

# ACCESSOR™ 4000+

Digital Access Control System

*Now With Standalone Operation!*

**Owner's  
Manual**



**ENGINEERING  
SOLUTIONS INC**

# ACCESSOR™ 4000+

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Digital Access Control System

Serial #:

\_\_\_\_\_

The serial number is located on the back near the wall latch

Dealer Name and Address:

\_\_\_\_\_

Name

\_\_\_\_\_

Address

\_\_\_\_\_

City, State, Zip

\_\_\_\_\_

Phone

Date of Purchase: \_\_\_\_\_



6300 Southcenter Blvd, Suite 209  
Tukwila, WA 98188  
(206) 241-9395 • Fax (206) 241-9411  
[www.engsolinc.com](http://www.engsolinc.com)

# Quick Start

This new version of Accessor features several enhancements:

- ... the ability to add new users at the unit, without a PC
- ... any Level 1 Master code can now be used to mount or unmount the unit from its mounting bracket
- ... added the Level 4 Lockout Mode (in lieu of Privacy)

***Please follow the steps below to get your new Accessor up and running as smoothly & easily as possible.***

- 1) Unpack the Accessor and attach the mounting bracket to a suitable location. Gate units must be removed from the mounting bracket prior to installation, see section 3 page 11.
- 2) New codes may be added at the box (see step 3) or by using ACE™ version 1.30 or greater. ACE™ is available via a free download at our website, [engsolinc.com](http://engsolinc.com).
- 3) Program in new codes at the unit as follows:
  - ... add a new Level 1 Master (*remember this code*)  
**FCN → 1234567 → New Master → 1 → FCN**
  - ... test new Level 1 Master by deleting default Level 1 Master  
**FCN → New Master → 1234567 → FCN**
  - ... confirm the default Level 1 Master is deleted  
**1234567** (unit should beep & illuminate the red LED)
  - ... add any other new codes you need (*repeat as needed*)  
**FCN → New Master → New Code → Level (1-4) → FCN**
- 4) Mount the Accessor on its mounting bracket:
  - ... enter your new Master code & lift open the keybox
  - ... position unit on the mounting bracket, then while holding the keybox open re-enter the new Master code  
**FCN → New Master → FCN**
  - ... slide the unit down, after 10 seconds the latch will move out of the way allowing the keybox to relock

***Congratulations! Your Accessor is ready to go!***

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# Introduction

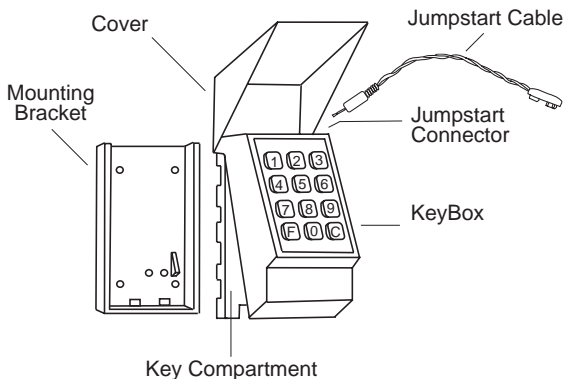
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This manual covers the installation and basic operation of the *Accessor4000*, a complete Digital Access Control system. The system is comprised of two parts:

1. The Accessor4000 access control box.
2. The optional ACE™ PC software which is used to create a user database, access schedules and retrieve and store audit trail logs from multiple Accessors. ACE™ is available free via download at our website “engsolinc.com”.

## Shipping Contents

- Owner’s Manual
- Mounting Bracket
- 1” Lag Screws (4)
- Allen Wrench (for removing the cover)
- Jumpstart Cable



Also included with the Gate/Fence model:

- Weather Vandal Housing & Shackle assembly
- Fence Mounting Plate
- Hardware bag including:
  - (4) 1 1/2" Hex Bolts
  - (4) 1 3/4" Hex Bolts

Also included with the Padlock/Fence model:

- Weather Vandal Housing
- Fence Mounting Plate
- Hardware bag including:
  - (4) 1 1/4" Hex Bolts
  - (4) 1 1/4" Lag Screws

Tools needed:

- 3/8" wrench
- Phillips Screwdriver (*Gate/Fence model only*)

## Section 2: Installation

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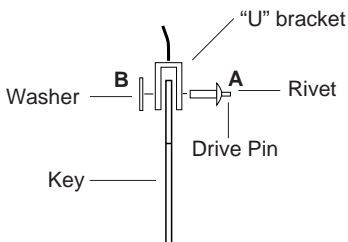
### Key Caddy and Key Hook

1. Attach the mounting bracket with the four screws provided, then mount the Accessor on the bracket as described in Section 3, page 10.
2. Enter your access code (or try the default Level 1 code, 1234567) and lift the keybox to gain access to the key compartment.

### *Attaching the Key*

#### **Key Caddy**

1. Assemble as shown in diagram below.
2. While holding assembly in place, squeeze the rivet “drive pin” into rivet housing using a pair of pliers squeezing A towards B.



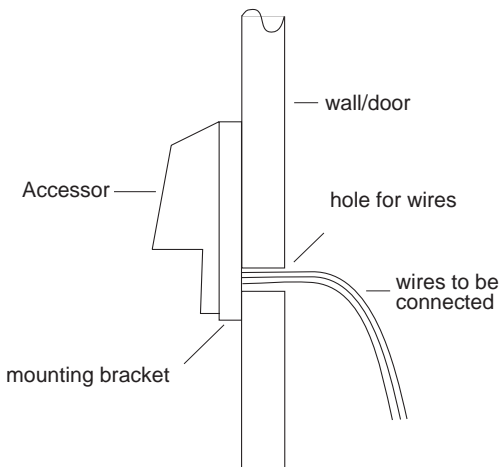
#### **Key Hook**

1. Hang the key on the “J” hook.

### Electric Strike

1. Attach the mounting bracket over the opening in the wall with the four screws or bolts provided.

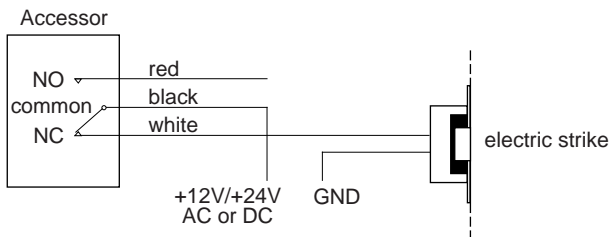
- Thread wires through the hole in the mounting bracket and wall (or door) and mount the Accessor on the bracket as described in Section 3, page 10.



- Hang the key on the “J” hook.
- Connect the wires as shown below.

*For Fail Unlocked —*

Connect the white wire to the electric strike.



This is an example of Fail Unlocked.



## For Fail Secure —

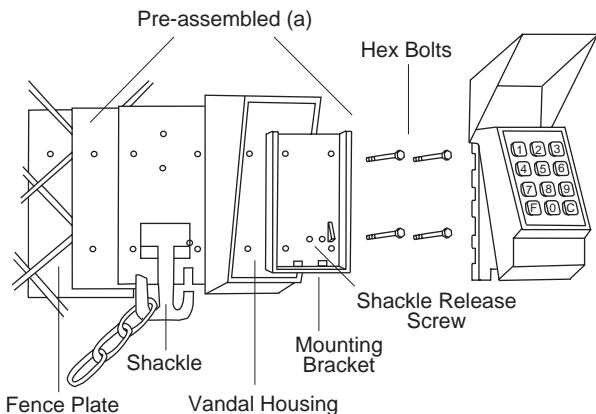
Connect the red wire to the electric strike.

*Caution: Be sure the unused wire from the Accessor will not come in contact with any metal surface.*

## Gate/Fence

There are 2 assemblies (a) and (b):

- (a) Pre-assembled Vandal housing, mounting bracket and shackle assembly
- (b) Fence plate with 4 threaded holes



## To install —

1. Position fence plate on the **back side** of the fence.
2. Position vandal housing assembly on the front

side of the fence.

3. Align the 4 holes, then screw the 2 assemblies together using the hex bolts provided.
4. Unscrew the shackle release screw; the shackle will drop down, completely exposing both prongs.
5. Place one end of the chain over the left (longer) prong. Push the shackle up and retighten the screw.
6. Mount the Accessor on the mounting bracket as described in Section 3, page 10.

*To operate —*

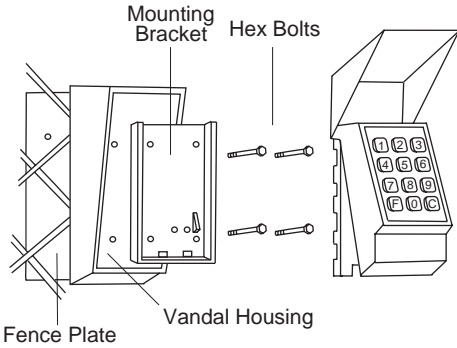
1. Enter your access code.
2. Lift open the keybox and pull the pin.
3. The shackle drops down to free one end of the chain (other end is secured during installation).
4. When finished, loop the chain back over the shackle then push shackle up into Accessor until it locks into place.

## Padlock/Fence

*To install —*

1. Position fence plate with 4 threaded holes on the **back side** of the fence.
2. Place vandal housing against the front side of the fence.
3. Position the mounting bracket inside the vandal housing.

4. Align the 4 holes in each piece, and screw them together using the hex bolts provided.
5. Mount the Accessor on the mounting bracket as described in Section 3, page 10.



# Section 3: Mounting the Accessor

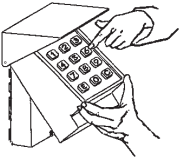
## Installing on Mounting Bracket



... enter your access code (or try the default master code 1234567)

... lift open the keybox

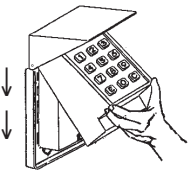
... position the Accessor on the mounting bracket so the bottom is just below the triangular stop



... while holding the kebox open, enter any Level 1 Master code as shown: FCN 1234567 FCN

... slide the Accessor down until it stops

... after 10 seconds the latch will relock, securing the unit and allowing the keybox to close  
*Note: the keybox cannot be closed and locked until the 10 seconds have elapsed*

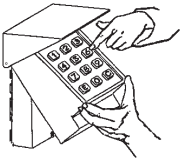


## Removing from Mounting Bracket



... enter your access code (or try the default master code 1234567)

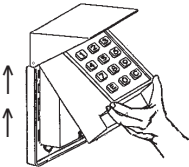
... lift open the keybox



... while holding the kebox open, enter any Level 1 Master code as shown: FCN 1234567 FCN

... *gate unit only*... pull the pin out enough to clear the mounting bracket

... slide the Accessor up and off the bracket



... after 10 seconds the latch will relock, allowing the keybox to close  
*Note: the keybox cannot be closed and locked until the 10 seconds have elapsed*

## Section 4: Basic Operations

---

### Overview

To gain entry to an area secured by an Accessor, a user enters an access code at the Accessor. If the code is valid, access is permitted to the key compartment which is used to hold a door key, card or latch. This access is recorded in the Accessor's memory log which may be downloaded to a PC or Palm Organizer using the optional ACE™ software & serial cable. (ACE may be downloaded for free at our web site, engsolinc.com.)

Users are assigned an Access Level based on four levels of security:

- Level 1 Master** - unlimited access and can add or delete any Level 1-4 user at the unit
- Level 2 Emergency** - unlimited access
- Level 3 Supervisor** - unlimited access and can add or delete any Level 4 user at the unit
- Level 4 Worker** - access limited (only by Level4 Lockout mode)

### Using the Unit

... enter a valid access code

*:beep + green LED lights if valid, red LED lights if not*

*:unlocks keybox allowing access to key compartment (non-electric strike units)*

or

*:electric strike energizes (electric strike units only)*

... get key from key compartment

or

... pull pin to release shackle (gate units only)

*:after 3 seconds, beep + LED turns off*

*:electric strike turns off*

... return key to key compartment

... close keybox

*:keybox automatically locked upon closing*

... resecure chain to shackle & push shackle up into Accessor until it locks into place (gate units only)

*Note: If the unit is operating an electric strike, only Level 1, 2 and 3 codes will provide access to the key compartment.*

## Adding a User

Any Level 1 or Level 3 User may add Users at the Accessor by entering the sequence as shown:

FCN → Master → New Code → Level (1-4) → FCN  
or

FCN → Supervisor → New Code → 4 → FCN

Level 3 Supervisors may only add Level 4 Users.

Successful additions are indicated with a green LED and unsuccessful attempts with a red LED. All

User Codes must be unique, so a New Code cannot already be used.

## Deleting a User

Any Level 1 or Level 3 User may delete Users at the Accessor by entering the sequence as shown:

FCN → Master → User Code → FCN

or

FCN → Supervisor → User Code → FCN

Level 1 Masters may delete any Level 1-4 Users, Level 3 Supervisors may only delete Level 4 Users.

Successful deletions are indicated with a green LED and unsuccessful attempts with a red LED.

## Level 4 Lockout Mode

The Level 4 Lockout mode denies access to Level 4 users by toggling between Lockout active and inactive each time the mode is entered.

*to activate Lockout*

FCN → Master → 0 → FCN      ...activated

or

FCN → Supervisor → 0 → FCN      ...activated

*to deactivate Lockout... enter again*

FCN → Master → 0 → FCN      ...deactivated

or

FCN → Supervisor → 0 → FCN      ...deactivated

While in Level 4 Lockout, all key presses except CLR will be indicated by a beep and a red LED. When in this mode, only Level 1, 2 or 3 codes are allowed access.



## Tamper Lockout

Tamper Lockout inhibits unauthorized code “guessing” by ignoring keypresses after detecting multiple invalid codes being entered.

The unit will not accept any codes for 30 seconds if an invalid code is entered 3 or more times in a row.

While in Tamper Lockout all key presses will be indicated by a beep and a red LED.

## Accessing the Serial Connector

The serial connector is located in the key compartment, and is used for programming and retrieving logs by a PC or Palm Organizer. To gain access to the serial connector, enter a valid access code.

Programming and log retrieval requires the use of the optional ACE™ software & serial cable. (ACE may be downloaded for free at our web site, [engsolinc.com](http://engsolinc.com).)

*Note: If the unit is operating an electric strike, only Level 1, 2 and 3 codes will provide access to the key compartment.*

## Section 5: Batteries

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### Replacing the Batteries

1. Remove the Accessor from the mounting bracket as described in Section 3, page 11.
2. Use a small Phillips screwdriver to remove the two screws securing the back cover to the Accessor.
3. Remove the back cover and the old batteries.
4. Insert (4) AA 1.5 volt alkaline batteries, be sure to observe the proper polarity.

The Accessor should respond to keypresses now. If it does not then remove one of the batteries, press a key on the keypad until the unit does not beep and then reinstall the battery.

5. Replace the back cover and secure it with the two screws.
6. Remount the Accessor onto the mounting bracket as described in Section 3, page 10.

*Note: Nonvolatile memory in the Accessor retains all codes, logs and programming even without batteries.*

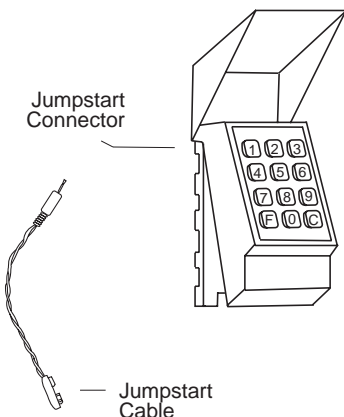
### Battery Failure

- If low battery is detected the Accessor will beep Hi/Lo/Hi (warble) when a key is pressed.
- If the battery voltage drops too low, the unit may be unable to open even when a valid code is entered. At this point it will be necessary to Jumpstart.

## Jumpstarting the Accessor

In the event of battery failure, jumpstarting provides power to the Accessor. Use the jumpstart cable provided and follow the steps below:

1. Plug a 9 volt battery (not included) into the jumpstart cable.
2. Push the jumpstart cable into the connector located on the top left corner of the Accessor keypad (beneath the cover).
3. Enter a valid Access Code to open the keybox. Then enter any Level 1 Master Code to remove the Accessor from the mounting bracket.
5. The batteries can now be replaced (as described in the previous section) and the Accessor returned to service.



## Section 6: Replacing the Key Caddy Recoil

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*Remove your key from the cable —*

1. Break off the flanged end holding rivet in place.
2. Remove rivet, freeing key.

*Remove cable from guide —*

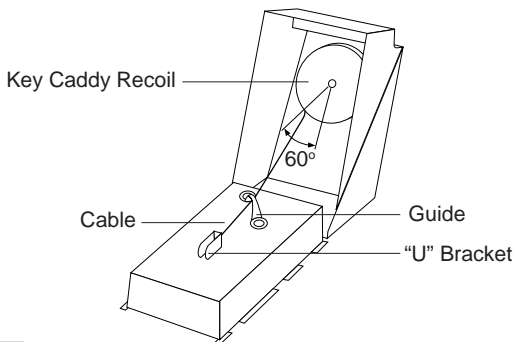
1. Unscrew guide, freeing cable.

*Remove key caddy recoil —*

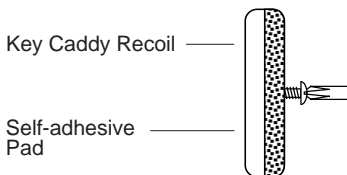
1. Unscrew the recoil.
2. Pry the key caddy recoil off the inside of the housing.

*Replace Recoil —*

1. Taking the new recoil, remove the backing from the self-adhesive pad.
2. Aligning the cable as shown below, position the new recoil in the housing with the self-adhesive pad towards the housing and press it into place.



3. Secure the recoil with the screw.

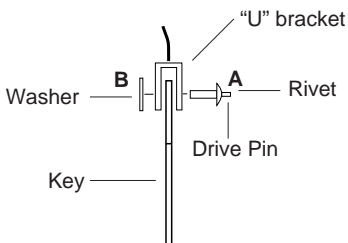


*Install cable in guide —*

1. Pull the cable through the guide.
2. Screw the guide back into place.

*Attach the key —*

1. Assemble as shown in diagram below.
2. While holding assembly in place, squeeze the rivet "drive pin" into rivet housing using a pair of pliers squeezing A towards B.



## **Appendix A: Troubleshooting**

If you are unable to solve the problem, try our web site for the latest information or consult with your dealer or call Engineering Solutions at (206) 241-9395 (8:00 am - 4:30 pm Pacific) and ask for Technical Support.

### *Accessor will not open*

- ... Your Level 4 Code is not accepted because the Level 4 Lockout Mode is active (indicated by red LED during keypresses).
- ... Batteries are weak or dead. No beeps during keypresses or batteries are too weak to open latch. Jumpstart and replace the batteries, see Section 5, page 17. The electronics require minimal power and can still be working when batteries are too weak to open latch.

### *Keypad housing will not latch when closed*

- ... Latch is in the unmount position (preventing the housing from closing). Wait until the green LED has turned off, 10 seconds. The latch will then return to its normal position & allow the housing to close.
- ... The key is obstructing the housing from closing. Be sure the key is flat against the key compartment and away from the latch.

### *Forgot Codes and need to reset Accessor to factory defaults*

- ... Unmount the unit and remove the back cover,

then remove one battery. After the battery is removed, press a key on the keypad until the unit no longer beeps. Then press and hold down the Reset button (on the upper right-hand corner of the board) while reinstalling the last battery. Hold for 2 seconds. The Accessor will indicate it has been reset to factory defaults by flashing the red LED and beeping twice.

### *Accessor cannot be removed from mounting bracket*

... Be sure you are using a Level 1 Master code in the sequence shown:

FCN → Master → FCN

### *Accessor will not download*

... Downloading requires a serial cable and ACE™ version 1.30 or greater.

... Confirm that the port the serial cable is plugged into on your computer matches the COM Port number selected in the **Communicate** window.

### *Shipping & Repair*

Please call Engineering Solutions' customer service department for a return authorization. A number will be assigned to aid in tracking your unit.

Send the entire unit, enclosing a brief explanation of the problem along with your company name, address, phone number and name of a contact person. **The return authorization number must be clearly marked on the outside of the box.** No

COD's or freight collect shipments will be accepted. If the original packing materials are not available, package the unit securely in a sturdy container with enough padding to surround the unit on all sides. The unit should not be able to shift after packing. Engineering Solutions will not be responsible for any damage which may occur.

Send to :        Engineering Solutions, Inc.  
                  6300 Southcenter Blvd., Suite 209  
                  Tukwila, WA 98188  
                  (206) 241-9395



## Appendix B: Specifications

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### Defaults

Code Length	7
Level 1 Master Code	1234567
Level 2, 3 & 4 Codes	None
Release Wall Latch	FCN Master FCN
Level 4 Lockout Mode	FCN Mast/Supv 0 FCN
Serial Comm Code	Master
Tamper Lockout	30 sec after 3 invalid attempts
Log	cleared (with room for 5000 entries)

### Indicators

The Accessor has a buzzer and two LEDs, Red and Green. The buzzer produces two tones, Hi and Lo, and also a Warble (Hi/Lo/Hi). The Accessor uses the LEDs in combination with the buzzer to indicate operating status.

Action / Operating Status	LED	Buzzer
Keypress (0-9 keys)		
- normal	—	Hi
- during Level 4 lockout	Red	Hi
- during Tamper lockout	Red	Lo
CLR key (clear key)	Green	Hi
or FCN key (twice)	<i>then</i> Red	Hi

Valid Code	Green	Hi
Invalid Code	Red	Lo
Add or Delete User		
- accepted	Green	Hi
- not accepted	Red	Lo
Low Battery (initial keypress)	—	Warble
Serial Communication		
- in progress (every 2 sec)	Green	—
- failed	Red	Lo (twice)
Reset To Defaults (via pushbutton on pcb)	Red	Lo (twice)

## Features

**Access Code Capacity** - up to 1023 users

**Access Codes** - 7 digit code used to gain access to key compartment or activate electric strike

**Access Code Levels** - Users are assigned an Access Level based on four levels of security:

- Level 1 Master** - unlimited access and can add or delete any Level 1-4 user at the unit
- Level 2 Emergency** - unlimited access
- Level 3 Supervisor** - unlimited access and can add or delete any Level 4 user at the unit
- Level 4 Worker** - access limited (only by Level4 Lockout mode)

**Level 4 Lockout Mode** - denies access by Level 4 users until cancelled

**Tamper Lockout** - inhibits unauthorized code “guessing” by ignoring keypresses after detecting multiple invalid codes being entered

**Daylight Savings Time** - automatic adjustments

**Year 2000 Compliant** - the Accessor4000 and ACE™ software are year 2000 compliant

**Low Battery Indication** - warbles when detected, estimated life is 500 entries after low battery indication begins

**Memory Retention** - all codes, programming and logs are stored in nonvolatile memory and are retained even without batteries

**Log Capacity** - up to 5000 entries, capacity varies with the number of Users, ranges from 4000 entries with 110 Users to 2000 entries with 1000 Users

**Log Entries** - all activity at the Accessor is logged including normal usage and programming, with user and time/date stamp (time/date req’s ACE)

*Logged Events:*

Entry By user name

Access Denied To user name

user name & user level Added

user name Deleted

Tamper Lockout

Level 4 Lockout Mode On/Off

Upload Log To PC/Palm Device

Wall Latch Released By master name

Low Battery Detected  
Reset To Defaults & Log Cleared  
Clock Reset - Date & Time Invalid  
Date & Time Set By PC Download

**Electric Strike Model** - activates a relay when a valid Access code is entered, access to the key compartment is only allowed to Level 1, 2 and 3 users

**Batteries** - requires (4) AA size 1.5V Alkaline

**Battery Life** - one year / 35000 entries guaranteed over the -30 to +135° F operating temperature range, typically three years / 60000 entries in normal 60 to 80° F room temperature

## Additional Features

*(available only by using Ace™)*

**Level 4 Vacations** - each Level 4 user may have up to 7 vacation periods during which they are denied normal entry access

**Level 5 Temporary Users** - access by a Level 5 user is limited to a programmed number of entries during specific dates

**Serial Comm Code** - authorizes Accessor serial communications with a PC or Palm™ Organizer

The Accessor has programmable time schedules and a holiday list that allows it to control access by Level 4 & Level 5 User (or groups of users) at predetermined days and times using the following functions:

**Group Schedules** - Level 4 and 5 users can be assigned up to 8 group affiliations. Each group has a schedule of times, days of the week and holidays that group members are allowed access

**Holidays** - list of dates access can be denied to Level 4 and 5 users through the Groups function

**Auto Changing Codes** - a 3-digit prefix to Level 4 & Level 5 codes that changes on a daily, weekly or monthly basis

**Level 4 Vacations** - each Level 4 user may have up to 7 vacation periods during which they are denied normal entry access

**Level 5 Temporary Users** - access by a Level 5 user is limited to a programmed number of entries during specific dates

## **Appendix C: Limited Warranty**

Engineering Solutions warrants that all products, component parts and accessories will, for a period of twelve (12) months from date of purchase, be free from defects in material and workmanship under normal use and service.

**PURCHASER'S SOLE AND EXCLUSIVE REMEDY UNDER THIS WARRANTY IS LIMITED TO THE REPAIR OR REPLACEMENT OF DEFECTIVE PARTS F.O.B., ENGINEERING SOLUTIONS, INC., 6000 SOUTHCENTER BLVD, SUITE 70, TUKWILA, WA 98188.**

To keep this warranty valid, the purchaser must (a) return signed Registration card to Engineering Solutions within fifteen (15) days of purchase, (b) have promptly informed Engineering Solutions' customer service department of any defects in writing, (c) properly used, maintained and repaired the Product, and (d) have proof of purchase.

This warranty does not cover normal wear and tear or defects due to (a) improper or negligent handling or unauthorized modifications, (b) defective or improper premises, chemical, electrochemical or electrical influences, (c) weather or other influences of nature.

**LIMITATIONS OF WARRANTY - THIS WARRANTY IS EXPRESSLY IN LIEU OF ANY AND ALL OTHER WARRANTIES AND OBLIGATIONS OF ENGINEERING SOLUTIONS OR ITS SUPPLIERS, EXPRESS OR IMPLIED. ENGINEERING SOLUTIONS EXPRESSLY DISCLAIMS ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.**

**LIMITATION OF REMEDY-** Under no circumstances shall

Engineering Solutions or any of its suppliers be liable for any loss or damage, including, but not limited to, loss or damage arising out of failure of the Product to operate for any period of time, inconvenience, use of rental or replacement equipment, loss of profit or other economic loss, or general, direct, special, indirect, incidental or consequential damages or property damages.

**PRODUCT SUITABILITY** - Many states and localities have codes and regulations governing sales, construction, installation, and/or use of products for certain purposes, which may vary from those in neighboring areas. While Engineering Solutions attempts to assure that its Products comply with such codes, it cannot guarantee compliance, and cannot be responsible for how the Products are installed or used. Engineering Solutions recommends that, before purchasing and using a Product, purchasers review the Product application, and federal, state and local regulations, to be sure that the Product, installation, and use will comply with them.

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