

Touchpad Exit Controller

Administration Guide

RF TECHNOLOGIES®

Contents

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Warnings and Cautions

It is important for your facility to implement and enforce the following WARNINGS and CAUTIONS in order to keep all equipment functioning properly. Disregarding the information and instructions in this document is considered abnormal use and may result in injury or system failure.

Warnings

ACCESSORIES (SUPPLIES)—To ensure resident safety and proper operation of equipment, use only parts and accessories manufactured or recommended by RF Technologies, Inc. Parts and accessories not manufactured or recommended by RF Technologies, Inc. may not meet the requirements of the applicable safety and performance standards.

Failure to use the components and supplies specified by RF Technologies, Inc. may result in equipment and/or system failure.

EXPLOSION HAZARD—These devices should not be used in the presence of flammable gas mixtures. It should also not be used in oxygen enriched atmospheres.

INSTALLATION AND CONFIGURATION—It is the responsibility of the facility to follow the installation instructions carefully, as outlined in the applicable system guides, and to use the components and supplies specified by RF Technologies, Inc. for all installations.

Failure to use the components and supplies specified by RF Technologies, Inc. may result in equipment and/or system failure.

INSTRUCTIONS FOR SET UP AND USE—It is the responsibility of the facility to follow the instructions for set up and use carefully, as outlined in this manual, and to use the components and supplies specified by RF Technologies, Inc. for set up and use. Do not attempt to use extension cords or other equipment not supplied by RF Technologies, Inc.

Failure to use the components and supplies specified by RF Technologies, Inc. may result in equipment and/or system failure.

STATIC DISCHARGE—Do not touch the conductor portion of any conductor or port. Damage to the device may result.

SYSTEM WIRING—All permanent supply connections must be done in accordance with National Electric Code, NFPA 70.

SYSTEM INSPECTION—It is the responsibility of the facility to establish and facilitate a regular inspection schedule for your system. RF Technologies, Inc. recommends inspections of your system for safety and performance at least twice a year by a qualified RF Technologies, Inc. representative.

To arrange for an inspection by RF Technologies, Inc., call our Technical Support Department at (800)-669-9946 or (262) 790-1771.

Failure to provide regular inspection of these products may result in equipment and/or system failure.

SYSTEM MAINTENANCE AND TESTING—It is the responsibility of the facility to establish and facilitate a regular maintenance schedule for your system, as outlined in the applicable system guides. This includes regular inspection, testing, and cleaning. RF Technologies, Inc. recommends monthly maintenance and testing of your system. It is also recommended that your facility keep records of maintenance and test completions.

Failure to provide regular maintenance and testing of these products may result in equipment and/or system failure.

USER TRAINING—Only users who have received adequate training on the use of the system, as outlined in this manual, should use the system. It is the responsibility of the facility to ensure all users have been trained.

Failure to adequately train employees may cause system failure due to user error. In addition, incorrect use of the equipment may also result in system failure.

EGRESS REMOVAL—Removal of egress functionality is only permitted when granted a waiver by the official authority having jurisdiction (AHJ) for the location.

Cautions

WORN OR DAMAGED PARTS—If the devices are worn or damaged, you must have the product serviced. For more information, see the section entitled “Service and Return.”

DISPOSAL—At the end of their service life the products described in this manual, as well as accessories (i.e. lithium batteries, banding material, disposable pads, etc.), must be disposed of in compliance with all applicable federal, state and local guidelines regulating the disposal of products containing potential environmental contaminants. Dispose of the packaging material by observing the applicable waste control regulations.

RESIDENT GENERATED ALARMS—Do not rely exclusively on resident generated alarms for resident care and safety. The alarm function of equipment in the possession of residents must be verified periodically and regular resident surveillance is recommended.

RESIDENT MONITORING—The most reliable method of resident monitoring combines close personal surveillance with correct operation of monitoring equipment. It is the responsibility of the facility to periodically check on residents in possession of RF Technologies, Inc.'s equipment (i.e. Pendants, Pull Cords, Control Units) to mitigate risk of inappropriate use of equipment or strangulation and stumbling hazards from cables and cords.

PRODUCT WARRANTIES—Failure to follow the Warnings and Cautions in this guide voids any and all Product Warranties.

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Preface

Introduction

This guide provides detailed information about the Touchpad Exit Controller, a component of the 9450 System. It provides detailed instructions about using the component as well as specific requirements.

Depending on which equipment options your facility has installed, the 9450 System can automatically lock doors and deactivate elevators. In addition, the system sounds an alarm at the Central Server and its network of Client computers when the event occurs. If configured, alarms are also annunciated at remote notification locations (i.e. pagers, walkie-talkie, Quick Look displays…).

WARNING: The 9450 System is designed and intended to work in conjunction with a facility's overall security program, including reasonable operating policies and procedures. The 9450 system, by itself, cannot prevent the mismatch, abduction or elopement of patients.

Intended Audience

This administration guide is intended for users who manage and use the Touchpad Exit Controller (TEC) devices within a facility.

Contact Information

For more information about RF Technologies, Inc. products, go to www.rft.com.

Technical Support

For technical support, contact the Technical Support Team at:

(800) 669-9946, option 5 or (262) 790-1771

tech@rft.com

Customer Care

For questions on part replacement or for ordering new parts, contact the Customer Care Team at:

(800) 669-9946, option 2

customercare@rft.com

Sales

For questions regarding system add-ons, contact your Sales Manager.

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Chapter 1 – General Information

Introduction

This chapter provides general information about the using the Touchpad Exit Controller (TEC). It includes information on the controller, alarms, and operating modes.

Controller

A TEC is a device located near a door that receives data from the Exit Alarm Receivers. If a patient wearing a transmitter is detected in the exit alarm zone and the door is open or opened, the controller issues an alarm.

The TEC is designed and tested to comply with the requirements of NFPA 101 Life Safety Code for controlling access through a door and for providing delayed egress functionality by interfacing with an electromagnetic lock.

LED Status Lights

LED	Function	Description
Solid Red	Power	Indicates that the TEC is operating and is illuminated at all times.
Flashing Red	Alarm	When flashing, the unit is in alarm.
Flashing Yellow	Signal	Indicates that a signal was received from the exit alarm receivers or that a transmitter is within range of the exit alarm zone.
Solid Yellow	Signal	Indicates that the unit is picking up a lot if RFI noise/interference. The system should be looked at.
Green	Status	Indicates that the system is in bypass mode. The LED blinks once when it is reset.

Alarms

When the TEC alarms, the staff alert relay is released, the unit emits an audible alarm, and the Central Server is notified (if connected through the network).

The following conditions can cause the TEC to alarm:

- If the TEC is in **Normal Mode** and a patient transmitter is detected in the exit zone, when the door is opened an alarm is triggered
- If the TEC is in **Perimeter Mode**, when the door is opened an alarm is triggered

- When an **Antenna Survey** is performed
- A receiver becomes saturated with noise or the tamper switch is triggered because the front panel of the TEC is open

Operating Modes

The TEC will operate in the following modes:

- Perimeter
- Wander
- Roam
- Staff Bypass
- Visitor Bypass

Perimeter Mode

When perimeter mode is active, the door is always locked and a code must be used to open the door. If the TEC senses that a door is open, it alarms unless a bypass cycle was initiated before the door was opened.

In perimeter mode, only the red LED is illuminated on the controller.

There are three (4) ways for a TEC to enter perimeter mode:

- Entering configuration setting 9 on the keypad if the TEC is to be used in a standalone configuration
- Through a network global lockdown triggered in the software (usually used in response to a cut band alarm)
- Hard wiring of the applicable terminals which is recommended for 24/7 use
- Timer configured in the software

How do I enable perimeter functionality for a specific door?

1. Go to the door you want to set in perimeter mode
2. On the TEC keypad, enter ****** and wait for the red LED to go out
3. Enter the **Admin Code** (default is *9450*)
4. Enter *09*
5. Select option *1* (enable)
6. System settings is automatically exited and perimeter is now enabled for that door

How do I activate perimeter functionality?

1. Make sure perimeter mode has been enabled on the door
2. Follow the instructions in your *Software Administration Guide* for Door Controllers / Lockdown Schedules
3. Once setup with the software, the door will lock / unlock following the time schedules setup

Wander Mode

When wander mode is used, the door is open unless a transmitter comes within range, then the door locks down.

In wander mode, only the red LED is illuminated on the controller unless a patient wearing a transmitter approaches the exit alarm zone, then the Yellow LED lights on the front panel indicating that a transmitter is in proximity to an exit alarm receiver and the CodeLock relay is activated.

When the patient wearing the transmitter leaves the area, the CodeLock relay returns to idle.

If the TEC senses that a door is open at the same time that a patient wearing a transmitter is detected within range, the TEC goes into alarm unless a bypass cycle is initiated before the door was opened.

NOTE: If the Yellow LED on the front panel is illuminated or flashing when a patient wearing a transmitter is not in the controlled exit alarm zone, an RF noise source may be causing an issue or the exit alarm receivers may require adjustment.

Roam Mode

Roam mode is used to allow long periods of unmonitored operation of a door allowing anyone to pass through the door without an alarm sounding.

Roam mode or manual roam mode is triggered manually by entering the manual roam key sequence on the keypad or automatically by setting a roam time-frame for specific TECs on the Central Server software. This roam period is indefinite and the door will remain unsupervised until terminated manually or the pre-configured time on the Central Server ends.

WARNING: When the roam mode is active, anybody, including a patient wearing a transmitter, can pass through the door without causing an alarm.

How do I enable roam functionality for a specific door?

1. Go to the door you want to open
2. On the TEC keypad, enter ** and wait for the red LED to go out
3. Enter the **Admin Code** (default is *9450*)
4. Enter *26*
5. Select option *1* (enable)
6. System settings is automatically exited and roam is now enabled for that door

How do I manually activate roam functionality at a specific door?

1. Make sure manual roam has been enabled on the door
2. Enter the manual roam key code on the keypad (default code is *2684*)
3. The door will remain in roam mode until entering the same manual roam key code on the keypad

How do I activate roam functionality through the Central Server software?

1. Make sure manual roam has been enabled on the door
2. Follow the instructions in your *Software Administration Guide* for Door Controllers / Schedules
3. Once setup with the software, the door will remain in roam mode until the specified time-frame has elapsed

NOTE: If the Central Server software loses communication with the TEC, any manual roam mode will terminate and will not be allowed to be re-triggered until supervision of the TEC resumes.

How do I change the default manual roam security code?

1. Go to the door you want to change the code for
2. On the TEC keypad, enter ** and wait for the red LED to go out
3. Enter the **Admin Code** (default is *9450*)
4. Enter *27*
5. Enter a new 4-digit numerical code
6. System settings is automatically exited and the new manual roam security code is now active for that door
7. Repeat for all doors as necessary

What do I do if I forgot what my manual roam security code is?

1. Go to the door you need to access
2. On the TEC keypad, enter ** and wait for the red LED to go out
3. Enter the **Admin Code** (default is *9450*)
4. Enter *15*
5. The controller is now reset to the default state (default code is *2684*)

   NOTE: This will reset ALL your settings to the default state so you will need to reconfigure for specific functions like bypass, manual reset, etc...
6. On the TEC keypad, enter ** and wait for the red LED to go out
7. Enter the **Admin Code** (default is *9450*)
8. Enter *27*
9. Enter a new 4-digit numerical code
10. System settings is automatically exited and the new manual roam security code is now active for that door
11. Repeat for all doors as necessary

Bypass Mode

Staff Bypass

Staff bypass mode enables a staff member to open the door by either entering a code or swiping their access card, without causing an alarm even when a patient wearing a transmitter is in the exit alarm zone.

After a code is entered, the staff bypass mode enables the door to remain unlocked for a preset period of time to allow staff to pass through a secured door without it alarming.

Visitor Bypass

Visitor bypass mode allows people who are not wearing transmitters to enter or exit through a secured door by entering a code. This option will only work if a transmitter is not within range.

When a patient wearing a transmitter attempts to exit through the door simultaneously as a code being entered, an alarm will sound.

NOTE: During this time, anyone can pass through the door, including patients wearing transmitters without an alarm.

How do I enable staff only bypass functionality at a specific door?

1. Go to the door you want staff bypass ability for
2. On the TEC keypad, enter ** and wait for the red LED to go out
3. Enter the **Admin Code** (default is *9450*)
4. Enter *01*
5. Select option *1* (staff bypass mode)
6. System settings is automatically exited and bypass for staff only is now enabled for that door (visitor bypass code will not work)

How do I enable visitor only bypass functionality at a specific door?

1. Go to the door you want visitor bypass ability for
2. On the TEC keypad, enter ** and wait for the red LED to go out
3. Enter the **Admin Code** (default is *9450*)
4. Enter *01*
5. Select option *2* (visitor bypass mode)
6. System settings is automatically exited and bypass for visitors only is now enabled for that door (staff bypass code will not work)

How do I enable staff and visitor bypass functionality at a specific door?

1. Go to the door you want bypass ability for
2. On the TEC keypad, enter ** and wait for the red LED to go out
3. Enter the **Admin Code** (default is *9450*)
4. Enter *01*
5. Select option *3* (staff and visitor bypass mode)
6. System settings is automatically exited and bypass for staff and visitors is now enabled for that door

How do I enable staff only bypass functionality at a specific door using hardware (external keypad) attached to the TEC?

1. Go to the door you want staff bypass ability for
2. On the TEC keypad, enter ****** and wait for the red LED to go out
3. Enter the **Admin Code** (default is *9450*)
4. Enter *24*
5. Select option *0* (staff bypass mode)
6. System settings is automatically exited and bypass for staff only is now enabled for that door (visitor bypass code will not work)

How do I manually activate bypass functionality at a specific door?

1. Make sure bypass functionality has been enabled on the door
2. Enter the bypass key code on the keypad (default code is *1379*) or swipe your access card
3. Green LED status light indicates bypass mode is active
4. The door will remain unlocked for the pre-configured period of time (default is *20 seconds*)

Chapter 2 – Configuration

Introduction

This chapter provides system settings for the Touchpad Exit Controllers and the steps to take to configure those settings.

Programming Mode

To access system settings in programming mode:

1. Enter **
   - The green LED light flashes and the red LED light goes out. This indicates that you are in programming mode.
2. Enter the four digit **admin code** (default admin code is 9450)
   - The green LED light flashes
3. Enter one of the following **system settings (key #) and options** (see below)

NOTE: To clear the keypad input at any time and exit programming mode without making changes, press #.

System Setting	Key #	Options		Default Setting
Active ID Range	14	0	Non-ID	1 – Tags 1 to 240 **NOTE**: This option is only available for models T80 and T100
		1	Tags 1 to 240	
		2	Tags 1 to 127	
		3	Tags 1 to 63	
		4	Tags 1 to 31	
Admin Code Change	06	Enter a new 4-digit numerical code		Default code – 9450 **NOTE:** RFT does not recommend changing the admin code as this can make technical support difficult and may result in resetting the TEC back to system defaults
Alarm Cadence	11	1	Constant Tone On	1 – Constant Tone One
		2	166ms On 166ms Off	
		3	500ms On 500ms Off	
Alarm Reset followed by Bypass Cycle	03	0	Normal reset	0 – Normal reset
		1	Reset followed by bypass	

Antenna Jammed Notification	21	0	0 second delay	0 – 0 second delay **NOTE**: Delay = time from jam detect to notification by audible alarm and staff alert relay **NOTE**: This option is not available for model T30
		1	1 second delay	
		2	2 second delay	
Antenna / Noise Window	12	1	Optimized for all 262Khz systems	1 – 262Khz system **NOTE**: This option is not available for model T30
		2	66Khz low range – high noise	
		3	66Khz intermediate range/noise	
		4	66Khz best range – low noise	
Antenna Survey	13	Press 1 to perform the antenna survey		None **NOTE**: Antenna survey enables you to trigger a survey of the current state of the antennas connected to a control unit **NOTE**: This option is not available for model T30
Anti-Tailgate	04	0	Disable	1 – Enable
		1	Enable	
Bypass Time Interval	02	*	1 second	2 – 20 seconds
		1	10 seconds	
		2	20 seconds	
		3	30 seconds	
		4	40 seconds	
		5	50 seconds	
		6	60 seconds	
		7	70 seconds	
		8	80 seconds	
		9	90 seconds	
		0	120 seconds	
CodeLock Hold Times	08	1	5 seconds	1 – 5 seconds **NOTE**: This option is not available for model T30
		2	10 seconds	
		3	15 seconds	
		4	20 seconds	
Delayed Egress Exit Time Delay	18	1	15 seconds	1 – 15 seconds
		2	30 seconds	

Delayed Egress Nuisance Time Delay	17	0	0 seconds	1 – 1 second
		1	1 second	
		2	2 seconds	
		3	3 seconds	
Delayed Egress Release Alarm	20	0	Disable	1 – Enable
		1	Enable	
Delayed Egress Release Alarm Mode	29	0	Must open and close door in delayed egress alarm prior to resetting	1 – May reset door in delayed egress alarm without opening
		1	May reset door in delayed egress alarm without opening	
Delayed Egress Wait-Alarm	19	0	Disable	1 – Enable
		1	Enable	
Diagnostic Mode	99	Press 1 to perform the test operation		None
(select) Hardware Bypass Mode	24	0	Staff Bypass Mode	1 – Visitor Bypass Mode
		1	Visitor Bypass Mode	
Keypad Bypass Ability	01	0	Staff and Visitor Bypass Modes disabled	0 – Staff and Visitor Bypass Modes disabled
		1	Staff Bypass Mode enabled Visitor Bypass Mode disabled	
		2	Visitor Bypass Mode enabled Staff Bypass Mode disabled	
		3	Staff and Visitor Bypass Modes enabled	
Manual Roam Mode	26	0	Disable	0 – Disable **NOTE**: Must be attached to a computer
		1	Enable	
Manual Roam Code Change	27	Enter a new 4-digit numerical code		Default Code – 2684 **NOTE:** # and * characters are not valid Code must be different than the Administration, Security, Staff Bypass, and Visitor Bypass codes
Noise Tolerance – Antenna Jamming Level	16	0	Low Noise Tolerance	1 – High noise tolerance **NOTE**: This option is not available for model T30
		1	High Noise Tolerance	

Non-Delayed Egress Alarm Door Lock Mode	30	0	CodeLock deactivated during elopement alarm	1 – CodeLock activated during elopement alarm
		1	CodeLock activated during elopement alarm	
Perimeter Alarm	09	0	Disable	0 – Disable **NOTE**: This option is not available for model T30
		1	Enable	
Reed Switch Sense	07	0	Normally Open (NO)	1 – Normally Closed (NC)
		1	Normally Closed (NC)	
Return to Defaults	15	Press 1 to return to default system settings		None
Security Code Change	05	Enter a new 4-digit numerical code		Default code – 1379 **NOTE**: This only changes the security code – see setting 25 for Staff Bypass code changes
Staff Bypass Code Change	25	Enter a new 4-digit numerical code		Default Code – 1379 **NOTE:** # and * characters are not valid
Test Mode	88	Press 1 to enter test mode Green LED – blinks with each computer poll Yellow LED – blinks with RF activity Red LED – blinks with each successful RF tag decode Press # to exit test mode		None **NOTE**: The exit alarm controller will time out of test mode by itself after 5 minutes
Visitor Bypass Code Change	22	Enter a new 4-digit numerical code		Default Code – 2580
Visitor Bypass During Lockdown	23	0	Disable	1 – Enable **NOTE**: This option is not available for model T30
		1	Enable	
Volume Level	10	0	65 dBA (lowest)	5 – 90 dBA **NOTE:** Setting volume levels below the default does not comply with UL standards
		1	70 dBA	
		2	75 dBA	
		3	80 dBA	
		4	85 dBA	
		5	90 dBA (highest)	

Chapter 3 – Troubleshooting

Troubleshooting

This chapter provides troubleshooting steps for the Touchpad Exit Controllers. If problems cannot be resolved or persist, contact RFT technical support, at: (800) 669-9946 or (262) 790-1771.

Symptom	Problem	Resolution
Alarm will not reset	Cannot reset	Default the TEC programming
	Door not recognized as closed	Replace reed switch
	Wrong code	Reset code
Configuration change needed/required		Change configuration per installation manual
Device fault comm failure	No power to device	Troubleshoot power issue
	Software issue	Reset device and restart the server
	Bad device	Replace device
	Wiring failure	Repair wiring
Device fault frequency interference	Gain too high	Adjust gain
	Radiation frequency interference (RFI) present	Remove RFI source
Door not locking	Door can be exited without code being entered	CodeLock terminals are wired incorrectly
		Power not wired correctly to CodeLock
Green light stays on	Bypass engaged	Wait 120 seconds
	Controller stuck	Return to TEC default settings
	TEC in roam mode	Take out of roam
	External button stuck	Disconnect external reset/bypass
	Bad keypad	Replace keypad
No power indication No red light	System not working	Replace power source or keypad
Not alarming on transmitter read	Door in bypass	Put TEC into normal mode
	Door not open	Open door and retest
	Gain too low	Adjust gain
	Reed switch not functioning	Replace reed switch
	RFI	Troubleshoot RFI
	Transmitter not transmitting	Call Technical Support

	Wrong transmitter type	Use correct transmitter
Not unlocking / no status light	Bad external bypass device	Replace external bypass device
	Bypass not enabled	Enable bypass
	Keypad (numbers) bad	Replace keypad
	Wrong code	Enter correct code
	Code not programed	Program code per installation manual
Red light continues to blink	Personality lost	Call Technical Support
Cannot enter from other side of door	Slave keypad or bypass push button not opening door	Check to see that staff hardware bypass mode is enabled
		Replace keypad or push button
Will not accept codes	Device locked up	Default TEC programming per installation manual
	System cannot be reset or bypassed	Reprogram code
		Enable staff keypad bypass ability
		Remove transmitter from area
Yellow light	Antenna disconnected improperly	Reconnect antenna
	Gain too high	Adjust gain
	RFI present	Call Technical Support
Keypad not working properly	Keypad not accepting inputs	Push a paperclip into the small hole located at the bottom of the keypad, this will activate the reset button.

Maintenance

SYSTEM MAINTENANCE AND TESTING—It is the responsibility of the facility to establish and facilitate a regular maintenance schedule for your system, as outlined in the applicable system guides. This includes regular inspection, testing, and cleaning. RF Technologies, Inc. recommends monthly maintenance and testing of your system and an annual inspection and re-certification performed by RF Technologies. It is also recommended that your facility keep records of maintenance and test completions.

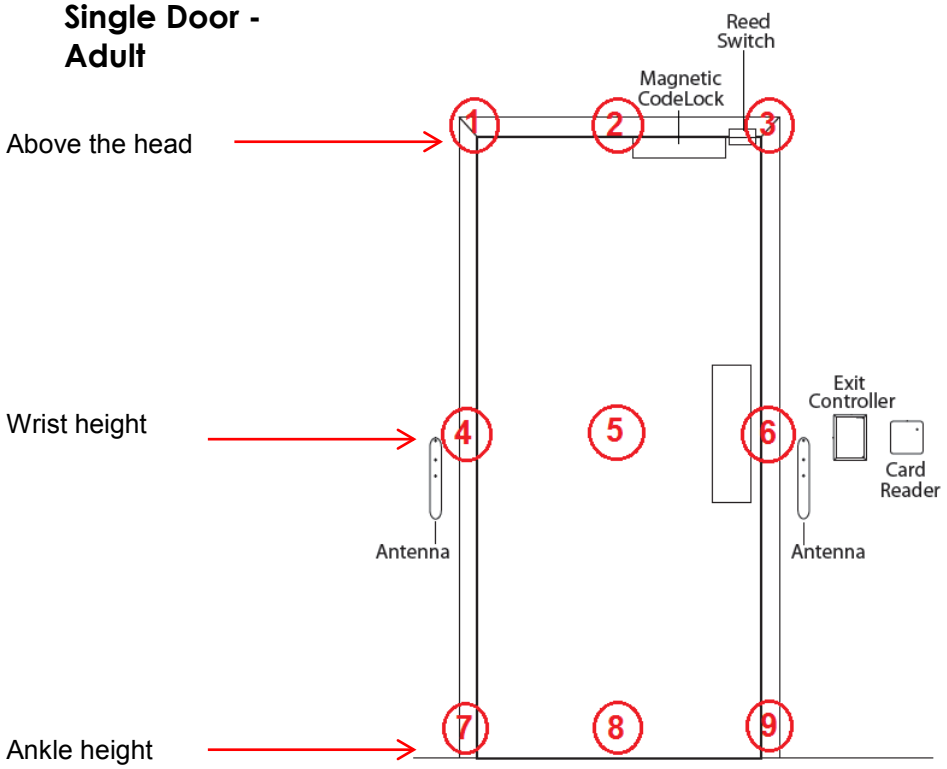
Failure to provide regular maintenance and testing of these products may result in equipment and/or system failure.

9-Point Test

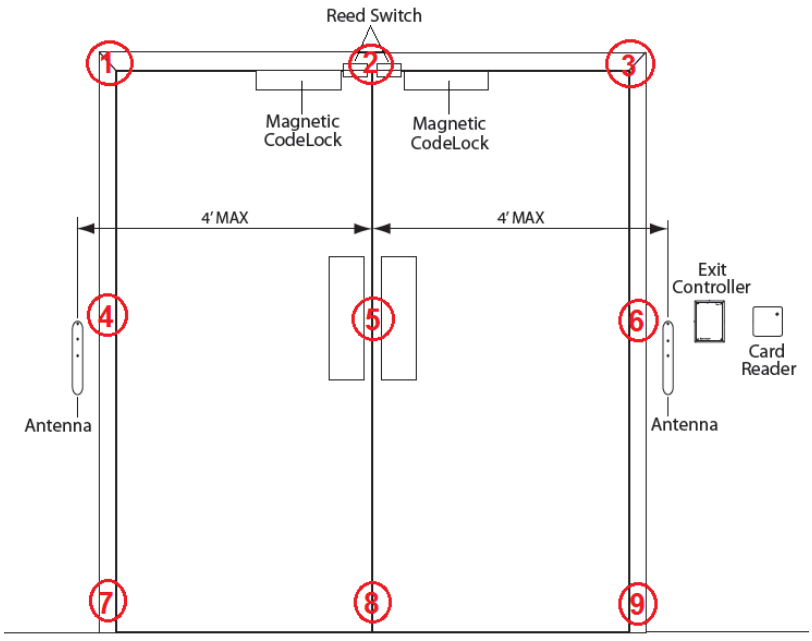
To perform a 9-point test:

1. Activate a test transmitter
2. Stand 4’ away from the door
3. Following the 9-point check test cycle, hold the transmitter up to the first position
4. Both receivers should pick up the transmitter but you must have at least (1) receiver picking up the transmitter and it be indicated on the exit controller
5. Remove the transmitter from the alarm area
6. Reset the alarm on the exit controller
7. Repeat until all 9 check points have registered successfully
8. When done, return the volume level to the customer’s settings if they were changed during testing
9. Repeat process for all doors

Single Door - Adult

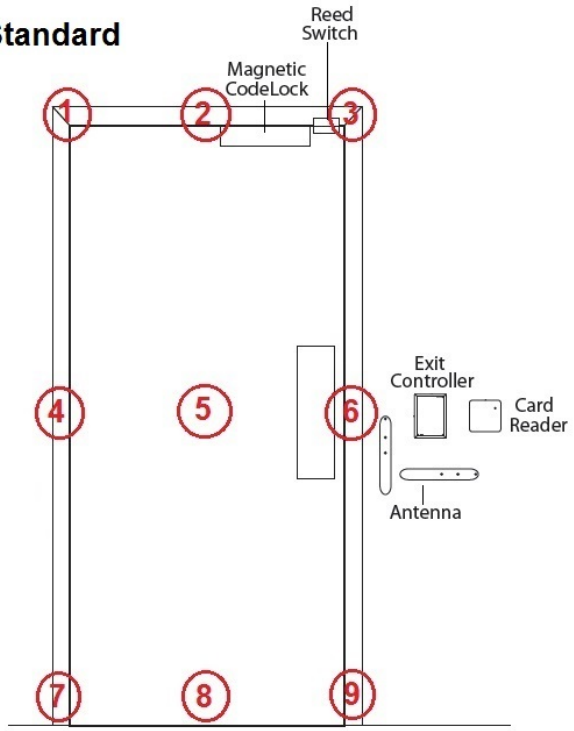


Double Door - Adult

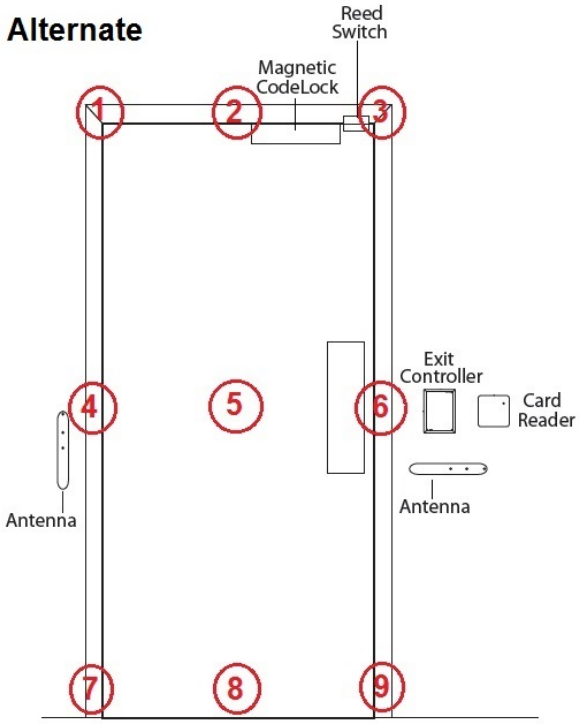


Single Door – Infant

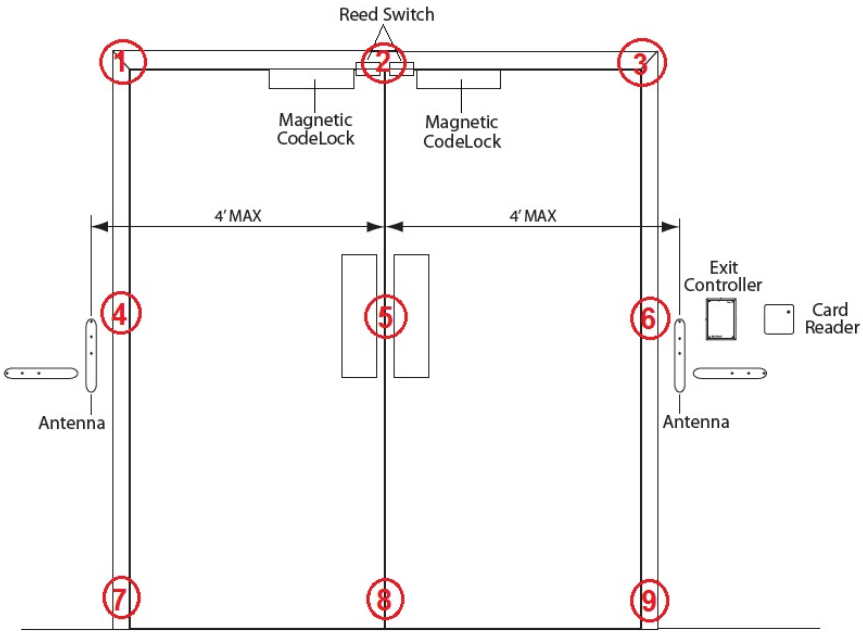
Standard



Alternate



Double Door - Infant



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Revision History

Revision	Change
A	Release
B	**Updated**: Document to latest format **Updated**: Document to be a customer administration guide, not a service guide **Updated:** Removed references to ICC **Added:** Section for maintenance

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RFTWI rftsafety RF Technologies

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