SENTRY™
AUTOMATICALLY THE BETTER CHOICE

Wireless Access Control Keypad

OPERATING INSTRUCTIONS

Revision History

Rev 1.1.. 2014/01/09
Rev 1.2.. 2014/08/21

Table of Contents

Introduction

The SENTRY Access Control LED Wireless Keypad is a durable, quality keypad designed to provide security access to a restricted area. Access is gained by entering a valid code. The keypad can operate in fixed length mode, meaning that a fixed number of digits can be set and the use of the [#] key at the end of the code is not needed or variable length mode, where the code can vary from one to ten digits.

Up to a thousand codes can be stored in the units non-volatile memory. Thus no codes will be lost when the power is removed from the unit. New codes can be added to the system and existing codes can be deleted as required. "Token" codes can be added allowing the user only a preset number of activations, after which the code is deleted. Upto 15 code channels is availible for activation of various equipment.

General use

After a user has been added. The user can now be learned into a receiver compatible to the remote vendor selected. If the quick learn option was used to add a user, the default will be a SENTRY 433Mhz code copping receiver, and the transmit time is approx 2 sec.

The user can now enter the password followed by the [#] key or No [#] key depending on the fixed or variable code length setting.

When the keypad was not used for more than 20 sec, the keypad will enter low power mode. Thus the Yellow led will flash every 5 seconds. When a code is entered, the keypad will exit low power mode instantly and the code will be verified.

When a code is entered incorrect more that the specified time, the keypad will enter lockout mode. In this mode the RED led will be on solid, after ~20 sec the keypad will enter sleep mode and the RED led will start flashing every 5 seconds. During this lockout period no codes will be accepted from the user.

Fixed or Variable Code Length Setting

This setting enables the user to set the type of code length to be stored on the keypad. If the user selects the fixed code length, a length of 1 to 5 can be selected and the need for the [#] key at the end of the entered code is not needed. Each new code that is then stored needs to have a fixed length that is set, ie 4.

If the variable code setting is selected, any length of code can be stored, and the [#] key is required to verify the code.

For fixed length set the length Type to 1, for variable length set the length type 0.

At default the variable code length is ENABLED.

Please Note: This setting must be changed before any codes are stored on the keypad. When the setting is changed, all codes that is stored will be lost!!! A conformation beep will be heard once all information is set. This could take a while depending on the amount of codes are deleted.

Enter the following keystrokes: *Indication LED's*
                                                                              Yellow

1. Enter program mode:	[*][*Master Code][*]*	Green
2. Select Length Setting	[3][*]	Red
3. Select Length Type	[0 / 1][*]	Yellow
4. Enter the Length	[*Length*[†]][*]	Green
5. Exit program mode	[#][#]	Yellow

[†] The code length can be omited by pressing [*] when variable length is set.

6

Example:

Set the code length to fixed with a code length of 4 digits

		Indication LED's
		Yellow
1.Enter program mode:	[*][1][2][3][4][5][6][*]	Green
2.Select Length Setting:	[3][*]	Red
3.Select Length Type:	[1][*]	Yellow
4.Enter the Length:	[4][*]	Green
5.Exit Menu	[#][#]	Yellow

The Quick Learn Procedure
The following Quick Learn Procedure will enable you to start using the SENTRY Access keypad system right away.

The Quick Learn Procedure
Adds a new access code at a specified address. The default channel is 0, the default frequency is 433.925Mhz, the default code format is SENTRY, the transmit time is 2 seconds and the code is unlimited.

Enter the following keystrokes:		*Indication LED's*
		Yellow
1.Enter program mode:	[*][*Master Code*[‡]][*]	Green
2.Select Quick Learn:	[0][*]	Red
3.Enter User Address:	[*Address*][*]	Yellow
4.Enter Access Code:	[Code][*]	Green
5. Exit program mode:	[#][#]	Yellow

Example:
Quick Learn Access code 13795 into address 10 (Master Code = 123456)

		Indication LED's
		Yellow
1.Enter program mode:	[*][1][2][3][4][5][6][*]	Green
2.Select Quick Learn:	[0][*]	Red
3.Enter User Address:	[1][0][*]	Yellow
4.Enter Access Code:	[1][3][7][9][5][*][§]	Green
5.Exit Menu	[#][#]	Yellow

[‡] Default Master Code = 123456

[§] Repeat step 3 to learn in another code

Change The Master Code

This function changes the currently stored master code. The master code <u>MUST</u> be 6 digits.

Note: The master code cannot be used as an access code.

Enter the following keystrokes: *Indication LED's*
                                                   Yellow
1. Enter program mode: [*][*Master Code*][*]   Green
2. Change master code: [9][*]   Red
3. New Master code: [*new code*][*]   Yellow
4. Exit program mode: [#][#]   Yellow

Example:
Replace the master code 123456 with 258011

                                                   Indication LED's
                                                   Yellow
1. Enter program mode: [*][1][2][3][4][5][6][*]   Green
2. Change master cde: [9][*]   Red
3. Enter new master code: [2][5][8][0][1][1][*]   Yellow
4. Exit menu   [#][#]   Yellow

Please Note:
The master code consists of exactly 6 characters. If a code of more than 6 characters or less than 6 characters is entered, an error tone is sounded and the user is given another chance to enter its code.

Add A New User

This function adds a New User to the system, at a specified address, assigns a channel, code format, frequency, transmit time and access limit.

The frequency can be set to either 403.55Mhz or 433.925Mhz, for 403.55Mhz select a **1** and for 433.925Mhz select a **2.**

Various code formats can be selected:
Sentry = 1, Centurion = 2, ET(old) = 3, Sherlotronics = 4, QD = 5

The tx time is the duration that the code is transmitted, it can range from 1 to 9 seconds.

The access limit is from 1 to 255, 0 when it is unlimited

Enter the following keystrokes:		*Indication LED's*
		Yellow
1.Enter program mode:	[*][*Master Code*][*]	Green
2.Select, Add User:	[1][*]	Red
3.Enter User Address:	[*Address*][*]	Yellow
4.Enter User Code:	[*Code*][*]	Green
5.Select channel(1-15):	[*Channel*][*]	Red
6.Select frequency(1 or 2):	[*freq*][*]	Yellow
7.Select Code Format:	[*Format*][*]	Green
8.Enter Tx Time(seconds):	[*time*][*]	Red
9.Enter the access limit:	[*access*][*]	Yellow
10.Exit, program menu	[#][#]	Yellow

Note: 2 beeps will be heard when a code is added successfully, to add another code start at step 3 of the above process.

Example:
Add a user code 5219 to address location 11, select channel 2,
403.55Mhz frequency,select sherlotronics code format, a transmit time
of 3 seconds the code is valid for ever. (master code = 123456)

		Indication LED's
		Yellow
1.Enter program mode:	[*][1][2][3][4][5][6][*]	Green
2.Select, Add Menu:	[1][*]	Red
3.Enter The User Address:	[1][1][*]	Yellow
4.Enter User Code:	[5][2][1][9][*]	Green
5.Select the channel:	[2][*]	Red
6.Select the frequency:	[1][*]	Yellow
7.Select Code format:	[4][*]	Green
8.Enter Tx time:	[3][*]	Red
9.Enter access limit:	[0][*]	Yellow
10.Exit program menu:	[#][#]	Yellow

Delete A User

This function deletes a user at a specified address.

Enter the following keystrokes:		*Indication LED's*
		Yellow
1.Enter program mode:	[*][*Master Code*][*]	Green
2.Select Delete Menu:	[2][*]	Red
3.Enter User Address:	[*Address*][*]**	Yellow
4.Exit Program Mode:	[#][#]	Yellow

** Repeat step 3 to delete additional user codes

Note:
If no address was entered, all the access codes will be deleted and the master code will reset to 123456.

Example 1:
Delete access code at address loaction 50

		Indication LED's
		Yellow
1.Enter program mode:	[*][1][2][3][4][5][6][*]	Green
2.Select Delete Menu:	[2][*]	Red
3.Enter User Address:	[5][0][*]	Yellow
4.Exit Program mode:	[#][#]	Green

Example 2:
Delete all user codes.

		Indication LED's
		Yellow
1.Enter program mode:	[*][1][2][3][4][5][6][*]	Green
2.Select Delete Menu:	[2][*]	Red
3.Enter User Address:	[*]	Yellow
4.Exit Program mode:	[#][#]	Yellow

Example 3:
Delete access code at address location 100 and 120.

		Indication LED's
		Yellow
1.Enter program mode:	[*][1][2][3][4][5][6][*]	Green
2.Select Delete Menu:	[2][*]	Red
3.Enter User Address:	[1][0][0][*]	Yellow
4. Enter User Address:	[1][2][0][*]	Green
4.Exit Program mode:	[#][#]	Yellow

Setting The Lock-out Parameters

This function sets the number of wrong access codes the system will accept before becoming inactive. Thie time can also be set. Default number of wrong codes = 3, default lock-out time is 60 seconds.

The Red led will be <u>ON</u> for the duration of the lockout, where after a tone will be sound and the keypad return to normal operation. After ~20 sec the keypad will enter sleep mode and the RED led will flash every 5 seconds. 2 beeps will be heard on successfull exit of lockout mode.

<u>Enter the following keystrokes:</u>

		Indication LED's
		Yellow
1.Enter program mode:	[*][*Master Code*][*]	Green
2.Select Lock-out Menu:	[5][*]	Red
3.No. Of wrong codes:	[*Wrong Codes*][*]	Yellow
4.Enter reset time:	[*Seconds*][*]	Green
5.Exit Program mode:	[#][#]	Yellow

<u>Notes:</u>
If the Number of wrong codes is set to 0, the unit will accept an
unlimited number of wrong codes.

Example 1:

Set the alarm to be activated after 3 incorrect code entries. The unit
must reactivate after 90 seconds.

		Indication LED's
		Yellow
1.Enter program mode:	[*][1][2][3][4][5][6][*]	Green
2.Select Lock-out Menu:	[5][*]	Red
3. No. Of wrong codes:	[3][*]	Yellow
4.Enter reset time:	[9][0][*]	Green
5.Exit Program Mode:	[#][#]	Yellow

Example 2:
Disable the wrong codes alarm feature.

		Indication LED's
		Yellow
1.Enter program mode:	[*][1][2][3][4][5][6][*]	Green
2.Select Lock-out Menu:	[5][*]	Red
3. No. Of wrong codes:	[0][*]	Yellow
4.Enter reset time:	[0][*]	Green
5.Exit Program Mode:	[#][#]	Yellow

Setting The Key Wipe-out Timer

Sets the number of seconds for which the keystrokes remain valid. This ensures that if a partial code has been entered, it is wiped out of the keypad buffer after a preset time. The code must be entered in its entirety. The clearing of the keypad buffer is indicated by a short beep. The default wipe out time = 15 seconds. **If the wipe out time is set to zero, this function is disabled.**

The sleep enter timer is ~20 seconds, please make sure that the maximuim key wipe-out time is less that the sleep enter timer

Enter the following keystrokes:		*Indication LED's*
		Yellow
1.Enter program mode:	[*][*Master Code*][*]	Green
2.Select wipeout menu:	[4][*]	Red
3.Enter the wipeout time:	[*Seconds*][*]	Yellow
4.Exit Program Mode:	[#][#]	Yellow

Notes:
If the Wipe out time is set to 0, the key wipe out function is disabled.

Example 1:
Set the key wipeout time to 15 seconds.

		Indication LED's
		Yellow
1.Enter program mode:	[*][1][2][3][4][5][6][*]	Green
2.Select the wipeout func:	[4][*]	Red
3.Enter the wipeout time:	[1][5][*]	Yellow
4.Exit program mode:	[#][#]	Yellow

Example 2:
Disable the key wipeout timer.

		Indication LED's
		Yellow
1.Enter program mode:	[*][1][2][3][4][5][6][*]	Green
2.Select the wipeout func:	[4][*]	Red
3.Enter the wipeout time:	[0][*]	Yellow
4.Exit program mode:	[#][#]	Yellow

Setting The Security Parameters

Sets the conditions under which the Alarm channel (channel 3) will activate. It also sets settings like the anti-default, mute tone, enable tamper function with sensitivity and output channel.

The following security settings can be set.

Duress (Code + 1) [Default = off]:
Adding 1 to the last digit of the user code, activates the unit, but also activates the alarm channel. Eg. If the access code is 2580 and the user enters 2581, if gives access to the user but also activates the alarm channel (channel 3).

Wrong codes (Default = off)
When the number of wrong codes, set by the user is exceeded, the alarm channel is activated.

Anti Default feature (Default = on)
Setting this feature prevents the master code and system parameters from being reset by the defaulting features.

Panic Alarm (0) [Default = off]:
Press and hold the [0] untill all three led's are on. This will send an
alarm on channel three.

Tone Mute Feature (Default = off)
The tone mute feature enables the user to turn off the audio of the
keypad, when entering a code. This prevents an eavesdropper from
determining the amount of digits in the code. Tones will still be heard in
programming mode.

Tamper feature (Default = off)
The keypad has a sensor fitted that can detect when the product is
being vandalized or removed from the wall.

Tamper Sensitivity
This function sets the sensitivity of the movement sensor. 0 being the
most sensitive and 9 being the least sensitive.

Alarm Frequency
Select the Frequency to transmit the alarm triggers on: 0 = 433.925Mhz
and 1 = 403.55Mhz. The coding format is SENTRY.

Enter the following keystrokes: *Indication LED's*

		Yellow
1.Enter program mode:	[*][*Master Code*][*]	Green
2.Select security option:	[6][*]	Red
3.Enable Duress:	[0 / 1][*]	Yellow
4.Enable Wrong Codes:	[0 / 1][*]	Green
5.Enable Anit-Default:	[0 / 1][*]	Red
6.Enable Panic Alarm:	[0 / 1][*]	Yellow

7.Enable Mute Function:	[0 / 1][*]	Green
8.Enable Tamper:	[0 / 1][*]	Red
9.Set Sensitivity (0-9):	[*Sensitivity*][*]	Yellow
10.Set the alarm Freq:	[*Freq*][*]	Green
11. Exit program mode:	[#][#]	Yellow

Example 1

Enable the <u>duress function</u> and clear all the other. And set the alarm
frequency to 403.55Mhz.

		Indication LED's
		Yellow
1. Enter program mode:	[*][1][2][3][4][5][6][*]	Green
2. Select Security Menu:	[6][*]	Red
3. Enable Duress:	[1][*]	Yellow
4. Clear Wrong Codes:	[0][*]	Green
5. Clear Anti-Default:	[0][*]	Red
6. Clear Panic Alarm:	[0][*]	Yellow
7. Clear Mute Function:	[0][*]	Green
8. Clear Tamper:	[0][*]	Red
9. Ignore Sensitivity:	[*]	Yellow
10. Set the alarm freq:	[1][*]	Green
11. Exit program mode	[#][#]	Yellow

Restoring The Unit

This function restores all the access codes in an event that something might go wrong. This is done by copying all the information from the backup module to the keypad.

The procedure is as follows:

Insert the backup module into the socket provided (ensure that the keypad is out of low power mode, if not press the [*]button). The keypad will automatically detect the module and all three led will flash. Enter the 6 digit master code followed by the [*], if the code is accepted the three led's will be on solid. Press [3] on the keypad. The RED LED will start flashing, indicating that the memory is being restored. When the restore is complete, the Yellow and Green LED's will turn off. Remove the module, where by the keypad will reset and you may resume operation.

Note:

Restoring from the backup module will overwrite all information previously stored on the keypad. The master code will reset to 123456.

Backing Up The Unit

This function backs up all the information currently stored on the keypad to a backup module.,

The procedure is as follows:

Insert the backup module into the socket provided (ensure that the keypad is out of low power mode, if not press the [*]button). The keypad will automatically detect the module and all three led will flash. Enter the 6 digit master code followed by the [*], if the code is accepted the three led's will be on solid. Press [1] on the keypad. The GREEN LED will start flashing, indicating that the keypad is being backed up. When the backup is complete, the Yellow and Red LED's will turn off. Remove the module, where by the keypad will reset and you may resume operation.

Note:

Backing up to a memory module will overwrite all information that was previously stored on the memory module.

Default The Unit

Both the master code and system parameters can be reset to factory defaults. This is useful when the master code has been forgotten, or the system parameters are in an unknown state.

- ➢ **Defaulting the Master Code**
  Remove the power. Re-apply power while holding the [1] key down for 2 seconds. Two beep will then follow, indicating that the master code has been reset to 123456.

- ➢ **Defaulting the System parameters**
  Remove power. Re-apply power while holding the [2] keys down for 2 seconds.Two beep will then follow, indicating that the system parameters have been reset to the following factory defaults:

Battery Low Indication

When the batteries start to reach the end of there service life, SENTRY wireless keypad will detect the battery low voltage. In normal mode the buzzer will beep 3 times while the red led is flashing. And in low power mode the red led will only be flashing.

There will still be a fair amount of operation left before the batteries are drained completely, but it is advisable to replace the batteries as soon as possible for continued operation.

Note:
The average battery life could be between 1-4 years depending on the amount of daily operations.

Specifications

Physical:
Supply Voltage: 3V – Alkaline Battries (AA)
Operating Temperature: -15°C to +55°C
Housing Material: ABS

Functions:
Code Length: 1 - 10 digits
Memory Capacity: 1000 unique codes
Memory Retention: >200 Years
Output Pulse Range: 1-255's adjustable or latched
Token codes: 1-254 activations
Frequency's   433Mhz And 403Mhz
Distance 433Mhz & 403Mhz: ~40m