impro®

MODEL NUMBER: IXP904-1-0-GB-XX
IXP905-1-0-GB-XX
IXP906-1-0-GB-XX

IXP110

ImproX IXP110 System
USER MANUAL

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CONVENTIONS

Definitions

Note - draws your attention to additional information on the subject being dealt with.

Caution - draws your attention to a specific requirement that you must meet to avoid damage to the product, test equipment or tools.

WARNING - DRAWS YOUR ATTENTION TO A VITAL, MANDATORY REQUIREMENT THAT YOU MUST MEET TO AVOID LOSS OF HUMAN LIFE OR INJURY, AS WELL AS DAMAGE TO THE PRODUCT, TEST EQUIPMENT OR TOOLS.

Access Control Specific Terminology

Anti-passback (APB) Override	A Tag is not subject to Anti-passback (APB) restrictions.
Anti-passback (APB) Relaxed.....	Successive Tag entry is NOT allowed.
Anti-passback (APB) Strict.....	Successive Tag access in the same direction is prevented.
APB	Anti-passback.
Blacklisted Tag	A Tag which is prevented from being read by the System after successive incorrect PIN-code entries.
PAC-code	Personal Access Code.
Present a Tag	Pass or hold a Tag close to the Front Cover of the Antenna Reader.
Pulse.....	A brief transition from rest state to the alternate state and back to the rest state. For example, High to Low to High or Low to High to Low.
Time Pattern	Entry control periods.
Tag Presentation Timeout Period .	The period within which a Tag must be presented after being prompted by the System.
Toggle.....	A transition from one state to the alternate state. For example, High to Low or Low to High.
Transaction.....	Record of a Tag presentation or other event.
Transaction Buffer	Storage of Transactions in the Controller
Valid Tag.....	A Tag entered into the Systems database, NOT black-listed.

INTRODUCTION AND LEADING PARTICULARS

Introduction

The ImproX IXP110 Controller is a fully featured Controller that forms part of the IXP110 System. The IXP110 Systems applications include high security access control for ***access of up to 900 users through a single door***.

Instead of using a mechanical key, the door is opened when a valid Tag is presented to the Antenna Reader. Advanced security features prevent the door latch being opened even if the wiring is tampered with, or if the Antenna Reader is substituted with another Antenna Reader.

For added security, the System can be programmed so that, in addition to presenting a Tag, a 4-digit Personal Identification Number (PIN-code) is also required to be entered via a Keypad Antenna Reader before access is allowed. As a cost effective option, provided the System is programmed to accept it, a 5-digit Personal Access Code (PAC-code) can be used in place of a Tag.

Three Tagholder levels are provided for in the System: User (entry during specified time periods only), Supervisor (entry at all times) and Administrator (entry at all times, and may program the System).

The IXP110 System provides a variety of features, while keeping the system easy to use. Basic features are available using the Keypad Antenna Reader; advanced features are available by means of the PC Software program.

Models

The IXP110 Controller is available in three models:

- IXP904-1-0-GB-XX: IXP110, Aluminium Cabinet, RS232 connection to the Host PC.
- IXP905-1-0-GB-XX: IXP110, Aluminium Cabinet, USB connection to the Host PC (USB cable included).
- IXP906-1-0-GB-XX: IXP110, Aluminium Cabinet, EtherNet connection to the Host PC.

Antenna Readers

The following Antenna Readers are compatible with the IXP110 Controller and are suitable for most installations:

- ImproX (MMA) Mullion Antenna Reader.
- ImproX (MA) Micro Antenna Reader.
- ImproX (MHA) Metal Antenna Reader.
- ImproX (KHA) Metal Keypad Antenna Reader.
- ImproX (KMA) Mullion Keypad Antenna Reader.
- ImproX (RA) Rod Antenna Reader.
- ImproX (KA) Keypad Antenna Reader.
- ImproX (DPA) Door Entry Panel Antenna Reader.
- ImproX (CA) Conduit Antenna Reader.

System Overview

The block diagram (Figure 1) details the parts of the IXP110 System, and their interconnections.

Items a, b and c are Impro-supplied, the remaining items are user-supplied.

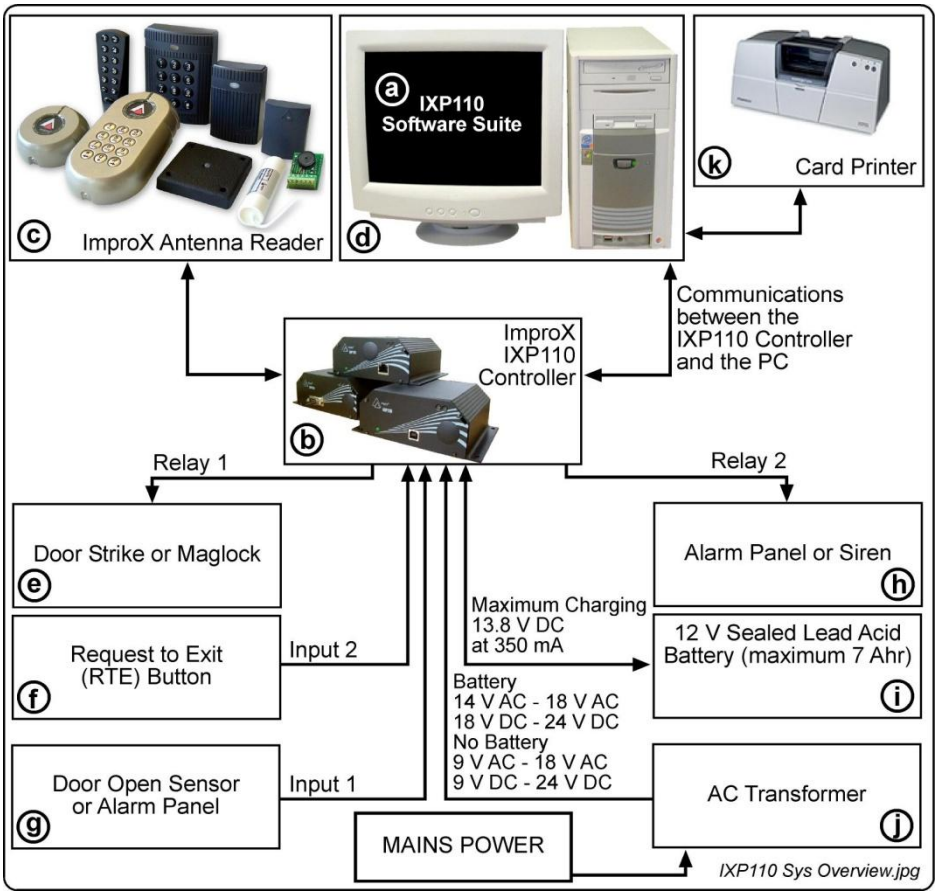

Figure 1: System Block Diagram

DEFAULT SYSTEM PARAMETERS

AC Power Fail Alarm Period	Off.
Alarm Disarming	Administrator and Supervisor Tagholders.
Black-listed Time-out Period	0030 (0 hours, 30 minutes).
Buzzer Volume	Level 3.
Door Left Open Period	0 seconds or not active.
Door Not Open Period	0 seconds or not active.
Key Entry Time	60 seconds.
Mode of Operation	Intrusion Mode.
No Key Entry Timeout period	120 seconds (needs Tag presentation to reactivate).
Present Tag Timeout Period	10 seconds.
Reason Code Entry	Disabled.
Reason Code Length	2 digits.
Relay 1 (Latch Drive Time)	30 (3 seconds).
Relay 2 (Alarm Drive Time)	300 (30 seconds).
Tagholder Level	0 (User).
Time and Date	01 January 2005.
Time Pattern	Access allowed 24 hours per day, 7 days per week. Start time 00H00, duration 24H00 for every day of the week.

Functions

The following are different functions offered using the Keypad Antenna Reader or using the PC.

Any changes that you make to the System are visually and aurally indicated via the Antenna Readers LED and Buzzer (except for the ImproX MMA).

	Keypad Antenna Reader	PC
Add, Edit or Delete Tags	Yes	Yes
Advanced System Parameters	No	Yes
Basic System Parameters	Yes	Yes
Keep Long-term Records of Events	No	Yes
Keep Short-term Records of Last 950 Events	Yes	Yes

Table 1: System Functions

SYSTEM OPERATION

Modes of Operation

The IXP110 provides four Modes of Operation, of these, two are Hardware Modes and two are System Modes.

Hardware Modes

Intrusion Mode

Used when there is no installed alarm panel and a simple intrusion alarm is required.

In this Mode the Alarm Relay activates a siren when the Door Open Sensor (DOS) is triggered and the unit is armed. Arming is only permitted in Normal Operation, if the Door Open Sensor is in the correct state. Adding extra Contact Sensors in series or parallel to the Door Open Sensor (DOS)/Alarm Input extends this function beyond the access door to other doors.

Alarm Mode

Used when there is an installed alarm panel installed in your System.

In this Mode the Door Open Sensor (DOS) Input senses the “Ready” state of the Alarm Panel, as the alarm cannot be armed unless it is “Ready”.

System Modes

Normal Mode

When in Normal Mode access is allowed when the Tagholder presents a valid Tag and, if required, enters a PIN-code and/or Reason Code.

Table 2 shows the LED and Buzzer states that occur when a Tag is presented. The LED patterns are indicated with an 'R', 'G' or '.' to indicate Red, Green or off. Each of the eight positions represents a time period of 0.1 seconds. The pattern shown is repeated continuously.

	LED State	
LED Standby Mode	`........`	Unless a Tag is presented
Run Mode	`RRRRRRRG`	Alarm Ready, Mains Ok
	`RRRRG.G.`	Alarm Ready, Mains Failed
	`RRRRRRR.`	Alarm Not Ready, Mains Ok
	`RRRRR.R.`	Alarm Not Ready, Mains Failed
Armed State Mode	`RRRRRRRR`	Mains Ok
	`R.......`	Mains Failed
Alarm Triggered Mode	`R.R.R.R.`	
Relay On in Toggle Mode	`GGGGGGGG`	Mains Ok
	`GGGGG.G.`	Main Failed

Table 2: IXP110 LED Steady State Patterns

Programming Mode

Ensure that you give at least one Tag Administrator level, in order to restrict access to the Programming Mode.

Failure to do so will result in all Tags being able to program the System.

Enter Programming Mode under control of the “Administrator” Tagholder.

Programming Mode allows management of Tag Tables, Settings and Operational Parameters.

Access control is not possible while in Programming Mode.

Operation Flow Diagrams

Programming Mode

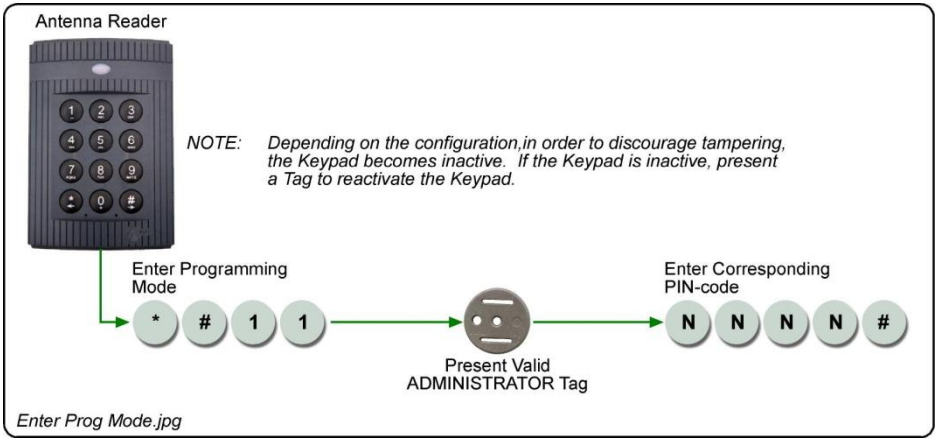

Figure 2: Enter Programming Mode

If no Administrator Tag is loaded, see Page 10.

Tag Level Permissions

	Tag Level		
	Administrator	**Supervisor**	**User**
Allowed Anytime	Yes	Yes	Access Time Pattern
Programming Allowed	Yes	No	No
Arming Allowed	Yes	Yes	Configurable
Disarming Allowed	Yes	Yes	No
Reason Code	Configurable	Configurable	Configurable
PIN-code	Required	Required	Configurable

Table 3: Tag Levels

Load First ADMINISTRATOR Tag

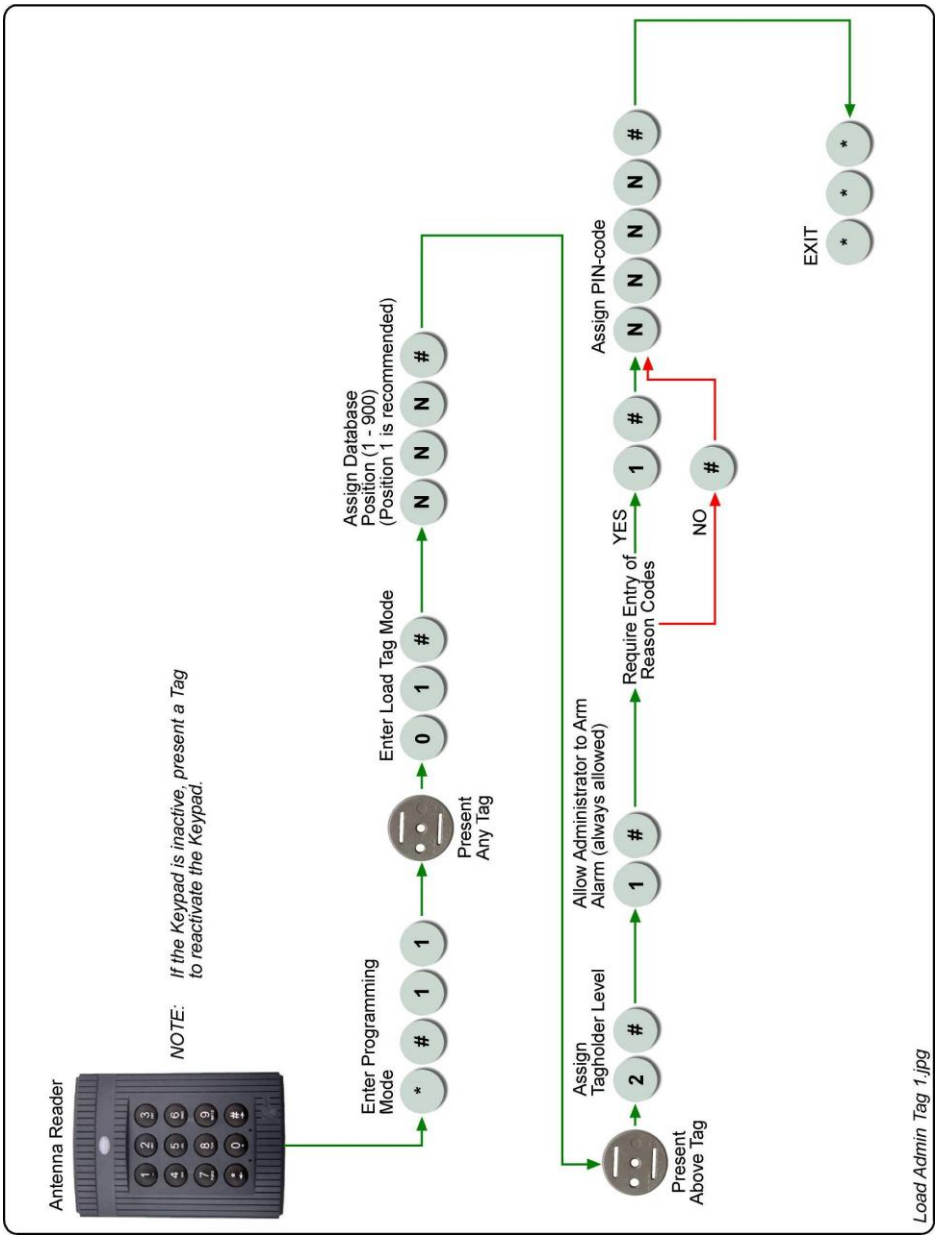

Figure 3: Load First ADMINISTRATOR Tag

Load User Tagholders

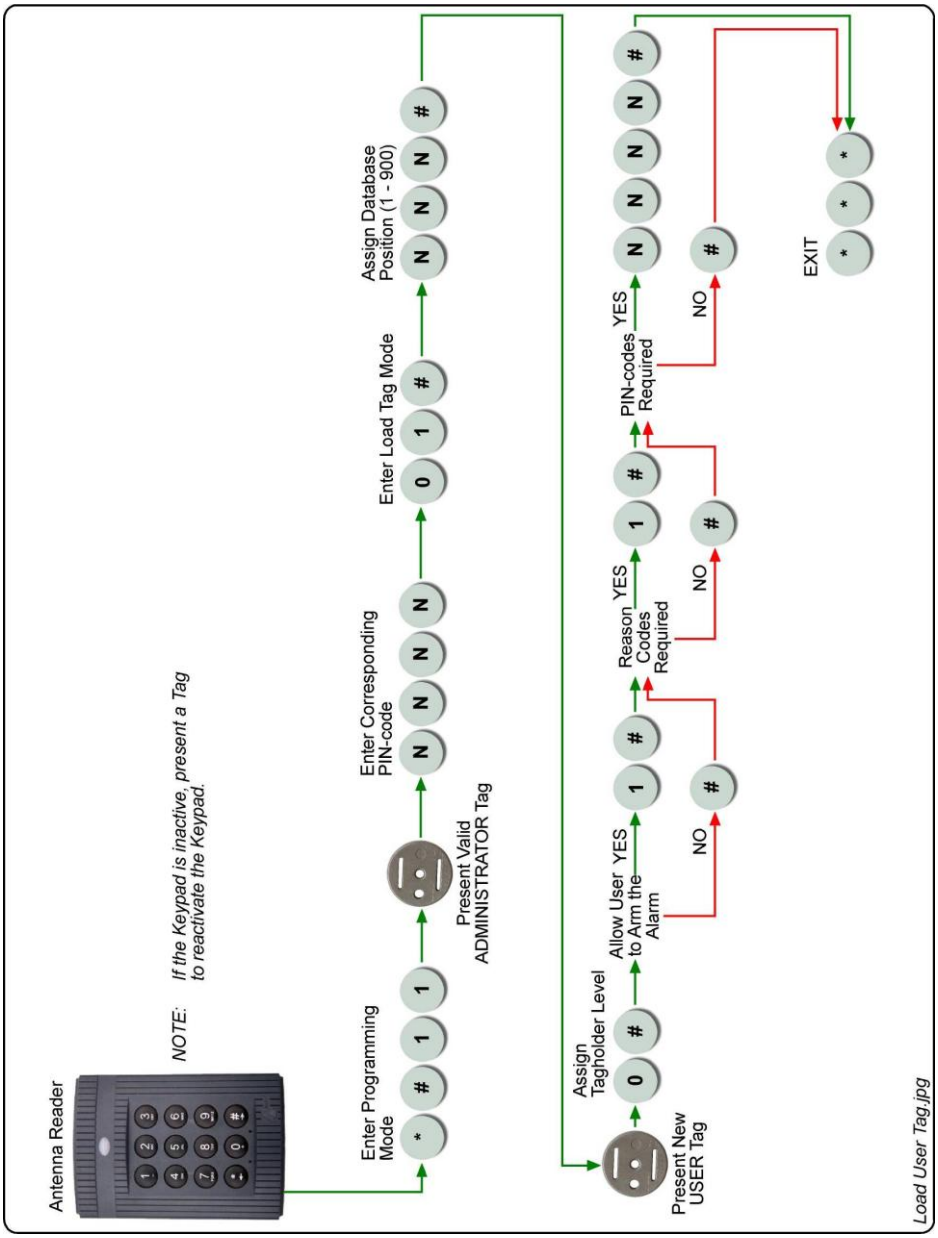

Figure 4: Load User Tagholders

Load Supervisor Tagholders

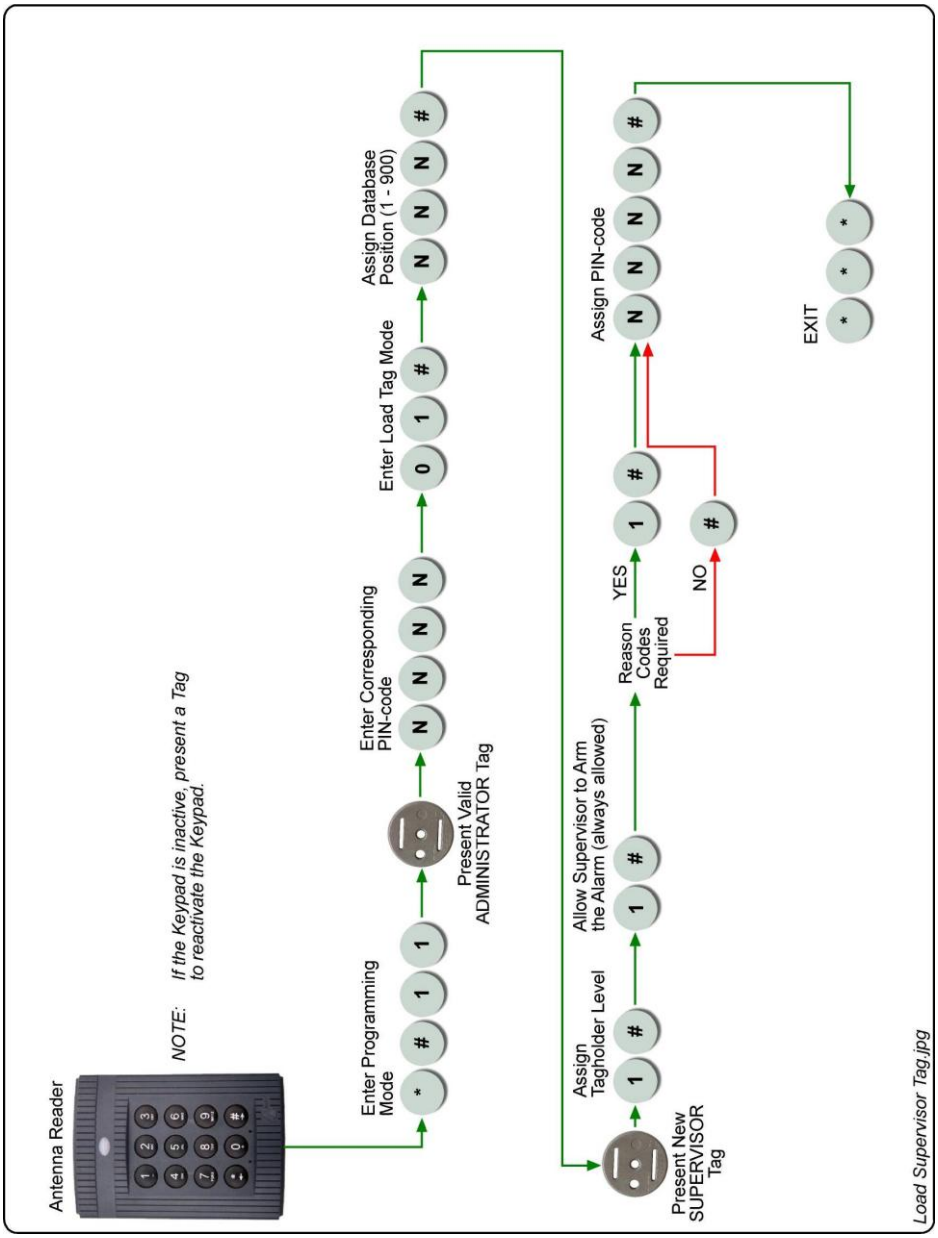

Figure 5: Load Supervisor Tagholders

Add PAC-code for an Individual

If a PAC-code is entered incorrectly three times in succession (that is a non-valid PAC-code), the Antenna Reader is disabled for 20s (non-configurable setting).

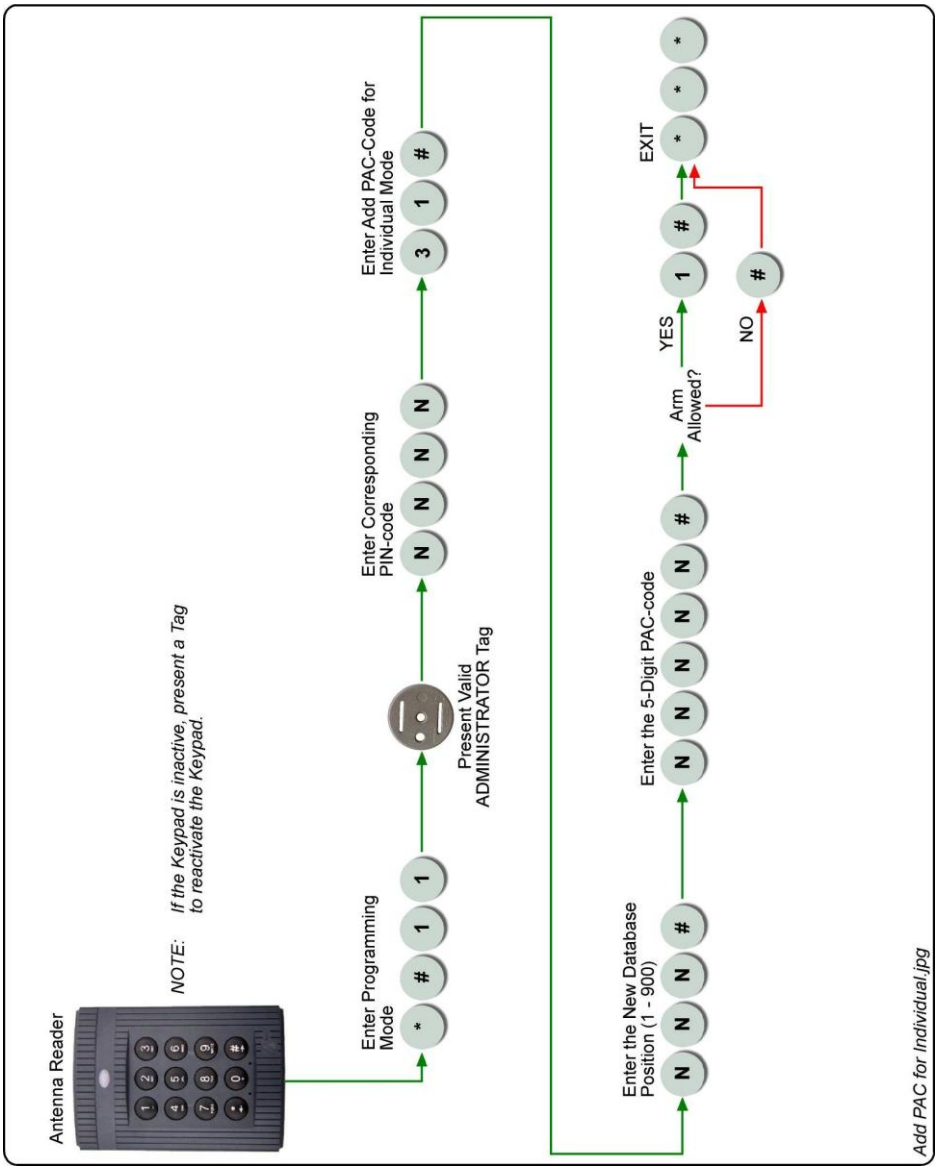

Figure 6: Add PAC-code for an Individual

Bulk Tag Entry

If position 1 is empty, then the first Tag presented becomes the Administrator Tag.

A PIN-code of 9999 is automatically assigned to the Administrator Tag.

User Tags are added in subsequent free positions.

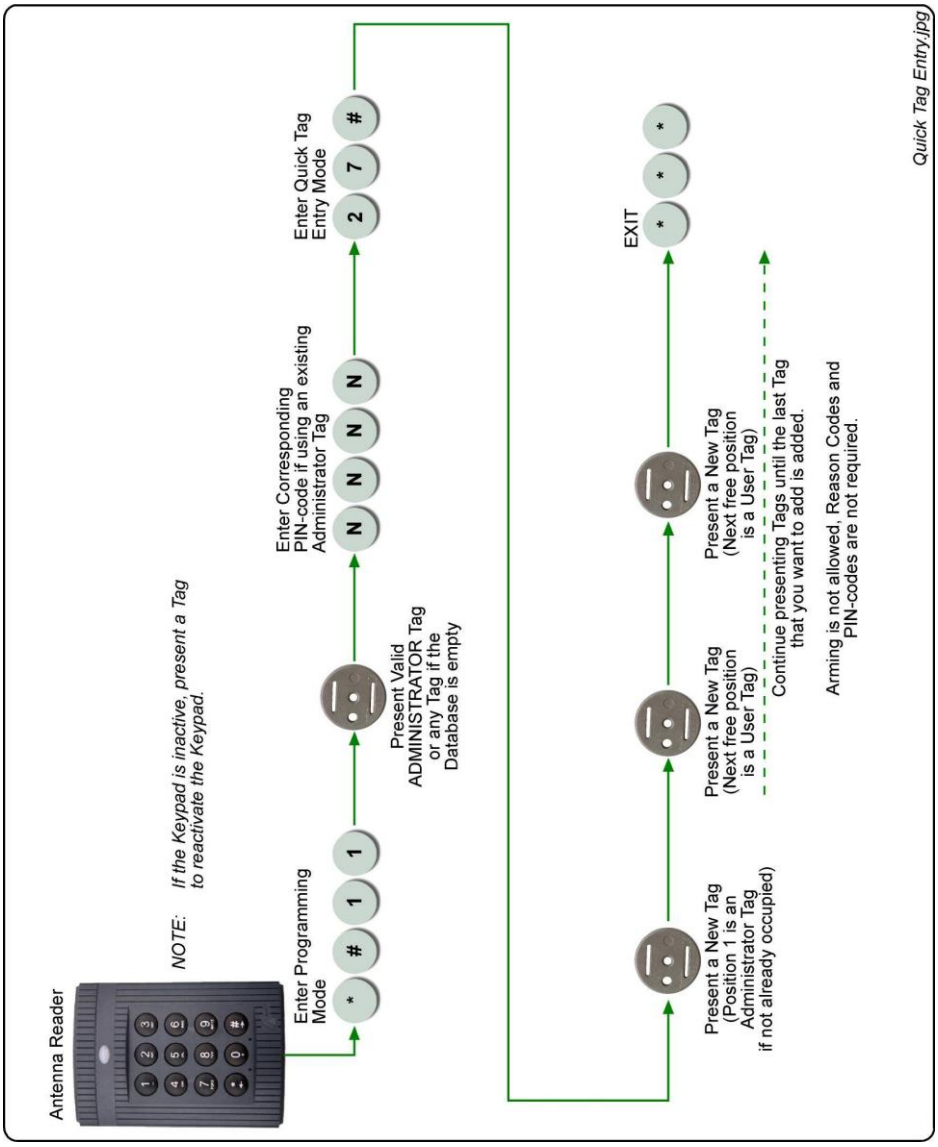

Figure 7: Bulk Tag Entry

Bulk PAC-code Entry

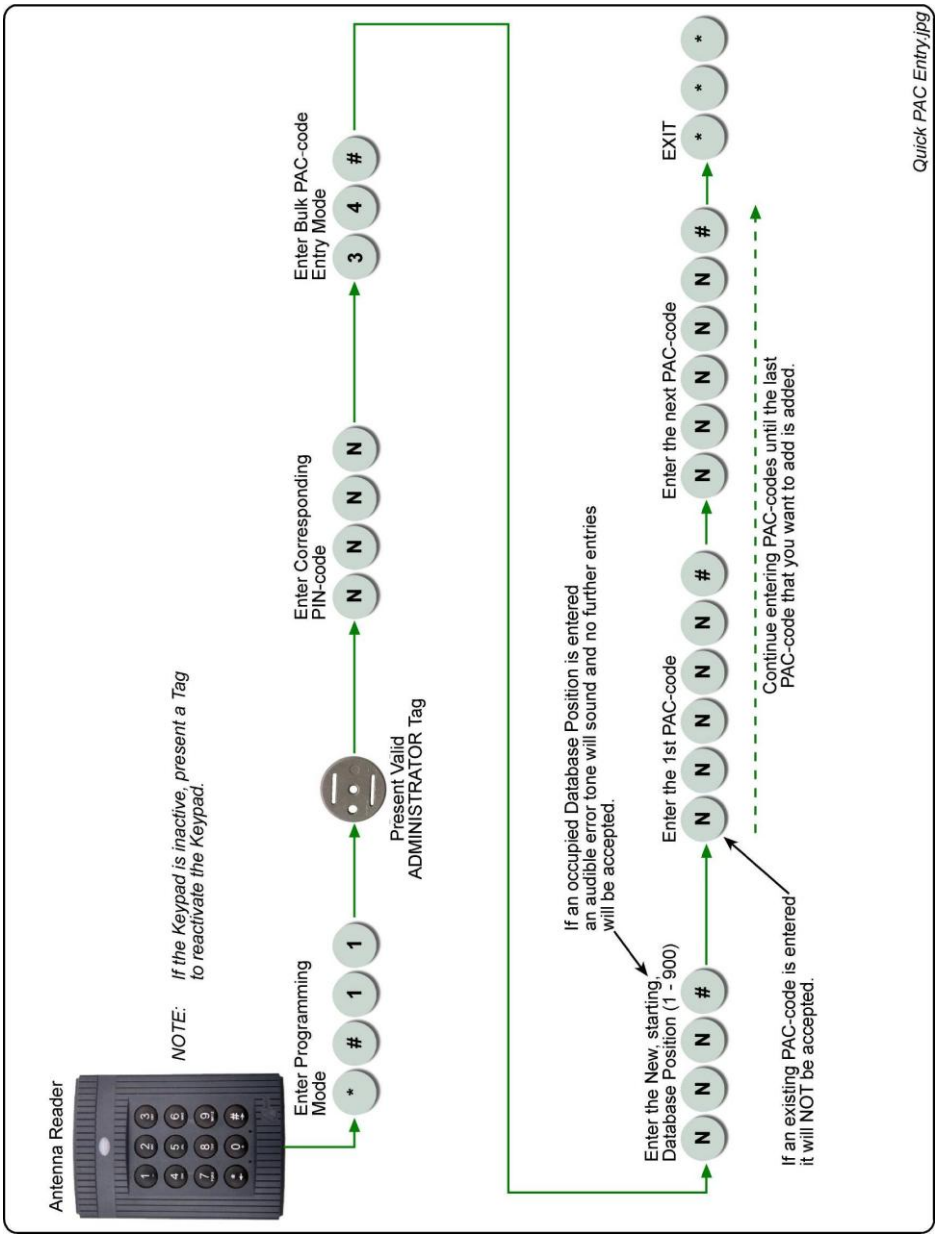

Figure 8: Bulk PAC-code Entry

Editing Tagholders

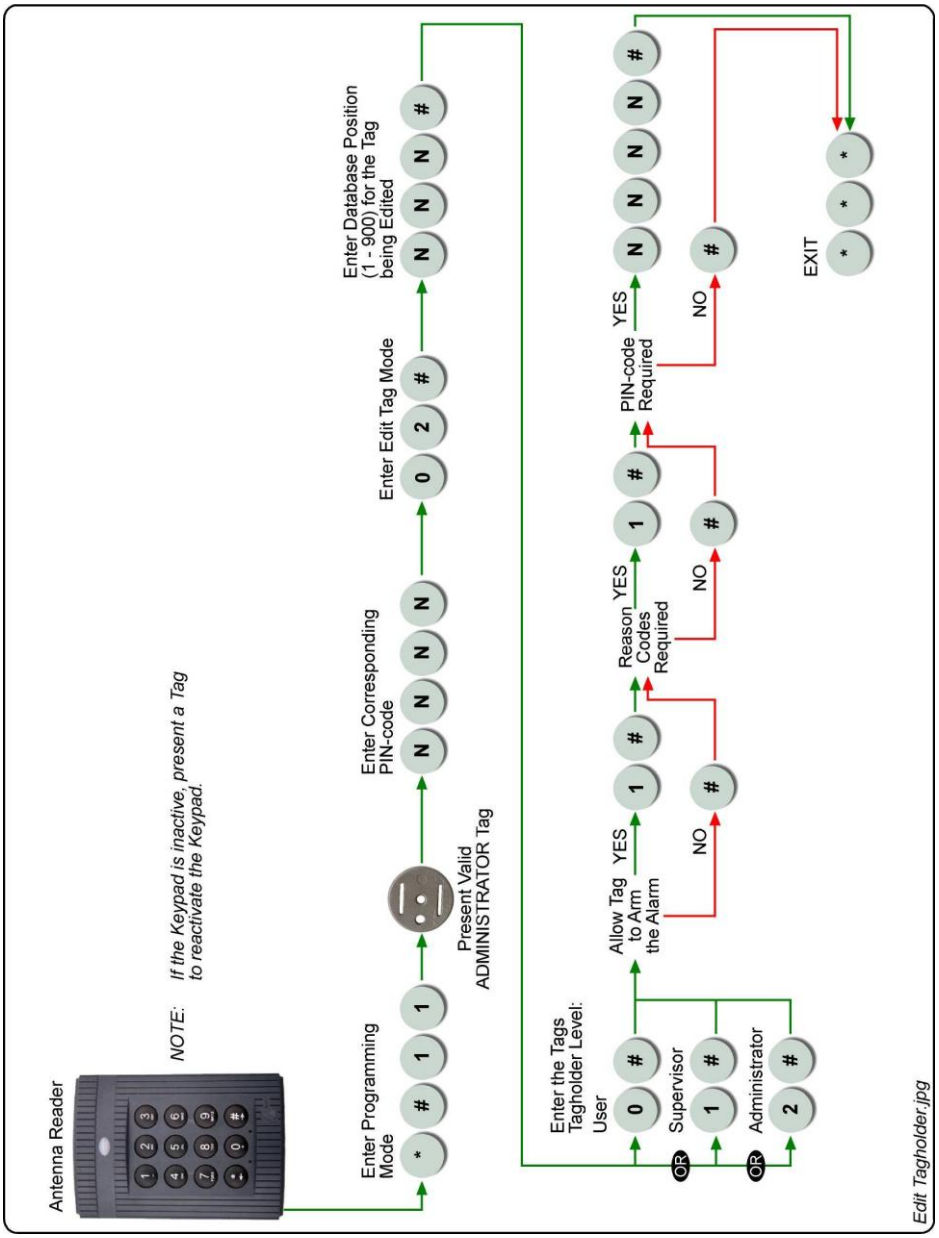

Figure 9: Edit Tagholders

Replacing Tags (No Old Tag Available)

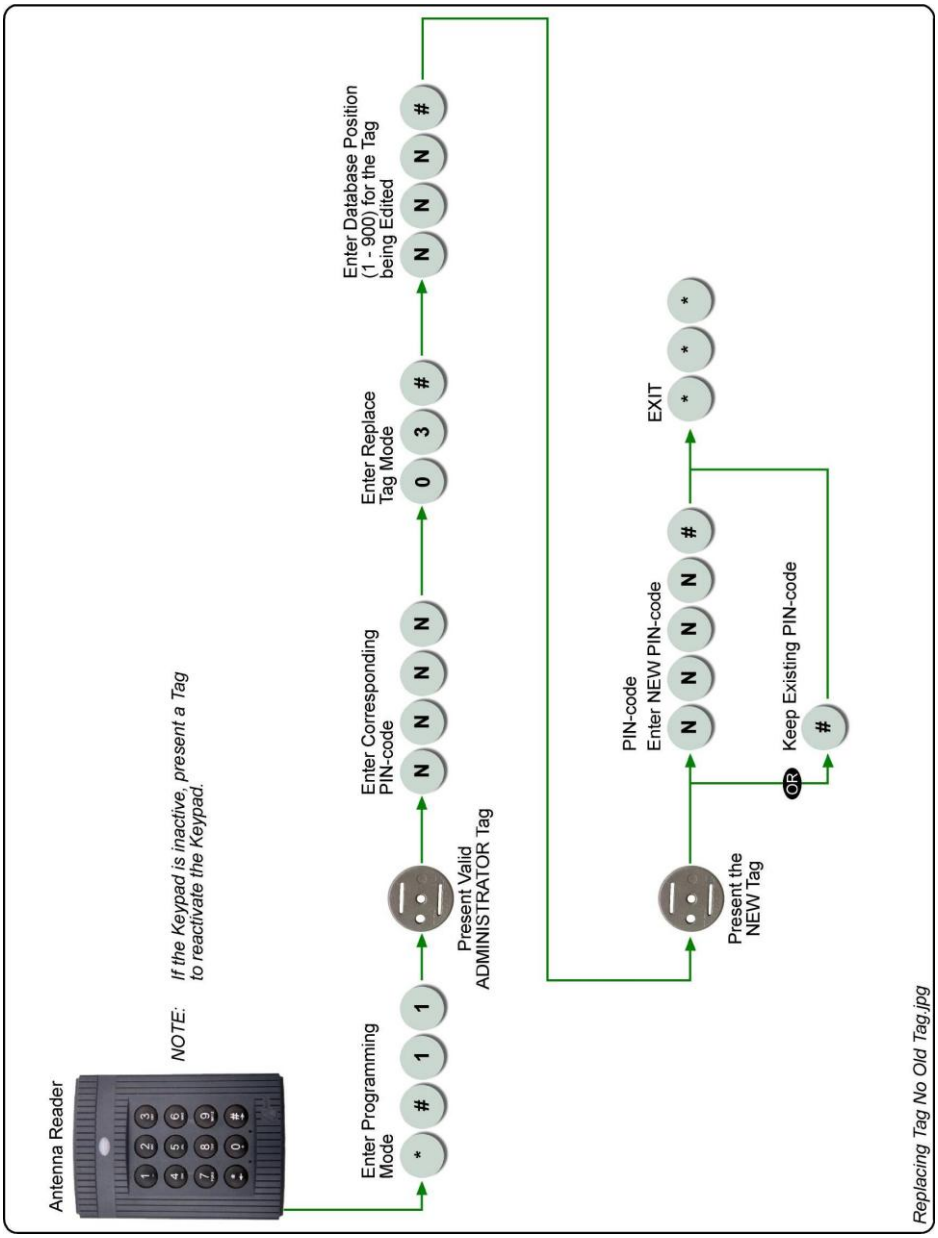

Figure 10: Replacing Tags (No Old Tag Available)

Replacing Tags (Old Tag Available)

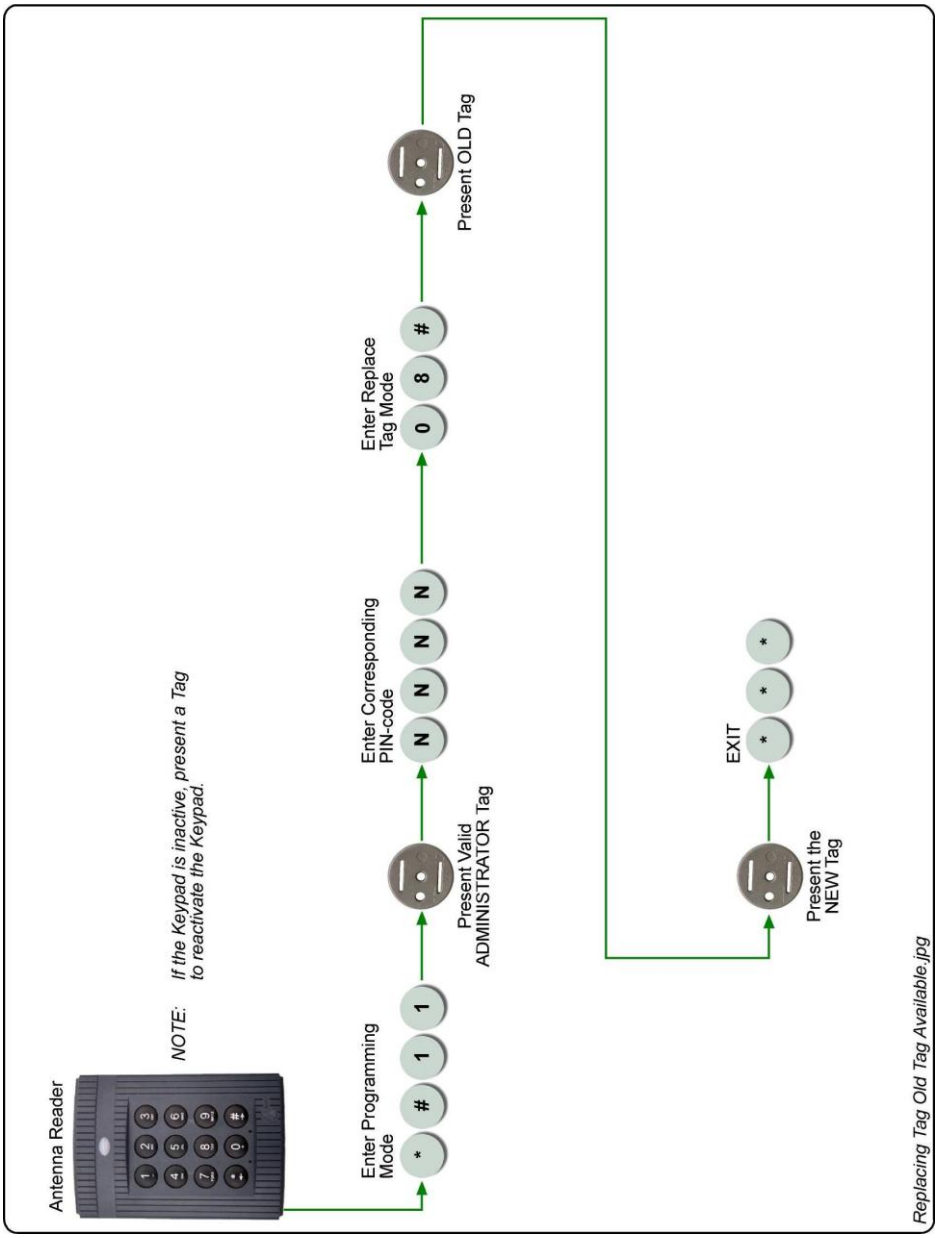

Figure 11: Replacing Tags (Old Tag Available)

Edit the PAC-code

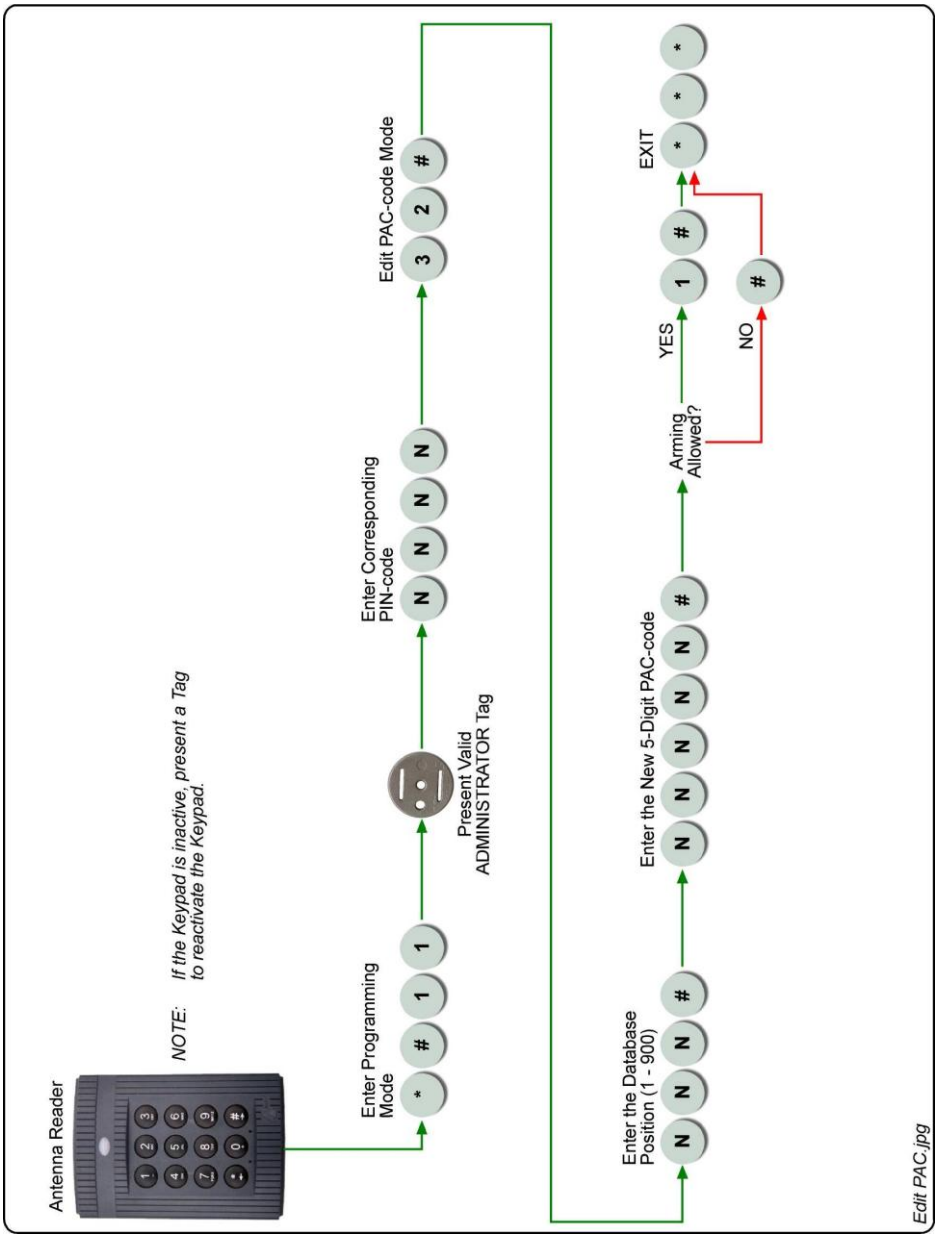

Figure 12: Edit the PAC-code

Delete the PAC-code

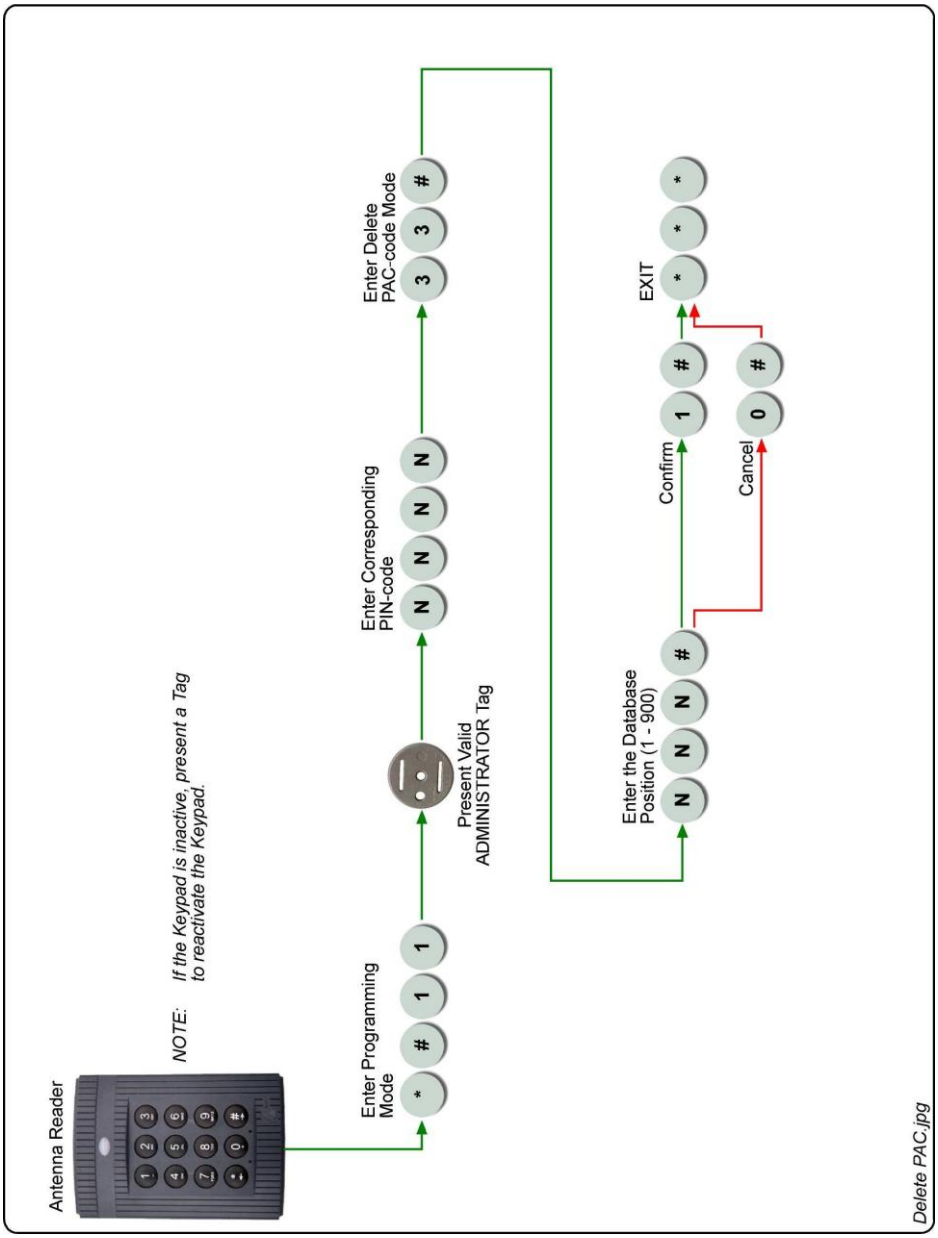

Figure 13: Delete the PAC-code

Deleting Tagholder (Known Location)

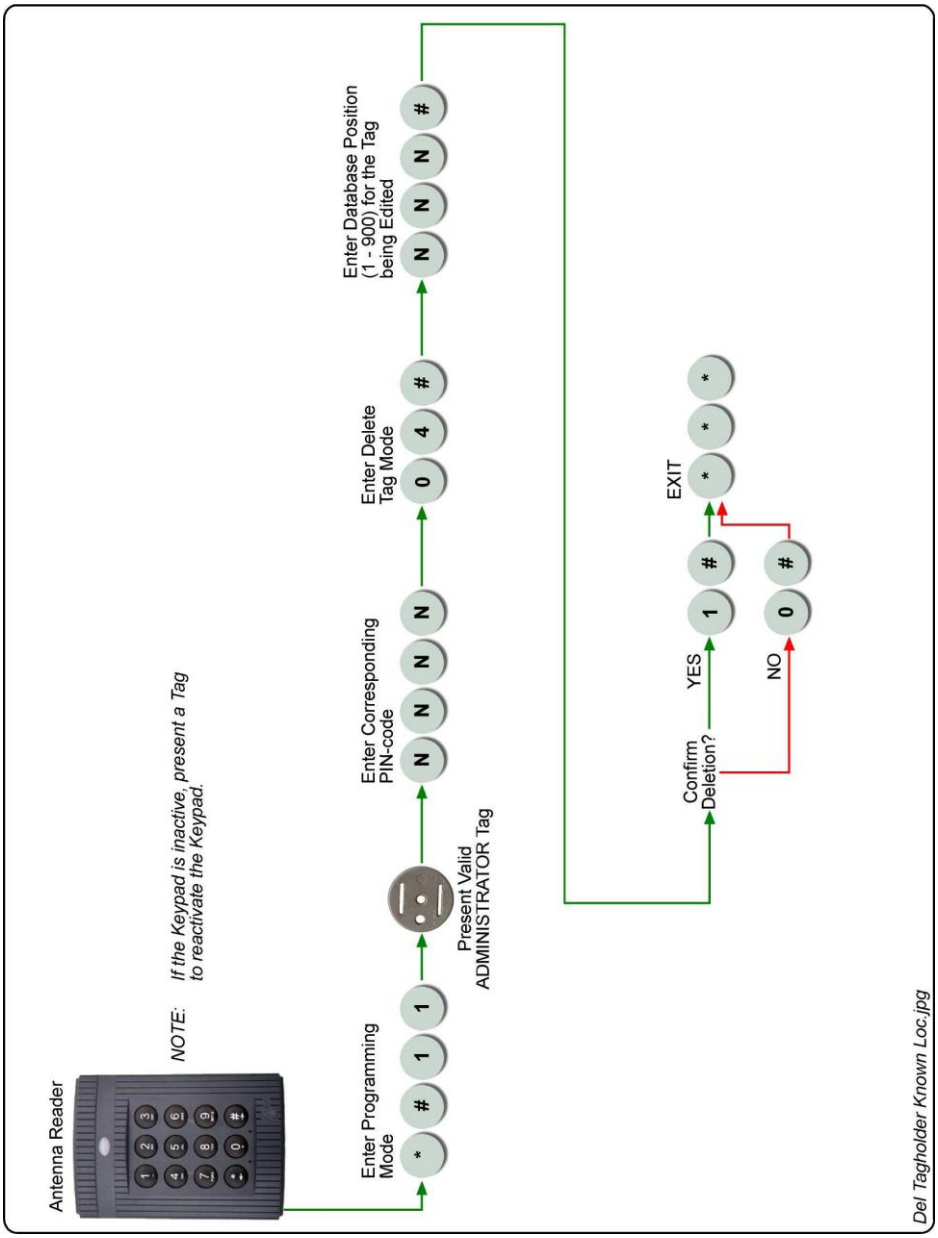

Figure 14: Deleting Tagholder (Known Location)

Deleting Tagholder (Unknown Location)

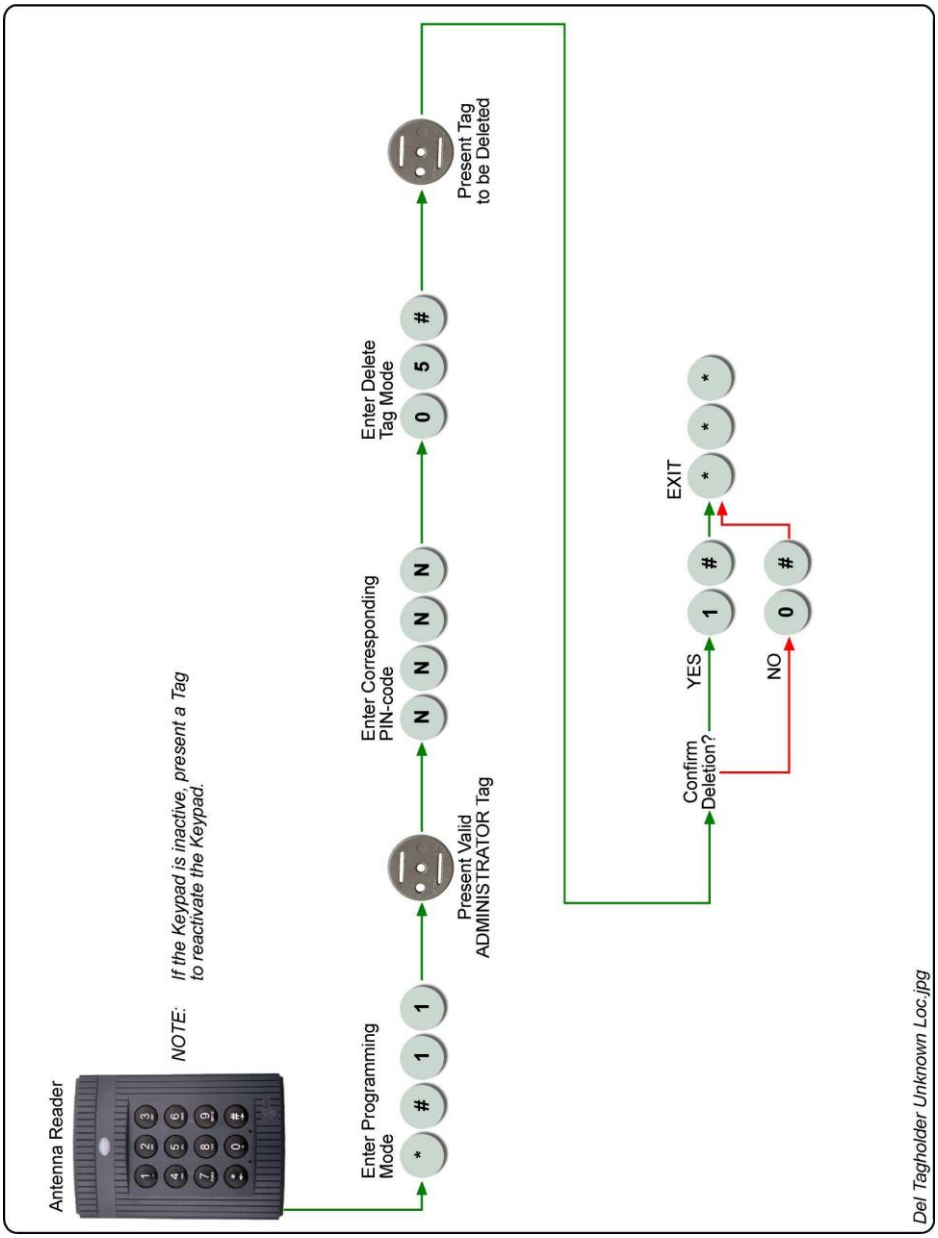

Figure 15: Deleting Tagholder (Unknown Location)

Deleting the Transaction Table

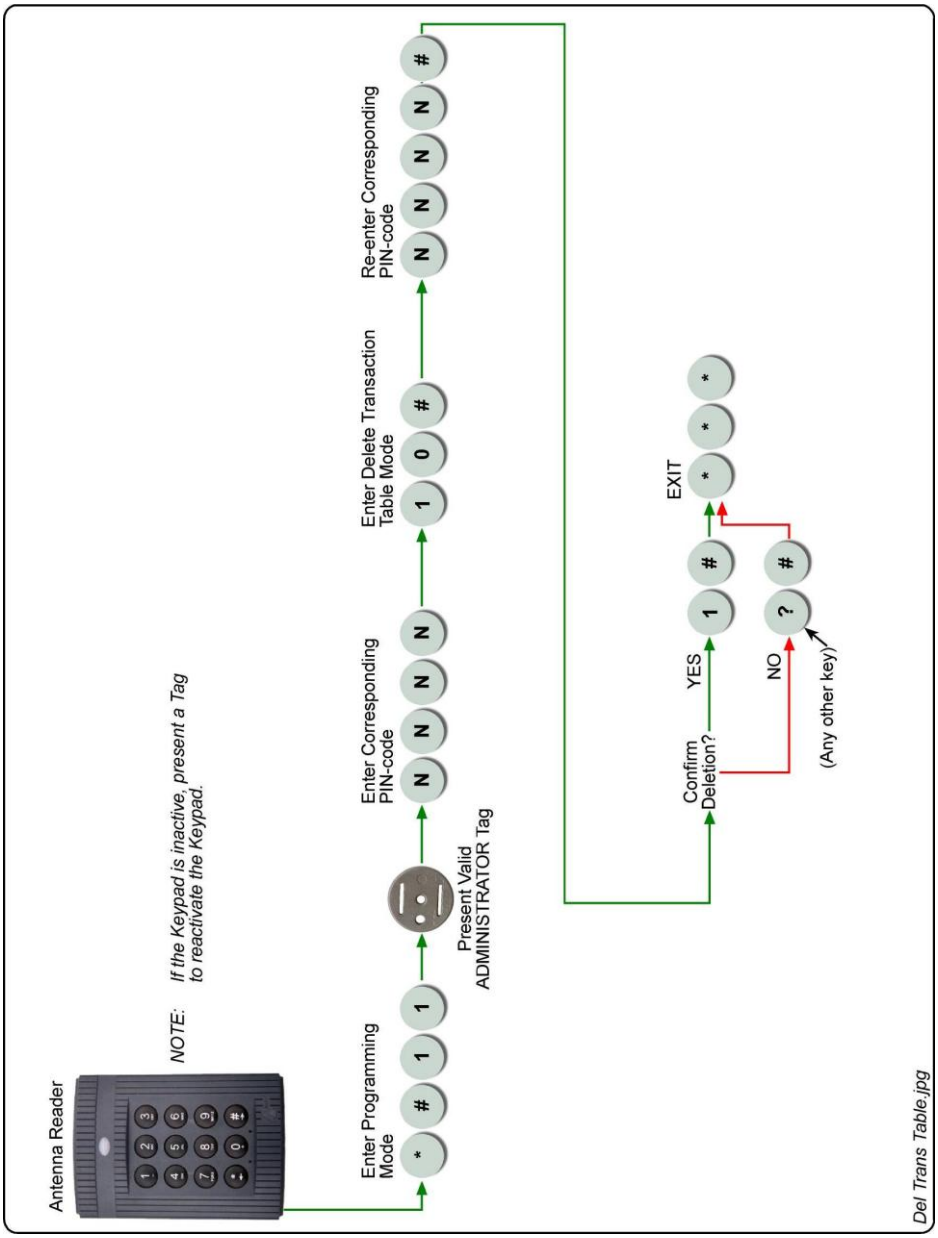

Figure 16: Deleting the Transaction Table

Access Time Patterns

Access Time Patterns provide for a single access period on a per-day basis whereby access is granted to User Tagholders after Tag presentation and a valid PIN-code (if required). The Time Pattern requires the entry of a start time and duration, which can vary for each day of the week.

Time Patterns can be entered or edited by the Administrator Tagholder only. The default Time Pattern allows access 24 hours per day, 7 days per week.

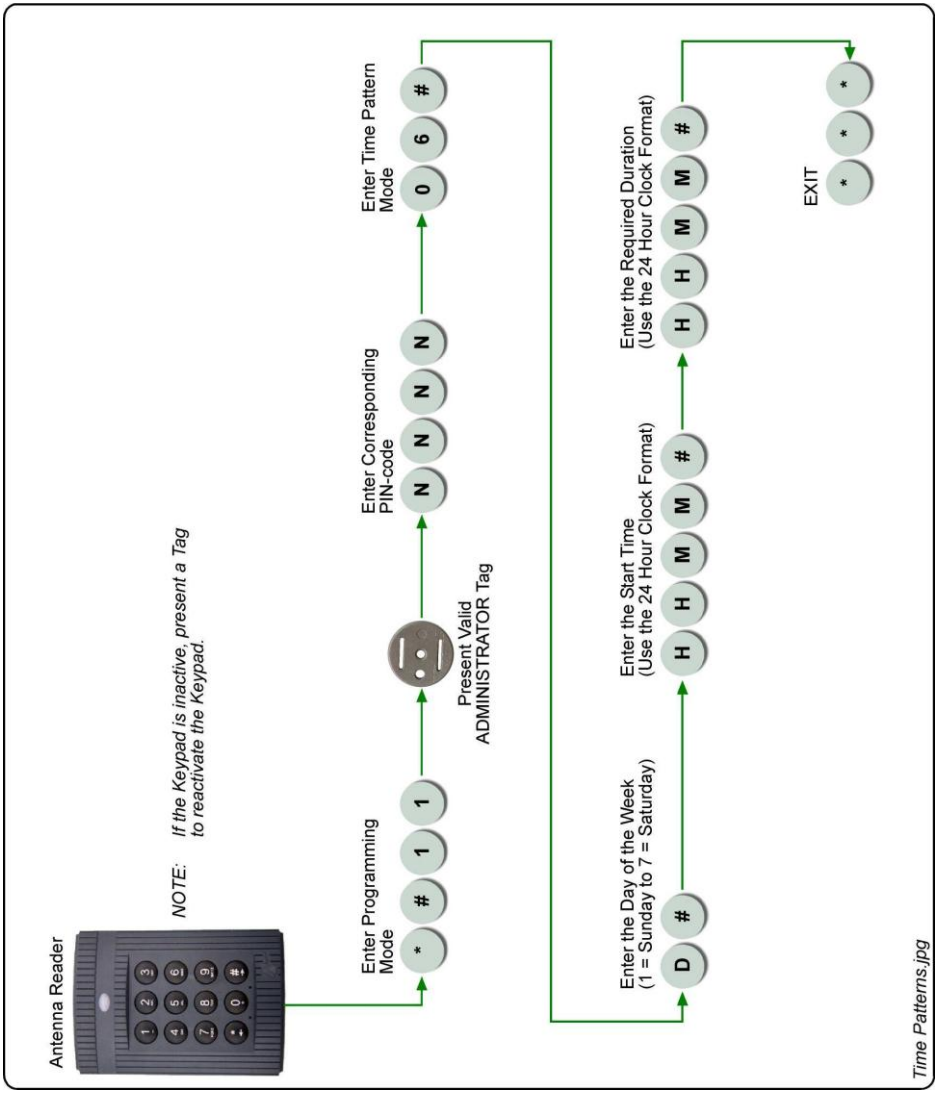

Figure 17: Access Time Patterns

Change Alarm Modes

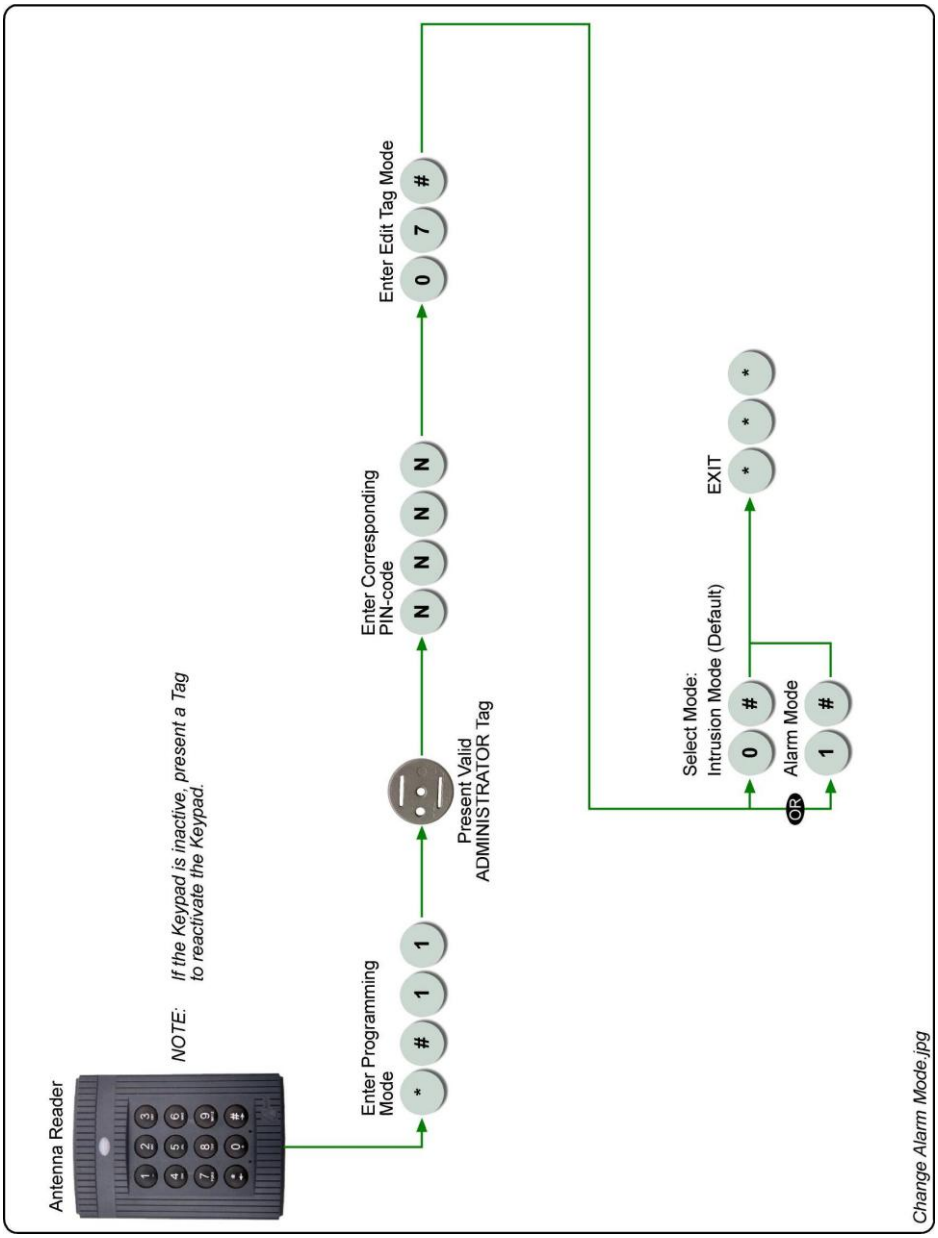

Figure 18: Change Alarm Modes

Change the Alarm Ready Input Sensing

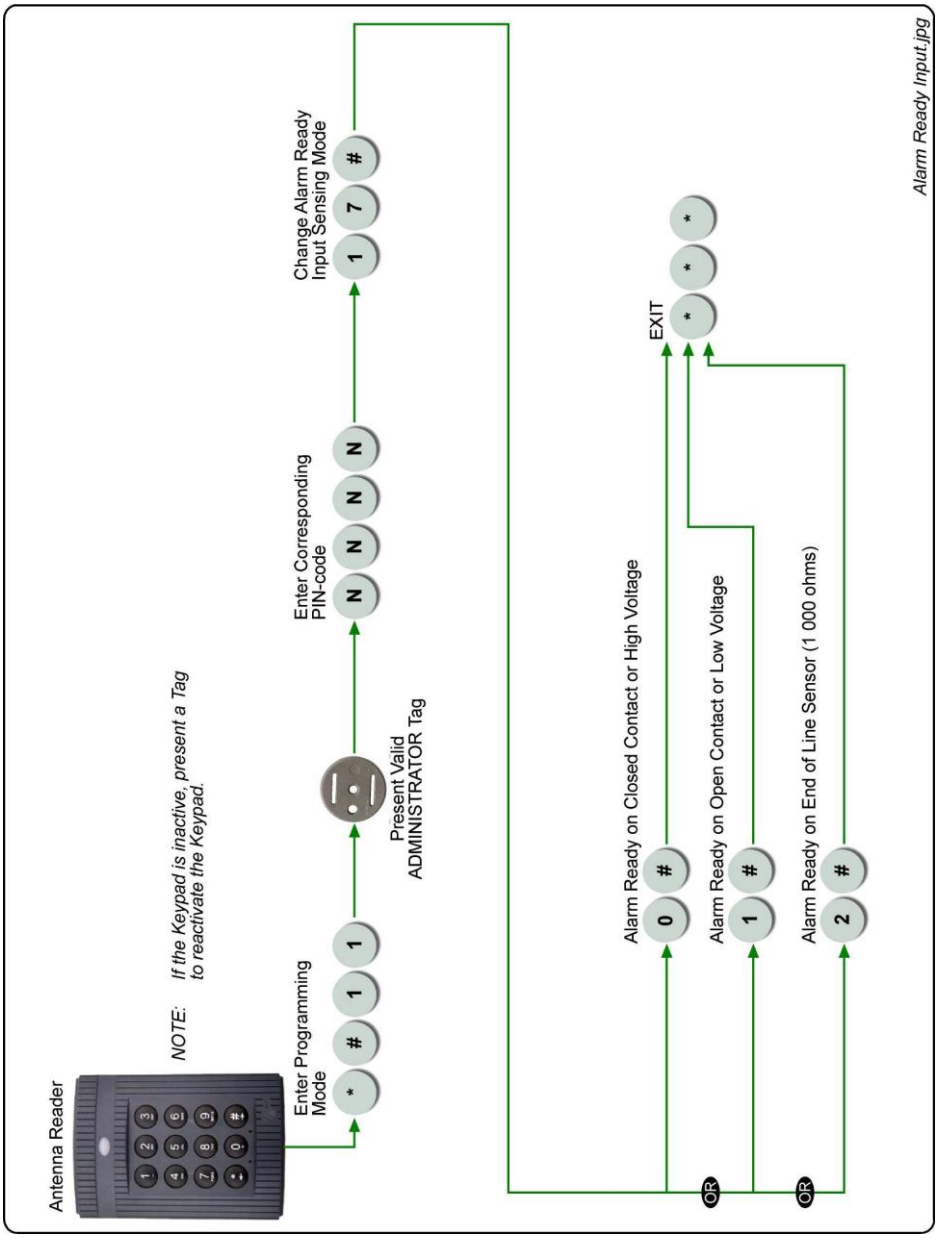

Figure 19: Change the Alarm Ready Input Sensing

Drive the Alarm Relay

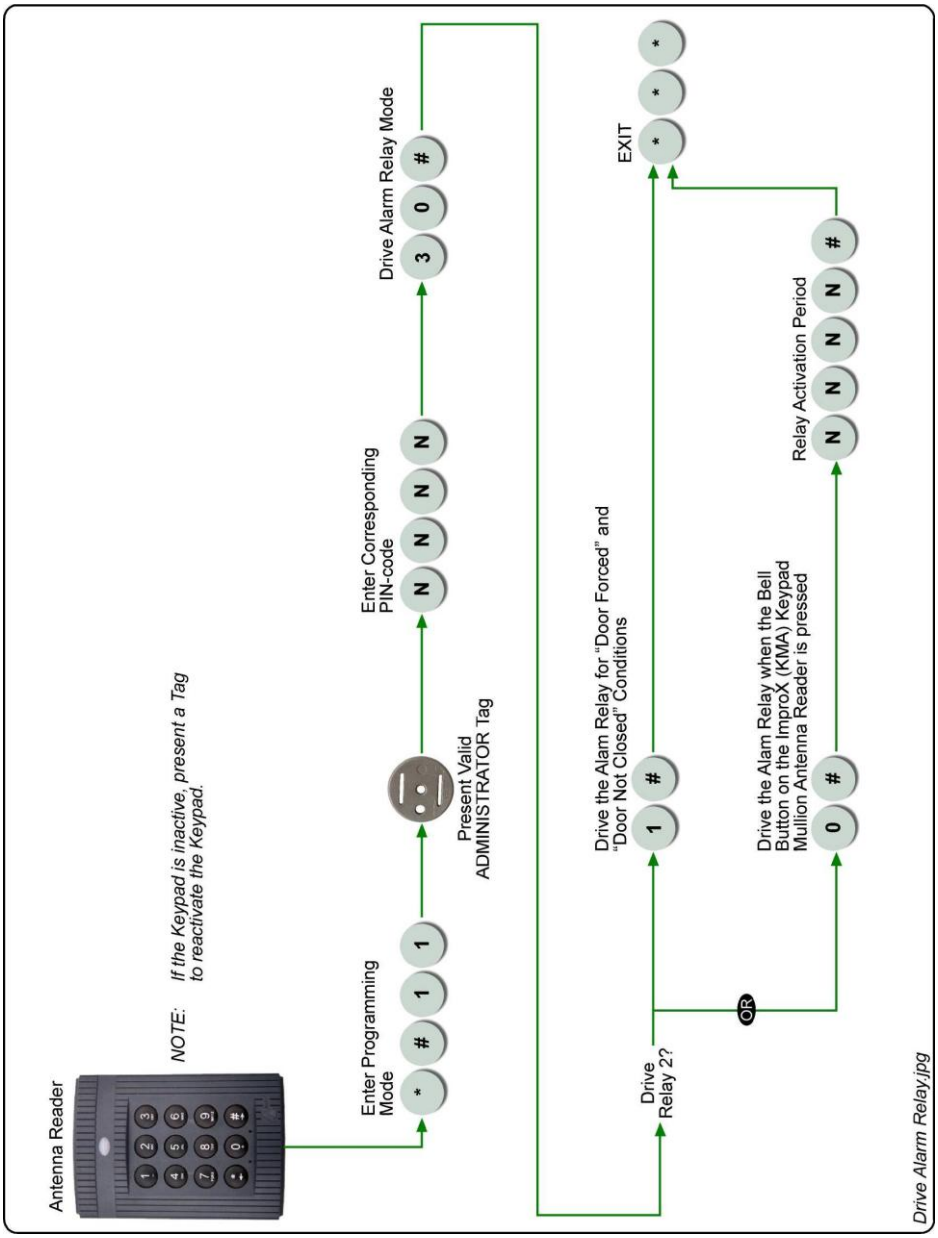

Figure 20: Drive the Alarm Relay

Change (Relay 1, Latch) Drive Mode and Time

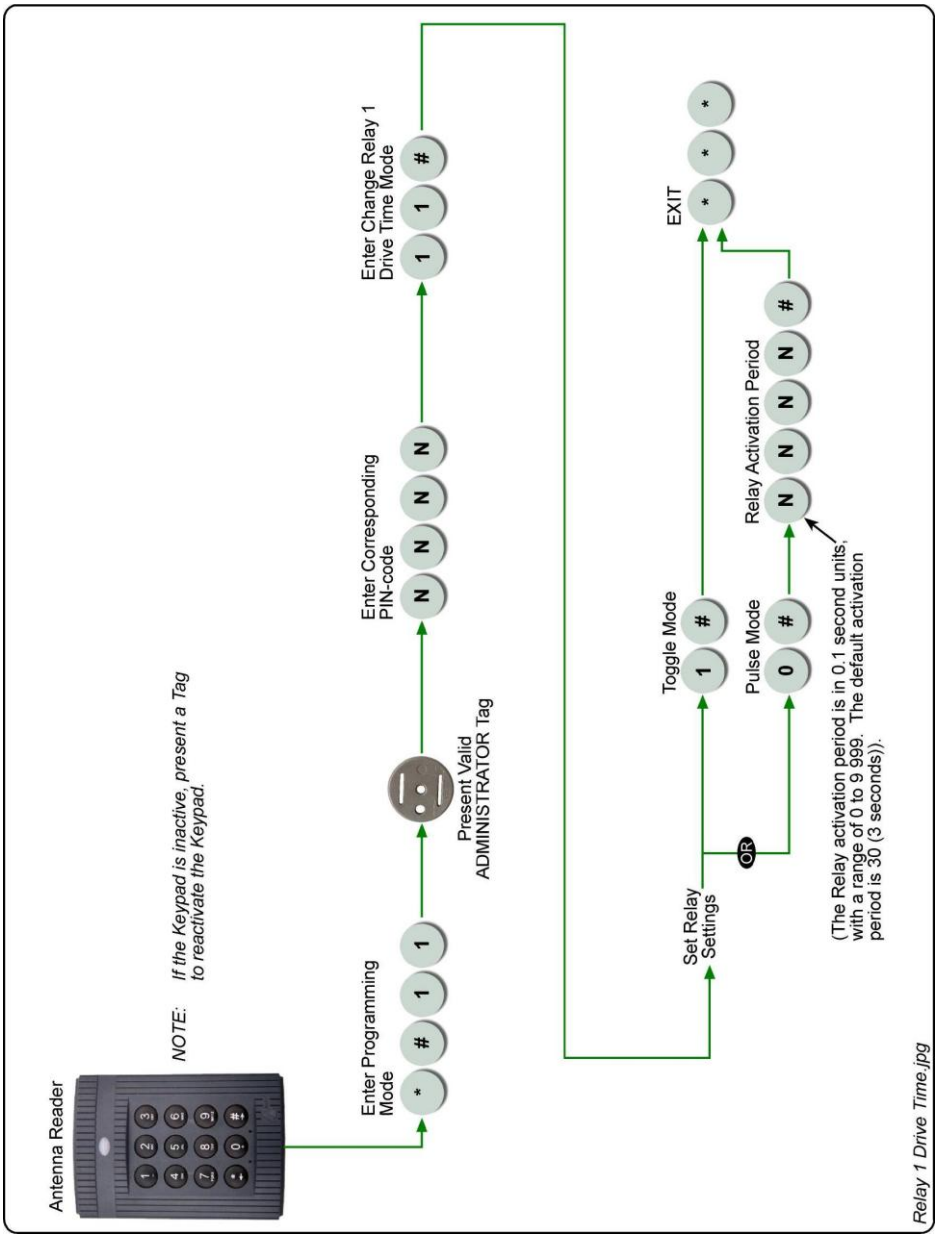

Figure 21: Change Relay 1 Drive Mode and Time

Change (Relay 2, Alarm) Drive Mode and Time

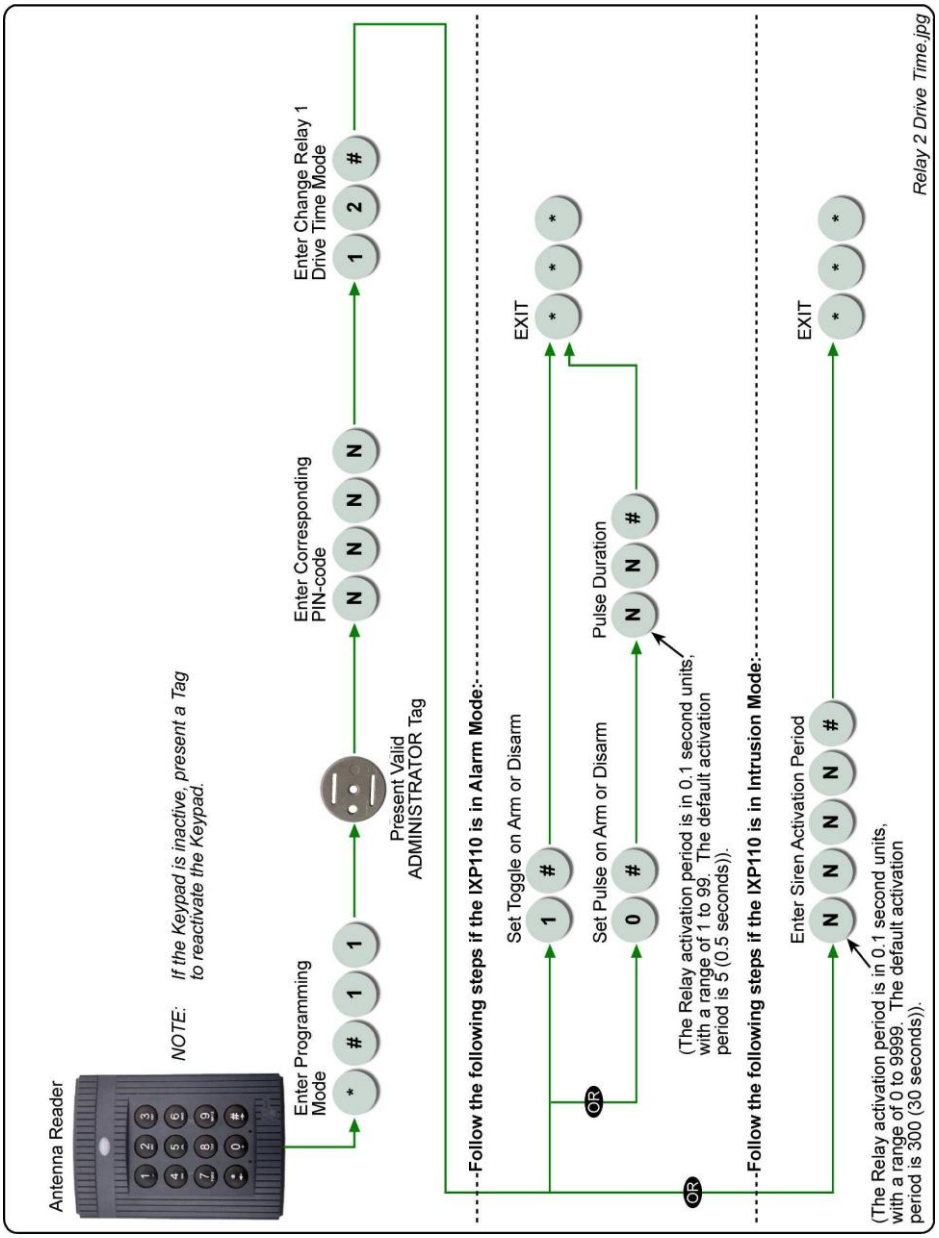

Figure 22: Change Relay 2 Drive Mode and Time

Configure the Real Time Clock

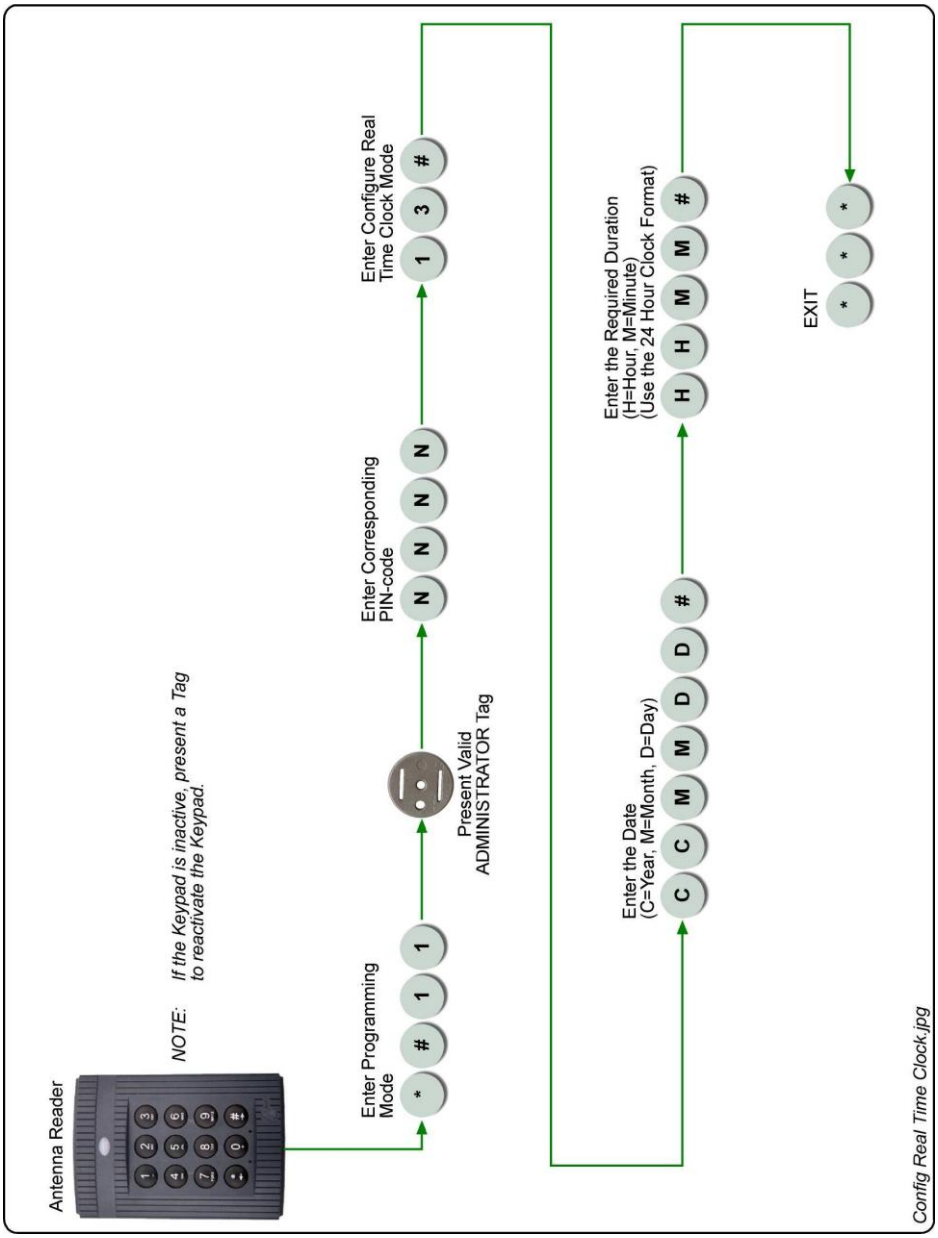

Figure 23: Configure the Real Time Clock

Change Whether Reason Codes are Required

In certain applications it may be necessary for Reason Codes to be entered by a Tagholder as part of the access process.

A Reason Code is a two digit (default length) code that is entered after a Tag has been presented and the PIN-code (optional) has been keyed in.

The Reason Code allocation is configured on a per Tagholder basis forming part of the programming process when adding or editing a Tag (this is an Administrator level function).

If a Reason Code is required by the System, the Antenna Reader prompts the Tagholder for entry of the code by means of the LED and/or Buzzer. The Tagholder must enter the Reason Code within the Key Entry Time Period (the default is 60s). Door access is granted once the Reason Code has been entered.

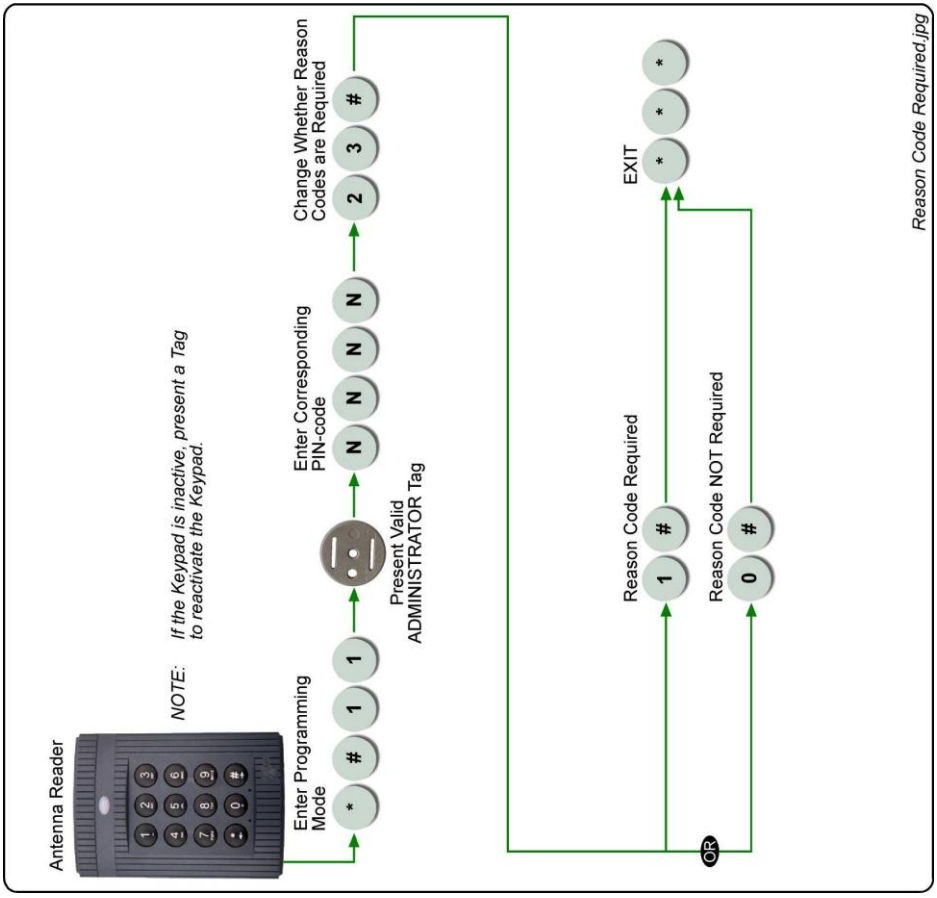

Figure 24: Change Whether Reason Codes are Required

Change the No Keypress Timeout Period

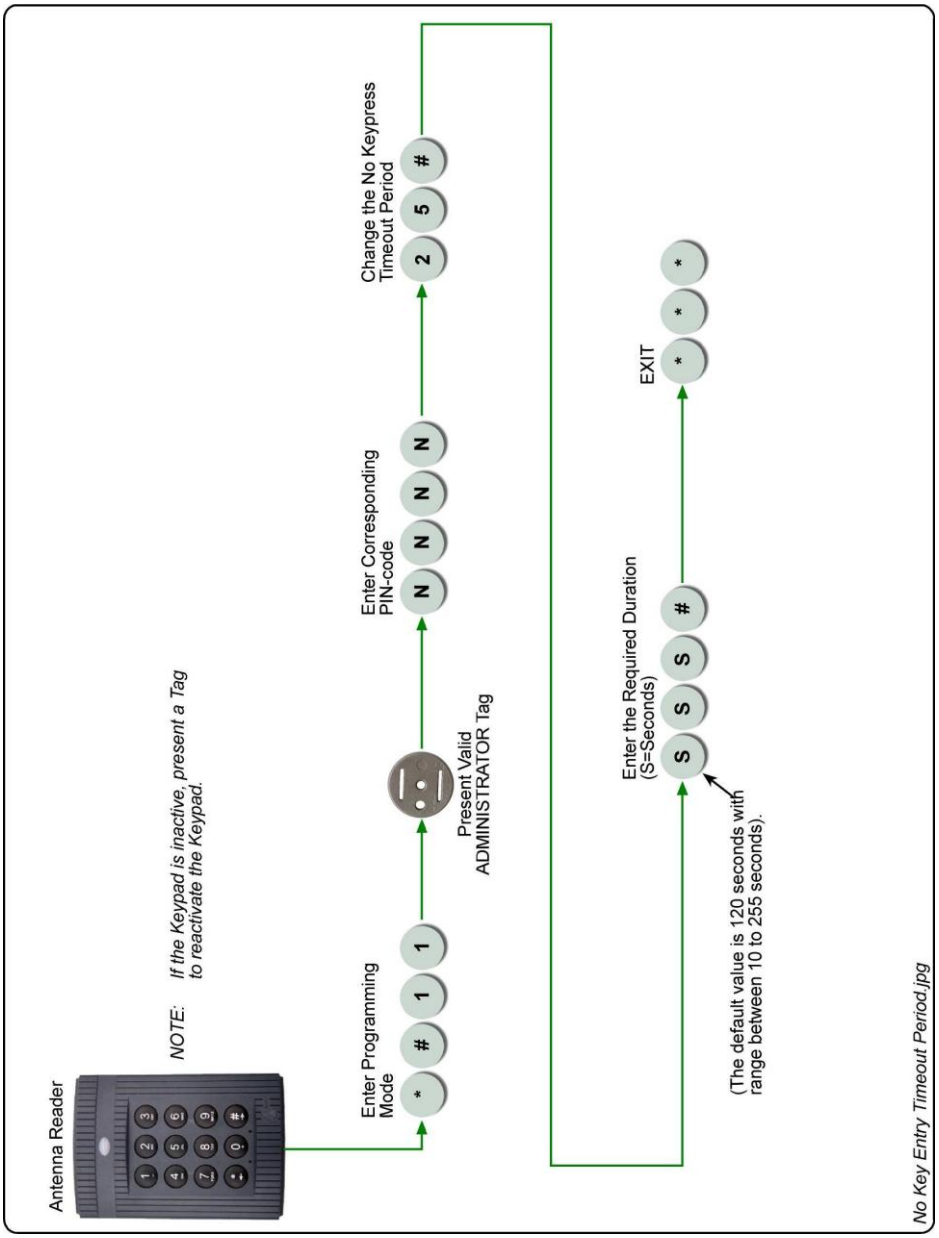

Figure 25: Change the No Keypress Timeout Period

Change the Request to Exit Input Sense

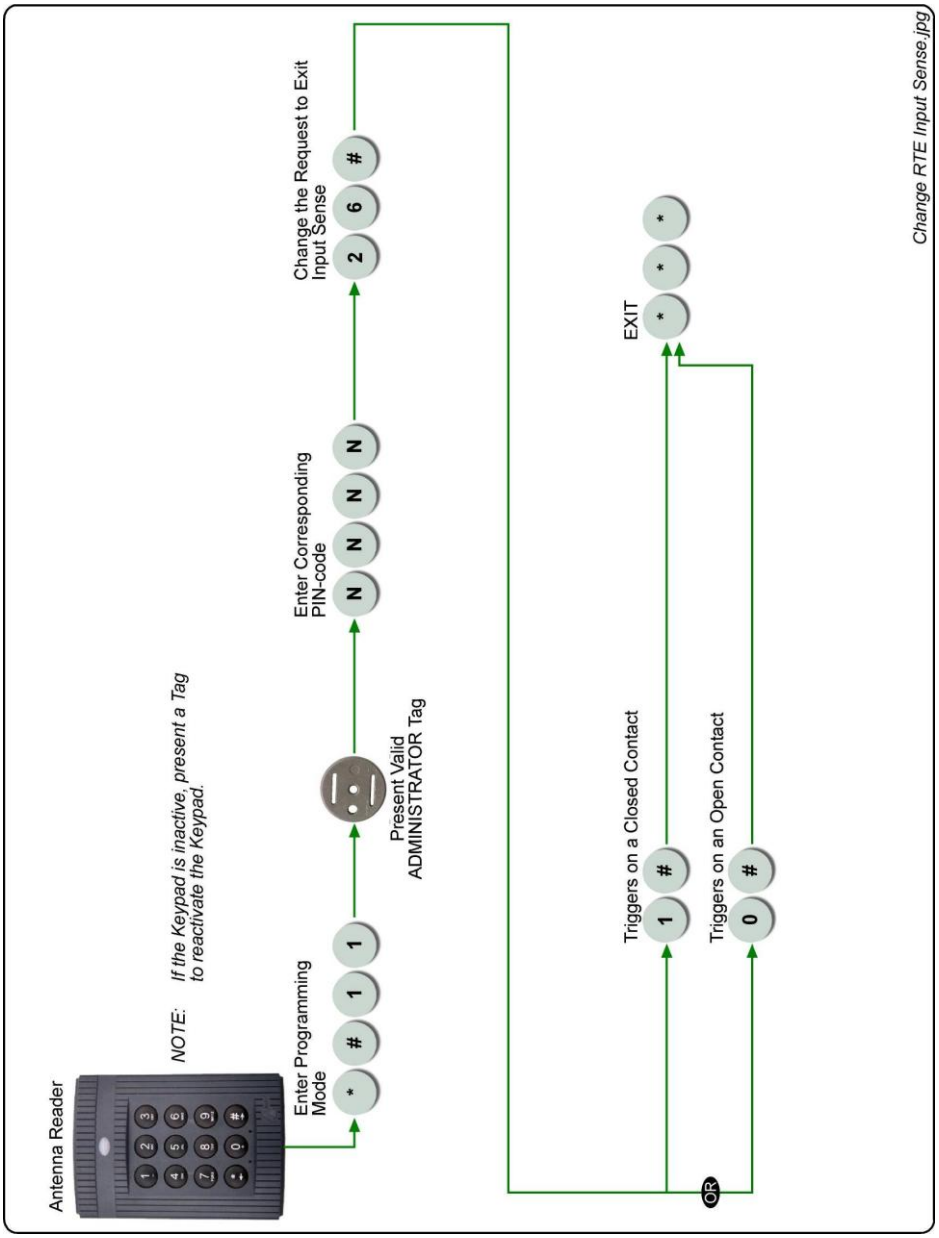

Figure 26: Change the Request to Exit Input Sense

Set PIN-code Mode

The IXP110 System offers the option of three PIN-code Modes. These PIN-code Modes operate in conjunction with the Time Pattern Settings. The conditions for each PIN-code Mode are described in Table 4.

PIN-code Mode	Time Pattern	
	Open	Restricted
Mode 1: Configurable PIN-code Enter the PIN-code on presentation of a Tag (if a PIN-code has been set for that Tag, and if the PIN-code Enforced condition is set).	All Tags allowed	Only Administrator and Supervisor Tags allowed
Mode 2: Restricted PIN-code The PIN-code Enforced or Relaxed Time Pattern setting is ignored in this Mode.	All Tags allowed PIN-code NOT required	Only Administrator and Supervisor Tags allowed (PIN-code required)
Mode 3: Personal Access Code (PAC) The PIN Enforced or Relaxed Time Pattern setting is ignored in this Mode.	All Tags allowed PAC allows access even without presentation of a Tag	Only Administrator and Supervisor Tags allowed (PIN-code required)

Table 4: PIN-code Modes

If a PIN-code is entered incorrectly three times in succession for a given Tag, the Tag is rejected for the pre-configured Blacklisted Tag Timeout Period.

The Controller maintains a table of up to 10 Tags recording those with incorrect PIN-codes entered. This table operates on a first in first out basis. The blacklisting status of a Tag is cleared by an Administrator editing the Tag data.

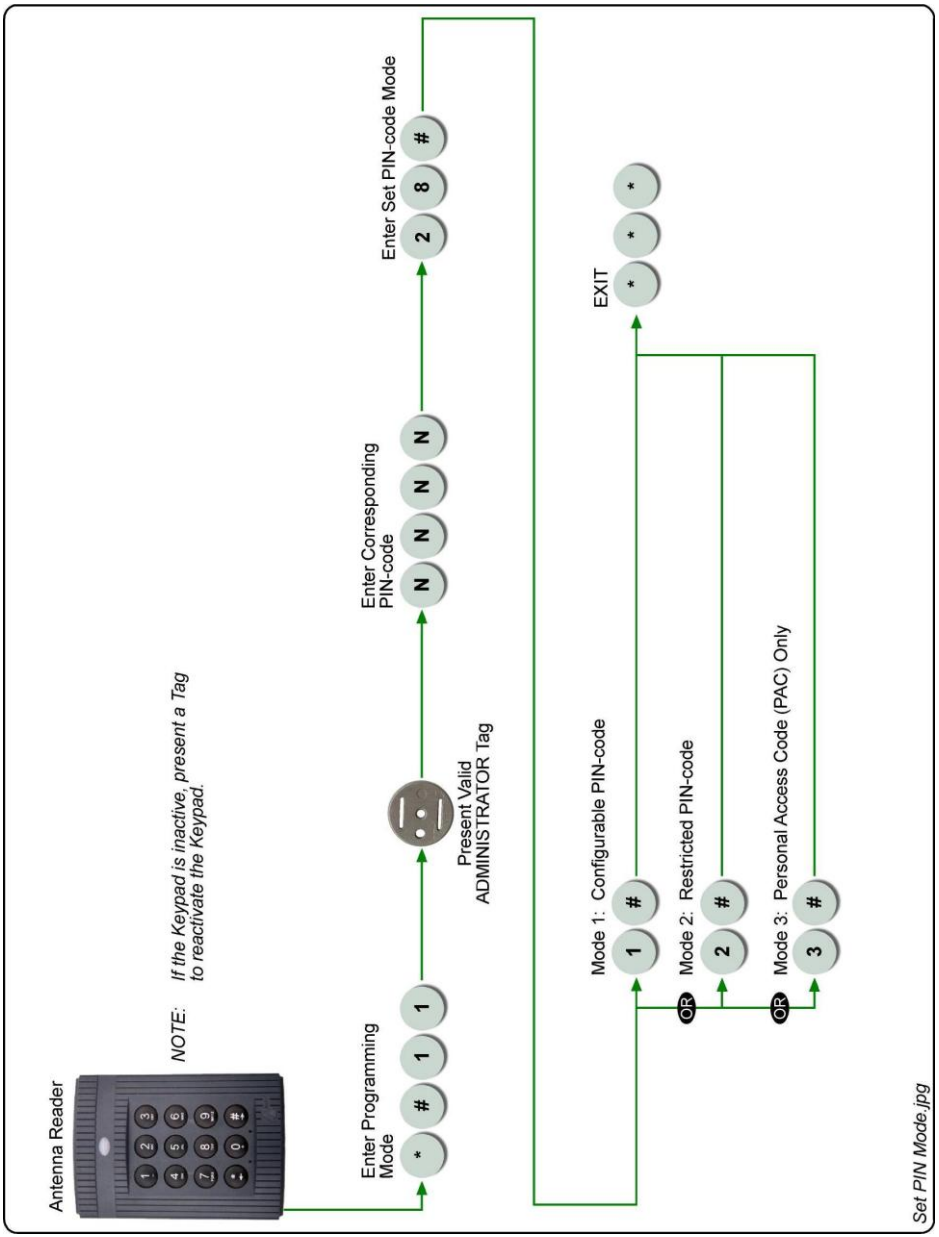

Figure 27: Set PIN-code Mode

Change the Blacklisted Tag Timeout Period

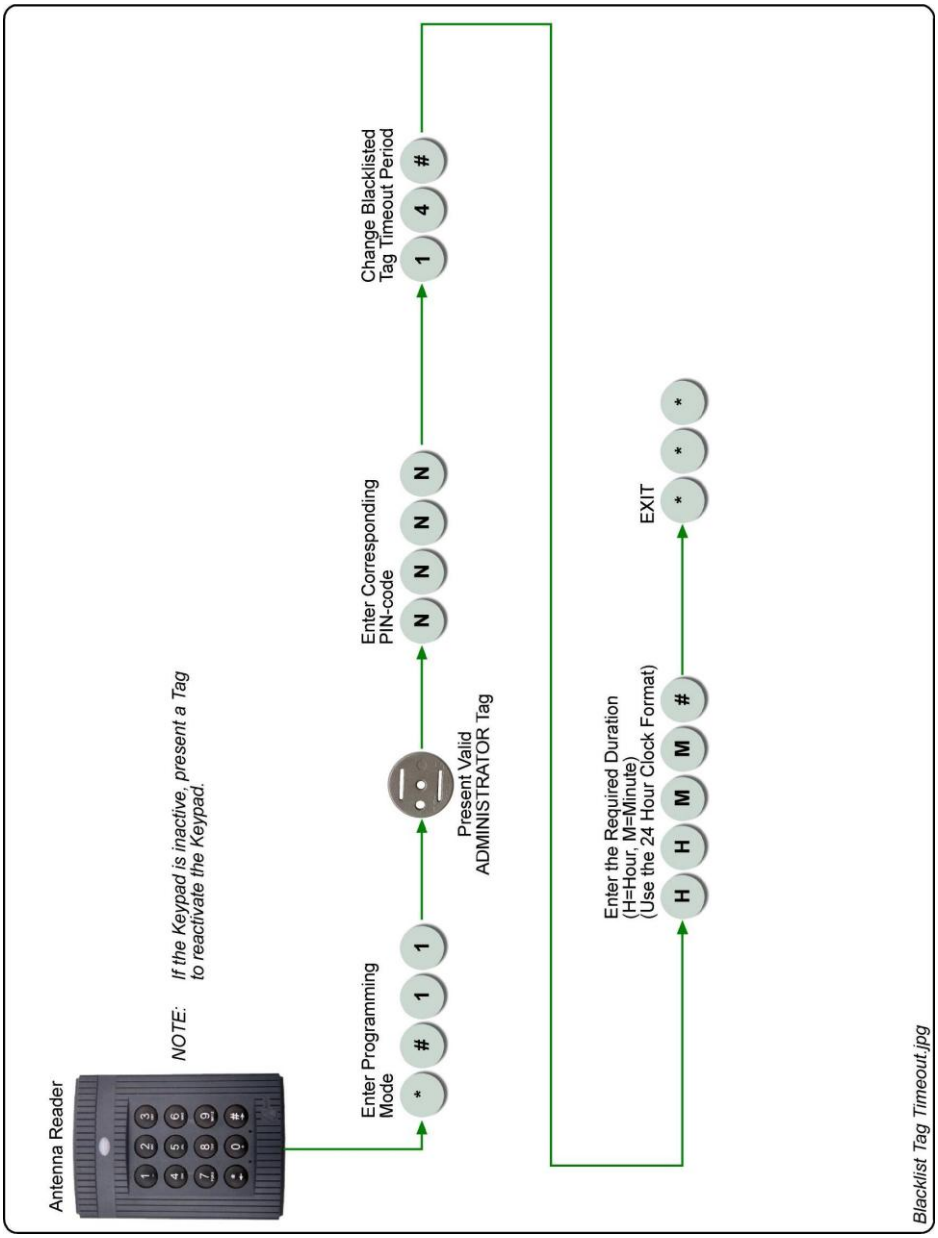

Figure 28: Change the Blacklisted Tag Timeout Period

Change the Present Tag Timeout Period

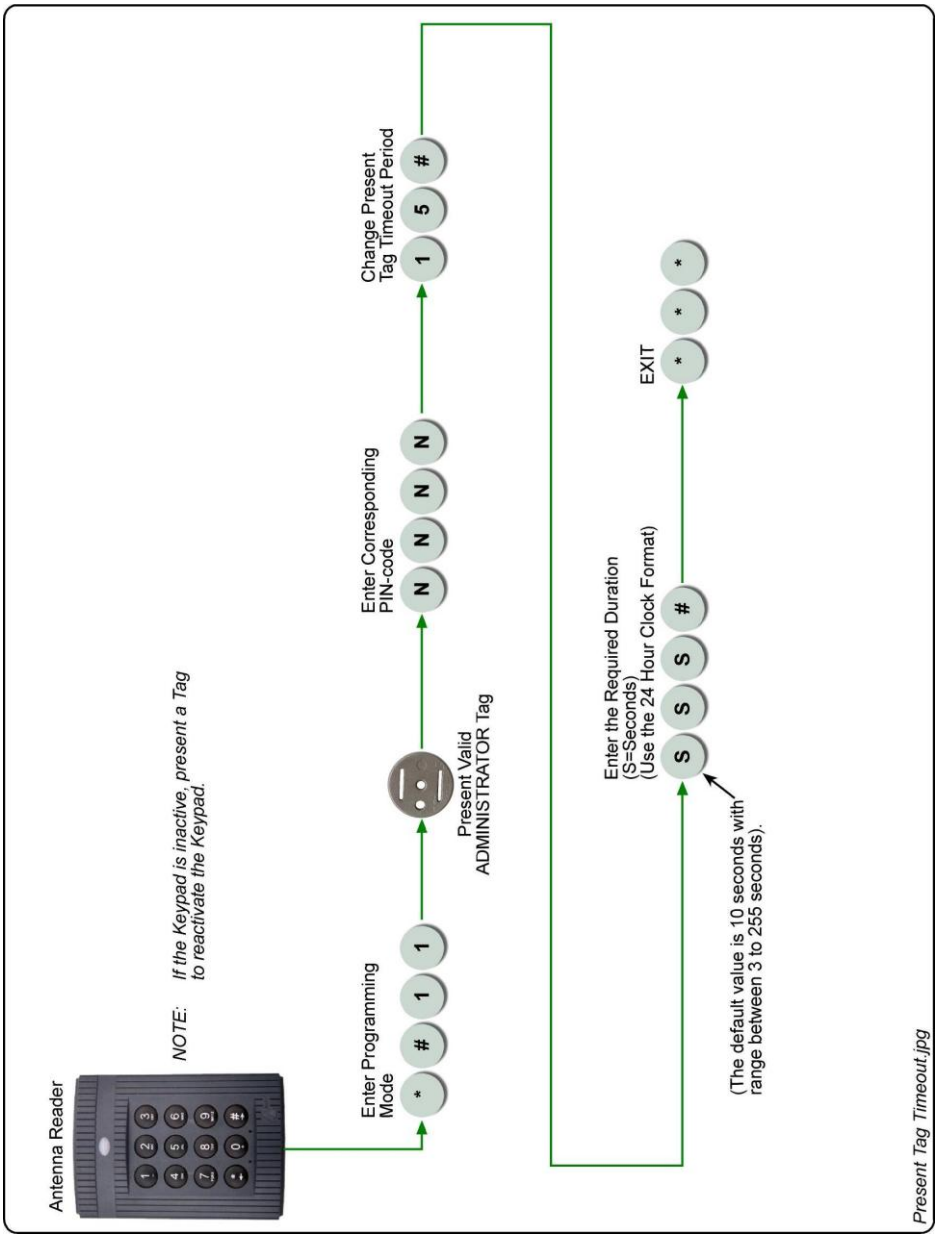

Figure 29: Change the Present Tag Timeout Period

Change the Key Entry Timeout Period

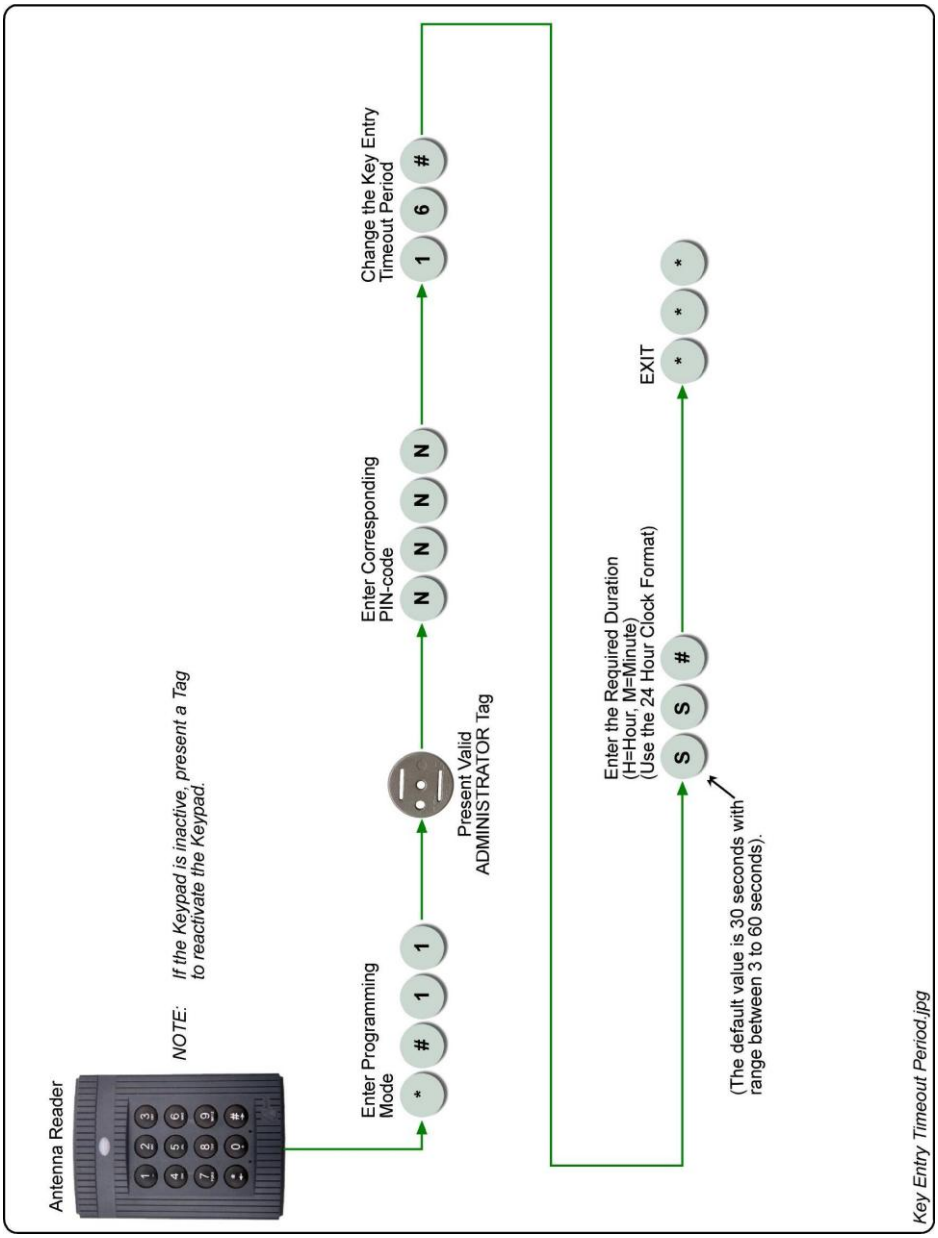

Figure 30: Change the Key Entry Timeout Period

Change the Buzzer Volume

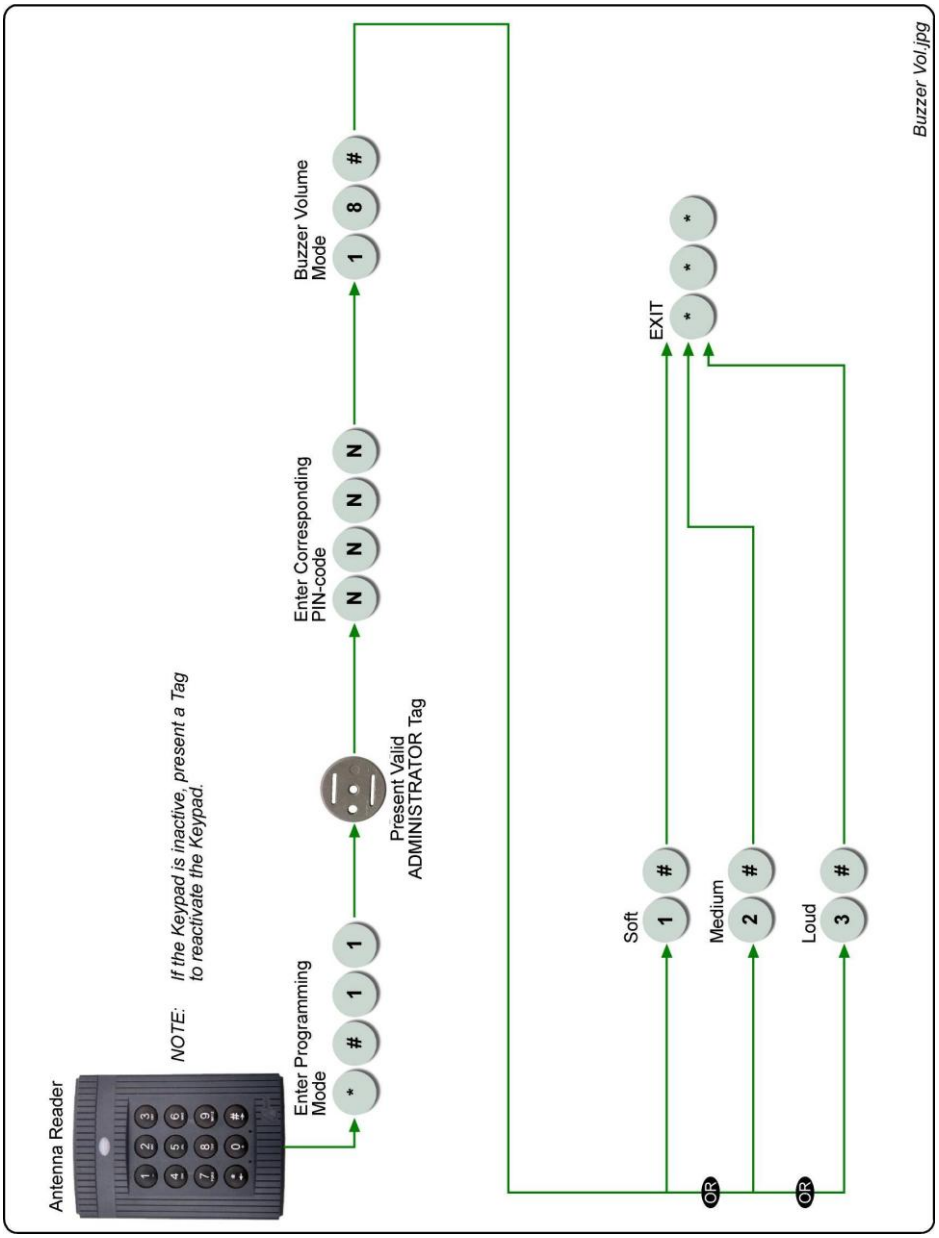

Figure 31: Change the Buzzer Volume

Change the Reason Code Length

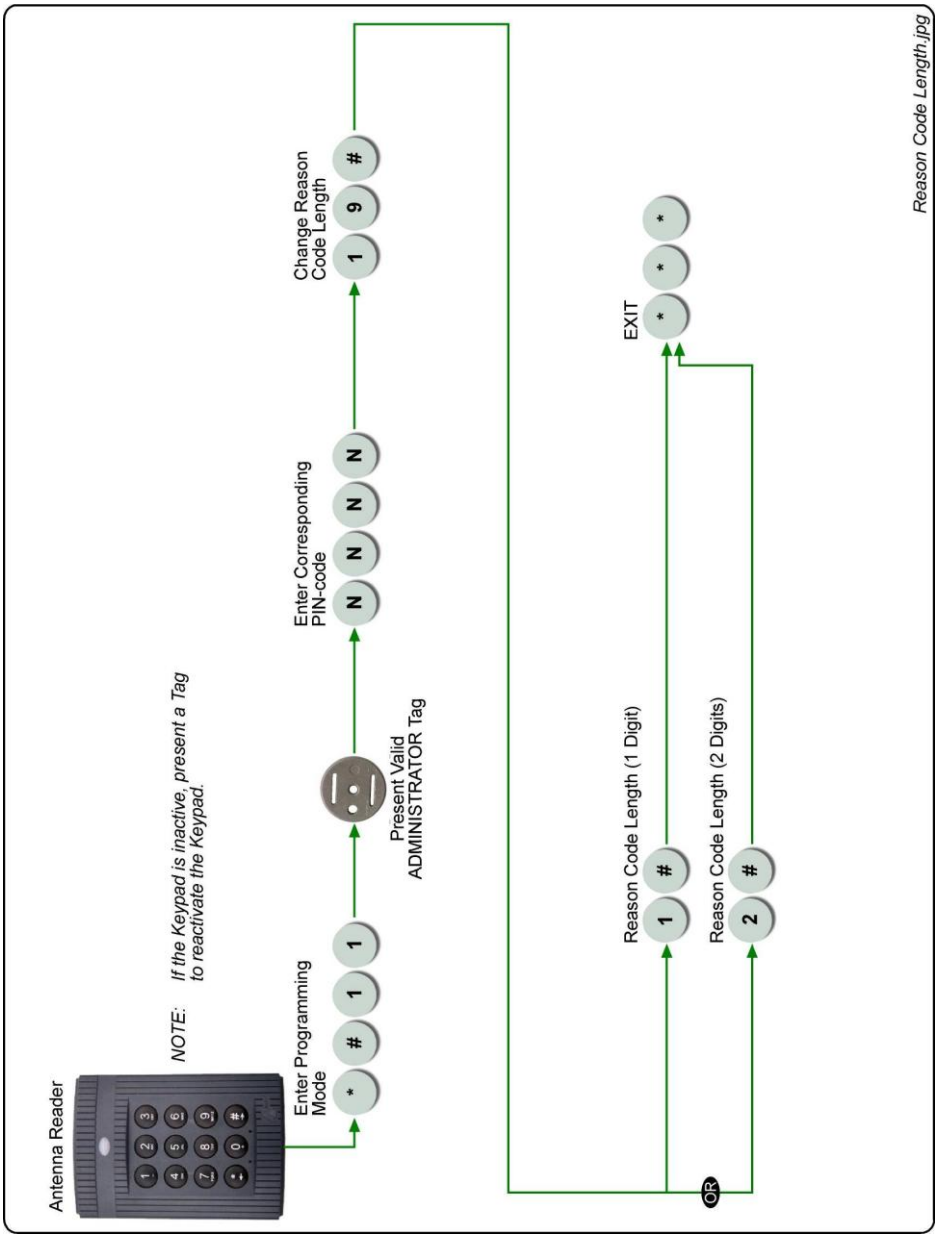

Figure 32: Change the Reason Code Length

Change the Door Left Open Period

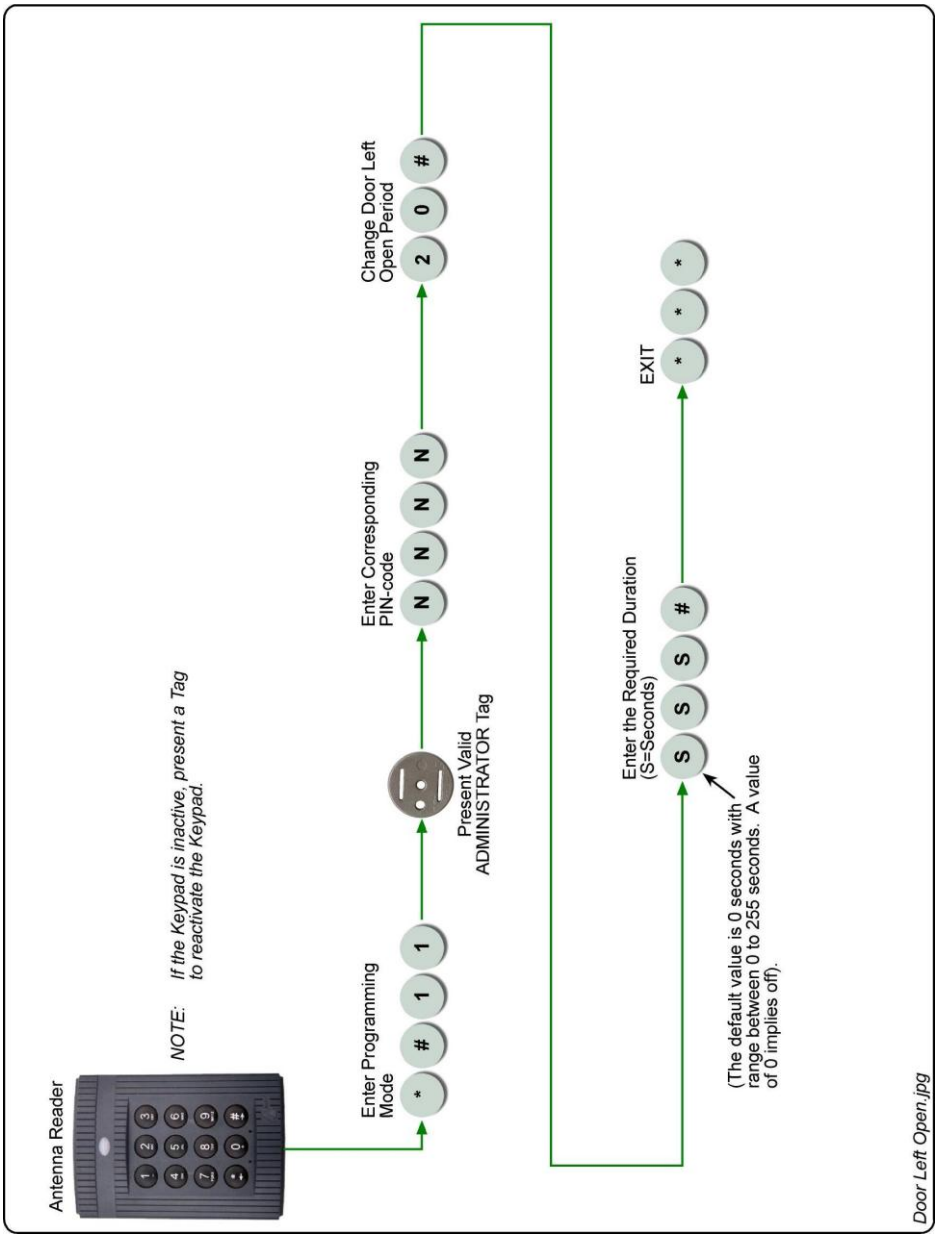

Figure 33: Change the Door Left Open Period

Change the Door Not Opened Period

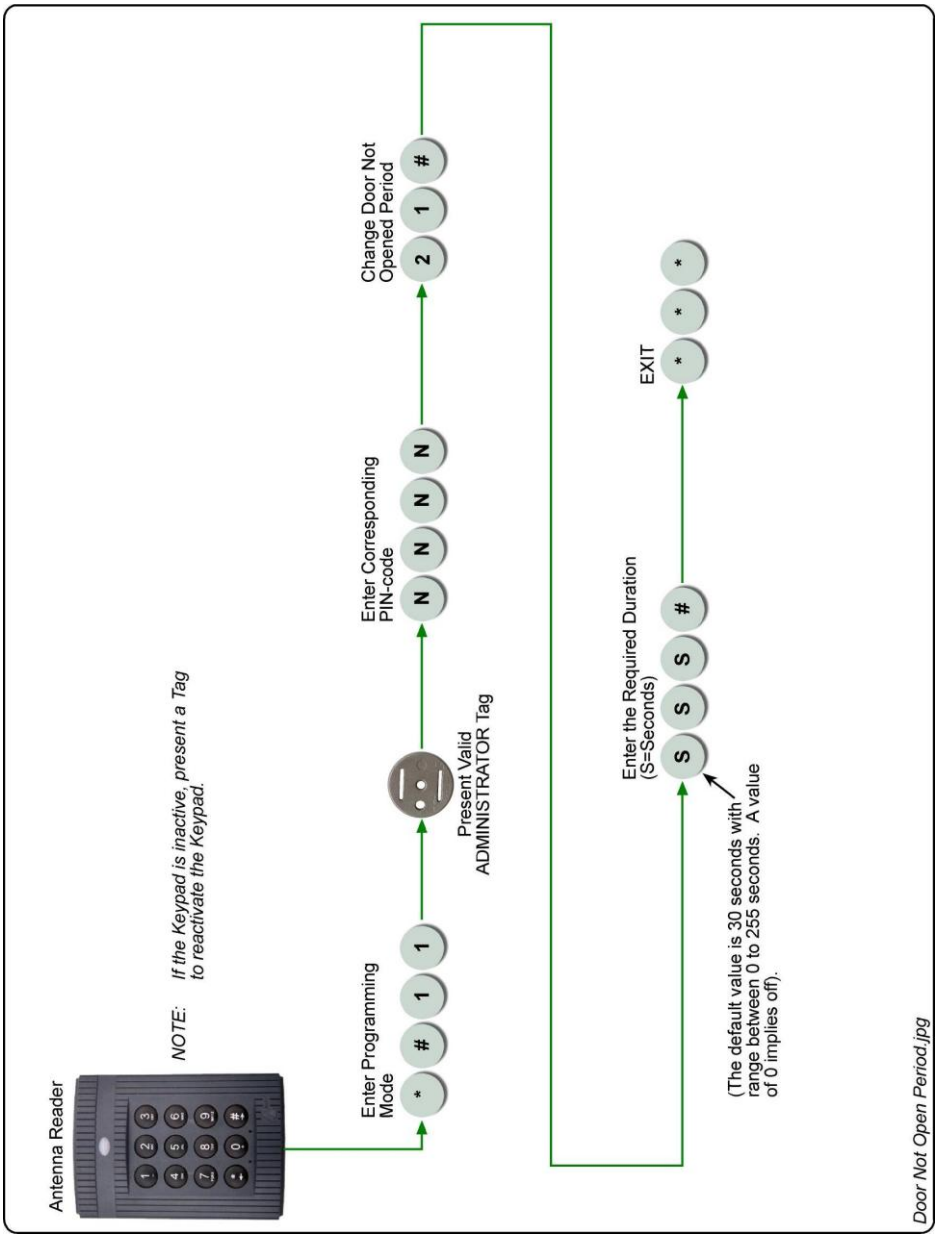

Figure 34: Change the Door Not Opened Period

Change the AC Power Fail Alarm Period

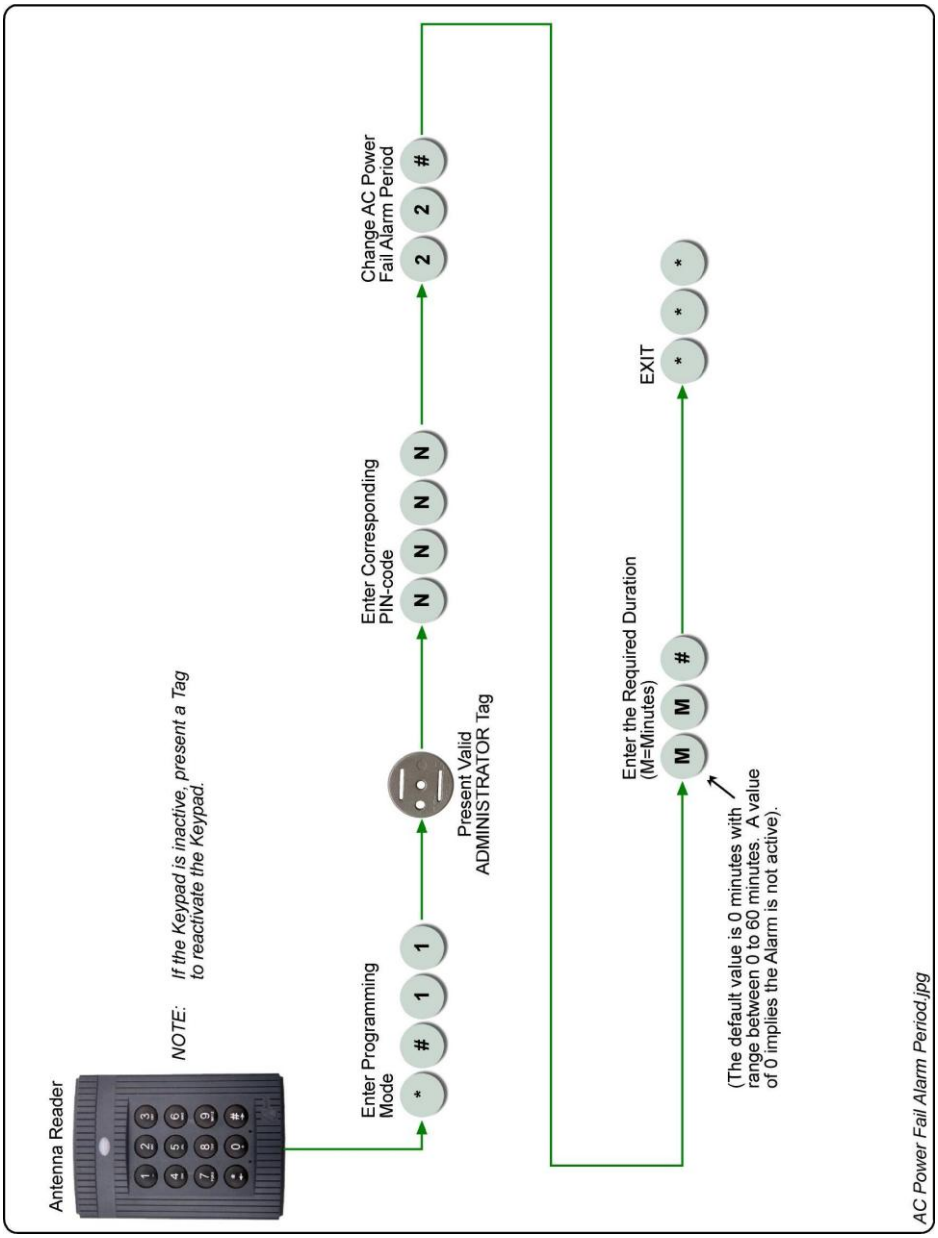

Figure 35: Change the AC Power Fail Alarm Period

Door Lock or Unlock

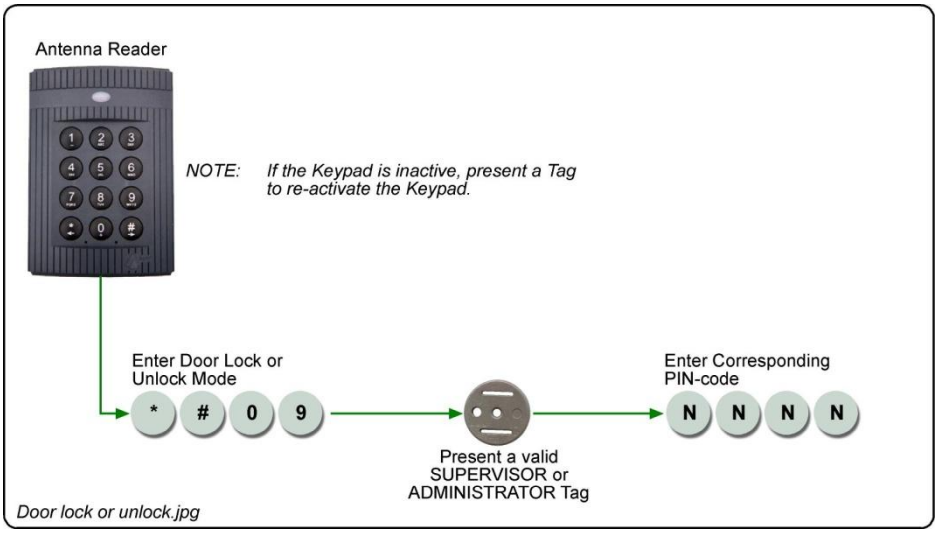

Figure 36: Door Lock or Unlock

Change PIN-code

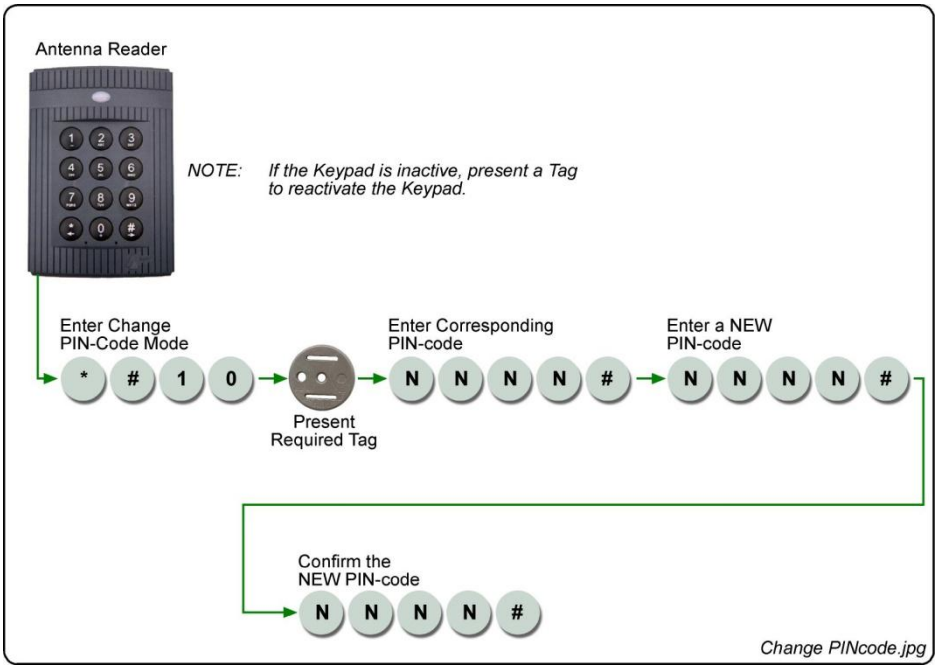

Figure 37: Change PIN-code

Enforce PIN-codes

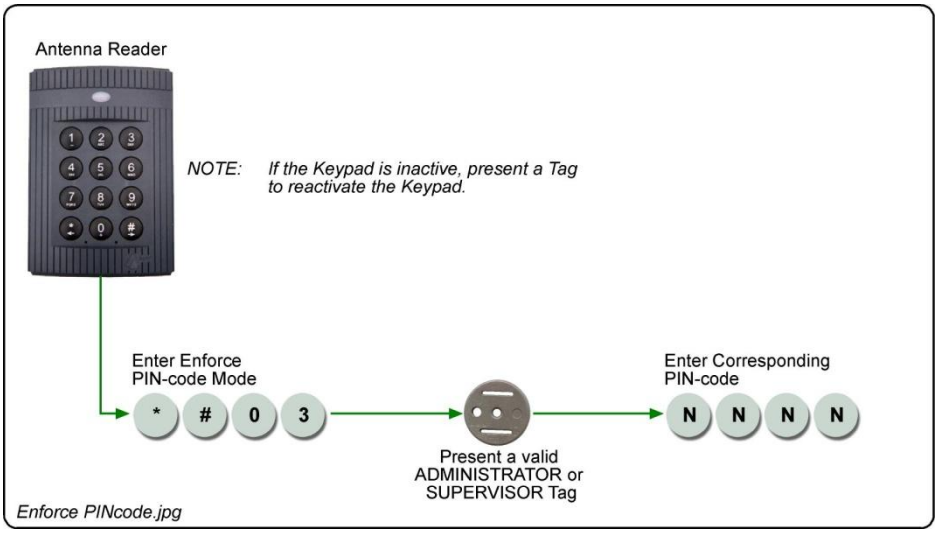

Figure 38: PIN-codes Enforced

Relaxation of PIN-codes

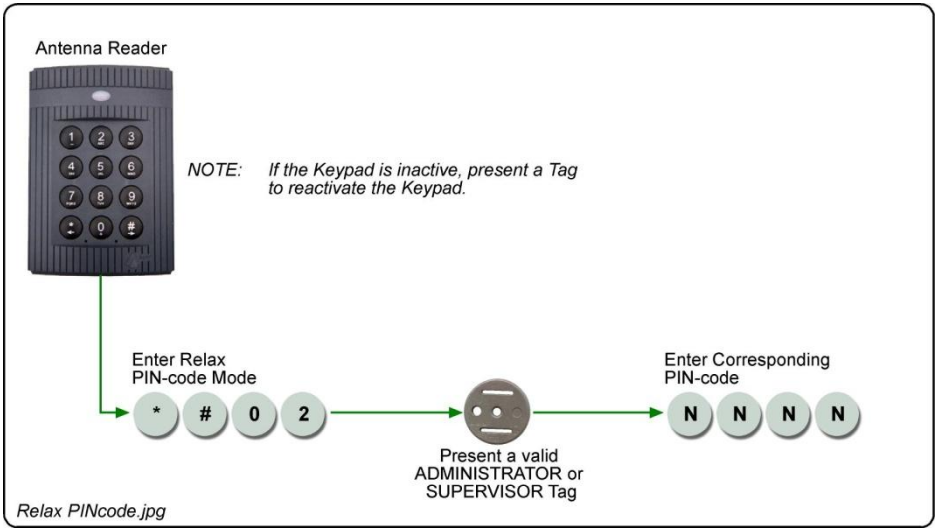

Figure 39: Relaxation of PIN-codes

Temporarily Suspend User Level Tagholder

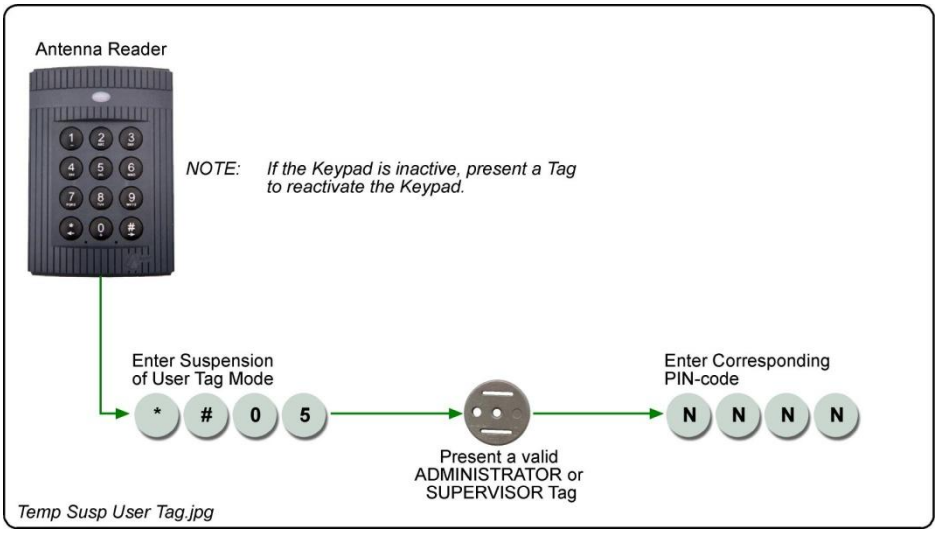

Figure 40: Temporary User Tag Suspension

Restore Suspended User Level Tagholder

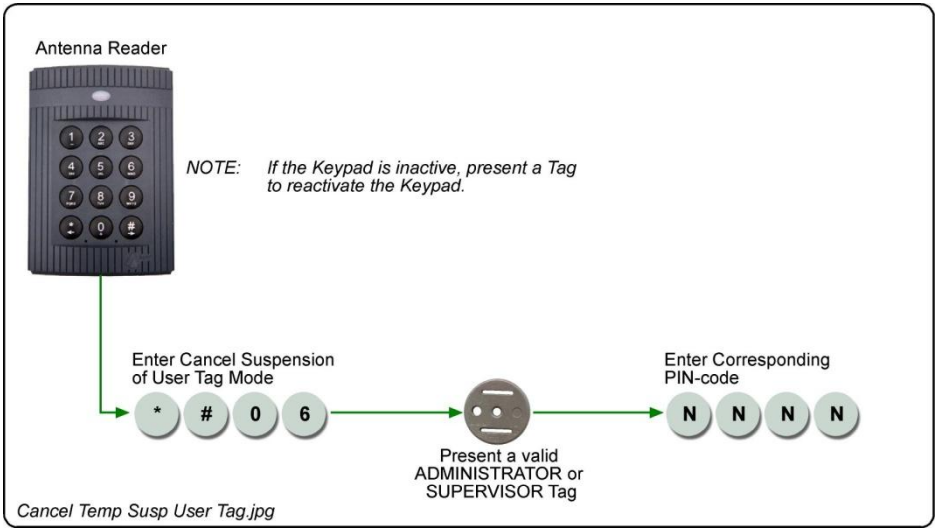

Figure 41: Cancel Temporary User Tag Suspension

Temporarily Suspend Supervisor Level Tagholder

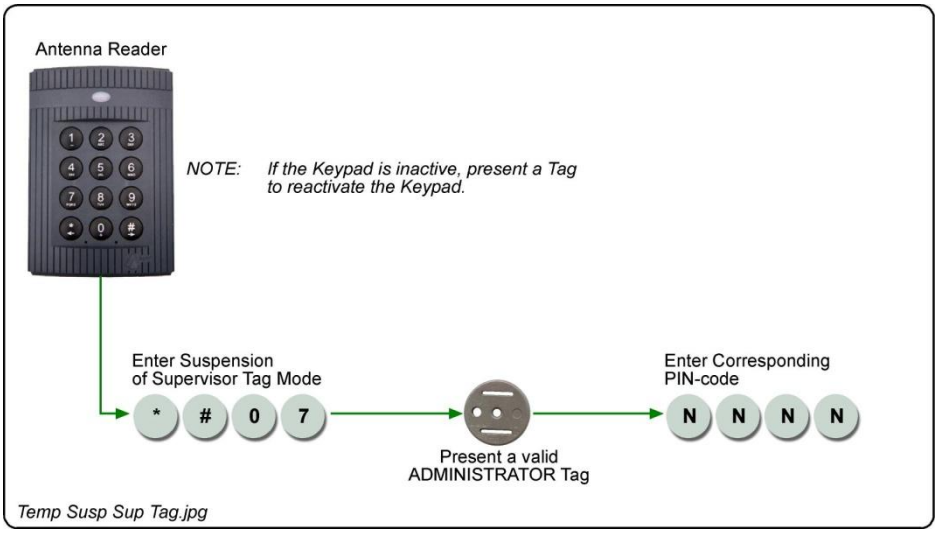

Figure 42: Temporary Supervisor Tag Suspension

Restore Suspended Supervisor Level Tagholder

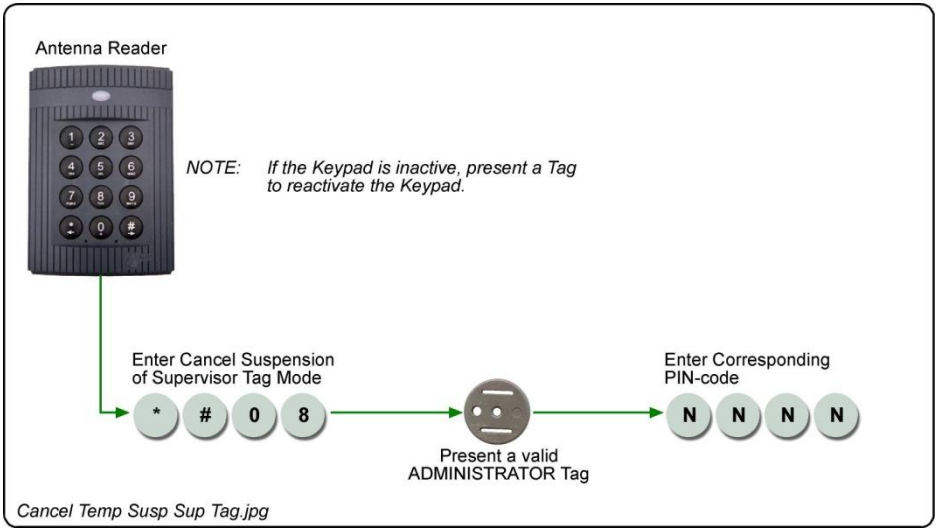

Figure 43: Cancel Temporary Supervisor Tag Suspension

Individual Tag Suspension

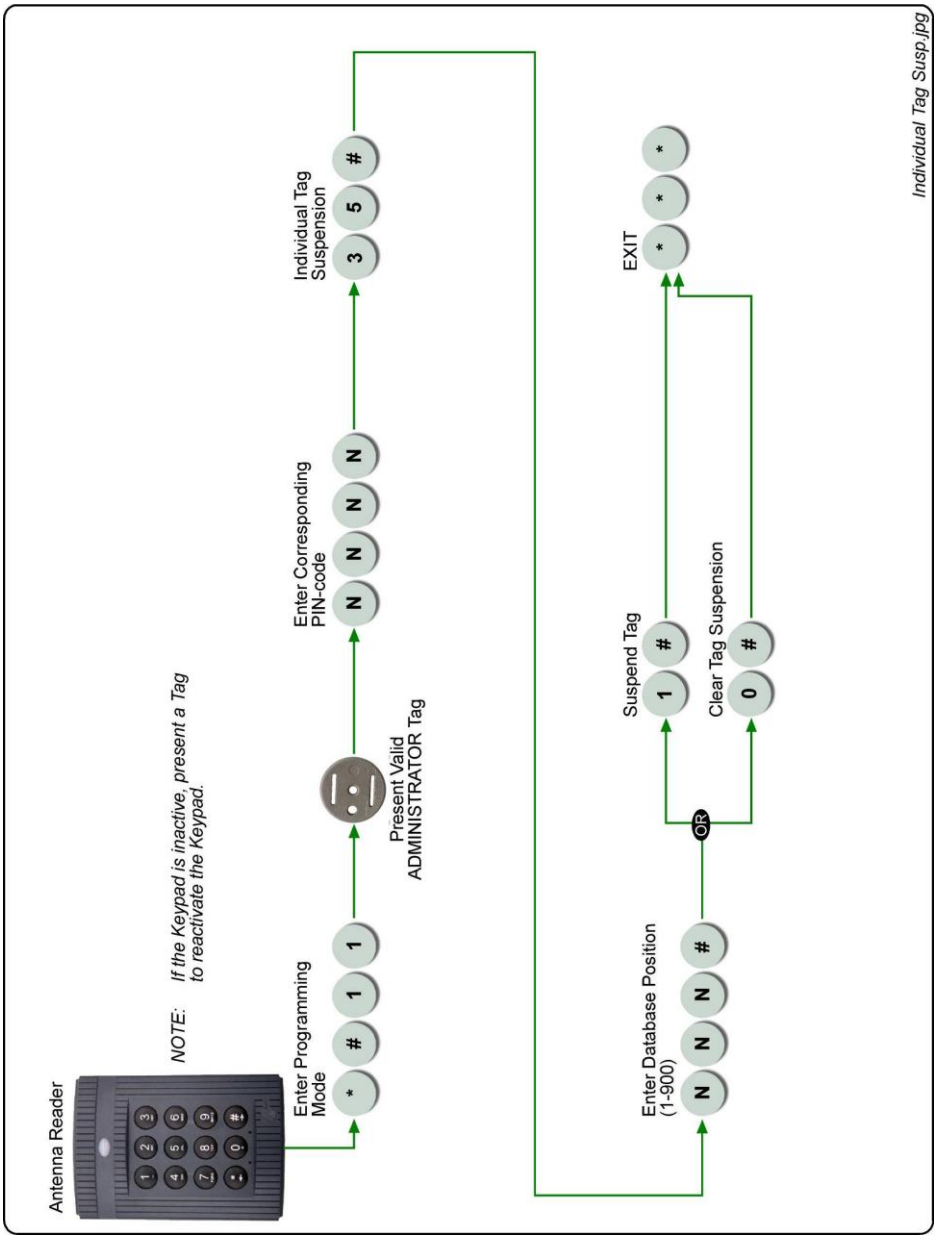

Figure 44: Individual Tag Suspension

Anti-passback (APB) Override

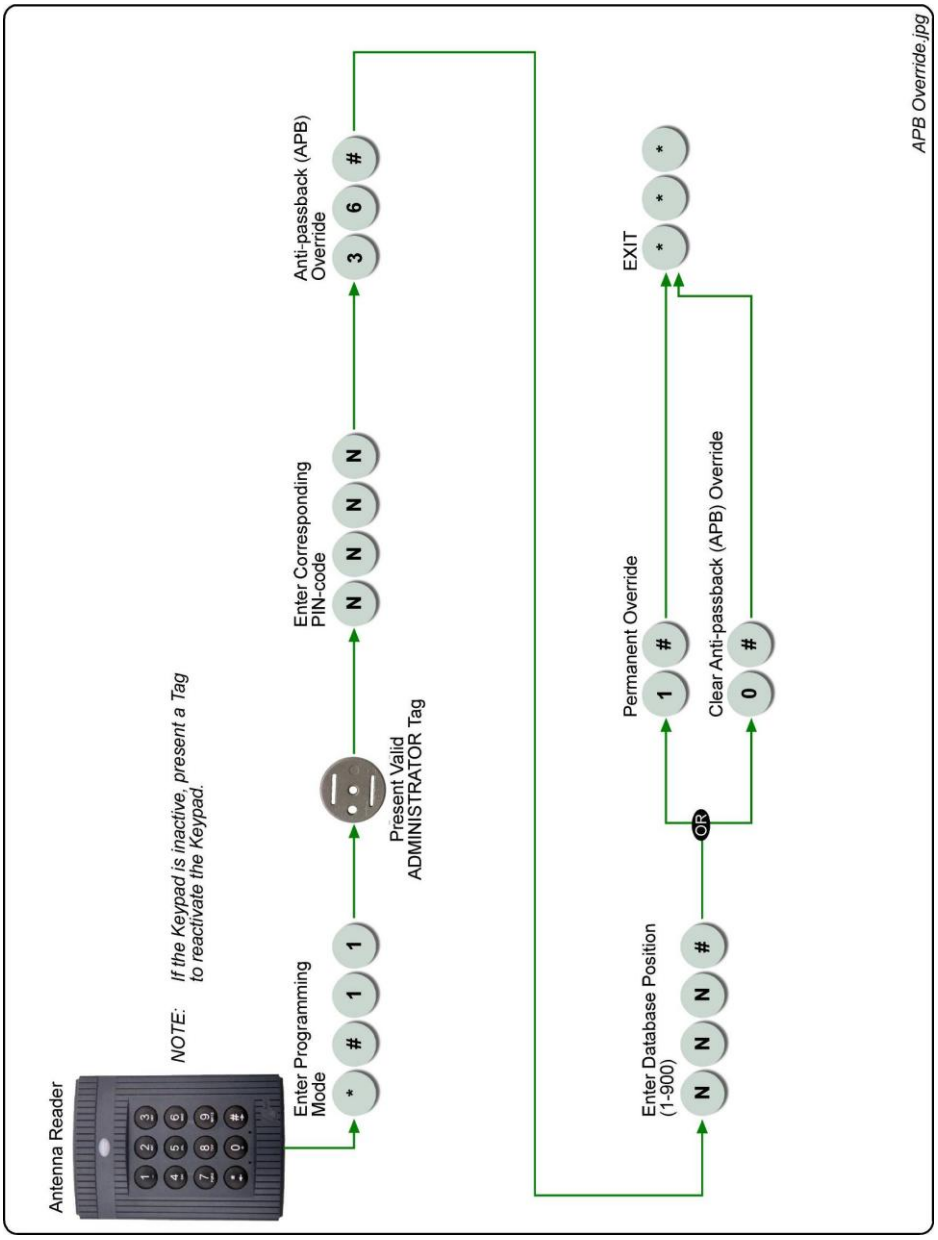

Figure 45: Anti-passback (APB) Override

Anti-passback (APB) Mode

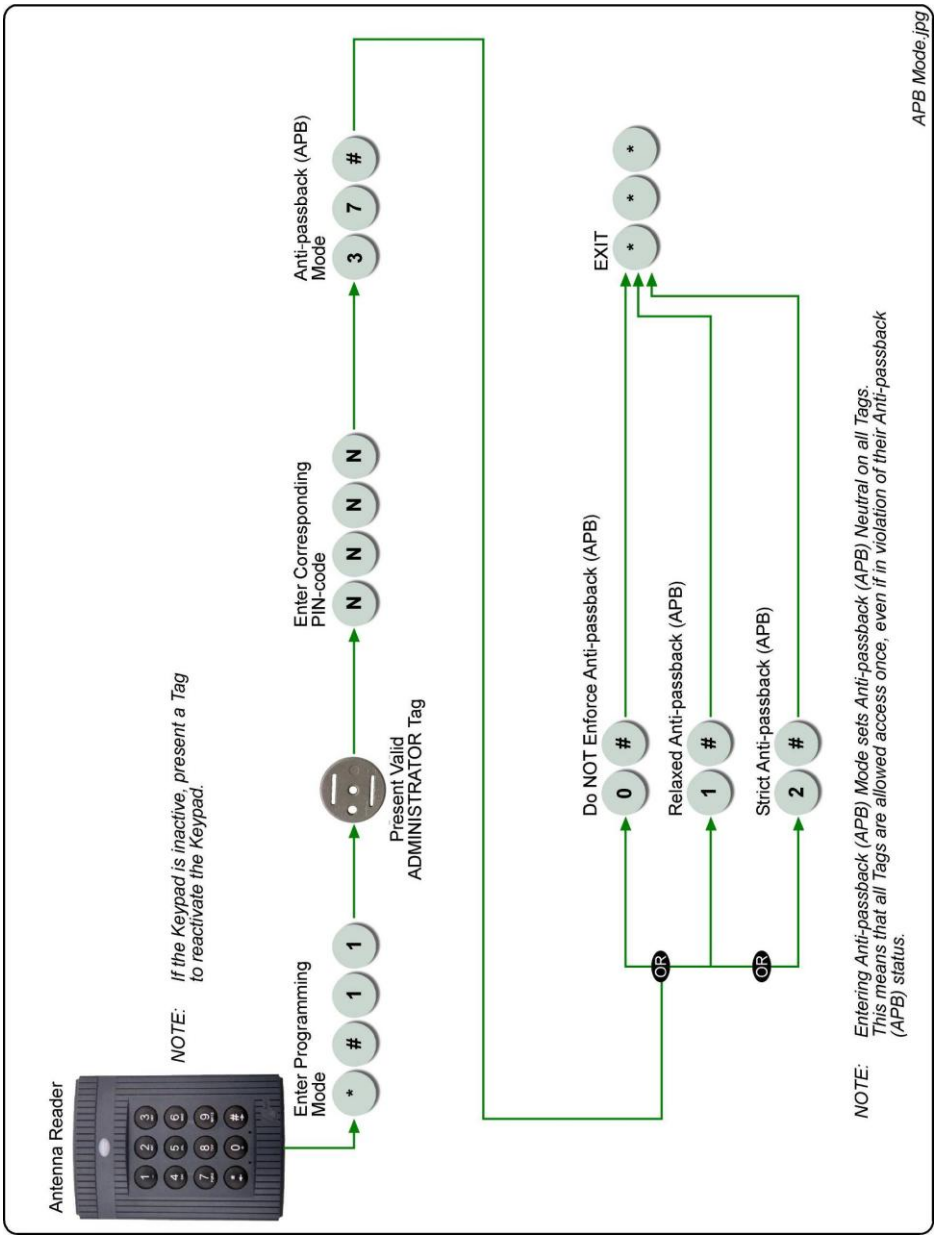

Figure 46: Anti-passback (APB) Mode

Arm the Alarm (Alarm Ready)

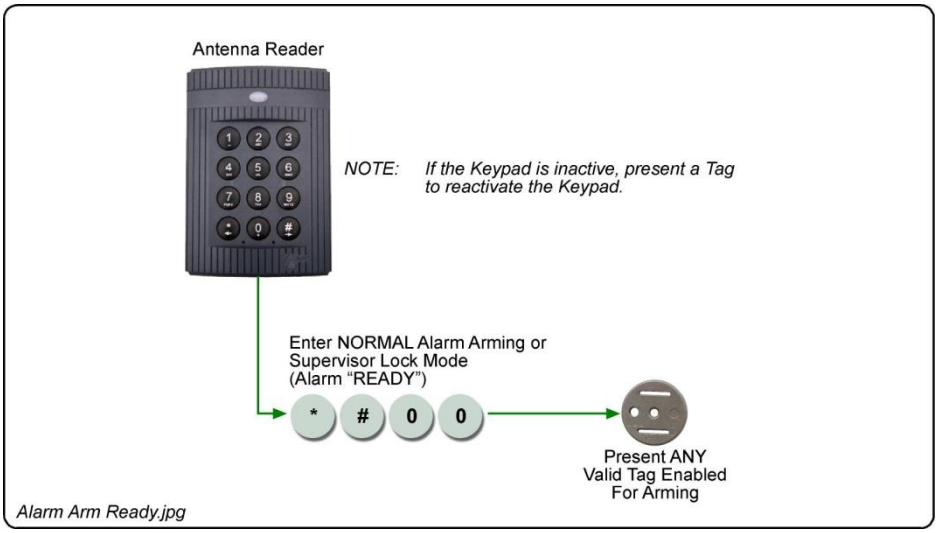

Figure 47: Arm the Alarm (Alarm Ready)

Arm the Alarm (Alarm Not Ready)

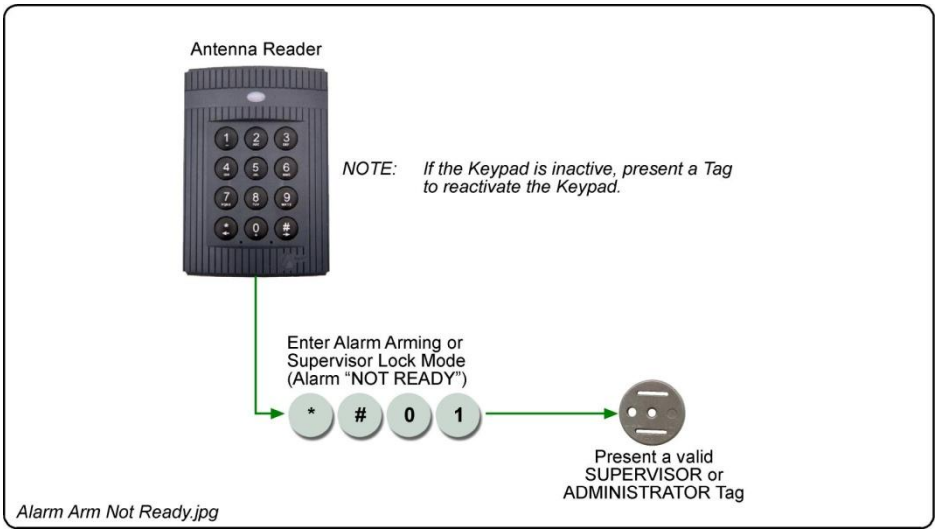

Figure 48: Arm the Alarm (Alarm Not Ready)

Toggle “Quiet” Status LED

In order to prevent the Antenna Reader from drawing attention to itself by means of the LED activity, it is possible to set the status LED into “Quiet” Mode. “Quiet” Mode causes the Status LED to be in an off state whilst waiting for a Tag to be presented.

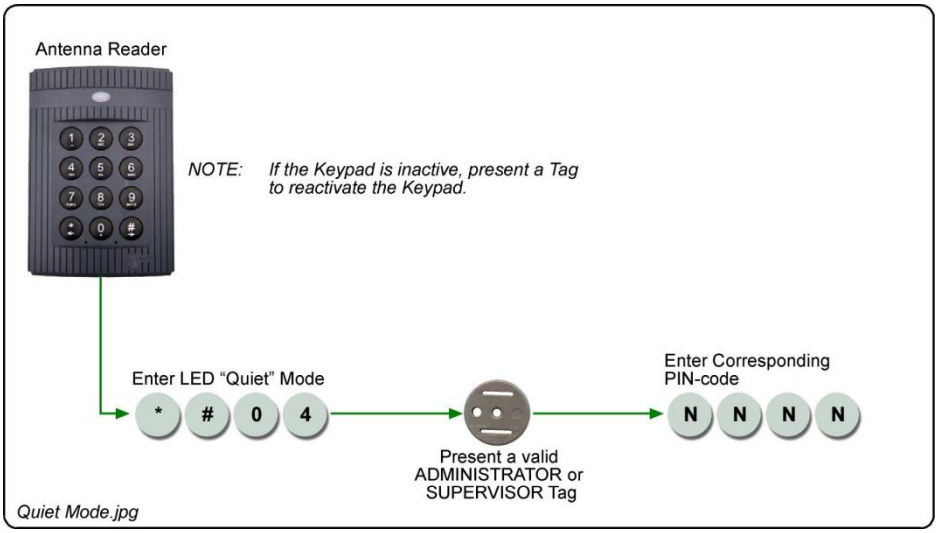

Figure 49: “Quiet” the Status LED

Installing the Real Time Clock (RTC)/RAM Backup Battery

When handling the Real Time Clock/RAM Backup Battery, be careful NOT to touch the Positive and Negative Poles simultaneously. Doing so will discharge the Battery.

The Battery Holder is located on the left-hand side of the Controller's Printed Circuit Board (PCB), alongside the RTE Input Terminal Block.

Replacement

1. Remove the Controller's Top Cover.
2. Remove the old 3 V, CR2032, Lithium cell Battery from the Battery Holder by pulling the plastic retaining clip horizontally AWAY from the Battery Holder. The Battery Holder is spring-loaded, and will raise the Battery out of the Holder.
3. Slide the new 3 V, CR2032, Lithium cell Battery under the metal clip of the Battery Holder, with the "+" Terminal facing UP.
4. Press the new Battery firmly into the Battery Holder.
5. Attach the Controller's Top Cover.

Power-on Self-test

The Power-on Self-test tests the RAM, Flash-ROM checksums and Real Time Clock (RTC).

TAG LOCATION TABLE

Location and Tagholder	Location and Tagholder	Location and Tagholder
1.	38.	75.
2.	39.	76.
3.	40.	77.
4.	41.	78.
5.	42.	79.
6.	43.	80.
7.	44.	81.
8.	45.	82.
9.	46.	83.
10.	47.	84.
11.	48.	85.
12.	49.	86.
13.	50.	87.
14.	51.	88.
15.	52.	89.
16.	53.	90.
17.	54.	91.
18.	55.	92.
19.	56.	93.
20.	57.	94.
21.	58.	95.
22.	59.	96.
23.	60.	97.
24.	61.	98.
25.	62.	99.
26.	63.	100.
27.	64.	101.
28.	65.	102.
29.	66.	103.
30.	67.	104.
31.	68.	105.
32.	69.	106.
33.	70.	107.
34.	71.	108.
35.	72.	109.
36.	73.	110.
37.	74.	111.

Location and Tagholder	Location and Tagholder	Location and Tagholder
112.	151.	190.
113.	152.	191.
114.	153.	192.
115.	154.	193.
116.	155.	194.
117.	156.	195.
118.	157.	196.
119.	158.	197.
120.	159.	198.
121.	160.	199.
122.	161.	200.
123.	162.	201.
124.	163.	202.
125.	164.	203.
126.	165.	204.
127.	166.	205.
128.	167.	206.
129.	168.	207.
130.	169.	208.
131.	170.	209.
132.	171.	210.
133.	172.	211.
134.	173.	212.
135.	174.	213.
136.	175.	214.
137.	176.	215.
138.	177.	216.
139.	178.	217.
140.	179.	218.
141.	180.	219.
142.	181.	220.
143.	182.	221.
144.	183.	222.
145.	184.	223.
146.	185.	224.
147.	186.	225.
148.	187.	226.
149.	188.	227.
150.	189.	228.

Location and Tagholder	Location and Tagholder	Location and Tagholder
229.	268.	307.
230.	269.	308.
231.	270.	309.
232.	271.	310.
233.	272.	311.
234.	273.	312.
235.	274.	313.
236.	275.	314.
237.	276.	315.
238.	277.	316.
239.	278.	317.
240.	279.	318.
241.	280.	319.
242.	281.	320.
243.	282.	321.
244.	283.	322.
245.	284.	323.
246.	285.	324.
247.	286.	325.
248.	287.	326.
249.	288.	327.
250.	289.	328.
251.	290.	329.
252.	291.	330.
253.	292.	331.
254.	293.	332.
255.	294.	333.
256.	295.	334.
257.	296.	335.
258.	297.	336.
259.	298.	337.
260.	299.	338.
261.	300.	339.
262.	301.	340.
263.	302.	341.
264.	303.	342.
265.	304.	343.
266.	305.	344.
267.	306.	345.

Location and Tagholder	Location and Tagholder	Location and Tagholder
346.	385.	424.
347.	386.	425.
348.	387.	426.
349.	388.	427.
350.	389.	428.
351.	390.	429.
352.	391.	430.
353.	392.	431.
354.	393.	432.
355.	394.	433.
356.	395.	434.
357.	396.	435.
358.	397.	436.
359.	398.	437.
360.	399.	438.
361.	400.	439.
362.	401.	440.
363.	402.	441.
364.	403.	442.
365.	404.	443.
366.	405.	444.
367.	406.	445.
368.	407.	446.
369.	408.	447.
370.	409.	448.
371.	410.	449.
372.	411.	450.
373.	412.	451.
374.	413.	452.
375.	414.	453.
376.	415.	454.
377.	416.	455.
378.	417.	456.
379.	418.	457.
380.	419.	458.
381.	420.	459.
382.	421.	460.
383.	422.	461.
384.	423.	462.

Location and Tagholder	Location and Tagholder	Location and Tagholder
463.	502.	541.
464.	503.	542.
465.	504.	543.
466.	505.	544.
467.	506.	545.
468.	507.	546.
469.	508.	547.
470.	509.	548.
471.	510.	549.
472.	511.	550.
473.	512.	551.
474.	513.	552.
475.	514.	553.
476.	515.	554.
477.	516.	555.
478.	517.	556.
479.	518.	557.
480.	519.	558.
481.	520.	559.
482.	521.	560.
483.	522.	561.
484.	523.	562.
485.	524.	563.
486.	525.	564.
487.	526.	565.
488.	527.	566.
489.	528.	567.
490.	529.	568.
491.	530.	569.
492.	531.	570.
493.	532.	571.
494.	533.	572.
495.	534.	573.
496.	535.	574.
497.	536.	575.
498.	537.	576.
499.	538.	577.
500.	539.	578.
501.	540.	579.

Location and Tagholder	Location and Tagholder	Location and Tagholder
580.	619.	658.
581.	620.	659.
582.	621.	660.
583.	622.	661.
584.	623.	662.
585.	624.	663.
586.	625.	664.
587.	626.	665.
588.	627.	666.
589.	628.	667.
590.	629.	668.
591.	630.	669.
592.	631.	670.
593.	632.	671.
594.	633.	672.
595.	634.	673.
596.	635.	674.
597.	636.	675.
598.	637.	676.
599.	638.	677.
600.	639.	678.
601.	640.	679.
602.	641.	680.
603.	642.	681.
604.	643.	682.
605.	644.	683.
606.	645.	684.
607.	646.	685.
608.	647.	686.
609.	648.	687.
610.	649.	688.
611.	650.	689.
612.	651.	690.
613.	652.	691.
614.	653.	692.
615.	654.	693.
616.	655.	694.
617.	656.	695.
618.	657.	696.

Location and Tagholder	Location and Tagholder	Location and Tagholder
697.	736.	775.
698.	737.	776.
699.	738.	777.
700.	739.	778.
701.	740.	779.
702.	741.	780.
703.	742.	781.
704.	743.	782.
705.	744.	783.
706.	745.	784.
707.	746.	785.
708.	747.	786.
709.	748.	787.
710.	749.	788.
711.	750.	789.
712.	751.	790.
713.	752.	791.
714.	753.	792.
715.	754.	793.
716.	755.	794.
717.	756.	795.
718.	757.	796.
719.	758.	797.
720.	759.	798.
721.	760.	799.
722.	761.	800.
723.	762.	801.
724.	763.	802.
725.	764.	803.
726.	765.	804.
727.	766.	805.
728.	767.	806.
729.	768.	807.
730.	769.	808.
731.	770.	809.
732.	771.	810.
733.	772.	811.
734.	773.	812.
735.	774.	813.

Location and Tagholder	Location and Tagholder	Location and Tagholder
814.	843.	872.
815.	844.	873.
816.	845.	874.
817.	846.	875.
818.	847.	876.
819.	848.	877.
820.	849.	878.
821.	850.	879.
822.	851.	880.
823.	852.	881.
824.	853.	882.
825.	854.	883.
826.	855.	884.
827.	856.	885.
828.	857.	886.
829.	858.	887.
830.	859.	888.
831.	860.	889.
832.	861.	890.
833.	862.	891.
834.	863.	892.
835.	864.	893.
836.	865.	894.
837.	866.	895.
838.	867.	896.
839.	868.	897.
840.	869.	898.
841.	870.	899.
842.	871.	900.

Table 5: Tag Location Table

GUARANTEE OR WARRANTY

This product conforms to our Guarantee or Warranty details placed on our Web Site, to read further please go to www.impro.net.

This manual is applicable to the ImproX IXP110 Controller, IXP904-1-0-GB-02, IXP905-1-0-GB-02 and IXP906-1-0-GB-03. (The last two digits of the Impro stock code indicate the issue status of the product).			
IXP342-0-0-GB-05	Issue 06	Sep 2007	IXP110\Controller\English Manuals\LATEST ISSUE\IXP110C-usrm-en-06.docx