English

AXS-100, AXS-100XT

Two-Door Proximity Access Control System (V2.06)

Visonic Technologi
Enterprise Protection Solution

User's Guide

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1.INTRODUCTION

Thank you for choosing the Visonic Technologies AXS-100 proximity access control system. We are confident that this product will serve your needs for years to come.

The Visonic Technologies AXS-100 is an electronic access control system for controlling two doors. Eight controllers can be networked together to control a total of 16 doors. The controller relay activates a lock or an electromagnetic strike (EMS), when a valid proximity key card or tag is presented to the reader located outside the protected area.

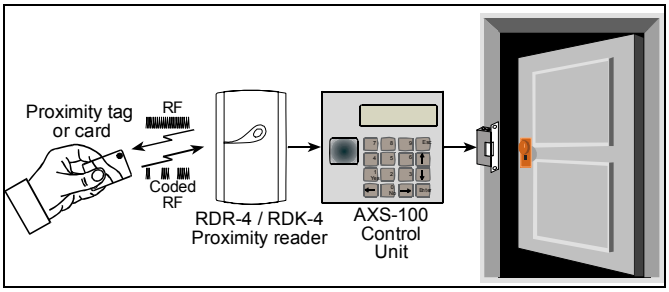


***Figure 1** - Access Control Functional Diagram*

The use of proximity (non-contact) key makes the AXS-100 system an attractive access control solution in harsh environments and in places with poor lighting conditions. The proximity keys are totally sealed and wear resistant. The reader reads the key ID, whenever the key is held close to the reader.

Most buildings have a few doors through which many individuals enter and leave.

The AXS-100 system provides an excellent access control solution at a very competitive price. Some of the applications for which the AXS-100 is beneficial are:

Apartment buildings	Shopping Malls	Office buildings
Municipal buildings	Kindergartens	Dormitories
Factories	Hospitals	Schools

In many of these buildings, there is a need for controlling access to some or all of the doors. The system gives the security department the ability to select where and when will a person be allowed to go through a door. In case of loss or theft of a key, the key may be easily barred from opening any of the locks, by deleting it from memory. This precludes replacement of the cylinder and associated keys as done in conventional doors.

The AXS-100 system can control from one to 16 door locks with up to 5000 key records.

The controllers are networked using a simple twisted pair cable.

The controllers can be installed in different locations, close to the locks. The system can produce various on-line and off-line reports of key user lists and individual reader usage.

The system allows the user to restrict the validity of each key by assigning each key with one or two time zones. The system contains eight time zones.

The system can be connected to a serial printer for online and offline printout of events.

The controller contains an alarm output relay, which trips when a predefined alarm or trouble occurs.

The user can program a specific unlock time for each door.

The AXS-100 controller can also operate with a single door and two readers to form an anti-passback configuration. The door lock will not open again for the same key unless the reader read the key on the other side of the door.

PC may be connected for use as supplementary monitoring only.

Each controller can govern one or two doors. The diagram below illustrates the various possible combinations for a single controller:

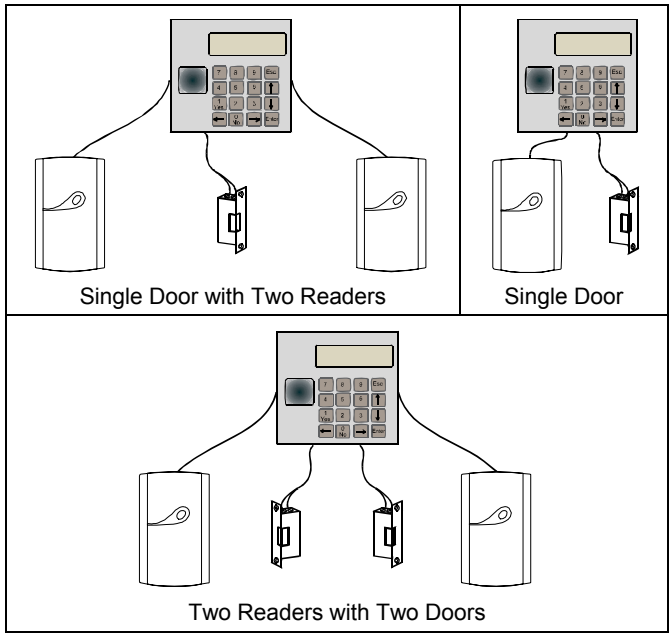


***Figure 2** - Door and Readers configurations*

2.USER INTERFACE

2.1.Keypad

Each AXS-100 controller is equipped with a 4x4 key keypad. All system programming is done through this keyboard.

The keypad buttons have the following functions:

Enter Execute a function (accept data and proceed)

Esc Quit current function or menu and go one level back. Pressing Esc a few times will return to the idle screen.

←, → Horizontal arrows used to move inside an edited field. They are also used to skip a month in Holiday table editing.

↑, ↓ The vertical arrows are used to select a menu item, select a day in Holiday table, as well as select special functions in various screens (see par. "5.ADVANCED FEATURES".) The down arrow signifies “forward”, and the up arrow signifies “backward”.

0 – 9 Used for typing in numeric values while programming. The “1” is also used for indicating Yes / On and “0” is also indicating No / Off.

2.2.Idle Screen

The AXS-100 idle screen is displayed as long as there is no user intervention. The top line displays date and time.

```
2 7 / 0 1        0 8 : 3 1 : 1 7
```

While the idle screen is displayed and no events are displayed on the bottom line, you may press certain buttons to get special information from the controller or set a few functions (see "2.5.User Hot Keys").

If date and time are not set, the screen will blink as shown:

```
- - / - -        - - : - - : - -
```

The bottom line is used for displaying trouble and alarm conditions:

```
2 7 / 0 1        0 8 : 3 1 : 1 7
F O R C E D   D O O R          1
```

Controller #1 will display its and the other controllers' alarm and trouble conditions. Controllers 2 through 8 will only display their own events.

The controller memorizes the most recent 32-alarm/trouble events. If no events are acknowledged and more than 32 events are logged, the oldest events will be cleared.

To acknowledge an event, press the "0" or "1". The oldest event will be replaced by the next event in line (Pressing "0" will turn off the buzzer. Pressing 1 will turn the buzzer on).

If no messages are displayed, the controller will sound a single beep when "0" is pressed to indicate that the buzzer is disabled, or a double beep if "1" is pressed to indicate that buzzer is enabled.

2.3.Login Screen

In order to change system parameters and key records, or print reports the user has to login. While display shows date and time:

- Press **Enter** to reach the login screen.
- Type the password followed by **Enter**.

```
E N T E R   P A S S W O R D
                    X X X X
```

If you entered an invalid password, the date and time screen will re-appear.

The system recognizes two password levels:

Level #1 allows the user modify all system parameters including passwords.

Level #2 allows the user to modify date and time and key records (ADD, DELETE, MODIFY) only.

To be able to change passwords, you HAVE to log in with a level #1 password.

***Note**: For initial password and resetting the passwords, refer to the Installation Instruction. For setting passwords see sec. "*3.2.5.Passwords*".*

2.4.Operating Modes

The following are the AXS-100 operating modes:

Mode	Description
1	2 doors, 2 readers, hard anti-passback
2	1 door, 2 readers
3	2 doors, 2 readers, soft anti-passback
4	1 door, 2 readers, soft anti-passback
5	Both EXIT in soft anti-passback mode
6	1 door, 2 readers, hard anti-passback
7	2 doors, 2 readers
8	Both ENTRY in hard anti-passback mode
9	Elevator control
1 door modes – connect lock to left side terminal block	

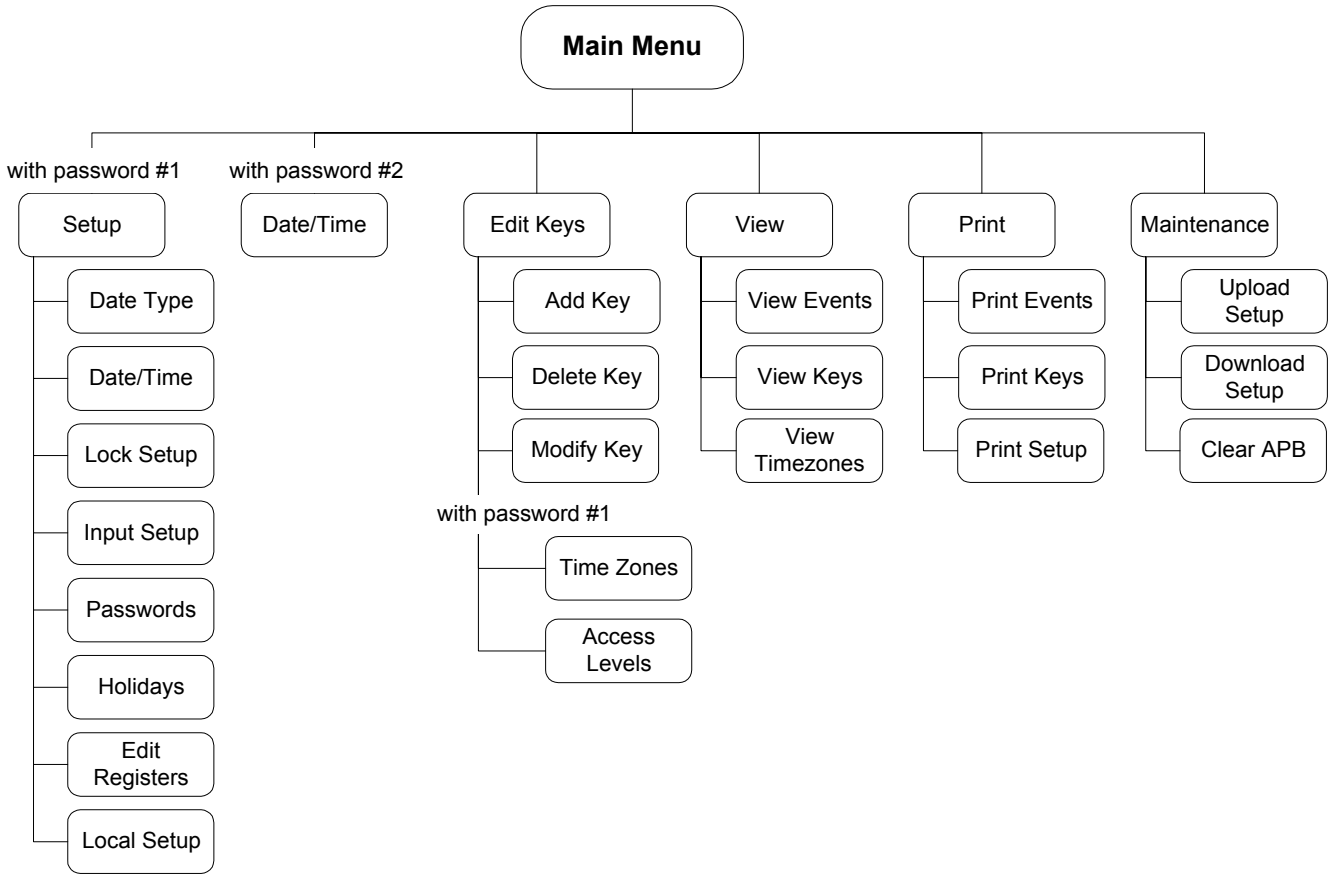
2.5.User Hot Keys

You may press the following keys while the idle screen is displayed and no events are displayed:

Key	Action
0	Acknowledges the displayed event message, one at a time. Silences the buzzer.
1	Acknowledges the displayed event message, one at a time. Activates the buzzer.
2	Toggles interface language if two languages are loaded.
3	Not used
4	View reader status. If a "+" is displayed both readers, the controller is OK. If one reader displays a "+" and the other a "-", then a hardware problem exists. Pressing "4" again shows the total number of keys in the database. Pressing "5" shows the last tag code that was presented to the external reader.
5	Not used
6	Shows firmware version.
7	Shows all the controllers in the loop (from 1 … 8). If a "-" appears instead of the controller number, a communication problem exists. If a controller is connected and is currently unavailable, its position will change to 'X'
8	Clears screen (usually used to clear the screen of event messages.
9	Displays the address and operating mode (see "**2.4.Operating** Modes").

3.MENUS

The AXS-100 user interface is organized into a main menu and five sub-menus. The chart below shows all menu entries.



A menu is a list of items to select from.

- Use the up and down arrows to scroll until reaching the desired item.
- Press **Enter** to execute or **Esc** to cancel and go back.
- If you do not press any key for more than 90 seconds, the controller will automatically log you out and revert to the idle screen.
- Pressing the 0 key on any menu will toggle the menus between text only and text plus selection number. In both modes, you can reach a specific selection by pressing its corresponding digit.

Example: LOCK SETUP can be reached from main menu by pressing 1 for SETUP and then 3 for LOCK SETUP.

3.1.Main Menu

Once you login successfully, you will be presented with the main menu. Depending on the password used to login, you will see one of two main menus:

Main Menu screen, available with Password #1:

```
→ S E T U P
  E D I T   K E Y S
```

Main Menu screen, available with Password #2:

```
→ D A T E / T I M E
  E D I T   K E Y S
```

Press the down arrow twice to see the rest of the main menu.

```
→ V I E W
  P R I N T
```

The following sections under chapter 3 explain all five sub-menus in detail.

3.2.Setup

To enter the SETUP menu, log in with password #1.

The SETUP menu allows selecting one of six functions:

1.	Select European / American date format	DATE TYPE
2.	Enter date and time	DATE / TIME
3.	Set up locks' open time in seconds	LOCK SETUP
4.	Setup AUX Input / Output on the IOX-4	INPUT SETUP
5.	Select passwords #1 and #2	PASSWORDS
6.	Set holidays	HOLIDAYS
7.	Set / Edit system registers	EDIT REDISTERS
8.	Additional options	LOCAL SETUP

3.2.1.Date Type

The system can use the European (DD/MM/YY) or American (MM/DD/YY) date format.

Select the appropriate date format and press **Enter** to set. The screen will return to the SETUP menu.

```
→E U R O P E A N
  A M E R I C A N
```

3.2.2.Date / Time

When entering the date and time setup screen, the date will be displayed according to selected date format. Enter new date and press **Enter** to move on to the time field. The time is always shown in 24-hour format.

For example: If the date is September 17, 2002 and the time is 3:34 PM:

- Enter date: 170902 and press **Enter.**
- Enter time: 1534 and press **Enter** to save the new date and time.

```
DATE: 17/09/02
TIME: 15:34
```

3.2.3.Lock Setup

Lock setup consists of specifying the unlock time in seconds (1 - 2000) for each lock. For example, for a door unlock duration of 5 seconds the value of 5 should be entered.

The detailed door unlock duration time process is as follows:

- Enter the lock number (1-16, or enter 99 to define all doors unlock duration period at the same time).
- Press **Enter**.
- Enter the desired unlock time, according to the above description. The display will show:

```
LOCK #:          1
UNLOCK TIME: 5
```

If a "0" is entered for the unlock time, the lock works in toggle mode. This means that when a key is presented to the reader, the lock remains unlocked until a new key is presented to it.

3.2.4.Input Setup

Please refer to the IOX-4 Installation Instructions manual for more details on this entry.

3.2.5.Passwords

Note: *The password is a 4-digit number.*

When entering this mode both passwords have to be set in order to continue.

Modifying passwords should be handled with care. Only password level #1 users can modify the passwords.

- Enter password #1 and press **Enter**
- Enter password #2 and press **Enter**

```
PASSWORD #1: XXXX
PASSWORD #2: XXXX
```

Password #: 2 can do the following:

Modify	**Date and Time**
Add / delete / modify	Keys
View	Events log
	Key records
	Time zones
Print (via RS 232)	Events
	Keys
	Setup

3.2.6.Holidays

Each day of the year can be defined as a regular day or as one of four holiday types. The holiday definitions are used in the Time Zone Setup to grant access to certain key holders during holidays. (Saturday and Sunday are not considered holidays since they are part of the week day definition).

When entering the holiday setup screen, select one of two choices:

1. **EDIT** - Change existing holiday schedule
2. **ERASE** - Delete holiday schedule

Press 1 for **EDIT** or 2 for **ERASE**.

3.2.6.1.Edit

Each day of the year (366 days including leap years) can be designated as a holiday. Each holiday should have a holiday type (1, 2, 3, or 4) assigned to it.

```
HOLIDAYS
1. EDIT  2. ERASE
```

To change a holiday into a regular day, change its type to be 0.

When a certain date is displayed, press numeric keys 0, 1, 2, 3 or 4 for setting date type.

```
01/01  FRI
TYPE:          0
```

Use the keypad to change the dates, as follows:

- Press right or left arrow to scroll months forward or backwards.
- Press the DOWN or UP key to change the date by a single day.
- Press 5 to advance to the next programmed holiday.
- Press 7 to advance to January 1
- Press 8 to advance to July 1
- Press 9 to advance to December 31

3.2.6.2.Erase

The AXS-100 will prompt you to confirm before erasing the holiday table. The "1" button is used as "YES" to confirm the erasure. If you are sure you want to erase the table, press 1 and then **Enter**.

```
ERASE ALL
HOLIDAYS (Y/N) N
```

3.2.7.Edit Registers

There are 128 data registers as follows:

Register	Description
0	Entry/Exit Up/Down counter. Enables counting how many entries minus exits occurred to enable counting cars in a parking lot application, for example.
1	Capacity threshold for alarm relay operation. Can indicate when a parking lot or other facility is full, for example.
2	Entry counter (can be cleared by user from controller or PC).
3	Left (bit 0) and right (bit 1) reader enabled (can be controlled from PC). Most significant 12 bits MUST be 1s to enable controlling the readers. This register enables activating/de-activating each reader.
4, 5	From/To time in minutes during which lock 1 will require two valid tags within 6 seconds to open. If either register is greater than 1439 or if R4 is greater or equal to R5, this feature is disabled.
6,7	From/To time in minutes during which lock 2 will require two valid tags within 6 seconds to open. If either register is greater than 1439 or if R6 is greater or equal to R7, this feature is disabled.
8, 9	From/To time in minutes during which reader 1 will switch from mode 0 to mode 1 (reserved for future RDK-4 Tag+Pin or Tag only or for RDT-4 entry or exit). IF either register is greater than 1439 or if R8 is greater or equal to R9, this feature is disabled.
10, 11	From/To time in minutes during which reader 2 will switch from mode 0 to mode 1 (reserved for future RDK-4 Tag+Pin or Tag only or for RDT-4 entry or exit). If either register is greater than 1439 or if R10 is greater or equal to R11, this feature is disabled.
12	Dial out event count threshold. Enables controllers working as a modem to dial out to the central computer download accumulated events.

Register	Description
13	For future use.
14, 15	Minute range (0 … 1439) during which Time and Attendance is in Entry mode.
40-99	Events counting, expressed as pulses on any of the inputs, in registers 40 to 99.
100	Alarm register. Exit delay in seconds.
101	Alarm register. Entry delay in seconds.
102	Number of alarm signals from an input in armed mode before bypassing it
103	Auto arm/disarm time zone selection
124	Main alarm arming register.
125	Secondary alarm arming register.
127	Read ONLY entry counter.

3.2.8.Local Setup

The Local Setup screen allow the user to set up the controller address and operation mode as well as many other advanced features of the controller.

The anti-passback feature is enabled when the controller operates with a single door and two readers. The door lock will not open again for the same key unless the reader reads the key on the other side of the door. This prevents the user that entered the protected area from passing the key to another person for gaining access with the same key. This feature is implemented by using an anti-passback timer.

In all LOCAL SETUP screens, pressing the up arrow button, will open the SPECIAL SETUP screens. These screens will be discussed in "5.ADVANCED FEATURES" bellow.

3.2.8.1. Anti-Passback Table Reset

When in any anti-passback mode, the AXS-100 uses a timer table with a timer for each key. Whenever a key is presented and accepted, its timer is set to number of half-hour interval as defined in "3.2.8.2.Anti-Passback Duration" below. If the key is not presented for more than the predefined interval, its timer will be cleared and both readers will accept that key again. The user has two other options for clearing all key timers at once without waiting for each key timer to time out:

- Select CLEAR APB in the MAINTENANCE menu.
- Set an hour (0..23), at which time the anti-passback table will be cleared automatically.

The APB CLEAR HOUR screen accepts a number between 0 and 23 or 99. Entering 99 will disable this feature.

```
A P B   R E S E T   H O U R
  9 9 : 0 0
```

3.2.8.2.Anti-Passback Duration

The anti-passback duration is measured in half-hour increments. Type in a number from 1 to 63.

The system initiates a key anti-passback to an interval of the given number of half-hour intervals. A 24-hour anti-passback interval is defined as 48. Press **Enter** to continue.

```
A P B   D U R A T I O N
  4 8
```

3.2.8.3.Alarm Relay Time

The alarm relay time is set up in seconds. Each alarm or trouble event will cause the system to close the relay for this number of seconds.

```
A L A R M   R E L A Y   T M
  1 0
```

Enter number in range of 1 to 99 and press **Enter** to continue. Please note that if the alarm relay is used for the "traffic light" function, this screen is not important.

3.2.8.4.Controller Address

The AXS-100 controller can be set to address #1 through #8. Controller #1 is special in the sense that it concentrates communications from other controllers for the PC.

```
C O N T R O L L E R
  2
```

Select the controller address and press **Enter**.

3.2.8.5.Operation Mode

The AXS-100 system can operate in one of a few modes:

Mode	Description
1	2 doors, 2 readers, hard anti-passback
2	1 door, 2 readers
3	2 doors, 2 readers, soft anti-passback
4	1 door, 2 readers, soft anti-passback
5	Both EXIT in soft anti-passback mode
6	1 door, 2 readers, hard anti-passback
7	2 doors, 2 readers
8	Both ENTRY in hard anti-passback mode
9	Elevator control
1 door modes – connect lock to left side terminal block	

Use the "1" and "0" keys to set or reset each of the flags. The flags and their functions are described below.

3.3.Edit Keys Menu

Note: *All adding, deleting and editing of keys are performed using the internal reader located on the LCD panel inside the AXS-100 unit.*

The Edit Keys menu allows you to add, delete, modify key records as well as set time zones (available only if you logged in with password level #1).

```
→A D D   K E Y
 D E L E T E   K E Y
 M O D I F Y   K E Y
 T I M E   Z O N E S
 A C C E S S   L E V E L
```

3.3.1.Add Key

When in ADD screen, the controller prompts you for adding a key. Present a new key close to the key illustration on the panel. The ADD screens will default to key data of the last added or modified key. This feature facilitates quick addition of many keys with same privileges.

```
S H O W   K E Y          A D D
```

Once the key is read, the controller will prompt for time zones to assign to the key. You must assign at least one time zone for the key to be usable (two different time zones can be assigned). Enter a digit from 1 to 15 and press **Enter**.

The cursor will move to the second time zone. Enter a second time zone number or press **Enter** to continue to next screen.

```
T I M E   Z O N E S      A D D
T Z 1 :   1     T Z 2 :  1
```

If "0" is entered for **both** TZ 1 and TZ 2, then the system will operate in Access Level mode (see "**3.3.7.**Editing and Adding Access Levels").

Note: *If Flag 7 in the FLAG SET 4 (see "*5.2.4.Flags **Set #4***") ON, do not use time zone in key add. Use access level instead.*

Each key can have an expiration date. The default is no expiration date (00/00/00). If you would like to specify a date, type it in the currently selected date format. Press **Enter** to continue.

```
V A L I D   U N T I L    A D D
0 0 / 0 0 / 0 0
```

The last screen is the valid door definition screen. The doors are numbered 1 through 9 and A (for door 10) through G (for door 16).

If you choose to work in Access Level mode, then the following screen will appear below (see "**3.3.7.**Editing and Adding Access Levels"):

```
ACCESS LEVEL ADD
1
```

Otherwise, the following screen will appear:

```
VALID DOORS ADD1
- - - - - - - - - - - - - - - -
1 2 3 4 5 6 7 8 9 A B C D E F G
```

- Use the arrows to move right or left to a specific door number.
- Press "1" to permit, or "0" to deny access to a specific door with this key.
- If modifying the second group of valid doors, press **DOWN ARROW**. The following screen appears:

```
VALID DOORS ADD2
- - - - - - - - - - - - - - - -
1 2 3 4 5 6 7 8 9 A B C D E F G
```

- Press **Enter** to continue. The system will store the new key and display its serial number. Please note this number down along with the name of the holder of this key.

```
KEY SAVED ADD
AS NUMBER 123
```

Note: *It is recommended to keep a list of key-holder names and keys serial numbers, in order to be able to delete stolen or lost keys.*

You may receive Error Messages in the following cases:
The key is already in database. It cannot be added again.
If the key is already added in the database, the display will be:

```
KEY ALREADY ADD
IN DB (171)
```

If there is no room for additional keys in the database, the display will be:

```
ADD
NO MORE ROOM
```

3.3.1.1.Setting the Start Key Location

Once in ADD screen, the controller will prompt you for a key to be added.

```
SHOW KEY ADD
```

Pressing the UP arrow BEFORE presenting a new key, will cause the controller to display the following screen:

```
SELECT ADD
KEY #: 0
```

This screen allows you to specify the starting memory location for adding keys (a location other than the first available memory address).

Example: Type in 1000 and press **Enter**. The controller will check, starting at 1000, which location is free, will briefly display that number and will return to the ADD screen waiting for a key.

Present a new key and set its parameters. Following the VALID DOORS list, the controller will display that a key has been added at location 1000 (assuming that this location was free).

If you add another key without logging out, the next key will be stored in location 1001 unless that location is already used, in which case the controller will look for the first free address higher than 1001.

3.3.1.2.Skipping Data Entry and Repeating Operation

Once the key is read, the controller will prompt for time zones to assign to the key.

```
TIME ZONES ADD
TZ1: 1 TZ2: 1
```

A second option is pressing the UP arrow while in the VALID DOORS screen. This will cause the AXS-100 to accept the current key and prompt for more keys without allowing the change of parameters. Each additional key will receive the same parameters as the key on which you pressed the UP arrow. This mode allows quick adding of many keys with the same parameters, without the need to press any additional buttons.

3.3.2.Modifying key flags

Seven flags are available for a key. Each flag activates or un-activates a specific function for that key.

Flag no.	Flag Characteristics
1	Overrides the anti-passback function, i.e., lets the user access the door without regard to anti-passback.
2	Doubles the time that a door remains open after the key is presented. The target population are the handicapped or others that might have difficulty accessing the door.
3	Someone with this key cannot open the door unless another valid key is presented immediately afterward.
4	Does not enable opening any door in the system.
5	This is the Master Tag function and has special privileges.
6	Arms/disarms the alarm system when the key is presented.
7	Fire off IOX-4 relay #25 when tag is presented.

These flags are set as follows: Enter the ADD key function and present a new key. The following display appears:

```
TIME ZONES ADD
TZ1: 1 TZ2: 1
```

Press the **DOWN ARROW**. Each number refers to an available flag.

Using the cursor, scroll through flags, pressing 1 to activate or 0 to de-active

```
KEY FLAGS ADD
- - - - - - -
1 2 3 4 5 6 7
```

3.3.3.Add Password Key

Note: *Adding password key to use with RDK-4 v3.00 only (see user manual RDK-4).*

To add a password key to the database, you need to enter a number (1-10 digits) in the Add Key screen.

```
SHOW KEY ADD
```

- Press **Enter** and continue according to par. "3.3.1.Add Key".

3.3.4.Delete Key

To delete a key from the database, you either need the key itself or its serial number as displayed by the system when you added the key. The controller prompts you for either one of the two options:

- If you possess the key to be deleted, simply present it to the built-in reader on the panel.
- If the key was lost or stolen you should enter its serial number. This number should be taken from the user list prepared when adding keys (see "3.3.1.Add Key").

```
SHOW KEY DEL
OR TYPE #:
```

When you start typing the first digit of the serial number, the screen will display:

```
KEY #: XXXX
```

- Enter the number
- Press **Enter** to delete.

Once you press **Enter**, the controller will delete the key and display the message:

```
KEY  111          DEL
DELETED
```

You may receive the following **Error Message:**

- Key is not in database, so it cannot be deleted.

```
UNKNOWN  KEY
```

***Note**: If code "999" is entered and dip switches 7 and 8 are ON, then the entire database will be erased from the whole loop*

3.3.5.Modify Key

The MODIFY KEY screens allow you to modify existing key record settings. You may either present the key or type its number followed by **Enter**.

```
SHOW  KEY         MOD
OR  TYPE#:
```

3.3.5.1.Modify Time Zones

If you present a key, the display will show its number for a few seconds.

```
TIME  ZONES       MOD
TZ1:  X    TZ2:  X
```

Then, the time zones screen will appear. You may type **Enter** immediately to confirm the current time zone setting OR change the time zone:

- Select one or two time zones by typing a number from 1 to 64.

  ***Note:** If selecting only one time zone, TZ1 and TZ2 should have the same number. If selecting two time zones, TZ1 and TZ2 should have different numbers, appropriate to the time zone number.*

- Press **Enter** to move to TZ2 and enter the appropriate time zone number. Press **Enter**.

3.3.5.2.Modify Expiration Date

Each key has an associated expiration date.

- For a key with no expiration date enter 00/00/00

  To change the expiration date:

- Enter a new expiration date and press **Enter**
- Press **Enter** to continue

```
VALID  UNTIL      MOD
  11/02/03
```

3.3.5.3.Modify Valid Door

The last screen in this sequence is the valid door definition screen. The doors are numbered 1 through 9 and A (for door 10) through G (for door 16).

```
VALID  DOORS      MO1
- - - - - - - - - - - - - - - -
 1 2 3 4 5 6 7 8 9 A B C D E F G
```

- Use the arrows to move right or left to a specific door number.
- Enter "1" to permit, or "0" to deny a specific door with this key.
- Press ARROW DOWN to return to Valid Doors mod 2. If ARROW UP is pressed the following screen appears:

```
SELECT            X
LAST  KEY: 0
```

In the above screen, "x" in the SELECT field signifies the current key that was modified (the actual number will be displayed). Instead of "0" in the LAST KEY field, if a key number from 1 to 5,000 is entered, the previously performed modifications will apply to the sequence of keys from the current key (which was just modified) to the key number that was designated in the LAST KEY field.

- If modifying the second group of valid doors, press DOWN ARROW. The following screen appears:

```
VALID  DOORS      MO2
- - - - - - - - - - - - - - - -
 1 2 3 4 5 6 7 8 9 A B C D E F G
```

- Perform the above procedure.
- Press **Enter** to finish the modify procedure.

  The system will store the modified key and display the following message:

```
KEY  XXX          MOD
MODIFIED
```

3.3.6.Edit Time Zone

The AXS-100 system recognizes up to 64 time-zone templates. The templates are assigned to user keys to facilitate the definition of different time and day privileges for different keys. Each template defines two from/to times, weekdays and up to four holiday types.

Each key database record can be linked to one or two templates. Using two templates allows definition of split shifts or "graveyard" shifts (through midnight).

Time Zone	From hour	To hour	From hour	To hour	M	T	W	T	F	S	S	H 1	H 2	H 3	H 4
1	08:00	11:00	08:00	11:00	X	X	X	X	X				X		X
2	09:00	19:30	09:00	19:30		X	X			X					
3	07:15	18:00	07:15	18:00		X	X					X		X	
4	09:00	17:30	09:00	17:30			X		X		X				X
5	08:00	11:00	08:00	11:00	X	X	X	X	X				X		
6	09:00	19:30	09:00	19:30		X	X			X				X	
7	07:15	18:00	07:15	18:00		X	X					X			
. . .															
. . .															
. . .															
62	09:00	19:30	09:00	19:30		X	X			X				X	
63	07:15	18:00	07:15	18:00		X	X					X			
64	00:00	23:59	00:00	23:59	X	X	X	X	X	X	X	X	X	X	X

The first TIME ZONE screen prompts for a template number. Press a digit from 1 to 64 (e.g., 2) followed by **Enter**.

```
TIMEZONE
SELECT  #: 2
```

The next screen lets you set the first FROM /TO time period in hours and minutes.

```
FROM    109:00
TO      19:30
```

The FROM time has to be earlier than the TO time. An exception is when both FROM and TO times are set to 00:00, which sets the time zone from 00:00 to 23:59.

Enter the FROM time followed by **Enter** and then the TO time. Press UP ARROW to go to the second FROM/TO period, OR simply press **Enter** to skip.

The last screen in TIME ZONE SETUP lets you define days of week and special holidays valid for this template (see "3.2.6.Holidays ").

Use the left and right arrow keys together with key 1 and key 0 to determine which days and which holidays are valid for this time zone.

Press **Enter** to store the time zone.

```
DOW
MTWTFSS1234
```

3.3.7.Editing and Adding Access Levels

When setting Access Levels from the controller, a maximum of 128 Access Levels are available. For each Access Level, up to 4 Time Zones can be used (of up to 64). Each Time Zone can have up to 16 valid doors.

Enter the Edit Keys menu (available only if you logged in with password level #1) and scroll down to Access Levels.

- Press **Enter**. The following screen appears:

```
S E L E C T
A C C E S S   L E V E L   1
```

- Enter a number from 1 to 128. Press **Enter**. If adding a new Access Level, fill in the new number, and define the time zone and valid doors. The following screen appears:

```
T I M E   Z O N E          1
    1
```

- Enter the number of the time zone (from 1 to 64).
- Press **Enter**. The following screen appears:

```
V A L I D   D O O R S
1 2 3 4 5 6 7 8 9 A B C D E F G
```

- Scroll using the cursor and select the valid doors.
- Press **Enter** to move to the next time Zone. Set up to four time zones using the above procedure. To stop before entering four time zones, select time zone 0 and press **Enter**.

3.4.View Menu

The VIEW menu provides three item selections:

- View events stored in the controller
- View key record
- View time zone record

```
→V I E W   E V E N T S
 V I E W   K E Y S
 V I E W   T I M E Z O N E
```

The VIEW screens do NOT allow modifying any data, only viewing it.
Use the UP and DOWN arrows to point to the desired item and press **Enter**.

3.4.1.View Events

The VIEW EVENT screen lets you view the events logged into the controller in reverse chronological order - the latest events are viewed first. Each event record is displayed on two screens.

The event type and date/time are displayed on the first screen. Press **Enter** to view the second screen

```
e v t   t y p e
2 0 / 0 3 / 9 8   0 3 : 5 1
```

The second screen shows the origin of the event, such as door 1 or 2. If the event involves a valid or an invalid key, the second line will display "ID ###". In case of a valid key, the number will be the key index number assigned by the system when that key was added. If the key is invalid, the system will display the unique code embedded in the key, permitting you to find out if someone is trying to open several doors with the same key. Press **Enter** to view next event.

```
S O U R C E   1
I D             X X X X
```

You may press the **Esc** button at any time to return to the menu.

3.4.2.View Key

The VIEW KEY screens are exactly the same screens as in MODIFY KEY but without being able to modify the data. Please refer to MODIFY KEY (see "3.3.5.Modify Key"). Description for operating instructions.

```
S H O W   K E Y
O R   T Y P E # :
```

3.5.Print

The PRINT menu lets you send the event list, the key list or the system setup to a serial printer connected to the RS-232 port of the AXS-100 controller. Use the Up/Down arrows to point to the desired report and press **Enter**. For example:

```
P R I N T   E V E N T S
P R I N T   K E Y S
```

3.5.1.Print Events

The PRINT EVENTS screen will prompt you for the number of the controller you wish to get the printout from. Enter the controller number (1-8) and press **Enter**.

```
P R I N T   E V E N T S
C O N T R O L L E R   1
```

The display will show an event counter, counting up to 1000 events.

```
P R I N T   E V E N T S
E V E N T # :       X X X
```

You may press the **Esc** button at any time to stop printing. Even after pressing the **Esc** button up to 32 lines may be printed before stopping. AXS-100 event printout sample:

LN#	DATE	TIME	EVT TYPE	DOOR/CONT.	ID
221	18/09/02	11:20	VALID KEY	4	544
222	18/09/02	11:19	INVALID KEY	2	59245

3.5.2.Print Keys

Selecting PRINT KEY function will immediately print keys information. Each key added to the AXS-100 will have a line printed with all its data including the key number, time zones, expiration date and valid doors.

The display will show the index number of the key being printed. You may press the **Esc** button at any time to stop printing. After pressing the **Esc** button, up to 32 lines may be printed before stopping.

```
P R I N T   K E Y S
K E Y # :           X X X
```

AXS-100 key information printout sample:

K.ID	TO DATE	TZ1	TZ2	VALID DOORS
101	00/00/00	1	2	1234---89-------
102	31/12/02	1	1	1-3-5----------

3.5.3.Print Setup

Selecting the PRINT SETUP option prints out a time zones and holiday report.

Each Time Zone has a line printed in the following format:

Zone #1	From hour	To hour	Days of week and holidays
1	**06:00**	**22:00**	**M-WTFS-12-**

Each holiday will be printed with day/month and holiday type:

Day/Month	Holiday Type
01/11	**2**
22/12	**1**

3.6.Maintenance

The Maintenance menu allows you to upload complete setup and key database to PC, download complete setup and keys to other controllers in the network and clear the anti-passback counters for ALL the 5000 keys.

3.6.1.Upload

The UPLOAD screen allows you to save a complete setup file to a computer connected to a AXS-100 controller #1 via a simple RS-232 cable (connection diagram can be found on the inside of the controller door.)

You can use any terminal software under Windows to log all text sent from AXS-100 controller into a file of your choice.

Selecting the UPLOAD screen from the MAINTENANCE menu will cause the controller to send all key records and setup records to the computer.

The last line will have a double semi-colon (;;).

Notes: *Pressing Esc while uploading will cause the upload to abort.*

ONLY controller #1 can send the setup to a computer.

3.6.2.Download

The DOWNLOAD screen allows you to send complete setup and key database from controller #1 to ALL other controllers in the network.

Log in and enter MAINTENANCE menu.

Scroll down to DOWNLOAD and press **Enter**.

Wait until screen goes back to MAINTENANCE menu.

D O W N L O A D S E T U P

3.6.3.Clear APB

The CLEAR APB screen allows you to reset all anti-passback key counters. When a key is presented to a reader whose controller is configured for anti-passback, it sets off an anti-passback period defined in half-hours in MISC SETUP.

Clearing the counter table with CLEAR APB, will cause the controller to accept ALL keys again from any of the readers.

Please note that the counter table can also be cleared automatically one time every day by setting the APB RESET HOUR in LOCAL SETUP to a number in range of 0 (midnight) through 23 (11pm at night).

4.OPERATING MODES

The AXS-100 controller network can function in a loop wide anti-passback mode:

This mode causes controllers #1 through #8 to share tag entry and exit events. To achieve this, you need to set each controller to any of the anti-passback modes detailed below and set flag 8 in FLAGS SET #2 screen (see sec. **3.2.8.2.Anti-Passback** Duration). This operation is specific to each controller and is NOT transmitted to all controllers.

For hard anti-passback, an exit must follow each entry (for re-entry to occur). An entry must follow an exit (for re-exit to occur).

For soft anti-passback, an exit must follow each entry (for re-entry to occur), but unlimited exit may occur several times without re-entry.

4.1.Single Door with Two Readers

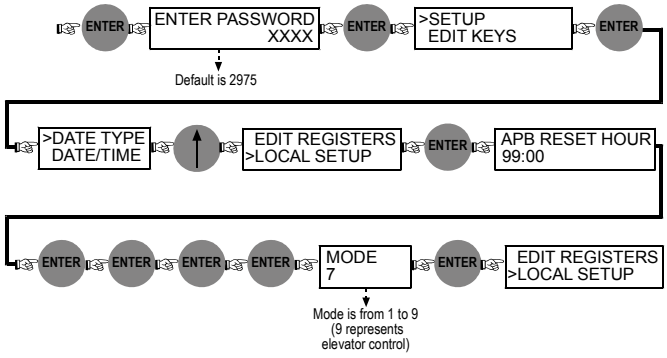
There are three modes dealing with a single door and two readers. In these modes, the door number is the odd number for this controller, i.e. door #1 for controller #1, door #3 for controller #2.

Note: *The Magnetic Lock (Maglock) or Electro-Magnetic Door Strike (EMS) has to be connected to left side door connector!*

The three modes are:

4.1.1.Single door, without Anti-passback

The two readers control a single door, one within and the other, outside of the secured area. This is **mode 2.**



4.1.2.Single door, with Anti-passback for entry only (Soft Anti-Passback)

Multiple exits are allowed, but only a single entry is allowed until the key is presented to the inside reader. This is **mode 4**.

4.1.3.Single door, with Anti-passback in both directions (Hard Anti-Passback)

Any exit has to be preceded by an entry. Every entry has to be preceded by an exit. This is **mode 6**.

4.2.Two Doors

The "Two Doors" mode is the most common operating mode, in which two doors' locks are controlled by each controller. Each of the two doors is controlled separately. Controller #1 controls doors #1 and #2, controller #2 controls doors #3 and #4, etc.

4.2.1.Two doors without Anti-passback

This mode allows the connection of two separate doors or gates without the anti-passback feature. There is no interaction between the two locks. This is **mode 7** and is the factory default.

4.2.2.Two doors, with Anti-passback in both directions (Soft Anti-Passback)

This mode allows the connection of two separate doors or gates with the anti-passback feature. Lock #1 (left side) is used for entry and lock #2 (right side) is considered as the exit. This is **mode 3**.

4.2.3.Two doors, with Anti-passback for entry only (Hard Anti-Passback)

This mode allows the connection of two separate doors or gates with the anti-passback feature. Any exit has to be preceded by an entry. Every entry has to be preceded by an exit. This is **mode 1**.

4.2.4.Two doors, entry only Anti-passback

The two doors are for entry only. The Anti-passback will work with the other controller [controllers #1 to #8] on the loop that is set to mode 5. This is **mode 8.**

4.2.5.Soft Anti-Passback use loop with mode 8 as entry

The two doors are for exit only.

This is mode 5.

Note: *4.2.4 and 4.2.5 can operate together as entry and exit, and together with all other modes within a loop.*

4.2.6.Elevator control

Elevator control using IOX-4 add-on cards. This is **mode 9.**

For full description, refer to the IOX-4 user manual.

5.ADVANCED FEATURES

The AXS-100 user interface allows for advanced features and also lets the user make shortcuts in certain situations for speeding up data entry. All hidden features are accessed by pressing the UP ↑ and DOWN ↓ arrow buttons. The UP ↑ arrow, where available, lets you reach data entry screens for extra features. The DOWN arrow, where available, acts like the **Enter** button (execute function) but executes the same function again.

This allows for fast adding or modifying of keys. The following sections list the extra functions available using the UP and DOWN arrow buttons modification of many keys without the need to press any button.

5.1.Lock Setup

While the cursor is on unlock time in the LOCK SETUP screen (bottom line), you may press the UP arrow to access the advanced lock features.

The advanced features are:

- RTE input Polarity - Normally Open/Normally Closed.
- D.POS input Polarity - Normally Open/Normally Closed
- D.POS input function.
- Door Ajar timeout

While in Extended Lock Setup screens, pressing the **Esc** button will void the changes and will cause the Lock Setup screen to reappear.

5.1.1.RTE Input Polarity

The RTE (Request-To-Exit) default input is set to **N.O.** (Normally Open), as the standard triggering device may be a Normally Open push button. If your triggering device has a Normally Closed output (such as a PIR detector) you need to change the AXS-100 input to **N.C.** (Normally Closed) as described:

- Press the '1' button to define NC input
- Press **Enter** to continue

```
RTE POLARITY NO
DPOS POLARITY NC
```

5.1.2.D.POS Input Polarity

The D.POS (Position) input default is set to **N.C**. (Normally Closed). If you need to change the input to be **N.O.** (Normally Open), press the '1' button. Press **Enter** to continue.

5.1.3.D.POS Input Function

The D.POS input has two possible uses:

Door position switch - 0

Reader enable switch - 1 when there a need to disable the reader (prevent entrance) until the D.POS input is activated. The option of reader enable is commonly used in parking lot gates where the reader is activated only when an under-pavement sensor detects an approaching car.

Select mode and press **Enter** to continue.

5.1.4.Door Ajar Timeout

The Door Ajar default timeout is 20 seconds. In this screen you may change it from 20 to 90 seconds in 10-second increments.

Press button '2' to '9' followed by **Enter** to continue.

5.1.5.Door Lock Time Zone Functions

Locks can have a time zone associated with them for operating with special functions.

The following functions are available:

Function 1: Auto Open - The lock will unlock automatically whenever the time zone is valid.

Function 2: First Valid Tag - The lock will unlock and stay unlocked for the duration of the time zone (if currently valid) upon presentation of the first valid tag.

Function 3: Ignore Door Ajar - This feature is applicable only if RDR-4B readers are used. The RDR-4B is similar to the RDR-4 with two additional wires that activate a local buzzer when the door ajar is detected. If mode #3 is selected and current day and time is within the selected time zone, the RDR-4B buzzer output will NOT sound.

Function 4: Prevent entry - Do not open lock for any tag which is not a master tag. Exit is allowed.

Function 5: Prevent entry and exit - Do not open lock for any tag which is not a master tag. Exit is NOT allowed.

```
TIME ZONE 0
TZ FUNCTION 0
```

To select the time zone in which this lock will automatically be unlocked type in a number between 1 and 15 or 0 to disable the time zone feature. Press **Enter.**

Type in a number between 1 and 5 corresponding to functions above. Press **Enter** to save and return to unlock duration screen.

Note: *When unlock time is set to "0" (toggle mode), do not operate the Time Zone Function at the same time.*

5.2.Local Setup

While in any of the Local Setup screens, you may press the up arrow to enter extra setup screens. These contain many more functions for finer tuning of the controller, mainly for special situations.

There are 17 screens divided to three groups:

- Flags Setup - 5 screens.
- Numeric values in range of 0 to 255 – 8 screens.
- Numeric values in range of 0 to 65535 – 4 screens.

To advance to next screen press **Enter**.

Once you modify the required parameter, you may press the down arrow to return to the regular Local Setup screens. Press **Enter** until you return to SETUP menu to save changes.

Pressing Esc before returning to setup menu, will void any changes to the flags.

5.2.1.Flags Set #1

Flag	Function	Default
1	Invalid Key Alarm flag. If this flag is set, any invalid key will cause the AXS-100 to display an invalid key message and turn on the alarm relay.	OFF
2	Display PIN code after adding key tag. This feature should be turned on if an RDK-4 (proximity reader with keypad) is connected to the controller. Following display of key number, the 4-digit PIN code will display for a few seconds. This flag will also cause VIEW KEYS to display the PIN code.	OFF
3	For future use	OFF
4	Enable buzzer on alarm/trouble. This flag can also be set by pressing the "1" or "0" keys in idle screen. If the buzzer is enabled and there is at least one unacknowledged event, the buzzer will sound every 4 seconds.	OFF
5	If ON, enables viewing the key code in addition to other key parameters.	OFF
6	Open lock for half time when working with backup battery to save battery power. Setting this flag will cause the controller to shorten open time when working off a backup battery.	OFF
7	Alarm relay control: 1->alarm/trouble, 0->computer control. THIS FLAG SHOULD BE "1", unless the relay control is from the computer.	ON
8	Door relay control: 1->direct control,0->computer control. THIS FLAG SHOULD BE "1", unless the relay control is from the computer.	ON

Once all flags are set, press **Enter** to continue.

5.2.2.Flags Set #2

When in SETUP screen, select LOCAL SETUP.
Once in LOCAL SETUP, press UP arrow → **Enter.**
The display will show:

```
S E T U P    F L A G S    2
1 2 3 4 5 6 7 8
```

Use the "1" and "0" keys to set or reset each of the flags. The flags and their functions are described below:

Flag	Function	Default
1	The controller will attempt to dial out using a modem when the new event count has exceeded the number in data register [12].	OFF
2	MODEM - Auto answer after 1 ring. If an external modem is connected to the AXS-100 RS-232 terminal, the modem will be initialized to answer after one ring after power up and every time a message fails to be acknowledged by the PC.	OFF
3	The controller will attempt to dial out using a modem when an alarm is detected in any controller.	OFF
4	Send Event messages in text mode. If flag is cleared, the controller will send messages in numeric mode.	OFF
5	Fire up IOX-4 relays 26 to 32 depending on event type. Relay 26 - Valid key indication. Relay 27 - Unknown key indication. Relay 28 - Alarm conditions. Relay 29 - Trouble conditions. Relay 30 - Long read indication. Relay 31 - Arm/disarm alarm system. Relay 32 - Valid key failed to open. For further information, refer to the IOX-4 manual.	OFF
6	Decrement anti-passback counters.	ON
7	Controller #1 - Capture alarm/trouble events from other controllers. If cleared, controller #1 will NOT display and close alarm relay upon receipt of alarm/trouble indication from other controllers.	ON
8	Controllers #2 - #8 - Anti-passback is loop-wide. Controllers #2 to #8 can share entry/exit information between themselves to allow for loop wide anti-passback operation.	ON

5.2.3.Flags Set #3

When in SETUP screen, select LOCAL SETUP.
From LOCAL SETUP, press UP arrow → **Enter** → **Enter**.
The display will show:

```
S E T U P    F L A G S    3
1 2 3 4 5 6 7 8
```

Use the "1" (ON) and "0" (OFF) keys to set or reset each flag. The flags and their functions are described below:

Flag	Function	Default
1	For controlling the buzzer of the RDR-4B while a green or red color is displayed. ON-Buzzer sounds when valid or invalid key presented. OFF-Buzzer sounds only if forced door or door ajar events.	OFF
2	Report Valid key/Valid exit only if the door is open.	OFF
3	Interlock feature. Single lock will open at any given time for both reader and RTE.	OFF
4	If set, controller will demand a valid password from the PC before allowing it to send commands. The password will enable up to 500 commands with inter-command timeout of 5 minutes.	OFF
5	Reserved - Not in use	OFF
6	Enable [ON], disable [OFF] the broadcast of all setup messages from the PC to controllers #2 - #8.	ON
7	Enable [ON] disable [OFF] key-press buzzer.	ON
8	For future use.	

5.2.4.Flags Set #4

When in SETUP screen, select LOCAL SETUP.
From LOCAL SETUP, press the UP \arrow → **Enter**→ **Enter**→ **Enter**.
The display will show:

```
S E T U P    F L A G S    4
1 2 3 4 5 6 7 8
```

Use the "1" and "0" keys to set or reset each of the flags. The flags and their functions are described below:

Flag	Function	Default
1	Alarm functionality using IOX-4 boards	OFF
2	Global arm/disarm of alarm system	OFF
3	Ignore RTE input	OFF
4	Report write operation to flash EEPROM.	OFF
5	Print paper slip if VALID KEY in controller #2 to #8.	OFF
6	Alarm relay is used with register 0 as up/down counter	OFF
7	Do not use time zones in key add/modify. Use access level instead.	OFF
8	Enable the use of Prevent Entry bitmap table	OFF

5.2.5.Flags Set #5

When in SETUP screen, select LOCAL SETUP.
Once in LOCAL SETUP, press UP arrow → **Enter** .
The display will show:

```
S E T U P    F L A G S    5
1 2 3 4 5 6 7 8
```

Use the "1" and "0" keys to set or reset each of the flags. The flags and their functions are described in the following table:

Flag	Function	Default
1	Enable IOX-4 board 1	OFF
2	Enable IOX-4 board 2	OFF
3	Enable IOX-4 board 3	OFF
4	Enable IOX-4 board 4	OFF
5	If ON, door becomes released and locks again only after entry (for emergency situations such as fire, etc.).	OFF
6	Motorized bolt door lock functionality for locks with unlock time of zero seconds.	OFF
7	Use tamper input to relock both doors locks.	OFF
8	Reset controller if any reader is not communicating for more than 3 minutes.	ON

5.2.6.More Parameters

The default value for these screens is 255. Simply press **Enter** to continue.

Name	Function	Value Range
Reader timeout	Reader communication failure timeout. Default when 255, is 24 cycles of approx. 150mS = 3 seconds. Increasing the number in very noisy environments will prevent frequent failure messages.	8..100
Network retry	Network message transmission retries. Default when 255, is 7. Increasing the number in very noisy environments will prevent frequent failure messages.	1..255
RDR Toggle / Scan	This is a dual purpose value: **Reader Loop Delay** is the time delay between full scans of all the readers in the system. The delay is defined in 10mS increments. **Toggle Readers** activates the reader toggle mode in which the readers alternately transmit to allow installation in close proximity situations. Example: 1. To define a reader loop delay of 50ms **without** reader toggling, the value should be 5 (=50/10). 2. To define reader toggling **without** reader loop delay, the value should be 16. 3. To define a reader loop delay of 50mS **with** reader toggling, the value should be 21 (=50/10 + 16).	0..31
Door position	Door position debounce time in 10mS increments. Default when 255, is 300mS.	1..255
Elev. Relay TM	The time period between presenting the tag to the reader and pressing the desired floor number. The elevator will not respond to pressing the floor number after this time period.	1..255
Printer pacing	Printer line pacing in 100ms increments. Default when 255, is 100mS.	1..250
PC ack. Timeout	Time for the controller to wait to a PC ACK (x 10 ms)	1..255
Bold relock time	The period of time that passes from whenever the door is closed until it locks.	1..255
Reserved	For future use.	
Door ajar timeout	Defines the door-ajar timeout for both doors. Changing Door ajar timeout will override the timeout defined in LOCK SETUP. You may select a separate door-ajar timeout per door in 10-second increments from 20 to 90, or select a common door ajar timeout in 1-second increments by modifying this parameter from 65535 (default) to the number of seconds required. This field is accessible by executing the following sequence	0..65535
System #:	System Number	0..65535
PC password	For future use.	0..65535
Load setup defaults	In the PC password mode press UP arrow in order that load setup default	Y / N

5.3.Installation Status Screens

Easily accessible screens are available for your use in order to monitor the installation status and quality.

5.3.1.Inter-Controller Information Screen

While in idle screen (date and time on top line, bottom line blank) **press 7** on controller #1. The display will show:

```
18/09/02        17:10
CTRLRS:      12-----
```

The bottom line lists the controllers connected to controller #1. If a controller has been detected and is currently unavailable, its position will change to "**X**".

Press 5 to view communication quality with each controller.

```
19/06/00        17:10
CTRLRS:      TS-----
```

The screen will change to show a letter "A" through "T" for each controller that answers. The letter "T" denotes perfect communication with the controller in question, while "A" is a very bad communication with same controller. Press **Enter** to exit to idle mode.

5.3.2.Multi Function Screen

This screen allows viewing reader communication failures, number of tags and network collisions.

Press 4 from idle screen.

```
RDR1   ER:   +1178
RDR2   ER:   +4727
```

If a reader is connected and the cable is intact, the number should have a plus sign and stable (increase by 1 every few seconds is fine). If the number increases by 8 every second, there is almost no successful communication messages with the reader, and the cables must be checked.

You can clear the counters by pressing the "0" button.

A minus sign in front of the number indicates no communication with the reader.

Press **Enter** to change the display to the following:

```
KEYS:        64
COLLISIONS:      0
```

This screen details how many keys are programmed into the controllers and whether or not any communication collisions were detected.

Press **Enter** to return to idle screen.

5.3.3.Who Am I?

Press "9" at idle screen:

```
18/09/02        17:10
ADDR:   01   MODE:   7
```

This screen shows the controller address (see "3.2.8.4.Controller Address") and mode of operation.

The different modes of operation are:

Mode	Locks	Anti-passback
1	**2**	Entry only
2	**1**	No Anti-passback
3	**2**	Entry and Exit
4	**1**	Entry Only
5	**2**	Exit Only
6	**1**	Entry and Exit
7	**2**	No Anti-passback **
8	**2**	Entry Only
9		Elevator control

** Default

6.REPLACEMENT PARTS LIST

1. Lithium battery 3V, cat. No. 0-9913-0.
2. CDR-1, cat. No. 9923.
3. Proximity reader RDR-4, cat. No. 3-6304-0

7.SPECIAL NOTES AND STATEMENTS

7.1.Lithium Battery Handling / Disposal

Caution: Battery may explode if mistreated, do not recharge, disassemble or dispose in fire.

Replace battery with PANASONIC Coin battery type CR2032, 3V only. Use of another battery may present a risk of fire or explosion.

Dispose any used Lithium battery only in an approved disposal container.

7.2.Compliance With Standards

This device complies with the essential requirements and provisions of Directive 1999/5/EC of the European Parliament and of the Council of 9 March 1999 on radio and telecommunications terminal equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

This device has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable

protection against harmful interference in residential installations. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio and television reception. However, there is no guarantee that interference will not occur in a particular installation. If this device does cause such interference, which can be verified by turning the device off and on, the user is encouraged to eliminate the interference by one or more of the following measures:

– Re-orient or re-locate the receiving antenna.
– Increase the distance between the device and the receiver.
– Connect the device to an outlet on a circuit different from the one which supplies power to the receiver.

Consult the dealer or an experienced radio/TV technician.

WARNING! Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment

WARRANTY

Visonic Technologies ("the Manufacturer") warrants its products hereinafter referred to as "the Product" or "Products" to be in conformance with its own plans and specifications and to be free of defects in materials and workmanship under normal use and service for a period of twelve months from the date of shipment by the Manufacturer. The Manufacturer's obligations shall be limited within the warranty period, at its option, to repair or replace the product or any part thereof. The Manufacturer shall not be responsible for dismantling and/or reinstallation charges. To exercise the warranty the product must be returned to the Manufacturer freight prepaid and insured.

This warranty does not apply in the following cases: *improper installation, misuse, failure to follow installation and operating instructions, alteration, abuse, accident or tampering, and repair by anyone other than the Manufacturer.*

This warranty is exclusive and expressly in lieu of all other warranties, obligations or liabilities, whether written, oral, express or implied, including any warranty of merchantability or fitness for a particular purpose, or otherwise. In no case shall the Manufacturer be liable to anyone for any consequential or incidental damages for breach of this warranty or any other warranties whatsoever, as aforesaid.

This warranty shall not be modified, varied or extended, and the Manufacturer does not authorize any person to act on its behalf in the modification, variation or extension of this warranty. This warranty shall apply to the Product only. All products, accessories or attachments of others used in conjunction with the Product, including batteries, shall be covered solely by their own warranty, if any. The Manufacturer shall not be liable for any damage or loss whatsoever, whether directly, indirectly, incidentally, consequentially or otherwise, caused by the malfunction of the Product due to products, accessories, or attachments of others, including batteries, used in conjunction with the Products.

The Manufacturer does not represent that its Product may not be compromised and/or circumvented, or that the Product will prevent any death, personal and/or bodily injury and/or damage to property resulting from burglary, robbery, fire or otherwise, or that the Product will in all cases provide adequate warning or protection. User understands that a properly installed and maintained alarm may only reduce the risk of events such as burglary, robbery, and fire without warning, but it is not insurance or a guarantee that such will not occur or that there will be no death, personal damage and/or damage to property as a result.

The Manufacturer shall have no liability for any death, personal and/or bodily injury and/or damage to property or other loss whether direct, indirect, incidental, consequential or otherwise, based on a claim that the Product failed to function. *However, if the Manufacturer is held liable, whether directly or indirectly, for any loss or damage arising under this limited warranty or otherwise, regardless of cause or origin, the Manufacturer's maximum liability shall not in any case exceed the purchase price of the Product, which shall be fixed as liquidated damages and not as a penalty, and shall be the complete and exclusive remedy against the Manufacturer.*

Warning: *The user should follow the installation and operation instructions and among other things test the Product and the whole system at least once a week. For various reasons, including, but not limited to, changes in environmental conditions, electric or electronic disruptions and tampering, the Product may not perform as expected. The user is advised to take all necessary precautions for his/her safety and the protection of his/her property.*

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Visonic Technologies
Enterprise Protection Solutions

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MADE IN ISRAEL