reader connections configured as shown above.

On the previous page the V+ connection is shown in Red, the GND connection is shown as Black, A+ connections are shown in Blue and B- connections are shown in Green.

Connections from the controller interface to the lock should be as per the table on the previous page.

DISPLAY AND KEYPAD LAYOUT

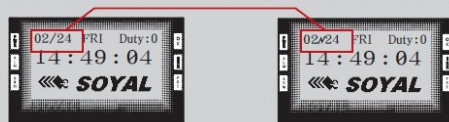
Front Panel Layout



LED's

Power (Green)	- Power on
Alarm (Red)	- Abnormal condition
Alarm (Green)	- Arming status
OK (Green)	- Slow flash normal operation, rapid flash programming
Error (Red)	- Indicates error
IN Processing (Green)	- Controller busy, processing data from reader

Display



Networking : / and \ interactively flash between the Month and DAY.
[e.g.] 02/24 ↔ 02\24

Stand-alone : No flashing [e.g.] 02/24

(←Reference to picture)

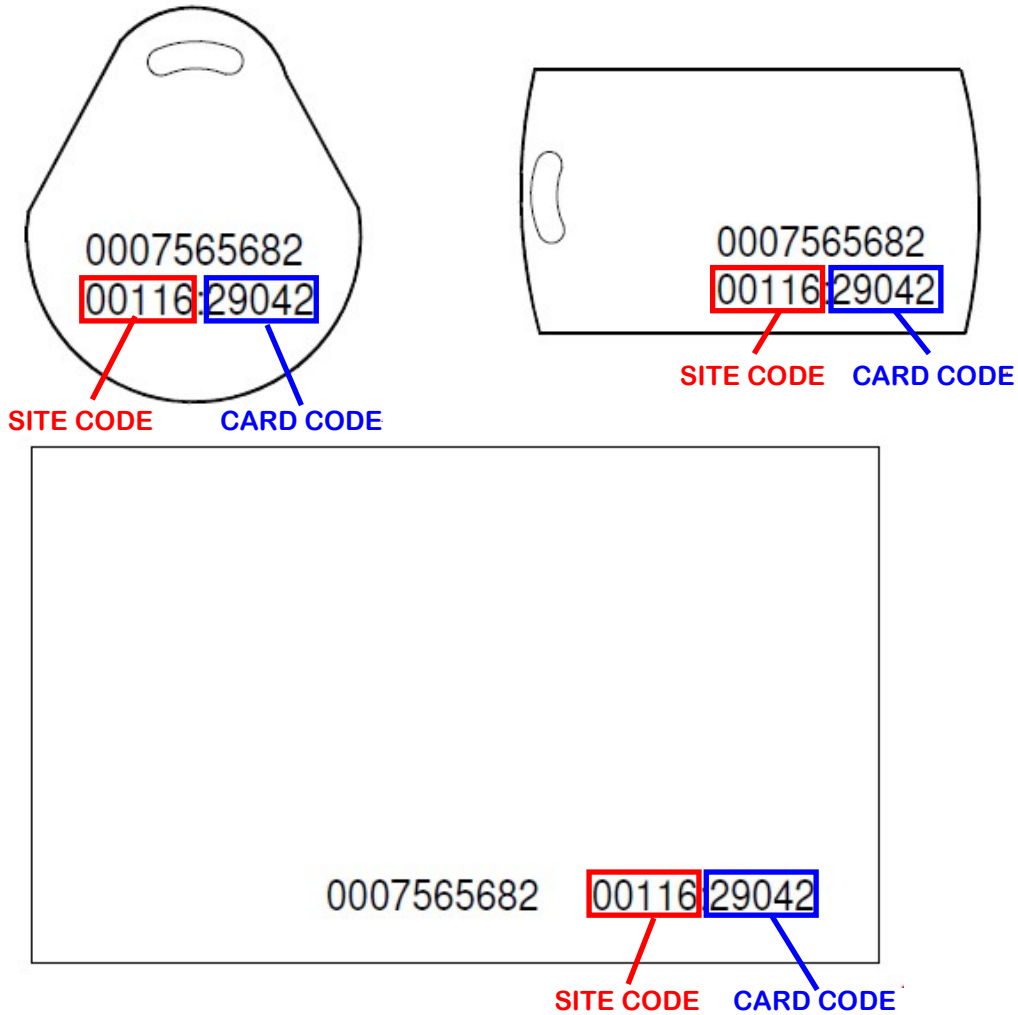
Buttons

- ▲
- ▼ F1 - Navigates up the menu.
- ◀ F2 - Navigates down the menu.
- ▶ F3 - Navigates left in the menu.
- F4 - Navigates right in the menu.
- * - Press to escape current menu screen.
- # - Press to enter data.
- * & # - Press together to lock/unlock Keypad.

TOKENS / CARDS

Identifying Tokens and Cards

All Soyal Tokens and Cards have the Site Code and Card Code printed upon them. The Site Code and Card Code are the unique identifier for the Token or Card. The Site Code and Card Code can be located as shown below:



In the above example the numbers in the **red box** are the Site Code and the numbers in the **blue box** are the Card Code.

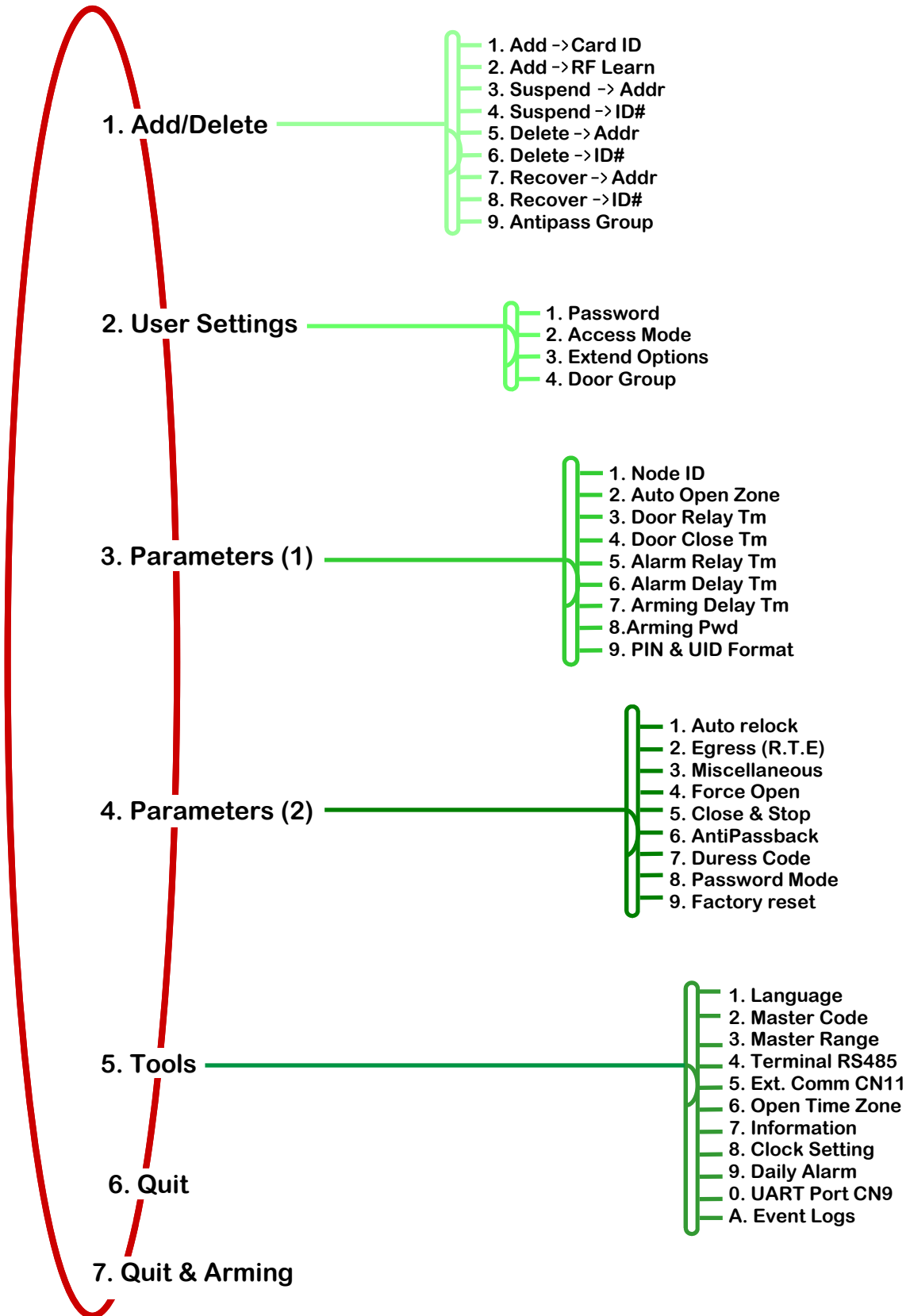
The Site Code and Card code are the unique identifiers that will show on the controller display or in the monitoring software.

If the Site Code and Card Code on the Token or Card cannot be read then the Token or Card can be presented to a controller and the display will show the required details.

Sequential Tokens or Cards will have the same Site Code with sequential Card Codes.

For Example : 00116:29041 to 00116:29050 represent 10 sequential Tokens or Cards. Please note that Mifare Encrypted tokens can NOT be identified by the above.

PROGRAMMING TREE



Enter programming mode by entering *Master Code#

Exit Programming mode by pressing * to step back through the menu until the display reads 6.Quit, then enter # to confirm.

If no keys are pressed for 30 seconds, programming mode will time out and the unit will return to normal operation.

PROGRAMMING

Entering and Exiting Programming Mode

In order to program any function of the AR-727HB-RAY-V5 Controller you must first access the programming mode by entering the factory master code. This is done as follows:-

To enter programming mode press `*123456#`

When the `#` button is pressed after the master code has been entered, the controller will enter into programming mode and the display will show `1. Add/Delete`

From here the programming can be carried out by following the relevant sections of this manual.

To escape from programming press the `*` button to step back through the menu until the display reads `6. Quit` then press `#` to confirm. If no keys are pressed for about 30 seconds, the unit will automatically revert back to Standby mode.

The Master Code can be changed, and it is recommended that system organisers do so for security reasons; however, if the new code is lost, the controller can only be reset to the factory default by using PC software and an interface (supplied separately)

PROGRAMMING

Restoring Factory Settings

If for any reason there is any uncertainty about which settings have been changed, it is possible to restore the original factory default settings. It is always advisable to start by performing a factory reset before commencing with any other programming. This will ensure that all settings are started from a known condition.

The factory reset is performed as follows:-

Enter Programming Mode

Press **4** then press **9**

The Display will then provide 3 options:

- 0: System Parameters (System settings)
- 1: User Settings (User card data and associated Door Groups etc)
- 2: System & User (full system reset)

Option 0 clears all system settings but programmed tokens remain in memory.

Option 1 Clears all user data, all token information and associated Door Groups are deleted.

Option 2 clears both of the above.

WARNING

Performing a factory reset may permanently delete any tokens programmed into the controller. To ensure any programmed tokens are not permanently lost, it is recommended that the tokens are recorded in the Table of Users at the end of this manual.

PROGRAMMING

Changing Master Code

It is recommended that the Master Code be changed from the factory default to keep the system secure. This is done as follows:-

Enter Programming Mode or if already changed

Press then press

Enter the new 6 digit master code.

The Display will now show

Record the new master code on the Table of Users in the back of this manual.

Changing Clock Setting

In standby mode, the display will show the date and time followed by **READY...**, the date and time are programmed as follows:-

Enter Programming Mode

Press then press

The Display will show - YY:xxxx MM:xx Day: xx Hour: xx Min: xx Sec: xx

Where xxxxx = the current setting.

The cursor will be flashing in the Year section. Either overwrite the existing year or if it is

correct press The cursor will now move to the Month section,

Either overwrite or press to continue.

Proceed with settings until the screen shows:

2 options will be shown, select the preferred option

The Display will now show

PROGRAMMING

Setting Up the Readers

If only one door is to be used make all connections to Door 1 on the interface board and proceed to checking the Door Output function(s) on Page 13

If both doors are to be used initially connect the 2nd Reader only. Follow the process below to set the 2nd Reader as Node ID=2.

****for this process have only the 2nd Reader connected****

Enter Programming Mode

Press **3** then **9** the display should be showing **User PIN Length** press **4**

The display should be showing **Card UID Length** Press **4**

The display should now be showing **Show UID** Press **1**

The display **MAY** now be showing
Default = 1.

NFC 13.56MHz RF
0=Disable
1=Enable

If so select the option required

The display **MAY** now be showing
Default = 1

RFID 125KHz RF
0=Disable
1=Enable

If so select the option required.

The display **MAY** now be showing

'#' is doorbell
0=Disable
1=Enable

Press **0**

The display **MAY** now be showing

User Capacity
0=16384 1=32768
2=65536 (0~2)

Press **0**

The display should now be showing **OnlineReader** Press **3**

The display should now be showing **Input New Node ID** Press **2** then press **#**

The display should now be showing **Tag in RF Field: Beep On/Off** Press **1**

The display should now be showing **The LED: Green** Press **1**

The display should now be showing **The LED: Red** Press **0**

The display should now show **Succeeded!** and beep once, after a short delay the controller will then return to the programming menu.

Exit programming mode.

Whenever readers are connected OR disconnected OR Dip switch settings are changed OR Reader parameters are changed - Switch the power off and then on for changes to take effect.

Once completed re-connect the 1st Reader and proceed to checking the Door Output function(s) on Page 13

Items in RED only apply to Firmware version APS727Ev5_V0404_210820 727RAY onwards

PROGRAMMING

Checking the Door Output Function

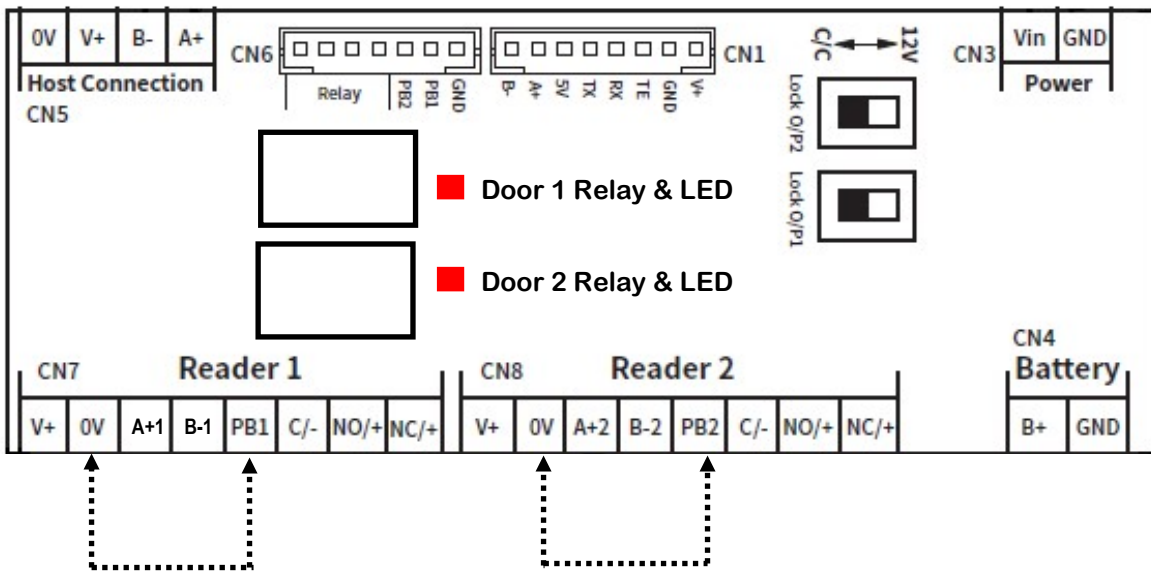
Once the reader(s) have been connected, Node ID's and door relay times have been set the Door output function(s) can be checked.

Each output relay on the interface pcb has an LED to indicate when it is operating.

To check the output relay function:

Link 0V to PB1 briefly, check that the Door 1 Relay LED comes on for the set time.

Link 0V to PB2 briefly, check that the Door 2 Relay LED comes on for the set time.



PROGRAMMING

Language

If, for any reason the language of the controller has been changed the display can be reset to English as follows:

Enter Programming Mode

Then enter **5 1 0**

The display will return to English

The time duration for which the lock relays are active can be adjusted between 0.1 to 600

Door Relay Time

seconds. This is done as follows:-

Enter Programming Mode

Press **3** then press **3**

The display will now show:

```
Reader 1 Open Tm
Range: 000 - 609
601 - 609 = 0.1 - 0.9
xxx
```

xxx will equal the time currently set.

Set xxx to the time required as follows (use 3 digits):

If xxx = 000 the door will operate in Latch Mode

If xxx = 601 to 609 the time will equal 0.1 to 0.9 Seconds

If xxx = 001 to 600 the time will equal 1 to 600 Seconds.

Once the time for Reader 1 has been entered Reader 2 time options will be displayed. Follow the above procedure for Reader 2.

At the end of the process the display will show **Succeeded!**

Exit programming mode.

By default each Door Relay time is set to 7 Seconds.

MANAGING TOKENS

Checking Existing Users

Enter Programming Mode

Press **5** then press **7**

The display will be showing

```
F/w Ver   : xxxx
Users     : xxxxx
Messages : xxxxx
Press any key . . .
```

F/w Ver - is the current version of Firmware installed on the controller.

Users - is the current number of Users (Tokens) on the controller, please note that suspended tokens will not be shown.

Messages - is the quantity of transaction messages stored on the controller.

On a new controller Users will be 00000

To check if there are any suspended tokens proceed as follows:

Enter Programming Mode

Press **1** then press **1**

The display will now show

```
User Information
65535 65535
Range: (0-16383)
xxxxxxx
```

Where xxxxxx is the next available single empty user location

The line below User Information will show the identity of the token at this user location.

If it is 00000 00000 OR 65535 65535 the user location is empty.

To check further user locations use F1 to scroll up 10 locations at a time, F2 to scroll down 10 user locations at a time, F3 to scroll up 1 user location at a time and F4 to scroll down 1 user location at a time.

If xxxxxx + 1 = The number of Users no suspended tokens are present.

If xxxxxx +1 does not equal the number of users then use F1, F2, F3 and F4 to scroll through the user locations to confirm where tokens are located.

When complete exit programming mode.

##The above check for suspended users will only be valid if our guidance for adding tokens on Pages 17 and 18 has been followed##

MANAGING TOKENS

Using Add RF Learn to Add Single Tokens

Enter Programming Mode

Press **1** then press **2**

The display will be showing

```
User Address :  
F3: Prev F4: Next  
Range: (0-016383)  
xxxxxx
```

Where xxxxxx will equal the next available User Address (On a new controller xxxxxx will equal 000001) Press **#**

For a single token the display will be showing

```
Tag Units (pcs)  
Must be sequence  
Range:1-016383)  
000001
```

Press **#**

The display will be showing

```
Close Tag  
Into RF Area
```

Present the Tag to the keypad / display area of the controller.

The Display will show

```
aaaaa:bbbb OK
```

Where aaaaa:bbbb is the identity of the token presented.

If further individual tokens are to be added present each token in turn.

The display will show for each token presented.

```
aaaaa:bbbb OK
```

Where aaaaa:bbbb is the identity of the token presented.

When all tokens have been added press ***** until the Quit menu is displayed then press **#**

Check that the tokens added open the door(s) from the reader(s)

MANAGING TOKENS

Using Add RF Learn to Add Sequential Tokens

Before proceeding confirm that the tokens are sequential, confirm the quantity and separate the lowest numbered token from the batch.

Enter Programming Mode

Press **1** then press **2**

The display should be showing
The next free User Address (On a new controller xxxxxx will equal 000001)
Press **#** to accept the address.

User Address :
F3: Prev F4: Next
Range: (0-016383)
xxxxxx

The display should be showing

Tag Units (pcs)
Must be sequence
Range:1-016383)
000001

Enter the quantity of tokens to be added via the keypad (e.g. for 20 tokens enter 20)
Then press **#**

The display will be showing

Close Tag
Into RF Area

Present the lowest numbered token only to the keypad / display area of the controller.

The Display will show aaaaa:bbbb
Which will be the identity of the token
Presented.

aaaaa:bbbb OK

If no further tags are to be added press ***** until the quit menu is displayed, then press **#**

Check the tokens open the Door(s) by presenting them to the relevant Reader(s)

(Check the highest and lowest numbered tokens to confirm correct function)

MANAGING TOKENS

Suspending Tokens by Address

We recommend that tokens are suspended rather than deleted. Suspended tokens can be recovered (see pages 19-20) Suspending tokens also prevents overwriting existing tokens when using “Add by RF Learn”

Before proceeding the User Address of the token(s) to be suspended will be required, refer to the table of users at the back of this manual.

Once Tokens are suspended when presented they will show as “Invalid User” at the controller or “Scan Data” when presented at the reader.

To suspend Token(s) by User Address

Enter Programming Mode

Press **1** then press **3**

The display will be showing

Input Start Addr

Range: (0 - 16383)
000000

Enter the start address for suspending tokens (if less than 6 digits are entered then Press **#**)

The Display will be showing

Input End Addr

Range: (0 - 16383)
000000

Enter the end address for suspending tokens (if less than 6 digits are entered then Press **#**)

The Display will be showing

Input End Addr:

xxxxxx : xxxxxx
Succeeded

Where xxxxxx : xxxxxx will be the Start and End address entered.

Exit Programming Mode.

MANAGING TOKENS

Suspending Tokens by Code

Before proceeding the Site Codes and Card Codes of the token(s) to be suspended will be required, refer to the table of users at the back of this manual.

Once Tokens are suspended when presented they will show as “Invalid User” at the controller or “Scan Data” when presented at the reader.

To suspend Token(s) by Site Code and Card Code

Enter Programming Mode

Press **1** then press **4**

The display will be showing

Set	Site:
00000:xxxxx	
Range : (0 - 65535)	

Enter the site code for the token to be suspended then press **#**

The display will be showing

Set	Code:
aaaaa : 00000	
Range : (0 - 65535)	

Where aaaaa will be the site code entered (if less than 5 digits are entered then press **#**)

Now enter the card code for the token to be suspended.

If the site code and card code are not recognised the screen will show

Set	Code:
aaaaa : bbbbb	
Data Not Found	

If the site code and card code are recognised the screen will show

Set	Code:
aaaaa : bbbbb	
Succeeded	

Where aaaaa = The site code and bbbbb = The card code of the token suspended.

Exit Programming mode

MANAGING TOKENS

Recovering Tokens by Address

Before proceeding the User Address of the token(s) to be recovered will be required, refer to the table of users at the back of this manual.

Once Tokens are suspended when presented they will show as “Invalid User” at the controller or “Scan Data” when presented at the reader.

To Recover Token(s) by User address

Enter Programming Mode

Press **1** then press **7**

The display will be showing

Input Start Addr
Range: (0 - 16383)
000000

Enter the start address for suspending tokens (if less than 6 digits are entered then press **#**)

The Display will be showing

Input End Addr
Range: (0 - 16383)
000000

Enter the end address for suspending tokens (if less than 6 digits are entered then press **#**)

The Display will be showing

Input End Addr:
xxxxxx : xxxxxx
Succeeded

Where xxxxxx : xxxxxx will be the Start and End address entered.

Exit Programming Mode

MANAGING TOKENS

Recovering Tokens by Code

Before proceeding the Site Codes and Card Codes of the token(s) to be recovered will be required, refer to the table of users at the back of this manual.

Once Tokens are suspended when presented they will show as “Invalid User” at the controller or “Scan Data” when presented at the reader.

To recover Token(s) by Site Code and Card Code

Enter Programming Mode

Press **1** then press **8**

The display will be showing (the initial number aaaaa is not relevant and can be ignored)

```
Set           Site:
aaaaa:xxxxx
Range : (0 - 65535)
```

Enter the Site Code for the token to be recovered, if a Site Code is already present enter the Site Code for the token to be recovered. (if less than 5 digits are entered then press **#**)

The display will be showing

```
Set           Code:
aaaaa : 00000
Range : (0 - 65535)
```

Where aaaaa will be the site code entered.

Now enter the card code for the token to be recovered (if less than 5 digits are entered then press **#**)

If the Site Code and Card Code are not recognised the screen will show

```
Set           Code:
aaaaa : bbbbb
Data Not Found
```

If the Site Code and Card Code are recognised the screen will show

```
Set           Code:
aaaaa : bbbbb
Succeeded
```

Where aaaaa = The Site Code and bbbbb = The Card Code of the token suspended.

Exit programming Mode.

MANAGING TOKENS

Setting Door Groups

By default any tokens added to the controller will have access to both doors (if both door outputs are being used)

The controller can be configured so that tokens have access to:

Neither door, door 1 only, door 2 only or both doors.

Door Groups are set for each individual user.

To set Door Groups:

Enter Programming Mode

Press **2** then press **4**

The display will show

```
User Address:  
F3: Prev F4: Next  
Range : (0-016383)  
xxxxxx
```

Where xxxxxx is the current user location. Either use F3 / F4 to navigate to the required user address OR over write xxxxxx with the desired location and press **#**

The display will show

```
0: None 1: Door (1)  
2: Door (2) 3: Dual  
  
x
```

Where x will be the current setting for the selected user location. If the current setting is correct press **#**

If a different setting is required over write x with the desired option.

The display will show

```
0: None 1: Door (1)  
2: Door (2) 3: Dual  
  
Succeeded
```

Exit Programming Mode.

NETWORKING

Setting Node ID (and IP Address)

If controllers are networked they can be programmed and monitored remotely using dedicated software available from our website <https://www.raytelsecurity.com>

Controllers can be networked by three different methods as follows:

RS485 (controllers are connected to a RS485 network and a USB to RS485 adaptor is used at the PC)

RS485 via TCP/IP (controllers are connected to a RS485 network via a TCP/IP to RS485 adaptor)

TCP/IP (controllers can be connected directly to a TCP/IP network. The AR-716E-RAY-AJ has a TCP/IP connection on the interface pcb,

For Networking purposes each controller will require a unique Node ID.

To set the Node ID proceed as follows:

Enter Programming Mode

Press **3** then press **1**

The display will show

```
Input New Node ID
Range: 001 - 254
Current Data: xxx
yyy
```

Current data: xxx is the node ID currently set (Default = 001)

Enter the required Node ID (yyy will be overwritten) if less than 3 digits are entered then press **#**

The display will show

```
Main Door Number
Range: 000 - 255
001
```

Press **#**

The display will show

```
WG1 Door Number
Range: 000 - 255
002
```

Press **#**

Continue to next page.

NETWORKING

Setting Node ID (and IP Address) continued

The display will show

```
Show WG Message
0: No 1 : Enable
x
```

X is the current setting, if x = 1 press if x = 2, press

The display will show

```
Enable DHCP
0 : No 1 : En 2: Exit
192.168.001.127*
x
```

X by default will be 0, there are now 3 options:

1. If an IP address is not required for the controller press This will save the settings already changed and return the controller to the main menu.
2. *DHCP would not usually be enabled, if it is to be enabled press*
3. To proceed with allocating an IP address without DHCP enabled press

The display will show

```
IP Address (IPv4)
192.168.001.127
192.xxx.xxx.xxx
```

To modify the default IP address over type 192.xxx.xxx.xxx with the required IP address

The display will show

```
Net Mask (IPv4)
255.255.255.000
255.xxx.xxx.xxx
```

To modify the net mask over type 255.xxx.xxx.xxx with the required net mask.

Continue to next page.

NETWORKING

Setting Node ID (and IP Address) continued

The display will show

```
Gateway (IPv4)
192.168.001.254
192.xxx.xxx.xxx
```

To modify the default Gateway address over type 192.xxx.xxx.xxx with the required gateway address.

At the end of this process the controller will restart and the modified settings will be active.

If the controller is to be used on a network it should be selected In the LAN settings drop down of 701 Server as:

881/837/82xEv5/727Ev5/725Ev2/721Ev2

If 701 Client software is being used to manage Door Groups the Doors will need to be Named in 701 Client as:

XXX:001 For Door 1 where XXX is the selected Node ID of the controller.
XXX:002 For Door 2 where XXX is the selected Node ID of the controller.

All TCP/IP controllers have a default IP address of 192.168.001.127

All controllers have a configuration function that can be accessed using this default IP address with a suitably configured PC. From within the configuration function Node ID, IP address and other basic functions can be configured.

ALARMS

Setting and Configuring Door Alarms

Alarms can be configured for Door 1 and Door 2. For alarms to be configured normally closed door sensing Contacts are required (if monitored mag locks are being used then monitoring contacts are built in to the mag lock) at each door where an alarm is required. The door contacts must be connected to 0V and either Sen1 or Sen2 inputs as required (See Page 4) Alarm outputs are Normally Open clean contacts that close when an alarm condition is met.

Alarms can be set for:

Door Open too long (only functions when On and the controller is 'Armed')
Door forced open (If ON always functions irrespective of controller 'Arming' status)

If monitored mag locks are being used then the monitoring switch in the mag lock will identify when power is cut to a lock (Break Glass operated) and trigger a Door Forced Open Alarm.

If un-monitored mag locks are being used normally closed isolated break glass contacts can also be configured in series with each of the door contacts if required to identify the operation of a Break Glass and sound an alarm.

If the controllers are networked alarms will also be identified on 701 Client monitoring software.

The following functions can be set independently for each door:

Door Relay time (Door 1 & Door 2)
Door Close time (Door 1 & Door 2)
Door Forced Open (Door 1 & Door 2) If set ON this will always function.
Door Close to Stop alarm (Door 1 & Door 2)

The following functions when set apply to BOTH doors.

Alarm Relay Time
Alarm Delay Time
Arming Delay Time
Arming PIN Code

For the 'Door Open too long' alarm to function the controller **MUST** be armed, this can be carried out at the controller or via 701 Client Software.

From the software each door can be armed independently,

At the controller both doors are armed simultaneously by presenting a valid token to the controller and then entering the arming passcode followed by #

The Controller display will confirm that the controller is 'Arming'

Controllers can be 'Disarmed' at the controller or via 701 Client Software. From the software each door can be disarmed separately, at the controller both doors will be disarmed by presenting a valid token to the controller and then entering the arming passcode followed by #

The controller display will confirm that the controller is 'Disarming'

See Pages 27 to 31 for alarm Setting and monitoring procedures.

ALARMS

Door Relay Time

To set the Door relay times refer to Page 15 of this manual.

Door Close Time

The Door Close time is the amount of time from the start of the Door Open time until the Alarm is triggered.

E.g. if the door relay time is 7 Seconds and the door close time is 20 Seconds the alarm will be triggered 13 seconds after the door should have been closed if the door is still open.

To set the Door Close Time

Enter Programming Mode.

Press **3** then press **4**

The display will now show:

```
Reader 1   Close
Delay time (Sec)
Range: 000 - 255
xxx
```

xxx will equal the time currently set.

Set xxx to the time required using 3 digits or press # to retain the existing setting.

Once the time for Reader 1 has been entered Reader 2 options will be displayed. Follow the above procedure for Reader 2.

At the end of the process the display will show **Succeeded!**
Exit programming mode.

By default the Door Close times are set to 15 Seconds.

Door Forced Open

These settings determine whether the alarm will be triggered if a door is forced open.

To set the Door Forced Open Alarms

Enter Programming mode.

Press **4** then press **4**

The display will now show:

```
Main Controller
Force Open Alarm
0:NO    1: YES
x
```

x is the default setting, Set x to the required setting or press # to retain the existing setting. Once the setting for Reader 1 (Main Controller) has been set Reader 2 (WG1 Port) settings will be displayed. Follow the above procedure for Reader 2.

At the end of the process the display will show **Succeeded!**
Exit programming mode

By default the Door Forced Open alarms are OFF

ALARMS

Door Close to Stop Alarm

Alarms can be set to either sound for the programmed 'Alarm Relay Time' or alarms can be silenced by closing the door.

To set the Close Door to Stop Alarm options:

Enter Programming Mode.

Press **4** then press **5**

The display will now show:

```
Main Controller
Close Door Stop
Alarm 0:NO 1: YES
x
```

X is the default setting, Set x to the required setting or press # to retain the existing setting. Once the setting for Reader 1 (Main Controller) has been set Reader 2 (WG1 Port) settings will be displayed. Follow the above procedure for Reader 2.

At the end of the process the display will show **Succeeded!**
Exit programming mode

By default the Door Close to Stop Alarm parameters are OFF

Alarm Relay Time

The Alarm Relay Time is common to both doors. The Alarm Relay Time determines the time the alarm relay contacts on each door will close if an alarm condition is met.

To set the Alarm Relay Time:

Enter Programming Mode.

Press **3** then press **5**

The display will now show:

```
Alarm Relay Time
Range 000-609
601 - 609 = 0.1 - 0.9
xxx
```

xxx will equal the time currently set.

Set xxx to the time required as follows (use 3 digits):

If xxx = 000 the alarm will sound continuously until cancelled

If xxx = 601 to 609 the time will equal 0.1 to 0.9 Seconds

If xxx = 001 to 600 the time will equal 1 to 600 Seconds

Once the 3 digits have been entered the display will show **Succeeded!**
Exit programming mode

By default the Alarm Relay Time is set to 15 Seconds

ALARMS

Alarm Output Delay Time

The Alarm Output Delay Time is the time between the Alarm condition being identified and the Alarm output switching ON.

To set the Alarm Output Delay time:

Enter Programming Mode.

Press **3** then press **6**

The display will now show:

```
Alarm Output
Delay Time (Secs)
Range 000 - 255
xxx
```

xxx is the current setting:

Set xxx to the time required (use 3 digits):

At the end of the process the display will show **Succeeded!**

Exit programming mode

By default the Alarm Output Delay Time is 1 Second

Arming Delay Time

The Arming Delay Time is the time between the controller being placed into Arming Mode and the Actual Arming process taking place on the controller. An output pulse can also be generated to indicate the controller is arming if it is required.

To set the Arming Delay time:

Press **3** then press **7**

The display will now show:

```
Enter Armed sta.
Delay time (Sec)
Range: 000 - 255
xxx
```

xxx is the current setting:

Set xxx to the time required (use 3 digits)

The display will now show:

```
Armed pulse out-
Put time. (10mS)
Range: 000 - 255
xxx
```

xxx is the current setting:

Set xxx to the time required (use 3 digits)

At the end of the process the display will show **Succeeded!**

Exit programming mode

By default the Arming Delay Time is 1 Second and the Output Pulse Time is 0 Seconds

ALARMS

Arming Password

To enable Alarms to be Armed at the controller a 4 digit passcode is required.

To set the Arming Passcode :

Enter Programming Mode.

Press **3** then press **8**

The display will now show:

```
Input PIN Code
Range:      0000 -
           9999
xxxx
```

xxxx is the current passcode:

Set xxxx to the passcode required (use 4 digits)

At the end of the process the display will show **Succeeded!**

Exit programming mode

The default arming passcode is '1234'

Controllers can be armed at the controller or via 701 Client Software. From the software each door can be armed separately.

At the controller both doors are armed simultaneously by presenting a valid token to the controller and then entering the arming passcode followed by #

The Controller display will confirm that the controller is 'Arming'

Controllers can be 'Disarmed' at the controller or via 701 Client Software. From the software each door can be disarmed separately,

At the controller both doors will be disarmed by presenting a valid token to the controller and then entering the arming passcode followed by #

The controller display will confirm that the controller is 'Disarming'

See the next page for Arming and Disarming via 701 Client software

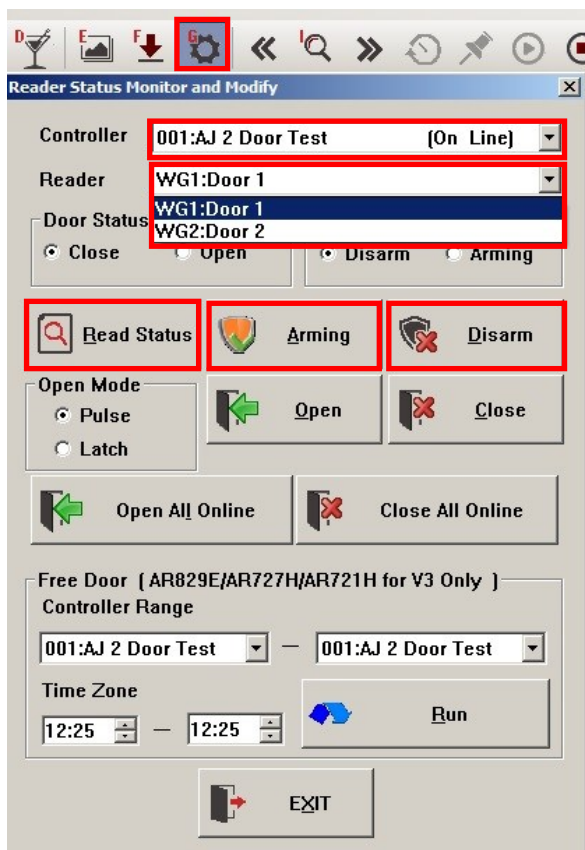
ALARMS

701 Client-Monitoring + Arming/Disarming Doors

Index	Time	Station	Num	Name	Department	Department:2	UserID	Status	Detail
0001	12:24:39		02	q				(L20)Login Server	
0002	12:24:47		01	AJ 2 Door Test				(L22)Controller Off Line	
0003	12:24:53		01	AJ 2 Door Test				(L23)Controller On Line	
0004	12:25:01		02	q				(L21)Logout Server	
0005	12:25:07		02	q				(L20)Login Client	
0006	12:25:36		02	q				(L21)Logout Client	
0007	12:26:51		02	q				(L20)Login Client	
0008	12:27:10	Door 1	0001	Contractor 1	Dep_00	Dep2_00		(M11)Normal Access	00100:10886
0009	12:27:23	Door 1						(M14)Arming	
0010	12:27:33	WG:Door 2						(M14)Arming	
0011	12:27:43	Door 1						(M16)Egress	
0012	12:27:46	WG:Door 2						(M16)Egress	
0013	12:28:05	Door 1						(M17)**Alarming**	Door Open Timeout
0014	12:28:09	WG:Door 2						(M17)**Alarming**	Door Open Timeout
0015	12:28:40	Door 1						(M17)**Alarming**	Force Entrance
0016	12:28:44	WG:Door 2						(M17)**Alarming**	Force Entrance
0017	12:29:04	Door 1						(M15)Disarm	
0018	12:29:07	Door 1						(M15)Disarm	

From within the 701 Client software door alarms can be Armed, Disarmed and monitored. The screen above shows a typical event log with Alarm events, the software shows alarm events in Red text.

Controllers can be armed and disarmed either via the 701 Client software or at the controller(s)



By selecting G from the 701 Client header strip the 'Reader Status Monitor and Modify' tab shown to the left can be opened.

All on line controllers can be selected from the 'Controller' drop down.

Individual doors (readers) can be selected from the Reader drop down.

By left clicking the 'Read Status' button the current status of the selected door will be reported.

Individual doors can be armed or disarmed by selecting the Controller and Door in the drop downs, reading the status and then using the Arming or Disarming buttons as required.

The Arming and Disarming buttons only function on the Controller and Reader selected in the drop down menus.

READER SETTINGS

Setting up and configuring readers

When connected via RS485 readers can be configured to provide different levels of functionality.

By default we recommend readers are set as per the information on Page 3. This setting (Dip switch 1 ON and Dip switch 2 OFF) enables the reader to transmit data in RS485 and WG modes.

The Green LED does not function with the above settings.

To enable the Green LED set the Dip switches to (Dip switch 1 ON and Dip switch 2 ON)

The configuration for each reader then has to be set in software using the 'Setting Up' readers function detailed on Page 12 or 13.

We would suggest the following are the best settings for improved user information.

Dip Switch 1 ON, Dip Switch 2 ON

Reader set up (use the process on page 12) so that Beep=ON, Green LED=ON, Red LED = OFF

The above settings will provide the following:

Present Valid Token: 1 Beep + Green LED to indicate token presented then 1 Beep + Green LED - to indicate Token Valid

Present Invalid Token: 1 Beep + Green LED to indicate token presented then 2 Beeps + Red LED - to indicate Token Invalid

