

KABA[®]

INSTALLATION GUIDE

Solitaire 710-II and SMART (740) Series

AMM and AADB Models

PK2710-T

I CHECKLIST

Each Solitaire 710-II or SolitaireSMART 740 lockset includes:

- (A) Outside housing
- (B) Mortise (including faceplate B1 and screws B2)
- (C) Inside housing

Parts inside hardware bag:

- (D) Medallion
- (E) One 8-32 x 1/4" (6.3mm), 5/64" hex-head setscrew
- (F) Two 1/4" (6.3mm) compression springs
- (G) Two square spindles
- (K) Two 1" (25mm) Phillips-head combination mounting screws
- (L) Sealed battery pack (includes 4 AA batteries)
- (M) One 6-32 x 3/8" (10mm), 5/64" hex-head screw
- (N) Battery cover
- (O) One #6 x 1" (25mm) screw for wooden doors
- (P) Four 10-24, 1/8" hex-head mounting screws (length depends on door thickness)
- (R) Tube 1 3/8" (35mm) diameter, for AMM only
- (S) Standard strike kit (screws, strike and dustbox)

Mechanical-core override model only (shaded):

- (H) Bridge
- (I) Two 8-32 x 9/16" (14mm), Phillips-head screws
- (J) Cylinder tailpiece
- (Q) Cylinder tailpiece retaining clip

Tools in spare parts box (not illustrated):

- 5/64" hex (Allen) key
- 1/8" hex (Allen) key

Packaged separately with lock shipment:

- (T) Override cylinder (mechanical core and removable core override models only)

Shipped separately after lock shipment:

- One entry key for mechanical core and removable core override models, per order of identical cylinders
- One control key for removable core override models, per order of identical cylinders

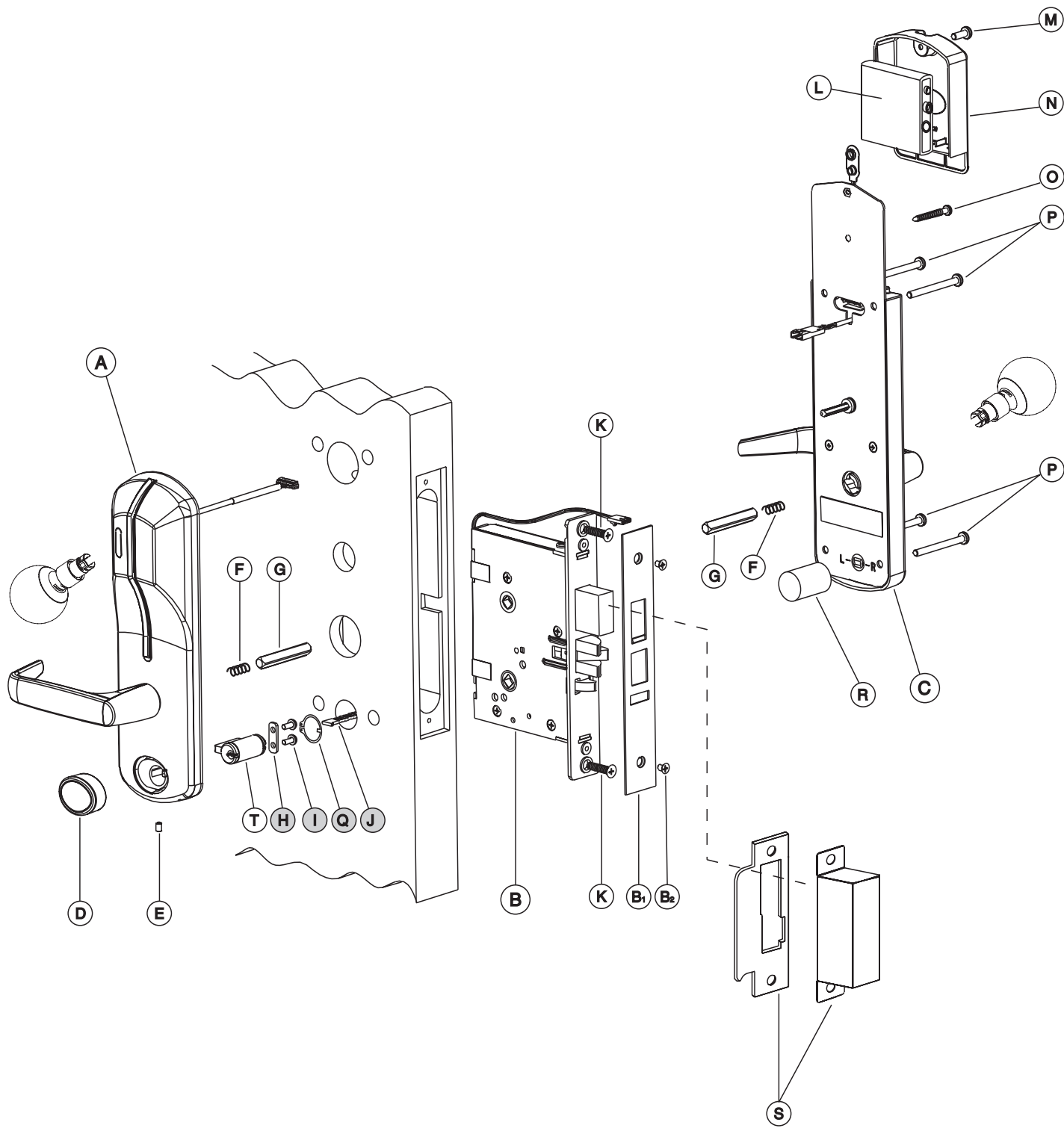
Tools Required:

Safety glasses

- 1/2" (13mm) chisel
- 1/8" (3mm) drill bit
- 1/4" (6.5mm) drill bit (SMM only)
- 7/16" (11mm) drill bit
- 7/8" (22mm) hole saw
- 1 1/4" (32mm) hole saw
- 1 3/8" (35mm) hole saw
- Drill
- Awl or center punch
- Hammer
- Rubber mallet
- Flat-head screwdriver
- Cleaning supplies (drop cloth, vacuum)

- Phillips screwdriver (#2)
- Two pliers (for mechanical core and removable core override models)
- External ring plier
- Fine steel file
- Mortising machine
- Router
- Mortise faceplate router template
- Adjustable square
- Tape measure
- Pencil
- Tape

©2002 Kaba Ilco, Inc. All trademarks and registered trademarks are the property of their respective owners.



II INTRODUCTION AND DISCLAIMERS



Please read and follow all directions carefully.

Target Audience

Please read and follow all directions carefully. These instructions are designed for use by maintenance professionals or lock installers who are familiar with common safety practices and competent to perform the steps described. Kaba Ilco is not responsible for damage or malfunction due to incorrect installation, however arising.

Definition of Terms

In these instructions, the term **AMM** refers to *American Motorized Mortise*, and **SMM** refers to *Slim Motorized Mortise*.

Technical Assistance

For technical assistance, call: **1 800 906-4526**

Warnings and Cautions



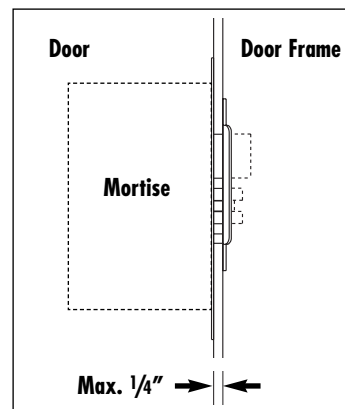
Important: Carefully inspect windows, doorframe, door, etc. to ensure that the recommended procedures will not cause damage. Kaba Ilco's standard warranty does not cover damages caused by installation.



Important: For auto-deadbolt models, the gap between the mortise front plate and the strike must be less than 1/4", or the automatic deadbolt will not extend.



Caution: Wear safety glasses when making the holes.



III INSTALL THE STRIKE

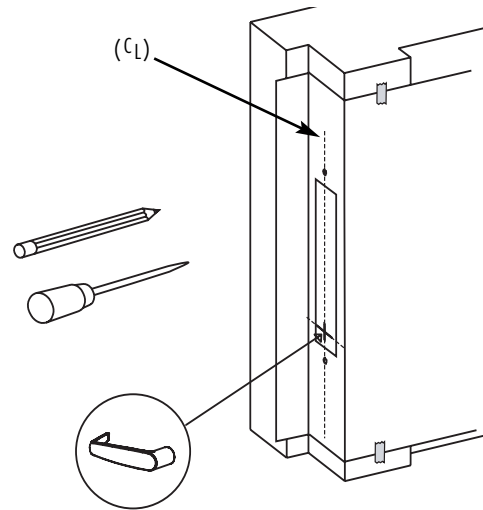
1 Mark the Location of the Strike

Align the paper template at the desired handle height (.), and along the vertical center line of the mortise (CL), which is also the center line of the door, allowing for any bumpers on the door frame.

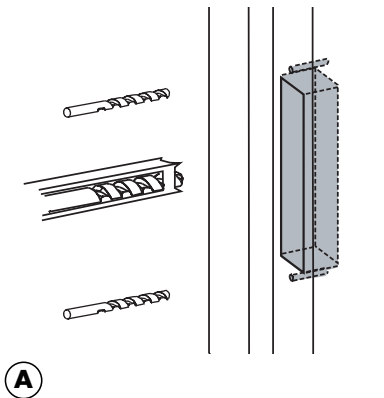


Respect applicable building codes regarding handle height.
Note that the vertical centerline of an ESM mortise does NOT pass through the screw holes on the strike.

Mark the locations of the dust box cutout and mounting screws.

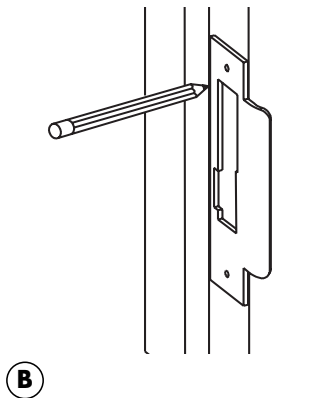


2 Prepare the Doorframe



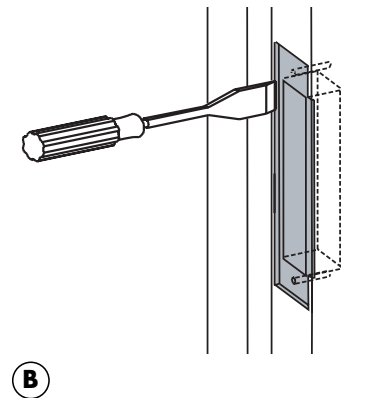
A

Mortise the doorframe to receive the dust box, and drill the pilot holes for the mounting screws (dimensions and depths marked on template).



B

Position the strike against the doorframe and align it precisely with the mounting screw holes. Trace the outline of the strike.



B

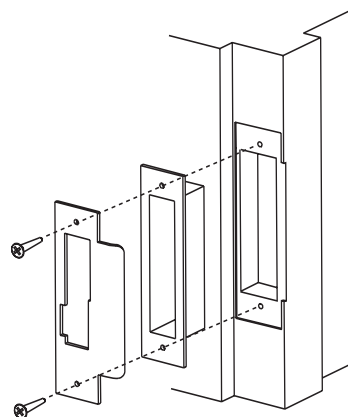
With a chisel, remove material from within the strike outline so that the strike will be flush with the doorframe.

3 Install the Dust Box and Strike

For ASM, install the dust box (optional for wood door frames, required for metal door frames), and check the strike handing on the template. Install the strike using the screws provided.




Use only the strike and dust box supplied.
Use of non-approved parts may void the lock warranty.



IV INSTALL THE MORTISE

If using the installation jig to prepare the door, refer to the instructions provided with the jig.
After preparing the holes in the door, proceed with step 2 below.

1 Prepare the Door

- A** With the door almost closed, mark the center of the edge of the door at the handle height  as determined directly from the strike:

For AMM, the axis of rotation of the handle is level with the bottom lip of the strike.

For SMM, the axis of rotation of the handle is 1 1/4" above the bottom lip of the strike.

Align the template vertically along the mortise midline at the desired handle height, and tape it to the door.

- B** Mark all holes and cutouts for the mortise in the edge of the door.

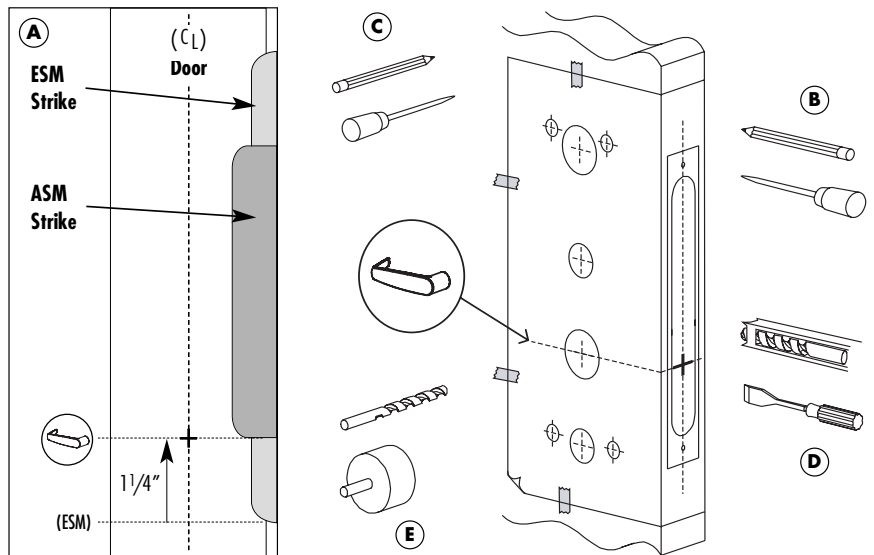
- C** **If the door has no bevel**, fold the template along the solid lines. Align the fold with the edge of the door, and mark the holes for the lock. Repeat on other side.

If the door has a 3° bevel, fold and align the dashed line marked "H" with the higher-beveled edge of the door, and mark the lock holes on that side of the door. Repeat on the side with the lower-beveled edge, using the dashed line marked "L".

Remove the template.

- D** **First**, prepare the slot and cut-outs for the mortise using the mortising machine, router and chisel.

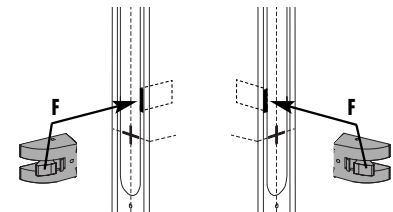
- E** **Second**, drill the round holes for the lock.



Drill from both sides of the door to prevent unsightly damage. Refer to template for drill sizes and depths.



Ensure clearance is provided for the anti-friction latch (F) and auxiliary latch (SMM only) in the mortise cutout:



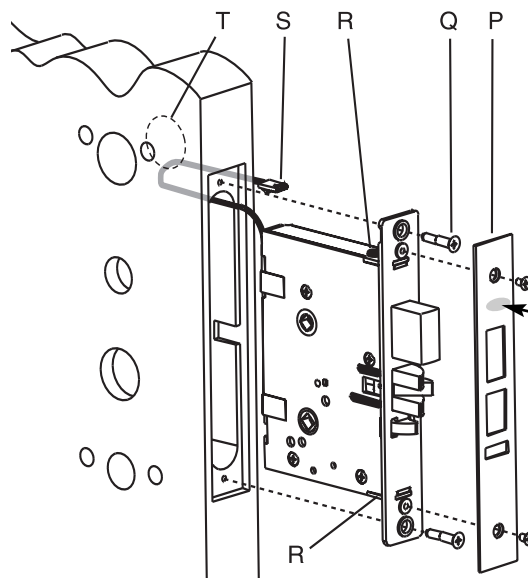
RH/LHR (AMM shown) LH/RHR

2 Adjust Bevel and Install Mortise

- A** **For AMM only**, check the bevel of the mortise. If adjustment is required, loosen bevel screws (R), and adjust mortise front plate angle to match the bevel of the door. Retighten screws.

- B** Feed motorized mortise cable (S) through the mortise cutout and out the wiring hole (T) on the inside of the door. Install the mortise with two 1" (25mm) Phillips screws (Q) provided.

- C** Install mortise trim plate (P) with the two 8-32 x 1/4" screws provided.

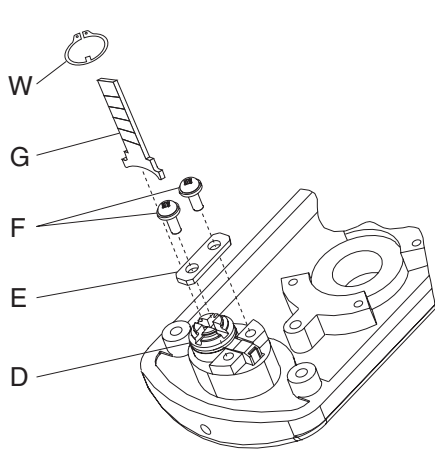


The SMM trim plate must be installed with the logo right-side-up for proper operation. (You should be able to read the logo.)

V PREPARE THE MECHANICAL OVERRIDE

If you have an electrical override lock, continue on page 8.

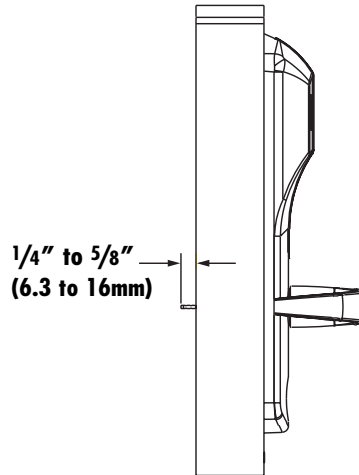
1 Key-in-Knob Mechanical Override



A

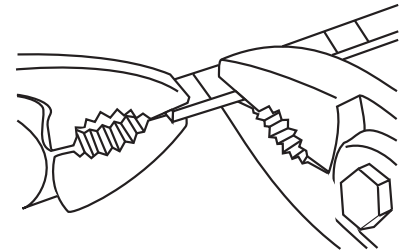
Assemble the key cylinder (D) in the rear of the outside housing, and secure it using the bridge (E) and two 8-32 x $\frac{9}{16}$ " (14mm) Phillips screws (F).

Install the tailpiece (G) horizontally in the cylinder, and secure it with the retaining clip (W), using an external ring plier.



B

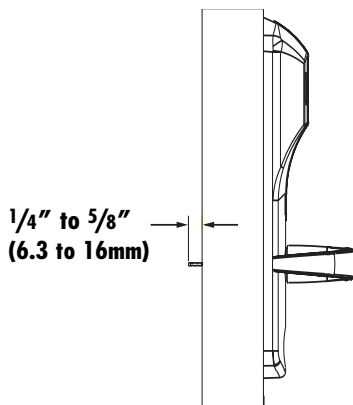
Hold the outside housing against the door. The tailpiece should extend between $\frac{1}{4}$ " and $\frac{5}{8}$ " beyond the rear face of the door. Mark the tailpiece accordingly.



C

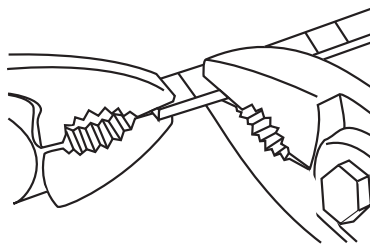
Break off the tailpiece at the mark using two pairs of pliers.

2 Removable Core Cylinder Mechanical Override



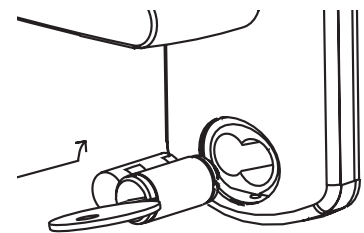
A

Hold the outside housing against the door. The tailpiece should extend between $\frac{1}{4}$ " and $\frac{5}{8}$ " beyond the rear face of the door. Mark the tailpiece accordingly.



B

Break off the tailpiece at the mark using two pairs of pliers.

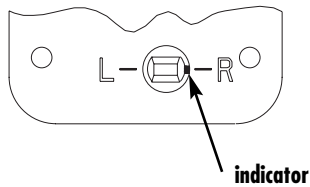


C

Install the key cylinder from the front of the outside housing, using the control key.

VI INSTALL THE LOCK

1 Set Override Hand



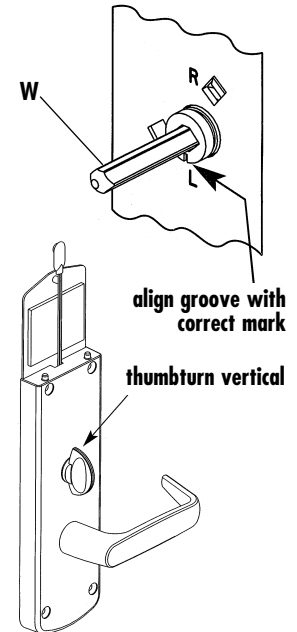
On the rear housing, rotate the override cam using a flat-head screwdriver, until the indicator mark corresponds with the handing of the door (L for LH/LHR or R for RH/RHR).

2 Set Thumbturn Hand

For mortise models with a thumbturn on the inside housing, the groove on the thumbturn spindle (W) must be positioned according to the following table prior to installation. (The thumbturn must be in the vertical position as shown.)

	Door Handing			
	RH	LH	RHR	LHR
Mortise	Thumbturn Position			
AMM (standard or auto-deadbolt)	R	L	R	L
SMM	L	R	L	R

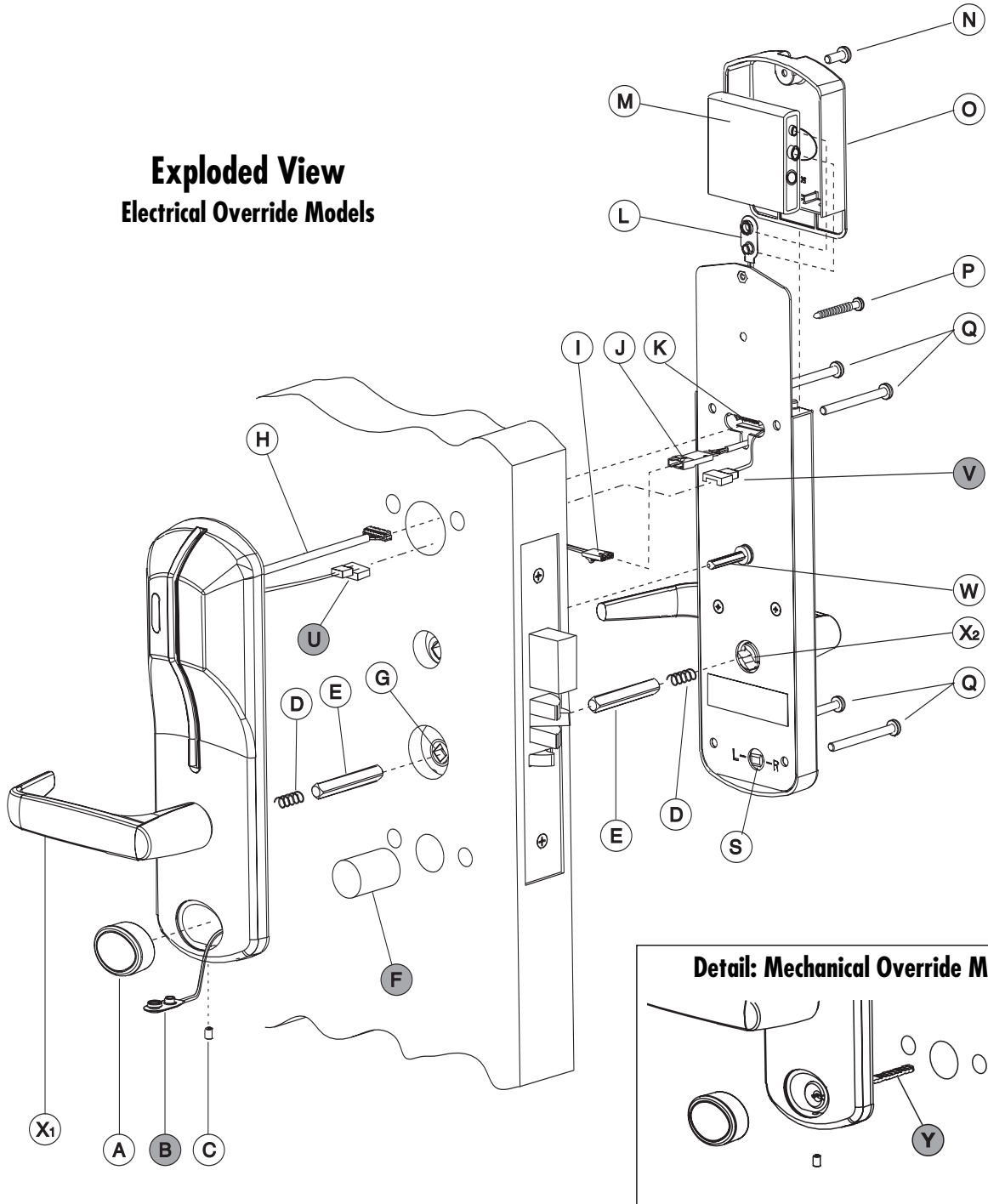
If there is no groove on the thumbturn or R/L marking on the inside housing, the orientation is not important. Simply ensure the thumbturn is vertical.



For the remaining steps in this section, refer to the exploded view diagram on page 9, opposite.

- For wood doors only**, install the tube (F) in the bottom hole in the door.
- Insert one square spindle (E) into each of the inside and outside mortise hubs (G). For lever models, install the long spindle and for knob models, use the short spindle. Then insert one compression spring (D) into each of the inside and outside handles (X).
- Thread the cable(s) from the outside housing through the top hole in the door. The electrical override model has two cables (H and U), mechanical override models have one (H).
- Gently pull the cables through the door, and position the outside housing on the door, ensuring that the mortise spindle (E) engages the lever handle (X1).
- Connect the outside housing cable (H) to the female socket (K) on the inside housing. A plastic keycard can be used to push the connector into place for a snug connection.
- Connect the mortise cable (I) to the connector (J) on the inside housing.
- On electrical override models**, connect the override cable (U) from the outside housing to the connector (V) on the inside housing.
- Fold excess cables inside the door, and position the inside housing on the door without pinching cables. Ensure the lever handle (X2) engages the mortise spindle (E), and the thumbturn spindle (W) engages the mortise. On mechanical override models, ensure the override cylinder tailpiece (Y) engages the override cam (S) on the inside housing.
- Secure both housings to the door using two of the four 10-24, 1/8" hex-head screws (Q), on the bottom right and top left of the inside housing.
- Turn the outside lever and then the inside lever to ensure that the bolt retracts.
- For mechanical override models**, the override key has been sent to the manager. Test the override in the manager's presence. Turn the key 2/3 of a rotation (clockwise for a left-hand lock, and counterclockwise for a right-hand lock). The cylinder and the inside lever rotate freely, and the latch bolt retracts fully. If the override cylinder does not rotate freely, the cylinder tailpiece (Y) is too long and must be shortened. If the override cylinder rotates freely but does not operate the lock mechanism, the tailpiece may have been cut too short, requiring replacement.
- Install the two remaining mounting screws (Q) and check the alignment of the lock and mortise (or latch) mechanisms by operating the lever handles, the latch, the deadbolt and the thumbturn. A properly aligned lock allows the smooth return of the thumbturn to its original position.
- For mechanical override models**, test the mechanical override mechanism again.
- For wood doors, install the #6 x 1" (25mm) screw (P) through the hole in the battery compartment portion of the inside housing.

**Exploded View
Electrical Override Models**



17. Snap the battery connector (L) onto the sealed battery pack (M) and place the battery pack in the top of the inside housing. Secure the battery cover (O) using the 6-32 x 3/8" (10mm), 5/64" hex head screw (N).

NOTE: If the lock makes a continuous buzzing noise, the mortise motor is running continuously. Reset the electronics by disconnecting the battery pack for ten seconds, then reconnect it.

18. Install the medallion (A) on the outside housing and secure it using the 5/64" hex-head screw (C). (On electrical models, tuck electrical override terminals (B) inside medallion.)

VII TEST THE OPERATION OF THE LOCK



Caution! Perform the following procedures in order, with the door **OPEN** unless otherwise indicated.

1 Inside Lever

Turn the inside lever downward. The latch bolt retracts fully.

If the latch does not retract, check that the handle, spindle and latch hub are properly engaged.

If the lever does not rotate, the override cam has not been properly set for the handing of the lock (see section VI, step 1).

If the lever feels tight (hard to turn, or does not return easily to its horizontal rest position), check the alignment of the lock assemblies. Loosen the mounting screws and shift the inside housing slightly until the friction is eliminated. If the problem persists, check the position of the holes on the door (compared to the mortise).

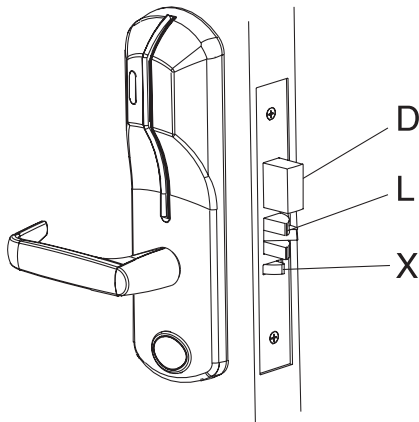
2a Standard Deadbolt Mortise

Turn the thumbturn back and forth to extend and then retract the deadbolt. The deadbolt extends fully and retracts without undue friction. **If the thumbturn does not operate the deadbolt**, the spindle may not have been properly aligned before installing the inside housing on the door (see section VI, step 2).

Turn the thumbturn to extend the deadbolt again, then turn the inside lever to retract the deadbolt. The deadbolt and the latch bolt retract simultaneously and fully without undue friction.

2b Autodeadbolt Mortise

Press and hold the auxiliary bolt (X). The deadbolt (D) will extend automatically. Keep the auxiliary bolt depressed, and turn the **inside** lever all the way down and hold it there. The latch (L) and deadbolt will retract together.



Release the auxiliary bolt, then let the inside lever return to a horizontal position. The deadbolt will remain retracted, while the latch will extend.

3 Outside Lever

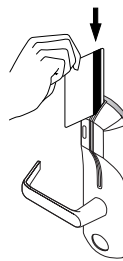
Turn the outside lever downward. The latch bolt does not retract.

If the latch bolt retracts, verify that the batteries are properly installed and that the mortise handing corresponds to the lock handing.

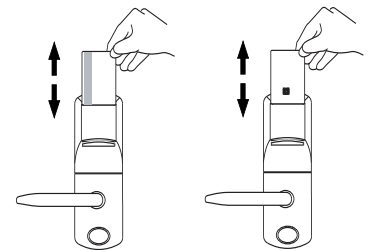
If the lever feels tight (hard to turn, or does not return easily to its horizontal rest position), check the alignment of the lock assemblies. Loosen the mounting screws and shift the outside housing slightly until the friction is eliminated. If the problem persists, check the position of the holes on the door (compared to the mortise).

4 Electronics and Card Reader

Solitaire 710-II



SolitaireSMART



Test the lock's response to keycards: a Test keycard, a Grand Master keycard, and an Emergency keycard.

Insert keycards as shown above. For SolitaireSMART 740 series locks, perform tests with both SMARTKeycards and magnetic stripe keycards.

A Test the Lock Before Programming

Normal Entry: Verify that the deadbolt is retracted. Use the Test keycard in the reader. The **red** and **green** LEDs each flash once and then the **green** LED flashes for six seconds or until the outside lever is turned.

Turn the outside lever downward while the **green** LED is flashing. The latch retracts fully. Release the lever, then turn it again. **The latch must not retract after the LED stops flashing without first inserting the keycard.**

If the lock does not respond to the keycard, verify that the override cam has been properly set for the lock handing.

Privacy Switch: Extend the deadbolt by turning the thumbturn (standard mortise) or press the auxiliary latch then turn the thumbturn to the horizontal position (autodeadbolt mortise). Use the Test keycard in the reader. The **red** and **green** LEDs each flash once and then the **red** LED flashes for six seconds. **If the green LED flashes for six seconds** (when thumbturn is horizontal), **the privacy switch is defective.**

If privacy is required when inside the room, with any mortise, turn the thumbturn to the horizontal position. The deadbolt will be extended and all management access except the Emergency keycard or the emergency override mechanism will be locked out. Turning the inside lever will retract the deadbolt and the latch, and return the thumbturn to the vertical position.

VII TEST THE OPERATION OF THE LOCK

B Lock Programming

Program the lock with its room number (see Reference Manual).

Verify that the deadbolt is retracted, and use the Grand Master keycard in the reader. The **green** LED flashes. Turn the outside lever downward while the **green** LED is flashing. The latch retracts fully and the LED stops flashing after 6 seconds. Release the lever, then turn it again. **The latch must not retract again without first inserting the keycard.**

C Deadbolt Function (Lockout of Keycards)

Turn the thumbturn (or press the auxiliary latch on autodeadbolt models) to extend the deadbolt, then turn the thumbturn to the horizontal.

Use the Grand Master keycard in the reader. The **red** LED flashes once. Then, turn the outside lever downward. **The latch does not retract.**

D Emergency Keycard Access (Deadbolt Override)

Use the Emergency keycard in the reader. The **red** LED flashes for 6 seconds. Then, turn the outside lever downward. **The deadbolt and latch bolt retract simultaneously and fully.**

While standing outside the room, close the door and ensure that it is properly latched. Open the door using the Grand Master keycard.

5 Deadbolt Deactivation

A Deadbolt Deactivation by Thumbturn

While standing inside the room, close the door, and then turn the thumbturn to extend the deadbolt. If the lock has an autodeadbolt mortise, the deadbolt extends automatically and can only be retracted by turning the lever (see B below).

Turn the thumbturn to retract the deadbolt. **Repeat.**

B. Deadbolt Deactivation by Lever

While standing inside the room, close the door. On standard mortise models, turn the thumbturn to extend the deadbolt. On autodeadbolt models, the deadbolt should have extended when the door was closed.

Open the door by turning the lever. The deadbolt and the latch bolt retract simultaneously and fully. Take note of any excess friction, which might necessitate filing the strike (deadbolt area only). **Repeat.**

6 Electrical Override

Remove the lock batteries and unsnap the battery wire connector from the battery pack.

Remove the hex-head set screw from the bottom edge of the outside housing assembly and remove the medallion from the outside housing.

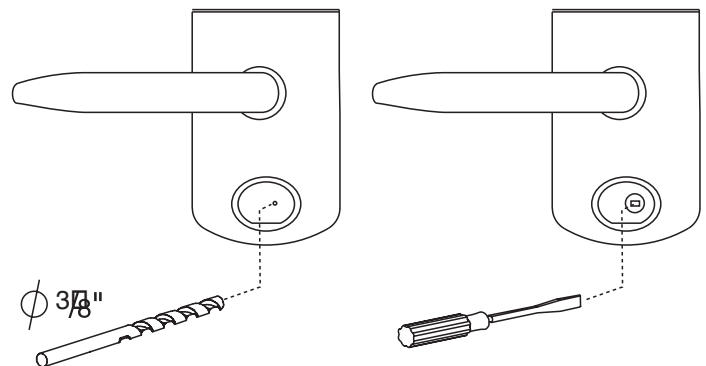
Pull out the exposed override cable, remove the protective cap, and plug it into a battery pack or a 9 volt battery. **The motor in the mortise should be activated for a short period of time. If you do not hear the motor while plugging in the battery, the override function or the lock is defective.**

Disconnect the battery from the override cable, re-install the protective cap and reposition the cable. Re-install the medallion, the lock batteries, and the battery cover.

VIII USING THE DRILL POINT ON ELECTRICAL OVERRIDE MODELS

Instructions for using the electrical override are found in the Reference Manual. **If the electrical override fails to open the door, the drill point can be used as a last resort.**

1. The decorative medallion should already have been removed (loosen hex head setscrew in bottom of the outside housing) in order to use the electrical override. A small dimple in the drill plate indicates the drill point, to the right of center.
2. Drill at the indicated point with a $\frac{3}{8}$ " (10mm) drill bit, until the plate is pierced.
3. Insert the screwdriver, and rotate the override cam on the inside housing $\frac{2}{3}$ of a rotation (clockwise for a left-hand lock, and counter-clockwise for a right-hand lock). The inside lever rotates, the latch bolt retracts fully and you can open the door.
4. Any damaged parts must be replaced, including the drill plate. A new drill plate can be purchased from Kaba (see catalog). To install the drill plate, the lock must be removed from the door.





Kaba Lodging Systems

7301 Boul. Décarie Montréal (QC) H4P 2G7

Technical Support:

1.800.906.4526

Customer Service:

T: 1.877.468.3555

F: 514.735.6589

General Information:

www.kabalodging.com

Online Consumable Orders:

www.keycard.com

To access all of our easy steps, please visit our Support Website:

<http://connect.kabalodging.com>