

# System Galaxy Quick Guide

CONFIGURATION AND OPERATION

## IR SCHLAGE WIRELESS

WIRELESS READERS & LEGACY ODT PIMS



LEGACY IR-SCHLAGE ODT PIM WITH WIRELESS READERS

RETIRED

SG 10.X

OCT 2014

# System Galaxy

## Schlage Legacy ODT

Integrating System Galaxy with  
**Legacy Schlage Wireless  
Readers & ODT PIMS**  
with RS-485 Serial Communication  
using a Galaxy 635-CPU & 635 DSI Board

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No claims are made as to the accuracy or completeness of this document.

This document describes how to wire & configure the Aperio Readers and Communication Hubs to work with the Galaxy DSI RS-485 Board, as well as how to program wireless readers into the System Galaxy software. This guide does not supersede the manufacturer's documentation for installing its products, which are not manufactured by Galaxy Control Systems.

2<sup>nd</sup> Edition 10.4

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# System Galaxy Schlage Guide

## Configuring the IR/Schlage PIM-OTD-485 for use with the 600-series DSI Board

*2nd edition*

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This document does not supersede any instructional documentation for products not manufactured by Galaxy Control Systems. This document describes simple set up to interface the Schlage PIM-OTD-485-RS to the Galaxy DSI Board's 485 port, as well as how to configure wireless readers into the System Galaxy software.

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## DOCUMENT HISTORY

DATE	HISTORY
SG 8	1 <sup>st</sup> Edition published.
OCT 16, 2014	Republished for SG10.4 Release, included adding instructions and requirements for the system registration for branded wireless locks.

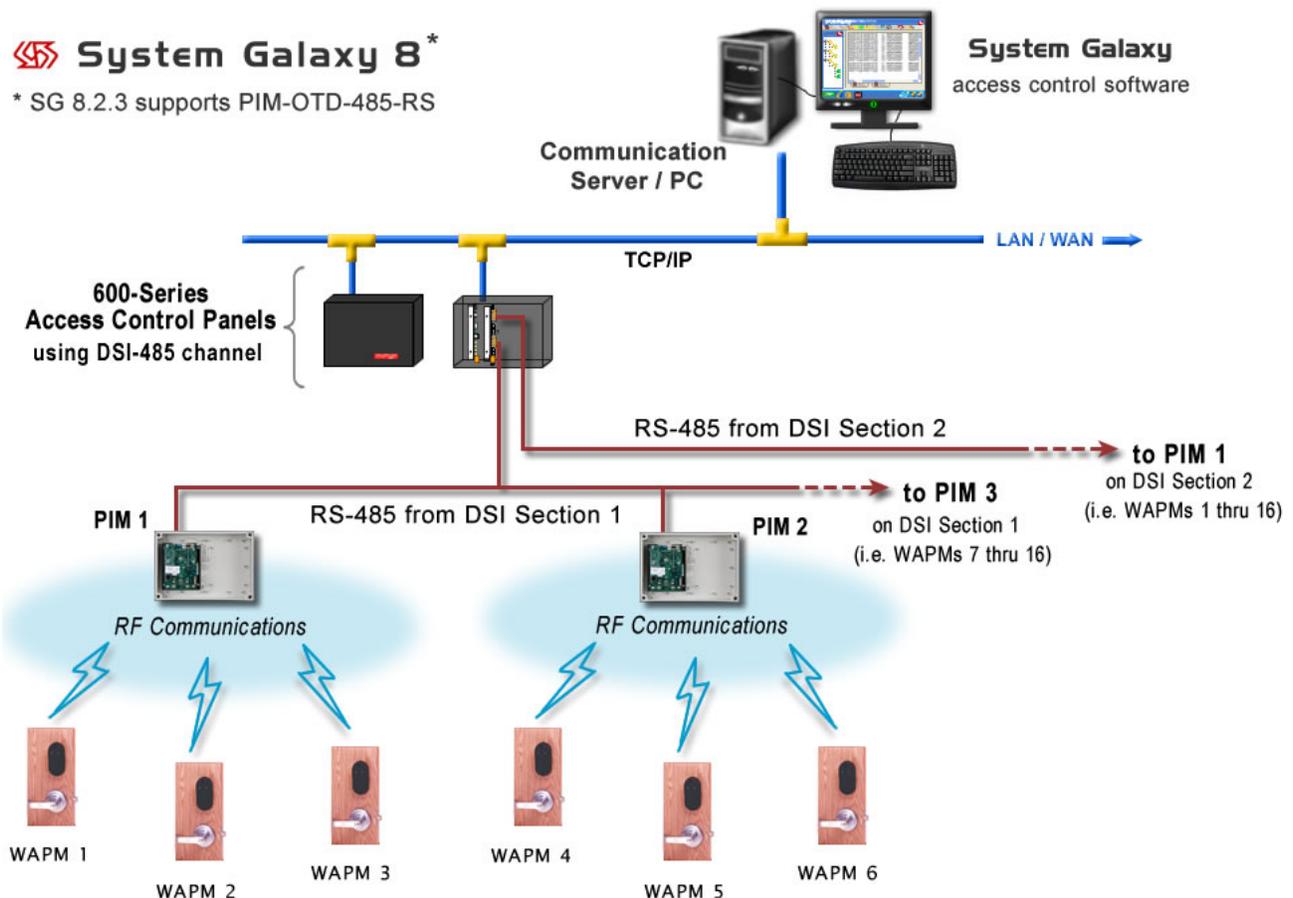
# 1 Introduction

This manual provides specific instructions for configuring a System Galaxy 600-series Access Control Panel to work with the Schlage Panel Interface Module (PIM-OTD-485-RS) and wireless access points (WAPMs/doors). This manual covers the portion of the System Galaxy software programming that is specific to the PIM interface. The main software manual covers SG in full.

System Galaxy uses the following system components to interface with a PIM on RS-485 protocol.

- ▶ **System Galaxy software v8.2.3 (or higher)**
- ▶ **600-series Controller (access control panel)**
  - **CPU Board** - with v1.74d S28 flash code (or higher)
  - **DSI Board** - with v2.12a flash (or higher) using the RS485 port  
*Supports 1-16 doors/WAPMs per RS-485 channel – two 485 channels per board.*
  - **DIO Board** (optional) only used if door alarms will trigger outputs

**Figure 1 – Concept Diagram: Integrating PIM-OTD-485 to System Galaxy 600-series panels**



**IMPORTANT:**

- supports a max. of 16 WAPMs per single DSI-485 Channel (one DSI board has two RS-485 sections/channels).
- use the number of PIMs needed to achieve proper RF communications.

## 1.1 What is a PIM-OTD-485?

---

PIM stands for *Panel Interface Module*. The PIM converts RS-485 protocol to RF protocol (and visa-versa), making it possible to integrate wireless access points (WAPMs) to System Galaxy access control panels and software.

### 1.1.1 How does the PIM work with System Galaxy?

System Galaxy (SG) software communicates with 600-series Access Control Panels via TCP/IP. The 600-panels use RS485 to communicate with the PIM (see Figure 1). Events from the PIM go back to the 600-panel and are logged to the SG software and database.

SG software updates a 600-panel with the programming (i.e. cards, access rules, schedules) for all the doors (wireless access points). The 600-panel stores this programming in memory. When a PIM sends a card swipe to a 600-panel, the panel returns the appropriate access decision based on rules in its memory. If a door is affected by a schedule or holidays, then the 600-panel sends the lock and unlock commands to the PIM at the appropriate time.

The PIM holds instructions from a 600-panel until the reader is ready to transmit/receive data. A card swipe, delay/retry timer, request to exit, and heartbeat are typical types of activity that prompt the reader to contact the PIM for data/access rules. The PIM does not initiate connections to the wireless reader.

## 1.2 What is a WAPM and how does it work?

---

WAPM stands for Wireless Access Point Module. It refers to the access hardware at the door. This includes the wireless reader module (RF receiver/transmitter, antenna, battery) and lock/motor, entrance lever, exit/request lever and possibly a request to enter button (see Fig. 9).

### 1.2.1 How does the WAPM handle card reads?

When a card is presented at a door, the WAPM sends the access request and card data to the PIM. The PIM forwards the data to the 600-Panel. The panel returns the access decision back to the PIM. The WAPM picks up the decision on the retry timer.

A WAPM timer determines the number of retries and amount of delay between retries (in milliseconds) to be used. It is important to set these values high enough to allow the PIM time to query the access control panel. *The number of retries should be at least 3 or 4 and the delay should be at least 100 ms.*

### 1.2.2 When does the WAPM initiate communication to the PIM?

Communications are always initiated by the WAPM either when the heartbeat elapses or when activity is detected at the door (e.g. card swipe, request to exit, door contact open/close, etc.). The heartbeat is a configurable value. Setting the heartbeat to a very low value (1 minute or less) can significantly impact battery life.

### 1.2.3 How are the PIM and WAPM configured?

The PIM and WAPM are configured using the Schlage Configuration Tool (CDT) software. This is a tool that allows the installer to setup and test the WAPMs and PIM (described in Chapter 2).

## 1.3 Sample Diagrams of integration with PIM-485-OTD

The diagram below shows two examples of integration for Schlage PIM-485-OTD-RS using Wyreless™ WAPM/MIRL readers.

You cannot mix Wiegand and ABA on the same 485 channel.

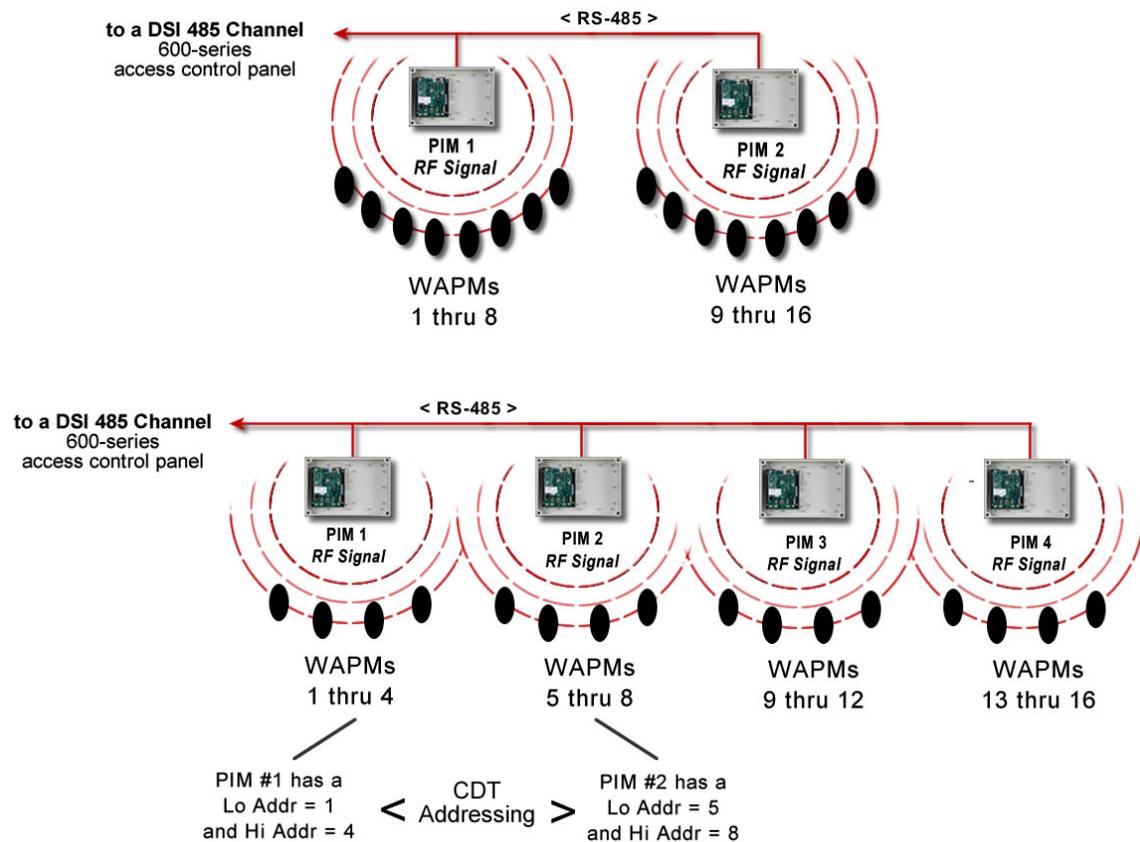
You can have up to 16 WAPMs (max) on a 600-series DSI Channel. You need multiple PIMs. You may find that you cannot divide the readers evenly among multiple PIMs. The number of WAPMs you can control with a PIM depends on your building dynamics (obstacles, floors, etc.).

**NOTE:** Galaxy does not recommend how many PIMs your system will need. Location Guidelines are listed in the Schlage documentation. A test kit is available that allows you to verify your reception before you permanently attach anything to the walls or doors.

**Figure 2 – Configuration examples of PIM-485-OTD interface to 600-Series DSI 485 Channel**

**NOTICE:** One DSI RS-485 channel/section supports a max. of 16 WAPMs. There are two sections (RS-485 channels) per DSI board.

**NOTICE:** The max. number of WAPMs per PIM depends on RF reception; A TEST KIT should be used to verify good RF reception.

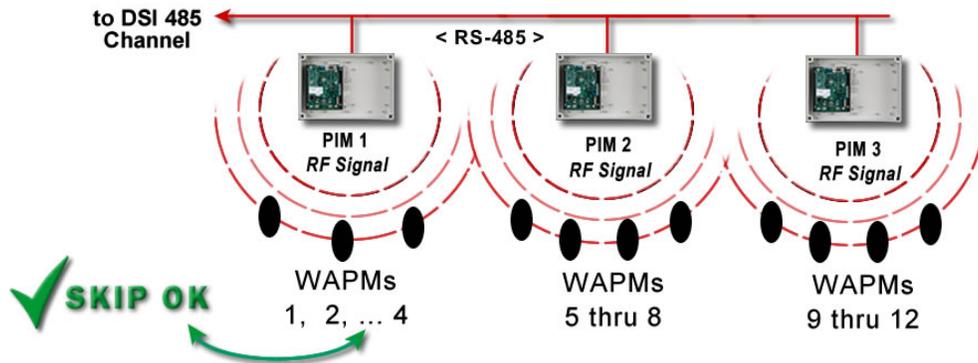


### Figure 3 – Door/WAPM ID Numbering scheme

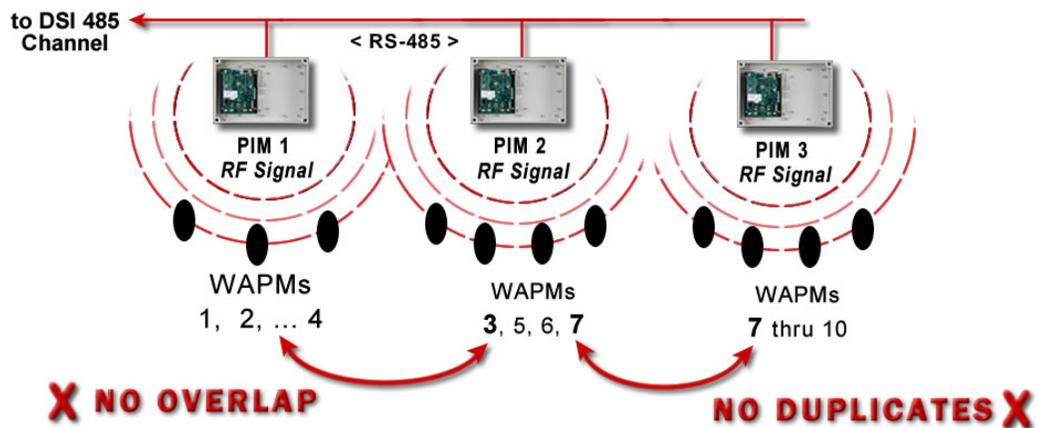
The diagram below shows examples valid and invalid WAPM ID configurations.

**NOTICE:** When programming the door WAPM ID's you can skip numbers (see example1).  
However, you cannot duplicate numbers or overlap numbers on the 485 channel (see example 2).

**EXAMPLE 1:** Skipping/omitting a door/WAPM ID numbers IS VALID as long as you don't overlap.  
*In this example door number 3 is not used.*



**EXAMPLE 2:** Duplicating WAPM ID numbers OR overlapping ID numbers is NOT VALID!  
*In this example door number 3 is overlapped and door 7 is duplicated.*



## 1.4 Requirements

---

### 1.4.1 For System Galaxy you need the following things:

1. You must have installed **System Galaxy version 8.2.3 or later**. Contact Galaxy Customer Service department for information on obtaining the software.
2. You must register the system for the **Max number of DSI Based Readers**
3. You must have a **600-Series Access Control Panel**.
  - Installation and configuration instructions for the 600 Panel are found in the 600-series Hardware Installation Manual.
4. You must have a **CPU board in your 600-series Access Control Panel**.
  - You must flash the CPU and DSI boards with the s28 flash code (v 1.74 or higher) that is current to the version of software you are using.
5. You must have at least **1 DSI (Serial) board in the 600-Series Control Panel**.
  - **IMPORTANT:** you must run minimum v2.12a flash on the **DSI board** – if your board is not at least at 2.12
  - you can have up to 16 WAPM's (MIRLs) on a single DSI's RS-485 channel
  - the number of PIMs needed varies from one building to the next – you need as many as it takes ensure reliable RF to the WAPMs
  - you cannot mix Wiegand and ABA formats on the same 485 channel

### 1.4.2 Field Wiring Specifications for RS-485:

Connection	Max Dist.	Wire
DSI RS-485 to PIM:	4,000 ft. *;	22 AWG, shielded/twisted pair (ground on one end only)

\* RS-485 4,000 ft. to the last PIM on the DSI 485 channel.

### 1.4.3 LAN Wiring Specifications for Control Panel:

Connection	Max Distance	Wire
Galaxy Control Panel: to switch	100 m (328 ft.)	Cat 5e Unshielded, port to port LAN twisted-pair (UTP)

**IMPORTANT:** Use the correct **Cat-5e unshielded twisted-pair cable**. Failure to meet wiring specifications can result in performance problems on the system. Always use accepted industry practices when installing cables and equipment.

#### 1.4.4 To install the PIM & WAPMs you need the following things:

**NOTICE:** This manual does not supersede the manufacturer's instructions. Consult your Schlage product manuals for instructions and requirements about installation, location and operation of devices.

**1. a Pre-Installation Test Kit is available:**

- a. to test for reliable RF signals between the PIM and WAPMs
- b. to determine where the PIM(s) will be located
- c. to determine how many PIMs you need

**2. a PC with a com port available** to configure the PIMs and WAPMs.

**3. Standard (null-modem) RS-232 Serial Cable** to connect the PIM to the com port of the PC running the CDT software.

**Male 9-pin D-shell on one end ~ female 9-pin D-shell on one end.**

PIM SERIAL PORT	CABLE PIN OUT	DESCRIPTION
J5	PIN 2 to 2	TD Transmit Data
	PIN 3 to 3	RD Receive Data
	PIN 5 to 5	Signal Ground

**IMPORTANT:** do not connect the RS-232 serial cable to the PIM while the RS-485 port is connected to the access control panel DSI 485 Channel.

**4. Microsoft® Java *msjavx86.exe*** installed on your PC in order to operate the CDT software. *This is found on the Galaxy Install CD (Disc 2) in the Schlage folder at the root of the CD.*

**5. Microsoft® IE 6.0 (or later)** browser to run the CDT software.

**NOTICE: The Internet Explorer configuration interactive option for Sun Java must be unchecked and the option for Microsoft Java must be checked.**

**6. the CDT v1.7 (Configuration Demo Tool) software** from Schlage in order to program the WAPM devices/doors. This installs on the C-drive in a typical directory path c > Program Files > WirelessDemoTool > WyrelessDemo.html. *This tool is found on the Galaxy Install CD (Disc 2) in the Schlage folder at the root of the CD.*

## 1.5 Getting Started

---

Before you can configure the PIM you must:

- determine the location of the PIM (*multiple PIMs may be needed to get reliable RF coverage*).
- you must have met the requirements in Chapter 1 Section 1.4. of this document.

### 1.5.1 About determining the best mounting location for the PIM

You must consult the manufacturer's documentation that matches your wireless products (PIM and WAPMs) for proper location guidelines.

A Schlage Pre-installation Test Kit and Portable WAPM are available to be used for determining PIM location to achieve proper RF communication.

### 1.5.2 About determining the location of the 600-series Panel

**Chapter 1** of the **600-Series Hardware Installation Guide** lists the installation and wiring requirements in detail. The Hardware Guide is found on the Galaxy Install CD (disc2) and on our website at [www.galaxysys.com](http://www.galaxysys.com) under technical support page (dealer login required).

**The 600-series control panel must be with 4,000 ft of the last PIM on the 485 channel.**

**You may need to consider certain factors about location of the panel that concern your access control system as well.** For example the panel must be wall mounted, is non-condensable, uses IP communications to connect to its GCS Event Server.

If you are triggering outputs from door events/alarms, then you can also install the Digital I/O(DIO) board in the same panel.

You need to factor in wiring distances to all devices (i.e. PIMs, outputs, etc.) and LAN cable distances from the access control panel to the IP port, switch or router.

## 1.6 Installing is the Configuration Demo Tool (CDT)

The CDT is a software tool that is used to ...

- program the Schlage PIM (panel interface module)
- link the PIM to the Wireless Access Point Modules (WAPMs)
- test/troubleshoot the PIM to WAPM communications

You must install **CDT v1.57** or later, along with **Microsoft Java** and **Internet Explorer 6.0** or later.

**NOTICE:** The Internet Explorer configuration interactive option for Sun Java must be unchecked and the option for Microsoft Java must be checked.

**! WARNING !**  
DO NOT CONNECT PC COM PORT RS-232 CABLE WHILE PIM's RS-485 IS CONNECTED TO THE ACCESS CONTROL PANEL (DSI 485 CHANNEL)!  
You must disconnect the RS-485 connection at the PIM from the DSI Channel before you connect the PIM to the PC RS-232 Com Port .

Figure 4 – Screen shot of the Schlage Configuration Tool (CDT)



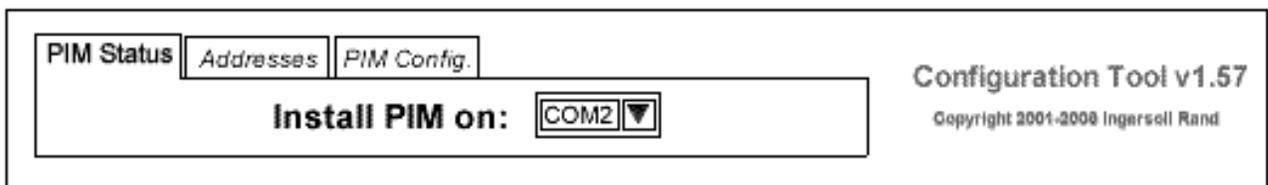
## 2 Configuring the PIM/WAPMs using the CDT

This section covers setting up the PIMs and WAPMs using the Schlage CDT tool.

### 2.1 Connecting the PIM to the CDT

1. Connecting the PIM to the CDT tool – do the following steps in order:
  - a. Connect PIM to a 12 VDC power source (observe polarity).
  - b. Disconnect the PIM's RS-485 cable if it has been connected. This must be done before you connect the RS-232 cable, according to Schlage requirements.
  - c. Start the CDT software. This must be done before you connect to the PIM with the RS-232 cable.
  - d. Connect the 9-pin RS-232 programming cable to the PIM and to the PC com port (you may use the 600 controller configuration cable as needed).
  - e. In the CDT, select the desired COM port from the [Install PIM on] droplist on the *PIM Status tab* (found at the bottom of the CDT screen).

Figure 5 – PIM Status tab: selecting COM port to connect to PIM



## 2.2 Getting the PIM in Link Mode with the CDT tool

---

### 2. Put the PIM in Link Mode (or CDT Mode):

- a. On the PIM, **press and hold down the SA switch**
- b. While you are holding the SA switch, **press & release the Reset switch**
- c. Continue holding the SA switch (about 20 seconds) until you see the CR-7 and CR-10 LED's blinking rapidly. Note that the LEDs will blink slowly while you are holding the SA button. You must continue holding the SA button until the LEDs are blinking very rapidly.
- d. **You should see the message "Recognition PIM Connected on COM #" on the CDT Status tab (Fig. 6) when successful.**

**You have put the PIM in the Link Mode (or CDT mode) when you see this message.**

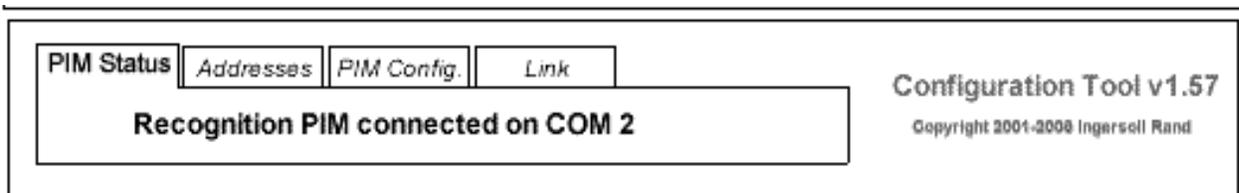
If you don't get it right the first time, simply re-perform step-6.

**NOTE:** if the configuration fields in the CDT tool are grayed out and disabled, you need to restart the CDT software (see step 3/4).

**NOTE:** Once the connection to PIM is completed, a *Link tab* will display on the CDT screen.

**Figure 6 – PIM Status tab: Connection Recognition for COM port to PIM**

---



## 2.3 Setting the PIM Address & Address Range for WAPMs

---

3. Select the **Addresses tab**. Remember the System Galaxy supports 16 max. WAPMs on a single DSI RS-485 channel/port.
  - **Setting the *Unique*** field: this field is factory set to a random value. You may need to change the value to a number that is not already used by another PIM on this RS-485 channel/port. You cannot have a duplicate PIM Unique number.

### **Setting the Address LO and HI Ranges the PIM will control. The Reader Address Range supported by Galaxy's DSI is 1 through 16.**

- **Set the *LO Address*** to the lowest WAPM ID that this PIM will control (i.e. 1-16).  
**Ex:** If this is the first PIM on the 485 channel, you would set WAPM # 1 in this field. Otherwise you will set it to the next number after the HI Address on the previous PIM. See Fig. 2 in Chapter 1 for examples of splitting WAPMs among PIMs.
- **Set the *Hi Address*** to the highest WAPM ID that this PIM will control (1-16).  
The Hi Address cannot be less than the Lo Address – thus it must be *equal to* or *greater than* the Lo Address ( Addr Hi  $\geq$  Address Lo). If only one WAPM is on the PIM then the Hi address can be equal to the Lo address.  
**DO NOT duplicate or overlap numbers when setting LO & HI Addresses. See Fig. 3 in Chapt. 1 for examples of valid and invalid numbering.**
- **Set the *PIM Address*** to a unique value not already used on this 485 Channel/port.
- **Click [Set] button** to send this information to the PIM.

**Figure 7 – Addresses tab: Setting Addresses for the PIM**

---

The screenshot shows a software interface with four tabs: "PIM Status", "Addresses", "PIM Config.", and "Link". The "Addresses" tab is active. Below the tabs, there are four input fields: "Unique" with the value "1", "Addr LO" with the value "1", "Addr HI" with the value "16", and "PIM Addr" with the value "1". Each input field has a small grid icon to its right. To the right of these fields is a "Set" button. In the top right corner of the interface, it says "Configuration Tool v1.57" and "Copyright 2001-2008 Ingersoll Rand".

## 2.4 Initiating the WAPM Link to the PIM

---

4. Select the **Link tab**. The status of the Link from the PIM to WAPM displays (Linking, Not Linking).

**NOTE:** The term 'panel' in this screen refers to the WAPM ID.

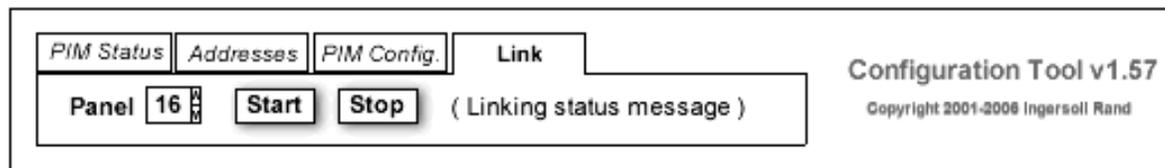
- **Set the Panel Number** (for WAPM/door) to a unique number not already used on this PIM or elsewhere on this 485 channel. The value you set here is the door reader ID in System Galaxy.

This number must be between 1 and 16 and must be unique and in sequence on this PIM and cannot be used again on the same RS-485 channel of the DSI board.

- **Click the [ Start ] button.** A linking session will begin. (Note: clicking the STOP button takes the PIM out of Link mode.)

**Figure 8 – Link tab: Setting the WAPM 'Panel' Number**

---



## 2.5 Linking the WAPM to the PIM

---

### 5. Link your WAPM/Reader to the PIM: (see fig. 9)

You must perform specific steps at the WAPM/reader to establish a link between the PIM and WAPM. **This may vary from on reader to another.** *The following steps were taken from the Schlage W.A.S. Manual P/N M053-007-B – see your manufacture’s instructions for the PIM and WAPM you are using.*

**NOTE: only one WAPM can be linked at a time.**

**NOTE: The battery pack must be installed in the MIRL.**

**NOTE: a portable WAPM must be opened and the reset switch pressed to link to the PIM (used for check points or muster points).**

- a. **The PIM must be in the Link Mode** (i.e. see step 6 of this document). Or refer to part 2.4 of the Schlage W.A.S. manual *P/N M053-007-B*. *This is also known as CDT Mode and is when the COM connection recognized. If you have lost connection with the PIM the CDT fields will be grayed/disabled. Connect the serial cable and restart the CDT if necessary to restore connection.*
- b. **Start linking process by opening the door** ( this separates the door contact).
- c. **Hold down the Exit Lever** (door handle) to create a *Request to Exit* (REX) – see Fig. 9.
- d. **While holding down the lever, present a card to the reader and wait for the MIRL LEDs to start blinking** (approximately 8 seconds).
- e. **Release the lever and close the door.**

During the linking process, the PIM’s LEDS (CR6 or CR9) and the MIRL LED will blink green for about 20 seconds while the RF signal integrity is being checked.

If the RF signal is good the PIM LED will turn solid and the MIRL blinks green and will beep the number of times as the channel number selected.

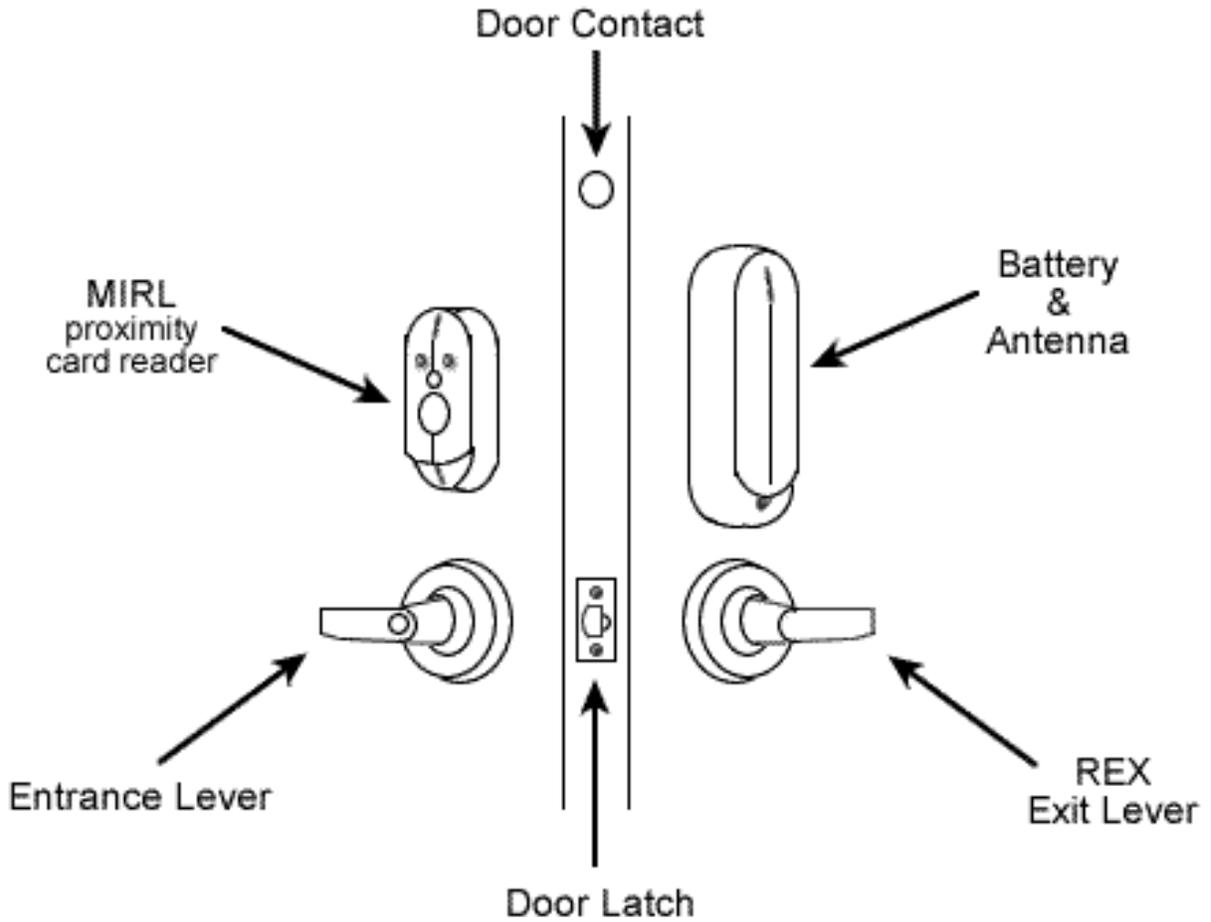
If the RF signal is not good, then the MIRL blinks red and beeps rapidly. The Schlage W.A.S. manual *P/N M053-007-B* Table 4.1 lists the meanings of the beeps and LED signals, and recommends you move the PIM or change the RF channel and retry the linking process.

***The diagrams (Fig. 9) on next page are an example of a WAPM reader door hardware configuration.***

**Figure 9 – Example of WAPM/MIRL Door Hardware**

---

Below is an example of one kind of WAPM. Refer to manufacturer's documentation for the specific device you are installing (e.g. magnetic stripe, etc.).



## 2.6 Testing WAPM (door) with the CDT

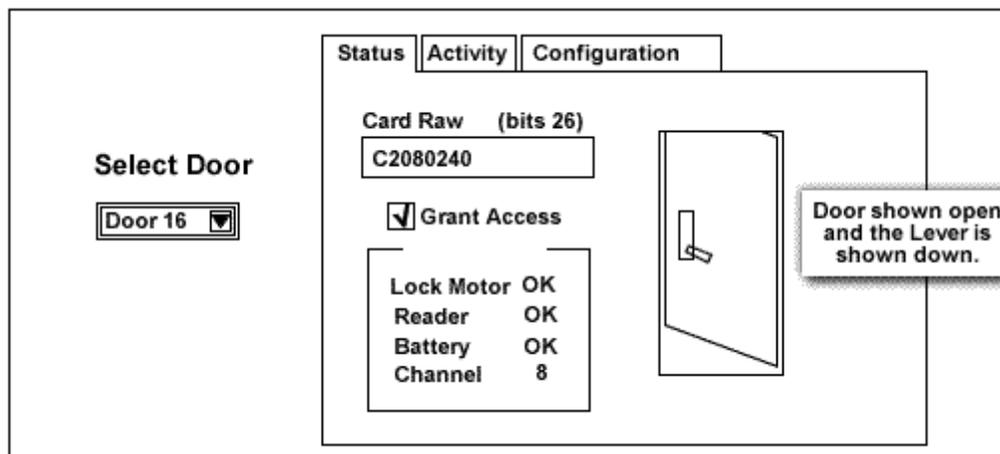
---

6. Test the WAPM (door/reader) by presenting the correct card type (i.e. prox., mag stripe, etc.).
  - a. Select the door from the list.
  - b. **Grant Access field:** Checking this should allow the card to work as a valid card and door should unlock/open. Un-checking this field should cause the card to be denied and door should remain locked and should not open.

This test shows that the door and WAPM are communicating to the PIM and able to correctly read cards and grant access. You can use this process to isolate issues with communications to the WAPM when troubleshooting field issues.

Figure 10 – Status tab: Testing the door/reader

---



## 2.7 The Activity Log in the CDT

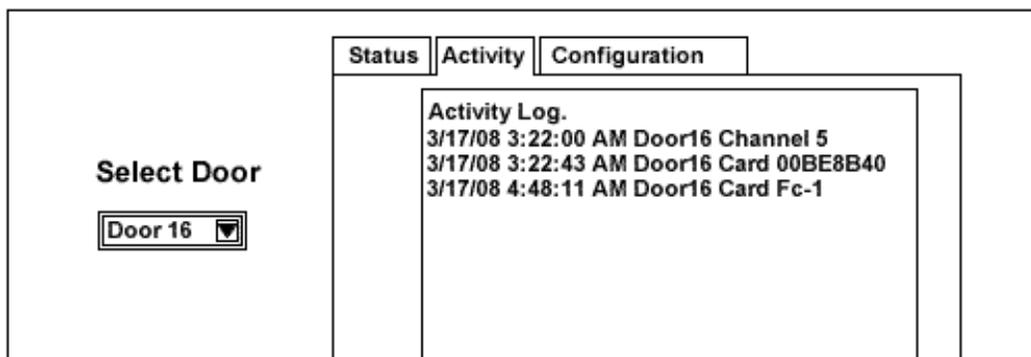
---

7. The *Activity tab* will display a log of events from your tests.

Figure 11 – Activity tab: Example of the Activity Log

---

The CDT tool will display a log of activity /events for the door/reader events.



## 2.8 Configuring the WAPM (door access point) with the CDT

### 8. Getting the WAPM Configuration:

- a. Select the Configuration tab.
- b. Click the [Get] button near the bottom of the tab. *NOTE: the PIM must be in CDT mode (step 6) and must be linked to the RF WAPM door access point (step 8 and 9).*

**Figure 12 – Configuration tab: Getting WAPM Configuration**

Once the PIM gets the WAPM status, the fields populate with the settings of the WAPM.

The screenshot displays the 'Configuration' tab of a WAPM configuration interface. On the left, there is a 'Select Door' dropdown menu currently set to 'Door 16'. The main configuration area is divided into several sections:

- HeartBeat:** Three spinners for hours (0), minutes (10), and seconds (0).
- Relatch After:** A spinner set to 15 seconds.
- Card Conversion:** A dropdown menu set to 'None'.
- Mode:** A dropdown menu set to 'Normal'.
- Latch Type:** A dropdown menu set to 'Motor 1'.
- First Delay Retry:** Three spinners set to 200, 200, and 5.
- Mag Track:** A dropdown menu set to 2.
- Door Held Time:** A spinner set to 15.
- Fail Safe:** Radio buttons for 'Disable' (selected), 'Lock', and 'Unlock'.
- Cash Mode:** A spinner set to 0.
- Other options:** Checkboxes for 'Extend Unlock', 'Rxt Sift', 'Rxt', 'Prealarm', 'No Purge', 'FC Mode', and 'Deny Act'.

At the bottom of the configuration area, there are 'Set' and 'Get' buttons. A red box highlights these buttons, and a red arrow points to the 'Get' button. To the right of the buttons, the status text reads 'Status: Getting Cfg...'.

## 2.9 Setting the WAPM Heartbeat

---

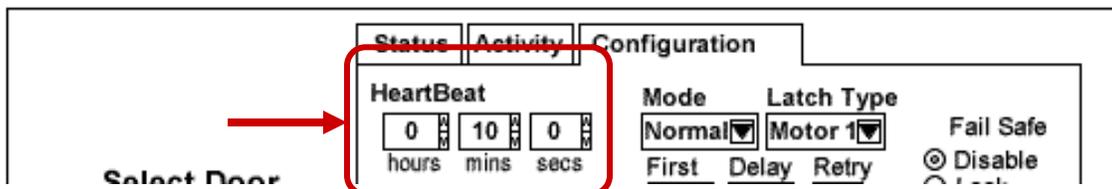
9. **Setting the WAPM Heartbeat (hh:mm:ss):** this value controls how often the WAPM will poll the PIM for instructions when there is no activity (i.e. no card swipe, or REX, etc). *Galaxy does not recommend that you set this value too low to avoid using up your batteries too fast.*

- **The default value = 10 minutes** (approx. 4 years battery life or 60,000 card swipes).
- The lowest value = 15 seconds (with less than 1 year battery life).

YOU MUST CLICK THE SET BUTTON TO SEND THIS DATA TO THE PIM. You can click the set button now or after you finish configuring the remaining settings.

**Figure 13 – Configuration tab: Setting the WAPM Heartbeat**

---



**NOTE - Access Rules / Door Schedules:** Cardholders, access rules, schedules and holidays are created in the SG software and loaded to the 600-series panel where they are stored in memory.

- **Cardholders and Access Rules:** When a card is swiped at the WAPM, an access request goes to the PIM and then to the SG 600-series controller. The control panel returns the appropriate response to the PIM for that card (granted or denied) based on whether that card has permission to use that door at that time, or not. The controller logs the card swipe and the permission (granted or denied) to the SG software and database. The PIM then stores the command until the WAPM picks it up (see setting the **First, Delay and Retry values in Sect 2.10**).

- **Schedules and Holidays:** At the top of the minute of a scheduled time, the control panel sends the lock or unlock command to the PIM and logs the event to the SG software / database. The PIM / stores the command until the WAPM picks it up.

Therefore, if your WAPM heartbeat is 10 minutes and your unlock schedule is 8:00 AM, / your door should unlock after 8 AM, but before 8:10 AM - *or sooner if a card is swiped.*

- **SG Operator manual commands:** When the operator sends lock and unlock commands to the door, the controller forwards them to the PIM where they wait to be picked up by the WAPM.

## 2.10 Setting the card swipe First, Delay and Retry timers

---

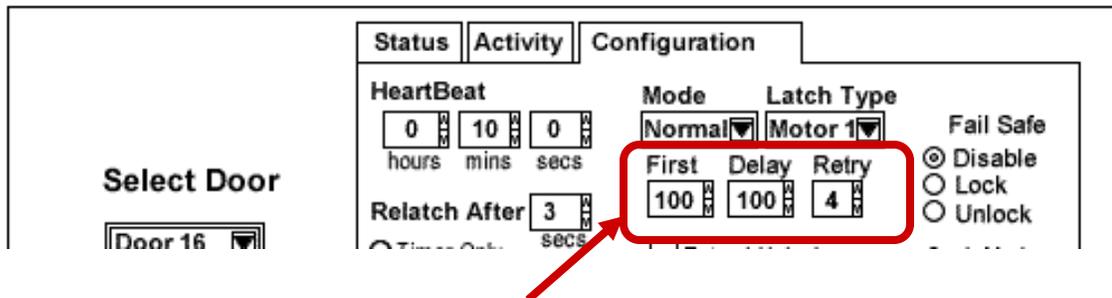
10. **Setting the First Delay and Retry times:** these settings adjust the response timing that the WAPM uses to work with the access control panel when card reads occur.

Each WAPM uses these settings to determine the following:

- a. **FIRST:** (default is 200 milliseconds) – this value is how long the WAPM will wait from the first card swipe to the next query (first retry) to the PIM to obtain the access rules of the card (grant or deny). Keeping this setting slightly higher than the access panel's normal response time optimizes performance. **System Galaxy recommends at least 100 ms in this field.**
- b. **DELAY:** (default is 200 milliseconds) – this value is how long between retries from the WAPM to the PIM for the access rule. **System Galaxy recommends at least 100 ms.**
- c. **RETRY:** (default is 3 attempts ) – this value is how many times the WAPM will retry requesting the PIM for the access rule (i.e. to unlock (grant access) for a card swipe. **System Galaxy recommends at least 3 or 4 retries depending on how many PIMS are on the channel.**

Figure 14 – Configuration tab: Setting the Card Read Timing

---



## 2.11 Setting the WAPM Re-Latch Time

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**11. Setting the Re-latch Time:** The Re-Latch feature controls the conditions under which the door automatically re-latches (relocks) for a momentary unlock (i.e. a valid card swipe). This feature can be set to use only a timed re-latch or both timed or door position.

- a. **Set the Re-Latch Time (1 – 255 seconds):** this controls how long the door stays unlocked when valid access is granted (card swipe). The door will re-lock when this time expires/elapses.
  - **Default value = 3 Seconds**, and the following option applies.
  
- b. **Set the Re-Latch Option (must set one):** this controls whether the door uses timer only or timer with door position to trigger a re-latch when a valid card read happens.
  - **Timer Only** (option button) - means the door relocks when the re-latch time expires, regardless of door status or position.
  - **On Door Open or Timer** (option button) – means the door relocks when the door contact opens or the re-latch time expires, whichever happens first. *Schlage recommends this as the most secure setting to reduce tailgating and extend battery life.*
  - **On Door Close or Timer** (option button) – means that the door relocks when the door contact closes or the re-latch time expires, whichever happens first.

**Figure 15 – Configuration tab: Setting the Re-latch options**

---

The screenshot shows a software configuration window with three tabs: Status, Activity, and Configuration. The Configuration tab is active. On the left, there is a 'Select Door' dropdown menu with 'Door 16' selected. The main configuration area is divided into several sections:

- HeartBeat:** Three spinners for hours (0), minutes (10), and seconds (0).
- Mode:** A dropdown menu set to 'Normal'.
- Latch Type:** A dropdown menu set to 'Motor 1'.
- Fail Safe:** Three radio buttons: 'Disable' (selected), 'Lock', and 'Unlock'.
- Relatch After:** A spinner set to '3' seconds. This section is highlighted with a red box. Below it are three radio buttons: 'Timer Only', 'on Door Open or Timer' (selected), and 'on Door Close or Timer'. A red arrow points to the 'on Door Open or Timer' radio button.
- First Delay Retry:** Three spinners for 'First' (100), 'Delay' (100), and 'Retry' (4).
- Extend Unlock:** An unchecked checkbox.
- Rxt Sift Rxt:** Two unchecked checkboxes.
- Mag Track:** A dropdown menu set to '2'.

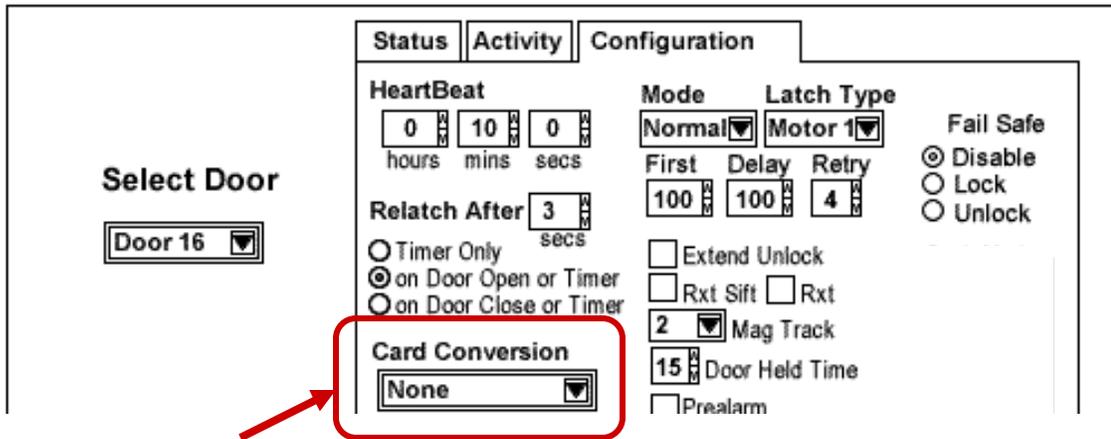
## 2.12 Setting Card Conversion

---

12. Setting the Card Conversion field : this field does not apply to System Galaxy therefore this field will be set to “NONE”.

Figure 16 – Configuration tab: Setting the Card Conversion

---



The screenshot shows a configuration interface with three tabs: Status, Activity, and Configuration. The Configuration tab is active. On the left, there is a 'Select Door' dropdown menu with 'Door 16' selected. The main configuration area is divided into several sections: HeartBeat (0 hours, 10 mins, 0 secs), Relatch After (3 secs), Card Conversion (None), Mode (Normal), Latch Type (Motor 1), and Fail Safe (Disable). The Card Conversion field is highlighted with a red box and a red arrow pointing to it. Other fields include First (100), Delay (100), Retry (4), Extend Unlock, Rxt Sift, Rxt, Mag Track (2), Door Held Time (15), and Prealarm.

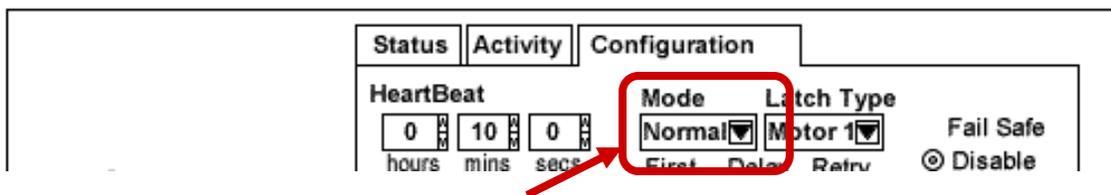
## 2.13 Setting the MODE

---

13. Setting the Mode field : this field must be set to “NORMAL” to interface with Galaxy.

Figure 17 – Configuration tab: Setting the Mode

---



The screenshot shows the same configuration interface as Figure 16. The Mode field is highlighted with a red box and a red arrow pointing to it. The Mode is set to 'Normal'. Other fields are visible, including HeartBeat (0 hours, 10 mins, 0 secs), Latch Type (Motor 1), and Fail Safe (Disable).

## 2.14 Setting the Latch Type

---

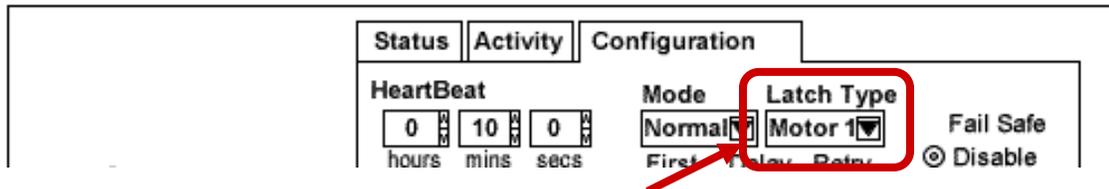
14. Setting the Latch Type field : this field must be set correctly.

a. **Default** = the factory setting based on lock or latch type issued with the access point.

- ▶ Motor 1 – WEXK & Best Cylindrical IRL
- ▶ Motor 2 - Best Mortise IRL & MIRL
- ▶ Motor 3 - Saflok Mortise MIRL
- ▶ Motor 4 – WA5600 Series, WA993 & Marks Cylindrical MIRL
- ▶ Motor 5 – WA5200 Series

**Figure 18 – Configuration tab: Setting the Latch Type**

---



## 2.15 Setting the Extended Unlock option

---

**15. Setting the Extended Unlock option:** this setting is used to control how the WAPM handles to scheduled unlocks from the access control panel.

- **The default is enabled (Checked)**
- **Setting this option to checked/enabled** means that the WAPM will follow the unlock schedule. When the access control panel sends the scheduled unlock to the PIM, the WAPM will pick it up within the heartbeat time. Door will unlock and remain unlocked until the access control panel sends the scheduled lock or lock command.

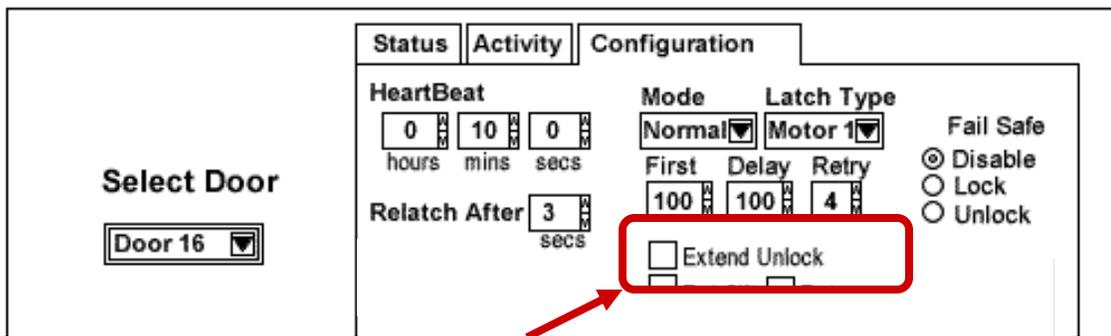
It is recommended you enable this option if you are using door unlock schedules.

**NOTE:** if an operator (manual) lock command is issued from the software during and unlock schedule the door will remain locked until the next unlock command is generated or a schedule unlock command is issued.

- **Setting this option to unchecked/disabled** will cause the WAPM to ignore the unlock schedule form the access point (i.e. door will re-latch based on Re-latch settings – see Section 2.10).

**Figure 19 – Configuration tab: Setting the Extended Unlock option**

---



## 2.16 Setting the RXT (request to exit) option

---

**16. Setting the RXT option:** this setting determines whether the WAPM queries for unlock authorization on a Request to Exit activation (Exit Lever is down).

- **The default is disabled (unchecked)**
- **Setting this option to unchecked/disabled** means that the WAPM will only report that a request to exit has occurred. Schlage suggests to use this setting if the access point does not need to be electronically unlocked in order to provide egress (for instance, the access point has a crash bar) but the access control panel needs to be notified so that a forced door does not occur. **System Galaxy uses unchecked.**
- **If Rxt is checked (enabled)**, then the WAPM will report that a request to exit has occurred and will query the PIM to determine if the access point should be electronically unlocked. Use this mode if the access point needs to be electronically unlocked in order to provide egress.

**Figure 20 – Configuration tab: Setting the RXT (request to exit) option**

---

The screenshot shows the Configuration tab of the System Galaxy interface. On the left, there is a 'Select Door' dropdown menu with 'Door 16' selected. The main configuration area is divided into several sections:

- HeartBeat:** Three spinners for hours (0), minutes (10), and seconds (0).
- Relatch After:** A spinner for seconds (3).
- Mode:** A dropdown menu set to 'Normal'.
- Latch Type:** A dropdown menu set to 'Motor 1'.
- First Delay Retry:** Three spinners for First (100), Delay (100), and Retry (4).
- Fail Safe:** Three radio buttons: 'Disable' (selected), 'Lock', and 'Unlock'.
- Other options:** Radio buttons for 'Timer Only', 'on Door Open or Timer', and 'on Door Close or Timer'. Checkboxes for 'Extend Unlock' and 'Rxt Sit' are also present.

The 'Rxt' checkbox is highlighted with a red box, and a red arrow points to it from the bottom left.

## 2.17 Setting the RXT SIFT option

**17. Setting the RXT SIFT option:** Determines whether WA56XX and WA993 reports Request to Exit events during unlocked state.

- If Rxt Sift is not checked (disabled), the WA5600 or WA993 will always report a request to exit has occurred regardless of the lock state.
- If Rxt Sift is checked (enabled), then the WA5600 Lockset or WA993 Exit Trim will not report a request to exit has occurred during the unit is unlocked. This is the default setting for the WA5600 Series and WA993.

**SCHLAGE NOTICE:** The Rxt Sift option can not be enabled for WA5200 Series Cylindrical Locksets or Wireless Reader Interfaces (WRIs) although the CDT may show the feature enabled. These units always report requests to exit no matter the setting of Rxt Sift or lock status.

**Figure 21 – Configuration tab: Setting the RXT SIFT option**

The screenshot displays the 'Configuration' tab of a Schlage interface. On the left, there is a 'Select Door' dropdown menu with 'Door 16' selected. The main configuration area is divided into several sections:

- HeartBeat:** Three input fields for hours (0), minutes (10), and seconds (0).
- Relatch After:** An input field for seconds (3).
- Mode:** A dropdown menu set to 'Normal'.
- Latch Type:** A dropdown menu set to 'Motor 1'.
- First Delay:** An input field for seconds (100).
- Delay:** An input field for seconds (100).
- Retry:** An input field for seconds (4).
- Fail Safe:** Three radio buttons: 'Disable' (selected), 'Lock', and 'Unlock'.
- Options:** Three radio buttons: 'Timer Only', 'on Door Open or Timer' (selected), and 'on Door Close or Timer'.
- Checkboxes:** Three checkboxes: 'Extend Unlock', 'Rxt Sift' (highlighted with a red box and a red arrow), and 'Rxt'.

## 2.18 Setting the MAG Track option

---

**18. Setting the MAG Track option:** This controls which track data is read from the Mag Stripe Card and is sent to the PIM-TD2 or PIM-485 from the WA Series or WPR access point module.

- 1 = track 1
- 2 = track 2 (Default)
- 3 = track 3

**Figure 22 – Configuration tab: Setting the MAG Track option**

---

The screenshot shows a web interface for configuring a door lock. On the left, there is a 'Select Door' dropdown menu with 'Door 16' selected. The main configuration area is divided into several sections: 'HeartBeat' with input fields for hours (0), minutes (10), and seconds (0); 'Relatch After' with a 'secs' input field set to 3; 'Mode' set to 'Normal'; 'Latch Type' set to 'Motor 1'; 'First', 'Delay', and 'Retry' input fields with values 100, 100, and 4 respectively; 'Fail Safe' options: 'Disable' (selected), 'Lock', and 'Unlock'; and 'Timer Only' options: 'on Door Open or Timer' (selected) and 'on Door Close or Timer'. A red box highlights the 'Mag Track' dropdown menu, which is currently set to '2'. A red arrow points to this dropdown menu.

## 2.19 Setting the Fail Safe Options

---

**19. Setting the Fail Safe :** this field determines how the lock/latch will behave when there is a loss of RF communications between the PIM and Access Point.

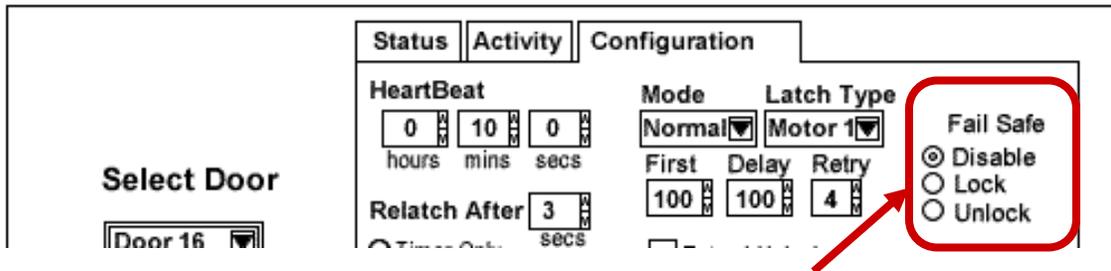
**IMPORTANT :** This feature is over-riden when the Cache feature is enabled.

**a. Default = the default setting is disable**

- ▶ Disable – means the lock will remain in the state/position it is in when the communication failure occurs.
- ▶ Lock – means the lock will re-latch when the communication failure occurs.
- ▶ Unlock – means the lock will unlatch when the communication failure occurs.

**Figure 23 – Configuration tab: Setting the Fail Safe Options**

---



## 2.20 Setting the Cache Mode options

**20. Setting the Cache Mode option:** this option allows an access point module (WAPM) to make access decisions based on previously approved credentials or facility codes if RF communications are lost to a PIM-TD2 or a PIM-485 is not polled by the access control system for more than 5 seconds.

- **Data Bits** – enter the number of bits in the credential
- **No Purge** – If not checked deletes the cache entry after 5 days of non-use. If checked does not delete the cache entry.
- **FC Mode** – If checked uses facility codes of previously approved credentials in degraded mode. If not checked then the full credential is used.

**Figure 24 – Configuration tab: Setting the Cache Mode options**

The screenshot shows a software configuration window with three tabs: Status, Activity, and Configuration. The Configuration tab is active. On the left, there is a 'Select Door' section with a dropdown menu showing 'Door 16'. The main configuration area is divided into several sections:

- HeartBeat:** Three spinners for hours (0), minutes (10), and seconds (0).
- Relatch After:** A spinner set to 3 seconds.
- Card Conversion:** A dropdown menu set to 'None'.
- Mode:** A dropdown menu set to 'Normal'.
- Latch Type:** A dropdown menu set to 'Motor 1'.
- Fail Safe:** Radio buttons for 'Disable' (selected), 'Lock', and 'Unlock'.
- First Delay Retry:** Three spinners for 'First' (100), 'Delay' (100), and 'Retry' (4).
- Other options:** Checkboxes for 'Extend Unlock', 'Rxt Sift', 'Rxt', 'Mag Track' (set to 2), 'Door Held Time' (set to 15), and 'Prealarm'.
- Cash Mode:** A section highlighted with a red box, containing:
  - Data Bits:** A spinner set to 0.
  - No Purge:** An unchecked checkbox.
  - FC Mode:** An unchecked checkbox.
  - Deny Act:** An unchecked checkbox.

At the bottom, there are 'Set' and 'Get' buttons, and a status indicator that says 'Status: Getting Cfg...'. A red arrow points from the bottom right towards the 'Cash Mode' section.

## 2.21 Setting the Pre-Alarm and Door Held options

**Setting the Pre-Alarm and Door Held options:** These options are related. Prealarm, if activated, provides a reader beeper 5 seconds prior to the PIM sending a door held open alarm. The number setting is the time to the door held open alarm transmission.

### 1. Defaults:

- Prealarm not active (unchecked) = beeper will not sound 5 seconds before the expiry of the door held timer.

Checking the Pre-alarm results in the battery powered WAPM sounding its beeper 5 seconds prior to the elapse of the door held open timer.

- Door Held alarm time – 15 seconds
- When the Door Held timer expires, the PIM sends a message to the access control system.

**NOTICE:** access control systems may not implement the door held open alarm report from the PIM and make its own decision on the door held open alarm.

**NOTICE:** System Galaxy is designed to determine door forced and door open too long alarms based on the state of the door (locked/unlocked) when the contact is separated, and how long the contact remains open. However the options are described below for your information.

**Figure 25 – Configuration tab: Setting the Pre-Alarm and Door Held options**

The screenshot shows a software configuration window with three tabs: Status, Activity, and Configuration. The Configuration tab is active. On the left, there is a 'Select Door' dropdown menu with 'Door 16' selected. The main configuration area is divided into several sections:

- HeartBeat:** Three spinners for hours (0), minutes (10), and seconds (0).
- Relatch After:** A spinner set to 3 seconds.
- Card Conversion:** A dropdown menu set to 'None'.
- Mode:** A dropdown menu set to 'Normal'.
- Latch Type:** A dropdown menu set to 'Motor 1'.
- Fail Safe:** Three radio buttons: 'Disable' (selected), 'Lock', and 'Unlock'.
- First Delay Retry:** Three spinners set to 100, 100, and 4.
- Extend Unlock:** An unchecked checkbox.
- Rxt Sift Rxt:** Two unchecked checkboxes.
- Mag Track:** A dropdown menu set to '2'.
- Door Held Time:** A spinner set to 15, highlighted with a red box.
- Prealarm:** A checked checkbox, also highlighted with a red box and pointed to by a red arrow.



## 3 Configuring System Galaxy

This section provides a brief overview of how to set up System Galaxy hardware and software to integrate with the PIM-485 module.

### 3.1 About Installing the SG Software

**Properly install the System Galaxy software, database & services on the communication and database servers.** Note: On smaller systems, this can all be on one computer. On networked servers, the system can have the database installed on separate a database server.

**Note:** you will have a 14-day grace period to register your system from the day you install.

#### Software Reference Documentation:

- ◆ The main **System Galaxy Software Installation manual** provides instructions about installing System Galaxy software. The Install CD also includes the install instructions on disk-1, which open in Internet Explorer (6.0 or later).
- ◆ The main **System Galaxy v8.2 Software manual** covers information about configuring all the features and functionality of the SG software/system.
- ◆ Also **System Galaxy v8 PC Recommendations** document covers the current recommendations and specifications for SG-8.

The Galaxy manuals are available in *PDF* format. Acrobat Reader 7.0 or later is recommended. You can find the manuals on the Software Install CD (disk-2).

You can also the manuals them on the Galaxy website (dealer login/password is required). To get a PDF manual from the website, go to [www.galaxysys.com](http://www.galaxysys.com). Click on the **Support** link on the left side menu, then click **Technical Support**, then find the list of **Documentation Links** at the bottom of the Tech Support page.

*Manuals are also available in print from customer service at Galaxy Control Systems.*

## 3.2 About Installing the 600-series Hardware

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Properly install the Controller, the CPU board and DSI board according to the instructions in the 600 Hardware Manual.

- ▶ **You will need a null-modem cable to program the CPU:** this cable should come with the controller panel (*see requirements in Chapter 1 of this manual for cable specifications*).
- ▶ **You will need a PC with a COM port and HyperTerminal:** to configure the correct network parameters for the CPU and configure the board ID on the DSI.
- ▶ **A serial DSI board can have up to 16 doors on each RS-485 channel.** There are two (2) RS-485 channels on a DSI board. Multiple PIM-485 units can be connected in a daisy-chain fashion to the DSI 485 channel. *See Figure 25 on following page.*

**NOTE:** you must install jumpers on the DSI port [ T – to R – ] and [ T + to R + ]

**NOTE:** you must install jumpers [ TB– to RB– ] and [ TB+ to RB+ ] on every PIM unit.

**NOTE:** you must ground the shielding on for every segment of RS-485 cable on one end. The following diagram shows shielding on the PIM end.

**NOTE:** The PIM unit should be powered on its own (separate) power supply.

The main **600-series Hardware Installation manual** provides requirements and hardware installation instructions for the 600-series hardware, CPU and its daughter boards.

These step-by-step instructions cover installing and configuring the boards, flashing, and how to wire the field devices (readers, relays, inputs, outputs, etc.).

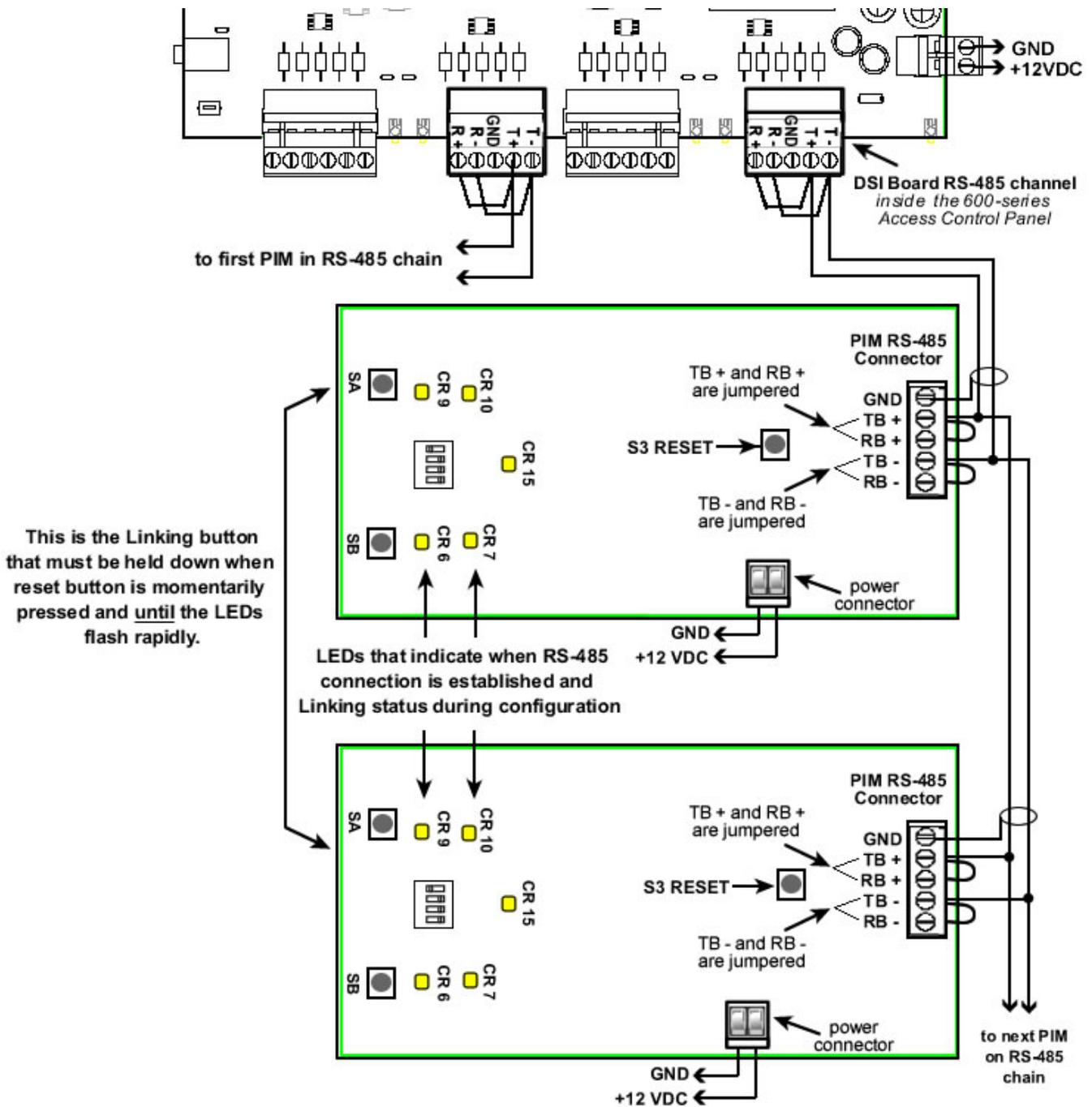
This manual is available in *PDF* format. Acrobat Reader 7.0 or later is recommended.

You can find the manual on the Software Install CD (disk-2).

You can also the manuals them on the Galaxy website (dealer login/password is required). To get a PDF manual from the website, go to [www.galaxysys.com](http://www.galaxysys.com). Click on the **Support** link on the left side menu, then click **Technical Support**, then find the list of **Documentation Links** at the bottom of the Tech Support page.

*Manuals are also available in print from customer service at Galaxy Control Systems.*

Figure 26 – Wiring Diagram: DSI RS-485 channel to PIM-485 connector



## 3.3 Configuring the 600 Controller and DSI in the software

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Once the 600 CPU is setup it will initiate an IP connection to the GCS Event Service on the Communication Server. The software must be programmed with the information about the Controller, DSI and Readers.

The following subsections describe configuring the System Galaxy software for Schlage Wireless readers. The main SG software manual describes the programming of cards, access rules, schedules, etc.

### 3.3.1 About Using System Galaxy software

- ▶ **The System Galaxy software and core GCS Services must be running** in order to load programming to the controller or send door commands:
  - ◆ **System Galaxy Software** used to ...
    - program the 600 Loop/cluster and panel settings, add DSI board, configure the DSI channel for the PIM-485, etc.
    - load card data, access rules, schedules/holidays, reader properties, etc.
    - monitor doors / events, send door commands, etc.
  - ◆ **GCS Client Gateway Service** (systray icon looks like a PC monitor)
  - ◆ **GCS Communication Service** (systray icon looks like a yellow control panel)
  - ◆ **GCS DBWriter Service** (systray icon looks like a database symbol)
  - ◆ **GCS Event Service** (systray icon looks like a globe) this service specifically handles the 600-series Panel connections. The 600-series access control panels initiate their connections to this service.



### 3.3.2 Signing-in to the System Galaxy software

- ▶ Start up System Galaxy software and log-on as a master operator:
  - a. Double-click the **SG icon** on the desktop of the Communication server
  - b. Supply the **login name** and **password** for a Master level operator

**Figure 27 – Sign On/Off: Logging into System Galaxy**

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### 3.3.3 Registering Wireless Readers in System Galaxy

All product levels support the registration/licensing of wireless locks for branded readers. To open the System Registration screen you must be signed in as a master operator.

- 1) **Open the Registration Screen:** select *Configure > Options > Registration > System*
- 2) **Select the correct Product Level**
- 3) **Enter appropriate information and option settings**
  - a. **NEW INSTALL/SYSTEM REGISTRATION:** you must select the correct product level according to the purchased license agreement. You must configure all options according to the agreement. The Max Readers count the Max DSI-Based Readers count must match the purchase agreement.
  - b. **UPGRADING REGISTRATION /ADDING WIFI READERS:** you must update ...
    - **the Max Readers count** (this is the total number of readers in the system including the total number of wireless readers)
    - **the Max DSI-Based Readers count** (this is the total number of wireless readers)
- 4) **Enter the correct Registration Code.**
- 5) **Click [Apply] to save changes.**

The screenshot shows the 'Product Registration' window with the 'System Registration' tab active. The window contains several sections: 'System Information' with fields for Current System ID (1716590731), Registered System ID (1716590731), Created Date/Time (9/9/2014 3:09:24 PM), and Workstation Count (1); 'Customer Name' and 'Authorized Galaxy Dealer Name' fields; 'Product Level' set to 'Professional'; 'System-Wide Features' with checkboxes for various options like CCTV Control, Card Data Import/Export/Replication, Event Log Output, S.G. Time & Attendance, User Status/Who's In, Galaxy DVR, 3rd Party DVRs, Alarm Panel Support, Guard Tour, Passback & Door Groups, Graphic Device Status, 508i & 502i Support (checked), Biometric Interface Support (checked), Unlimited Card Capacity (600 only), and Access Rule Override (600 only); 'Software Maintenance Settings' with Expiration Date (9/23/2014) and Maximum Version (10.xx); 'Limits' section with Maximum Clients (2), Maximum Readers (16), # Used (2), Maximum Biometric Readers (0), and Maximum DSI-Based Readers (0); 'Web Client' options (Web Client, Photo, \* Requires Card Exchange Inside); 'Badge Printing System' set to 'No Badging System'; a 'Registration Code' field containing 'GJTLRW4H' and a 'Report' button; and a 'Last Registered Date/Time' field. At the bottom are 'OK', 'Cancel', and 'Apply' buttons. Three red callout boxes with white text and red borders point to specific fields: the top one points to the 'Authorized Galaxy Dealer Name' field with the text 'Max Readers cannot be less than the Max DSI Readers'; the middle one points to the 'Maximum Readers' field with the text 'Max Readers cannot be less than the Max DSI Readers'; and the bottom one points to the 'Registration Code' field with the text 'Registration Code must be obtained by an authorized Galaxy Dealer'.

### 3.3.4 Adding the Loop/Cluster in System Galaxy

Add the 600 Loop/cluster before adding the access control panel:

- ◆ **Click on the Loop button on the toolbar;**  
{Or from the menu, select *Configure > Hardware > Loops/Clusters.*}
- ◆ When the Loop Properties screen opens, **click [ Add New ].**
- ◆ **Type in a loop name.**
- ◆ **Set Loop Type to “600”.**
- ◆ **Set Connection Type to “TCP/IP”.**
- ◆ **Enter the IP address of the Event Server** (the PC running the GCS Event Service)
- ◆ **Remote Port should be “4003”**
- ◆ **Enter the computer name of the Communication Server** ( the PC running the GCS Communication Service). you can click the [ This Computer ] button if you are programming this on the communication server.
- ◆ **Click [ Apply ] to save settings.**

**Figure 28 – Loop/Cluster Properties: Configuring the Loop**

The screenshot shows the 'Loop/Cluster Properties' dialog box. At the top, there are fields for 'ID #' (1), 'Name' (Building A (600)), 'Serial #' (02000001), and 'System Type' (600). To the right of these fields are radio buttons for 'Order by ID' and 'Order by Name', and a vertical stack of buttons: 'Add New', 'Edit', 'Delete', 'Apply', 'Cancel', and 'Reports'. Below these fields are four tabs: 'Communication', 'Card/Reader Options', 'Share Options', and 'LED Options'. The 'Communication' tab is active, showing 'Connect using' (TCP/IP), 'Event Server IP' (63.122.126.79), 'Remote Port' (4003), and 'Loop Communication Server' (XP5150-Tw) with a 'This Computer' button next to it.

### 3.3.5 Adding the 600 Controller & DSI Board in System Galaxy

Add the 600 Controller (access control panel) to the loop/cluster:

- ◆ **Click on the Controller button on the toolbar,**  
{Or from the menu, select *Configure > Hardware > 600 Controller.*}
- ◆ When the Controller Properties screen opens, **select the Loop/Cluster name** you just created in the previous step.
- ◆ **click [ Add New ]** to add the controller.
- ◆ **Enter the Controller serial number** (found on the CPU board). This can be a valid serial number of any CPU in this loop/cluster.
- ◆ **Enter a user-friendly *descriptive Name*** for the control panel. The software automatically assigns a controller name – you can / should change that to a name that logically describes the location or purpose of the panel (i.e. Lobby controller, or East Wing, 1<sup>st</sup> floor, etc.) for administration and future maintenance purposes.
- ◆ **Click the [Get Board Info] button:** the Board Info screen will open and display the list of boards in that panel.
- ◆ **Click the [Save] button** to add the boards.  
  
    { OR you can add boards individually by clicking the [Add Board] button, setting the board # (you must know/match the board ID, choose the board type, and click [OK] }
- ◆ *Configure **Alarm I/O Groups** another **Options** as needed. You would only use alarm I/O options here if you were monitoring the controller alarm events.*
- ◆ **Click [ Apply ]** to save the configuration.

**Figure 29 – Controller Properties: Configuring the 600-series Controller**

Cluster/Loop:

Controller ID:   Order by ID  Order by Name

Name:

Bypass loading:

Interface Boards | CPU Boards | Alarm I/O Groups | Options

Board/Section #	Description	Sections
[-] <input checked="" type="checkbox"/> 1	Dual Serial Interface Board	2
├── 1.1	Serial Data Channel	
└── 1.2	Serial Data Channel	
[-] <input checked="" type="checkbox"/> 2	Dual Serial Interface Board	2
├── 2.1	Serial Data Channel	
└── 2.2	Serial Data Channel	

### 3.3.6 Configuring the Serial Channels in System Galaxy

You must have added the DSI board in the controller property screen in order to be able to configure the serial channels.

All the readers on a channel must be the same format (e.g. all Wiegand or all ABA). You cannot mix reader technology. This means you cannot have both ABA and Wiegand on the same DSI port/channel.

- ◆ Open the 600 **Serial Channel Property** screen from the SG menu bar selections **Configure > Hardware > Serial Channel**
- ◆ Select the **Cluster/Loop Name**
- ◆ Select the **Controller Name**
- ◆ Select the appropriate **DSI Board number / section number** (e.g. Board 1; Sect 1) from the droplist.
- ◆ Click **Edit** button
- ◆ Set the **Channel Mode**: you can choose 'Ingersoll Rand Wiegand' or 'Ingersoll Rand ABA'.  
NOTE: setting a channel to 'Unused' will disable the channel.
- ◆ Check and/or uncheck the reader (WAPM) ID's that you have attached to this DSI channel. If you have readers 1 through 8 installed, then you will check the first 8 WAPMs.
- ◆ Click **Apply** to save changes.

**NOTE:** you may need to restart the Hardware Tree to see your readers. Do this by selecting **View > Hardware Tree >** from the menu.

*You may edit the reader properties in the Reader Properties screen described in the next section.*

**Figure 30 – Serial Channel Properties: Configuring the DSI's Serial Channels**

Cluster: 2

Control Unit: Cluster #: 2, Unit #: 1

Cluster: 002, Cont: 001, Brd: 1, Sect: 1

Description: Serial Channel Cluster: 002, Cont: 001, Brd: 1, Sect: 1

Channel Mode: PIM Wiegand Readers

WAPM #	Name
<input checked="" type="checkbox"/> 1	Cluster: 002, Cont: 001, Brd: 1, Sect: 1, WAPM: 1
<input type="checkbox"/> 2	Cluster: 002, Cont: 001, Brd: 1, Sect: 1, WAPM: 2
<input type="checkbox"/> 3	Cluster: 002, Cont: 001, Brd: 1, Sect: 1, WAPM: 3
<input type="checkbox"/> 4	Cluster: 002, Cont: 001, Brd: 1, Sect: 1, WAPM: 4
<input type="checkbox"/> 5	Cluster: 002, Cont: 001, Brd: 1, Sect: 1, WAPM: 5
<input type="checkbox"/> 6	Cluster: 002, Cont: 001, Brd: 1, Sect: 1, WAPM: 6
<input type="checkbox"/> 7	Cluster: 002, Cont: 001, Brd: 1, Sect: 1, WAPM: 7
<input type="checkbox"/> 8	Cluster: 002, Cont: 001, Brd: 1, Sect: 1, WAPM: 8
<input type="checkbox"/> 9	Cluster: 002, Cont: 001, Brd: 1, Sect: 1, WAPM: 9
<input type="checkbox"/> 10	Cluster: 002, Cont: 001, Brd: 1, Sect: 1, WAPM: 10
<input type="checkbox"/> 11	Cluster: 002, Cont: 001, Brd: 1, Sect: 1, WAPM: 11
<input type="checkbox"/> 12	Cluster: 002, Cont: 001, Brd: 1, Sect: 1, WAPM: 12
<input type="checkbox"/> 13	Cluster: 002, Cont: 001, Brd: 1, Sect: 1, WAPM: 13
<input type="checkbox"/> 14	Cluster: 002, Cont: 001, Brd: 1, Sect: 1, WAPM: 14
<input type="checkbox"/> 15	Cluster: 002, Cont: 001, Brd: 1, Sect: 1, WAPM: 15
<input type="checkbox"/> 16	Cluster: 002, Cont: 001, Brd: 1, Sect: 1, WAPM: 16

## 3.4 Configuring the RF Reader Properties in System Galaxy

Some reader behaviors can be configured from System Galaxy. Some reader features must be set from the CDT tool. This section briefly covers the options that can be set from System Galaxy.

### 3.4.1 Setting Reader Properties from System Galaxy

To configure a Reader Port, open the Reader Port window. Follow the menu **selections Configure > Hardware > Reader Ports**, or click the **Doors/Readers** button on the toolbar.

- ◆ When the Reader Port properties window opens, **choose the loop** that includes your controller. Use the **Loop** drop-down list to select a loop.
- ◆ Then **select the specific controller** for your readers in the **Controller** drop-down list.
- ◆ **Select the specific reader** port in the **Reader Name** drop-down list.
- ◆ **Click the Edit button.** When Edit is clicked, the fields in the main area become enabled:
- ◆ **Enter a descriptive Reader Name** (up to 65 characters) that makes the reader easy to identify (i.e. Room 101; supply closet).
- ◆ **The Reader Type field will be disabled**, but it will display the format you assigned to this DSI channel when you configured the serial channels (Wiegand or ABA).

Figure 31 – Reader Properties: Configuring the Reader Name



### 3.4.2 Setting General Properties from System Galaxy

These options must be configured in the SG software, saved (applied) and then loaded to the access control panel.

**NOTICE: you must set your PIM number to the correct value of the PIM ID that supports this reader.**

The General Options tab also contains a list of check boxes, each of which are described below.

---

**Disable Door Forced Open Message:** When checked, stops the controller from sending the message and recording the event history (does not stop the controller from sensing the door status).

---

**Disable Open Too Long Message:** When checked, stops the controller from sending the message and recording the event history (does not stop the controller from sensing the door status).

---

**Disable Door Closed Message:** When checked, stops the controller from sending the message and recording the event history (does not stop the controller from sensing the door status).

---

**Enable Video Verification:** Video Verification must be enabled for the reader port (in this screen), and for the system (in Workstation Options). When enabled in both options, Video Verification will bring up the main photograph associated with a card when it is swiped.

---

**Elevator Reader: not available for Schlage Wyreless readers in SG 8.2.3.**

---

**NOTICE – THE PIM NUMBER MUST BE SET CORRECTLY!**

**PIM number:** this dropdown field sets which PIM the wireless reader is assigned to.

---

**Figure 32 – Reader Properties: Configuring the General Options**

The screenshot shows the 'General' tab of the Reader Properties configuration window. The window has several tabs: General, Timing/Schedules, Relay 2 Settings, Alarm Options, Passback/Who's In, and Group/Interlock Options. The General tab is active and contains the following options:

- Disable Door Forced Open Message
- Disable Open Too Long Message
- Disable Door Closed Message
- Disable Request To Exit Message
- Unlock On Request To Exit
- Enable Duress
- Two Person Rule
- Energize Relay1 during Pre-Arm delay
- Lock when Door Contact closes
- Enable Video Verification
- Time & Attendance Reader
- Event Log E-Mail Enabled
- Event Log RS-232 & TCP/IP Transmit Enabled
- Event Log File Output Enabled
- Reader Heartbeat Enabled
- Elevator Reader

Below these options are three dropdown menus:

- Elevator Output Channel: [Empty]
- Door Supervision: No Supervision Resistors
- IP Address: [Empty]
- PIM Number: 01

The PIM Number dropdown is circled in red.

### 3.4.3 Setting Reader Schedules from System Galaxy

These options, and the schedules on which they rely, must be configured in the SG software, saved (applied) and then loaded to the access control panel.

The Schedules tab contains fields that affect the timing of the locking and unlocking at the reader. *Disabled (greyed) features are not available for Schlage Wyreless readers in SG 8.2.3.*

**Auto Unlock Schedule:** when selected, the door or WAPM will receive an unlock command from the access control panel at the time(s) configured in the schedule. The door will receive a lock command from the access control panel at the time(s) configured in the schedule. Also if any holidays should affect the unlock schedule, those should be configured and loaded to the panel. *This would be used if you want a door to always open up at a specific time and relock (restricted access) at a specific time (e.g. 8:am to 5:pm). During the locked portion of the schedule, only the card(s) that have access privileges are able to open the door.* The schedule must be configured in the software and loaded to the access control panel.

**PIN required schedule:** *not available for Schlage Wyreless readers in SG 8.2.3.*

**Disable Forced (schedule):** when selected, the system will not report a door forced condition at the door or WAPM.

**Disable Open Too Long (schedule):** when selected, the system will not report a 'door open too long' condition at the door or WAPM. This could be helpful during certain times when a door must be open for an extended period of time on a routine bases (e.g. a loading dock ).

**Reclose Within (mm:ss):** the default is 15 seconds. This is the amount of time the controller will wait for the door contact to close at the door before generating a 'door open too long alarm'.

**Figure 33 – Reader Properties: Configuring the Timing/Schedules**

CCTV Events		Access Rules		Elevator Schedules	
General	Timing/Schedules	Relay 2 Settings	Alarm Options	Passback/Who's In	Group/Interlock Options
Auto Unlock Sch.	*** NEVER **		<input type="checkbox"/> Require Valid Card before auto unlock		
PIN Required Sch.	*** NEVER **		PIN Mode: High Security		
Disable Forced:	*** NEVER **				
Disable Open Too Long:	*** NEVER **				
	Min:Sec				
Unlock delay:	0 0				
Unlock for:	0 5				
Reclose Within:	0 15				
<input type="checkbox"/> 2 Digit PIN specifies Reclose Time for Valid Access					

### 3.4.4 Setting Reader Alarm Options from System Galaxy

These options, and any I/O Groups on which they rely, must be configured in the SG software, saved (applied) and then loaded to the access control panel. **You do not have to select an I/O group to be able to configure Alarm Options.** Alarm Options are independent of I/O groups.

System Galaxy allows controllers to generate alarms based on certain conditions at the door or reader.:

An alarm event is basically created when a specific is configured to generate an Alarm Message. An alarm event displays on the Alarm Event window in the order it occurs unless an alarm priority is configured. When an alarm priority is configured, the alarm messages will still appear when they occur but the order they display in the alarm window is sorted by the number assigned to the priority field. **NOTICE: The Acknowledge check-box must be selected before Priority will apply.**

There are several conditions that can be configured with I/O groups and Alarm settings. Those conditions are **Door Forced Open, Open Too Long, Invalid Attempt, Valid Access, and Passback Violation.**

**I/O Groups:** The drop-down list shows all the available I/O Groups. By default, the field is set to **\*\*NO I/O GROUP\*\***. When an I/O Group is selected, that I/O group will be activated whenever the condition occurs on the reader. I/O groups are used to activate outputs associated with the alarm condition.

**I/O Offsets:** This field contains the I/O Offsets for each condition.

**Acknowledge:** Select (check) this checkbox if the condition should appear as an alarm event (in the alarm events window).

**Priority:** The Acknowledge check-box must be selected before Priority will apply. The priority field is an optional numeric field that accepts a value equal or less than 9999. This is the priority level of that will be assigned to the alarm event. Priority affects the order of the alarm events in the Alarm Events window. Alarms with higher priority number are sorted to the top of the screen regardless of the order they occur.

**Instructions:** The Acknowledge check-box must be selected before Instructions will apply. When this button is clicked, a window appears in which you can type in text instructions for responding to the alarm event.

**Audio:** The Acknowledge check-box must be selected before Audio will apply. The location of files must also be set up in the Multimedia tab of the Workstation Options window (Configure > Options > Workstation Options > Multimedia tab). One .wav file can be selected to play when the alarm event occurs.

**Figure 34 – Reader Properties: Configuring the Alarm Options**

