To ensure problem-free installation and application, please read these instructions thoroughly before proceeding with the installation. The installation instructions are the basis for Security Agency Approvals. The installation must be done in accordance to these instructions in order to maintain the labeled approval level.

9150/9160 Entry Device Parts
- 9150 Entry Device (w/out biometrics) or 9160 Entry Device (w/biometrics) w/Cable Assembly
- English Hardware Kit
  - #8-32 .218 Diam x .2 Shoulder Screws (2) (for Standard Mounting Method)

9250/9260 Entry Device Parts
- 9250 Entry Device (w/out biometrics) or 9260 Entry Device (w/biometrics) w/Cable Assembly
- Gasket - P/N 705068
- English Hardware Kit
  - 10-32 Socket head cap screws (2) (for Standard Mounting Method)

Lock Options
Dual-Handed Swing Bolt, Dead Bolt, Spring Bolt or Redundant Mechanical Lock.

**NOTE:** Hardware Kit included with lock.

Power Supply
A single A/C Power Supply unit (P/N 701107, 701108 or 701115) is recommended as the primary power for a SmartLinc II lock system, and is required for a SmartPoint lock system. The large battery box (P/N 4001) or the large battery/alarm box (P/N 4002) can be used as an alternate power source for the SmartLinc II lock system. (An alarm box is required for certain features.) If using a battery box, it is recommended that high quality, name brand batteries (Energizer® or Duracell®) be installed. Connect the A/C power supply or the large battery box to the BAT port on the lock. A 9-volt connection is provided on the Entry unit for emergency power only.

Interface Box
One or more Interface Boxes may be required if installing a lock system with more than one lock. P/N 4006 includes one 43099-1 (18") Smart Series lock cable assembly.

See the Lock System Configuration Requirements section for detailed Interface Box requirements.

Lock Cable Assembly Options
The Smart Series lock cable assemblies are available in the following four (4) lengths for custom installation configurations:
- 43099-1 (18")
- 43099-3 (3’)
- 43099-6 (6’)
- 43099-10 (10’)

See the Lock System Configuration Requirements section for detailed cable assembly requirements.
OPTIONAL ACCESSORIES
- Knob Assembly - P/N 2666 (recommended for use with Dead bolt or Spring bolt locks).
- VisionGard Dial Assembly - P/N 2085 (for use with Redundant Mechanical lock). An entire range of LA GARD dials is available for alternate dial options.
- Battery or Battery/Alarm Box (recommended if using with Time Delay/TimeLock. Alarm Box is required for use of certain features).
  - Small box: P/N 2789
  - Large box: P/N 4001 or 4002
- Mounting Wedge Kit - P/N 704128
- Adapter Plate - P/N 705074

LOCK SYSTEM CONFIGURATION REQUIREMENTS
Listed below are the component requirements for the various Smart Series lock system configurations.

One Lock System
- One Entry Device
- One Lock
- One Power Supply (SmartLinc II or SmartPoint) or Large Battery Box (Smartlinc II only)

Two Lock System
- One Entry Device
- Two Locks
- One Interface Box - P/N 4006 (Includes a 43099-1 Smart Series lock cable assembly.)
- One additional Smart Series lock cable assembly. (P/N 43099-1 or 43099-3 or 43099-6 or 43099-10)
- One Power Supply (SmartLinc II or SmartPoint) or Large Battery Box (Smartlinc II only)

Three Lock System
- One Entry Device
- Three Locks
- One Interface Box - P/N 4006 (Includes a 43099-1 Smart Series lock cable assembly.)
- Two additional Smart Series lock cable assemblies. (P/N 43099-1 or 43099-3 or 43099-6 or 43099-10)
- One Power Supply (SmartLinc II or SmartPoint) or Large Battery Box (Smartlinc II only)

Four Lock System
- One Entry Device
- Four Locks
- Two Interface Boxes - P/N 4006 (Each includes a 43099-1 Smart Series lock cable assembly.)
- Three additional Smart Series lock cable assemblies. (P/N 43099-1 or 43099-3 or 43099-6 or 43099-10)
- One Power Supply (SmartLinc II or SmartPoint) or Large Battery Box (Smartlinc II only)

Five Lock System
- One Entry Device
- Five Locks
- Two Interface Boxes - P/N 4006 (Each includes a 43099-1 Smart Series lock cable assembly.)
- Four additional Smart Series lock cable assemblies. (P/N 43099-1 or 43099-3 or 43099-6 or 43099-10)
- One Power Supply (SmartLinc II or SmartPoint) or Large Battery Box (Smartlinc II only)
SOFTWARE & PROGRAMMING REQUIREMENTS
Listed below are the component requirements for programming a Smart Series lock system via the system software.

- SmartLinc II/SmartPoint Programming & Audit Software - P/N 707000
- Smart Series Lock Programming Cable Assembly with Serial Interface & USB Adapter - P/N 701105
- Logic Module (Entry Unit) Programming/Audit Cable - P/N 2041
- USB Fingerprint Reader - P/N 702003 (Optional for SmartPoint systems)

INSTALLATION PREPARATION
Obtain a copy of all instructions identified in the list below. Read all instructions completely before configuring and installing any portion of the Smart Series system.

1. Verify that all required components have been received before beginning installation.
2. Install the Setup and Total Audit software on the PC or laptop in order to configure the system. (Refer to Software Installation Instructions, 706.087).
3. Configure the Entry before installation. (Refer to Logic Module and Lock Setup Instructions, 700.087).
4. Program the Lock(s) before installation. (Refer to Logic Module and Lock Setup Instructions, 700.087).
5. Enroll the lock(s) into the lock system. (Refer to Master Operating Instructions, 702.007).
6. Install the Entry and Lock(s) on the safe.

The installation instructions are the basis for Security Agency Approvals. The lock installation must be done in accordance to these instructions in order to maintain the labeled approval level.

DESIGN PARAMETERS FOR DEAD BOLT LOCKS
1. Bolt dimensions (nominal): .312 inches x 1.000 inches/8 x 25.4mm
2. Bolt movement (nominal): .465 inches/11.8mm
3. Bolt extension: .465 inches/11.8mm
4. Maximum load movable by the bolt: 5 lbs. (22N)

**NOTE:** La Gard dead bolt locks may not open if more than 5 lbs. (22N) of force is applied to the end or side of the bolt.

5. Maximum load against bolt when thrown (all directions): 224.8 lbs. (1kN)
6. The lock can be fitted to safes or vault doors of any material.

**NOTE:** As is the case with all mechanical and electronic locking devices, the container and boltworks must be designed to protect the lock.
DESIGN PARAMETERS FOR SWING BOLT LOCKS

1. Bolt dimensions (nominal): .309 inches x .900 inches/7.8 x 22.8mm
2. Bolt movement (nominal): .465 inches/11.8mm
3. Bolt extension: .465 inches/11.8mm
4. Maximum load movable by the bolt: None

NOTE: La Gard swing bolt locks will not open if force is applied to the end or side of the bolt.

5. Maximum load against bolt when thrown (all directions): 1kN (224.8 lbs.)
6. The lock can be fitted to safes or vault doors of any material.

NOTE: As is the case with all mechanical and electronic locking devices, the container and boltworks must be designed to protect the lock.

SAFEGUARDS FOR MOUNTING

1. Once an electronic lock has been mounted, no more welding can be done on the safe.
2. Keep metal dust, filings, etc. away from the lock.
3. Never remove lock cover on a Dead Bolt, Spring Bolt or Swing Bolt lock as this voids warranty policy.
4. Never oil, grease, lubricate or paint the lock.
5. Keep cables away from sharp edges and moving parts.
6. Never pick up or carry the Entry or Locks by the cable.

BASIC TOOLS AND MATERIALS REQUIRED:

• Medium Phillips head screwdriver (#2) (recommend magnetized tip)
• 5/32 Allen wrench (9250/9260 only)
• Small flat file or deburring stone
• Tape measure or ruler
• ESD wrist band

For dead bolt, spring bolt, or redundant mechanical installation:

• Fine pitch hacksaw (32 teeth/inch)
• Small vise grip (Recommended)

WARNING: LA GARD locks are protected from 25,000 V Electrostatic Discharge (ESD) damage when correctly installed. Follow these precautions to avoid ESD damage when installing the lock:

  o Handle the Entry assembly by the outer edge only.
  o Use an ESD wrist band grounded to the lock or container during installation.

9150/9160 ENTRY DEVICE INSTALLATION

PREPARATION FOR NEW INSTALLATION: (IF REQUIRED)

1. Use the template provided to establish the exact locations (relative to the spindle hole) of the mounting holes for the Entry Device and the lock assembly. Be sure to consider the cable length from the entry device to the lock.
2. The spindle hole diameter can be a minimum of .406" (10.3mm) to a maximum of .438" (11.1mm). The .406" (10.3mm) diameter is recommended. Spindle hole must be deburred.
3. The Entry Device mounting screws require drilled and tapped holes to 3/8" (9.5mm) depth if possible (minimum 1/4" or 6.4mm depth required.) Drill either the two horizontal mounting holes or the two vertical holes.
4. When mounting the lock unit (i.e., integrating it in a boltwork), make sure that the lock bolt has clearance to freely move to its end positions and that the shifting force works only in the axial direction (direction of movement). Lateral forces should not be exerted on the lock.
5. If other parts of the boltwork are to be connected to the lock unit (e.g., for activating a blocking device), corresponding adapters can be fixed with screws (#10-32 or M4) to the front of the lock bolt (tightening torque for 15mm screwing depth: 200Ncm maximum).
9250/9260 ENTRY DEVICE INSTALLATION

STANDARD INSTALLATION
The 9250/9260 Entry can be directly mounted to safes designed with a protective compartment. Use the Entry installation template (P/N 792.0211) to locate and mark the location for the holes. The mounting screws require drilled and tapped 10-32 holes, to a depth of 3/8" (9.5mm) if possible with a minimum 1/4" (6.4mm) depth required. (Figure 4.)

Without Adapter Plate
1. Locate, drill and tap holes (if required), to mount the Entry to the outside of the safe.
2. To install the gasket, press the gasket onto the back outside edges of the Entry. The gasket is channeled and must be fitted securely around the entire edge of the Entry.

IMPORTANT NOTE: The gasket is designed to aid in moisture resistance. Using the gasket will NOT make the installation water-proof!
3. Route the Entry cable through the opening in the safe compartment.
4. Position the Entry (with the gasket attached) over the safe compartment. Ensure that there are no wires or cables trapped under the Entry. Pinched cables can result in a system failure.

NOTE: When installing the Entry, it is recommended to leave enough cable to provide a drip loop.
5. Secure the Entry to the safe with the two (2) mounting screws provided.
6. Insert the two (2) screw covers into the Entry.

With Adapter Plate (P/N 705074)
If the 9250/9260 Entry is smaller than the compartment in the safe, you may have to use an Adapter Plate (P/N 705074) behind the Entry to fill the space. An example of this type of installation is a retrofit situation where a Vindicator™ Lock 1 is being replaced with a Smart Series lock system with a 9250 or 9260 Entry Device.

1. Locate, drill, and tap holes (if required) to mount the adapter plate and Entry to the outside of the safe.
2. To install the gasket, press the gasket onto the back outside edges of the Entry. The gasket is channeled and must be fitted securely around the entire edge of the Entry.

IMPORTANT NOTE: The gasket is designed to aid in moisture resistance. Using the gasket will NOT make the installation water-proof!
3. Place the adapter plate over the mounting hole on the outside of the safe. If you choose, seal the adapter plate to the mounting surface with RTV Silicone Adhesive to improve moisture resistance.
4. Route the Entry cable through the adapter plate and the opening in the safe compartment.
5. Position the adapter plate between the Entry (with the gasket attached) and the safe compartment. Ensure that there are no wires or cables trapped under the Entry. Pinched cables can result in a system failure.
6. Secure the adapter plate and the Entry to the safe with the two (2) screws provided.
7. Insert the two (2) screw covers into the Entry.

ALTERNATE INSTALLATION WITH MOUNTING WEDGE KIT (P/N 704128)

The Mounting Wedge can be mounted in multiple positions. The orientation of the Mounting Wedge will be determined by its location relative to the safe. Be sure to consider the cable length from the Entry to the lock or Interface Box (P/N 4006) when locating the Mounting Wedge. Once the Mounting Wedge has been located and installed (Figure 5), secure the Entry to the Mounting Wedge using the Standard Installation without Adapter Plate instruction in this document.

Preparation for New Installation: (If Required)
1. Use the Mounting Wedge template (P/N 793.0211), or the Mounting Wedge itself, as a template to mark the location for the holes.
2. The through-hole diameter can be a minimum of .406" (10.3mm) to a maximum of .624" (15.9mm). It is generally easier to drill a smaller diameter hole first and then enlarge it with a bigger drill bit. The through-hole must be deburred. This will help prevent damage to the entry cable when installed.
3. The mounting screws require drilled and tapped10-32 holes, to a depth of 3/8" (9.5mm) if possible (minimum 1/4" or 6.4mm depth required).

Door Mount
1. Locate, drill and tap holes (if required), to mount the Mounting Wedge to the outside of the safe door.

NOTE: If the safe previously had a mechanical lock and dial installed, you may be able to install the Mounting Wedge using the existing holes in the door.

2. Position the Mounting Wedge so that the though-holes are against the door and the Mounting Wedge is angled up (Figure 6A).
3. Secure the Mounting Wedge to the safe door using the screws provided.

Front Mount
1. Locate, drill and tap holes (if required), to mount the Mounting Wedge to the outside of the safe front.
2. Position the Mounting Wedge so that the though-holes are against the front of the safe and the Mounting Wedge is angled up (Figure 6B).
3. Secure the Mounting Wedge to the safe using the screws provided.

Top Mount
1. Locate, drill and tap holes (if required), to mount the Mounting Wedge to the top of the safe.
2. Position the Mounting Wedge so that the though-holes are against the top of the safe and the Mounting Wedge is angled toward you (Figure 6C).
3. Secure the Mounting Wedge to the top of the safe using the screws provided.

Cavity Mount
1. Locate, drill, and tap holes (if required) to mount the Mounting Wedge within the safe cavity.
2. Position the Mounting Wedge so that it fits securely within the safe cavity and the Mounting Wedge is angled toward you (Figure 6D).
3. Secure the Mounting Wedge within the safe cavity using the screws provided.

LOCK CONNECTIONS & POWER INSTALLATION

The number of lock cables and the number of interface boxes required for lock installation are dependent on the number of locks to be installed in the system. Each lock has two ports, one marked ENT and one marked BAT. The ENT port is used to connect the Entry to the lock (one lock system) or to interconnect a lock to an interface box (multi-lock system). The BAT port is used to provide power to the system. The cables should be inserted so the tab is facing in the downward position (Figure 7). Use care when installing the cables into the lock; a misaligned connector may bend the pins and damage the lock. Also, a cable that is mistakenly installed in the upward position will not make a connection and will cause a communication error.

Once the locks are programmed and ready to mount, follow the appropriate connection steps for the system you are installing.
SINGLE LOCK SYSTEM
1. Connect the 4-pin cable from the Entry into the ENT port on the lock (Figure 7).
2. Connect the power supply to the BAT port on the lock.

MULTI-LOCK SYSTEM

Interface Box (P/N 4006)
A single interface box is required to connect a two (2) or three (3) lock system. A second interface box is required to connect a four (4) or five (5) lock system. Follow the steps below to install the interface box(es) into the Smart Series lock system.

Two or Three Lock System (One Interface Box)
1. Remove the cover from the interface box (Figure 8).
2. Insert the cable from the Entry through the hole at the bottom of the box (Figure 9).
3. Remove the circuit board from the interface box to plug the cable from the Entry into the circuit board (Figure 10). The cable should be inserted so the tab is facing in the downward position.
4. Once the cable is installed, slide the circuit board back into the box.
5. Gently pull the cable taut so that there is no slack remaining in the interface box (Figure 11).
6. Replace the interface box cover.

Each lock installed in the system will require a Smart Series lock cable assembly. (P/N 43099-1 or 43099-3 or 43099-6 or 43099-10)
1. Plug the telephone style connector the lock cable assembly into the interface box (Figure 12). The interface box ports are non-specific; use any open port
2. Plug the 4-pin connecter of the lock cable into the ENT port on the lock.
3. Repeat these steps for all locks enrolled in the system.
4. Connect the power supply to the BAT port on one of the locks.
Four or Five Lock System (Two Interface Boxes)
1. Follow steps above to connect lock 1 and 2.
2. Plug the third lock cable into the second interface box. This cable will be used as an interconnect between the two interface boxes.
3. Remove the cover from the second interface box (Figure 8).
4. Insert the 4-pin cable from the first interface box through the hole at the bottom of the box (Figure 9).
5. Remove the circuit board from the interface box to plug the cable from the first interface box into the circuit board (Figure 10). The cable should be inserted so the tab is facing in the downward position.
6. Once the cable is installed, slide the circuit board back into the box.
7. Gently pull the cable taut so that there is no slack remaining in the interface box (Figure 11).
8. Replace the interface box cover.

Each lock installed in the system will require a Smart Series lock cable assembly. (P/N 43099-1 or 43099-3 or 43099-6 or 43099-10)

1. Plug the telephone style connector of the lock cable into the interface box (Figure 12). The interface box ports are non-specific; use any open port.
2. Plug the 4-pin connector of the lock cable into the ENT port on the lock.
3. Repeat these steps for all locks enrolled in the system (Figure 13).
4. Connect the power supply to the BAT port on one of the locks.

LOCK MOUNTING
There are three variations of locks available for use with the Smart Series – swing bolt locks, knob locks (dead or spring bolt), and redundant mechanical locks. Swing bolt locks are generally used to replace standard dial combination locks where there is a bolt mechanism and a handle to open the door. Knob locks are generally used on interior doors without a bolt mechanism. Redundant mechanical locks are recommend for TL-15 and higher rated safes. The recommended torque for the mounting screws on all LA GARD locks is 30 in./lbs (3.4 N•m).

SWING BOLT
1. Locate, drill and tap holes to mount the Lock Assembly to the inside of the safe door using the installation template provided.
2. Ensure that the Entry Device cable is running through the channel at the back of the lock. Mount the lock with the three US 1/4"-20 (Metric M6X1) screws.

NOTE: All four mounting orientations are possible. The recommended torque for mounting screws on the Swing bolt lock is 30 in./lbs. for the US 1/4"-20 screws (3.4 N•m for Metric M6X1). (Figure 14.)

3. Secure any cables with wire tie, making sure to keep out of the way of all moving parts (Figure 15).
4. The blocking part “A” of boltwork should exert pressure on the entire width of the lock bolt. In the locked position the boltwork MUST NOT place pressure on the lock bolt.

NOTE: In case of boltwork construction where two blocking parts are moving opposite one another, the one facing the round side of the lock bolt “B” should be cut off to avoid jamming of lock bolt (Figure 16).

5. Connect the cable coming from the Entry Device directly into the connector port marked ENT on the lock (Figure 7).
DEAD BOLT OR SPRING BOLT LOCKS
In order to use either the Dead bolt or Spring bolt locks, a method of retracting the bolt will be required. Knob Assembly - P/N 2666 - (Figure 17) is recommended.
The drilling holes necessary to mount the lock correspond with the standard dimensions for mechanical locks. The spindle hole must be well deburred and no sharp edges may remain. The holes required to mount the knob need to be drilled 1.25" apart and must be centered over the spindle hole.
1. Locate, drill and tap holes to mount the Lock Assembly to the inside of the safe door using the installation template provided.
2. To install the Knob Assembly, remove the insert from the front of the knob.
3. Cut the spindle to a length of .820" (20.8mm) plus the mounting thickness.
4. Install the knob assembly using the two 8-32 X 5/16 phillips pan screws (Figure 17).
5. Install the lock (always with the bolt extended) onto the spindle, placing it flush to the mounting surface.
6. Attach the lock using the three US 1/4"-20 (Metric M6X1) screws found in the hardware pack.
7. Connect the cable coming from the Entry Device directly into the connector port marked ENT on the lock (Figure 17).

REDUNDANT MECHANICAL LOCKS
In order to use a Redundant Mechanical lock, a method of retracting the bolt is required.
Use of the VISIONGARD Dial (P/N 2085) is recommended (Figure 18). An entire range of LA GARD dials is available for alternate dial options.
1. Locate, drill and tap holes to mount the Lock Assembly to the inside of the safe door using the installation template provided.
2. Locate and drill the two holes for the dial ring to be mounted.
3. Attach the lock assembly to the door using the three US 1/4"-20 (Metric M6X1) mounting screws provided. Tighten the mounting screws to a torque setting of 30 in./lbs. (3.4 N•m).
4. Measure total mounting thickness (door thickness + mounting plate). (Figure 19.)
5. Cut the spindle to a length of 1.125" (28.6mm) plus the total mounting thickness.
6. Mount the dial ring centered on the through hole, and attach to the safe door using the two mounting screws supplied with the dial assembly. The opening index reference mark must be in the twelve o’clock position (Figure 20).
7. Place the dial bearing onto the dial ring.

WARNING: The lock bolt MUST remain in the retracted position throughout the installation procedure. To ensure this keep one finger over the bolt while installing the dial spindle into the lock cam.

WARNING: Ensure that you are properly grounded to protect the system card from Electrostatic Discharge (ESD) damage before proceeding with the next steps.
8. Remove the two cover screws from the back cover of the lock assembly, and remove the lock back cover (Figure 21).
9. Carefully unplug the solenoid connector from the system card. (If applicable, unplug the bolt switch connector from the system card.) (Figure 21.)
10. Remove the mounting screw from the system card, and gently lift the system card out of the case (Figure 21).
11. Insert the spindle through the spindle hole in the front of the door.
12. With the bolt retracted, carefully thread (clockwise) the spindle into the drive cam of the lock assembly until tight.
13. Next, rotate (counterclockwise) at least 1/2 turn until the groove in the spindle is aligned with the correct spline position. The correct spline position for the installation orientation showing in Figure 21 is RH (for a “Right Hand” door). Refer to the following Spline Key Position Chart for all mounting positions.

**Spline Key Position Chart**
The lock may be mounted in four positions - align the spindle groove with the corresponding cam position. The positions are
- **RH** (right hand)
  Lock bolt points right as you view the lock from the back side of the door.
- **LH** (left hand)
  Lock bolt points left as you view the lock from the back side of the door.
- **VU** (vertical up)
  Lock bolt points upward.
- **VD** (vertical down)
  Lock bolt points downward.

14. Insert the spline key fully into the cam from the back of the lock assembly by tapping it into place.

**IMPORTANT** Note: Ensure the spline key is seated against the spindle.

15. Reinstall the system card.
16. Reconnect the solenoid (and bolt switch if applicable.)
17. Reinstall the back cover.
18. Connect the cable coming from the Entry Device directly into the connector port marked ENT on the lock.

**NOTE:** Ensure the cable is secure and away from any moving parts.

**ARMOURED CABLE**
Cables connected to or passing through a moving part, such as a door, should be protected by an armored cable (P/N 43116). The armored cable will help protect against the cables being damaged during movement.
**9150/9160 EMERGENCY BATTERY INSTALLATION**

A 9-volt connection is provided on the Entry unit for emergency power only.

1. Remove the battery compartment cover at the bottom of the entry device.
2. Connect a new 9-Volt Alkaline battery to the battery connector. Use of a high quality, name brand battery (Energizer® or Duracell®) is recommended.

**NOTE:** Once the battery is connected, the system will run a self check of the display and buzzer.

3. Place the battery in the battery compartment and put the cover back in place.

**9250/9260 EMERGENCY BATTERY INSTALLATION**

A 9-volt connection is provided on the Entry unit for emergency power only.

1. Remove the two screw caps from the Entry to expose the mounting screws.
2. Use a 5/32 Allen wrench to loosen the mounting screws.
3. Carefully remove the Entry from the safe or Mounting Wedge.

**CAUTION:** Do not unplug the cable from the board while removing the Entry.

4. Connect a new high quality, name brand battery (Energizer® or Duracell®) to the battery connector. Never pull on the battery leads (Figure 23).

**NOTE:** Once the battery is connected, the system will run a self check of the display and buzzer.

5. If the gasket has become disengaged, press the gasket back onto the back outside edges of the Entry. The gasket is channeled and must be fitted securely around the entire edge of the Entry.
6. Mount the Entry to the safe or the Mounting Wedge. Ensure that there are no wires or cables trapped under the Entry. Pinched cables can result in a system failure.
7. Secure the Entry with the two (2) mounting screws provided.
8. Insert the two (2) screw covers into the Entry.