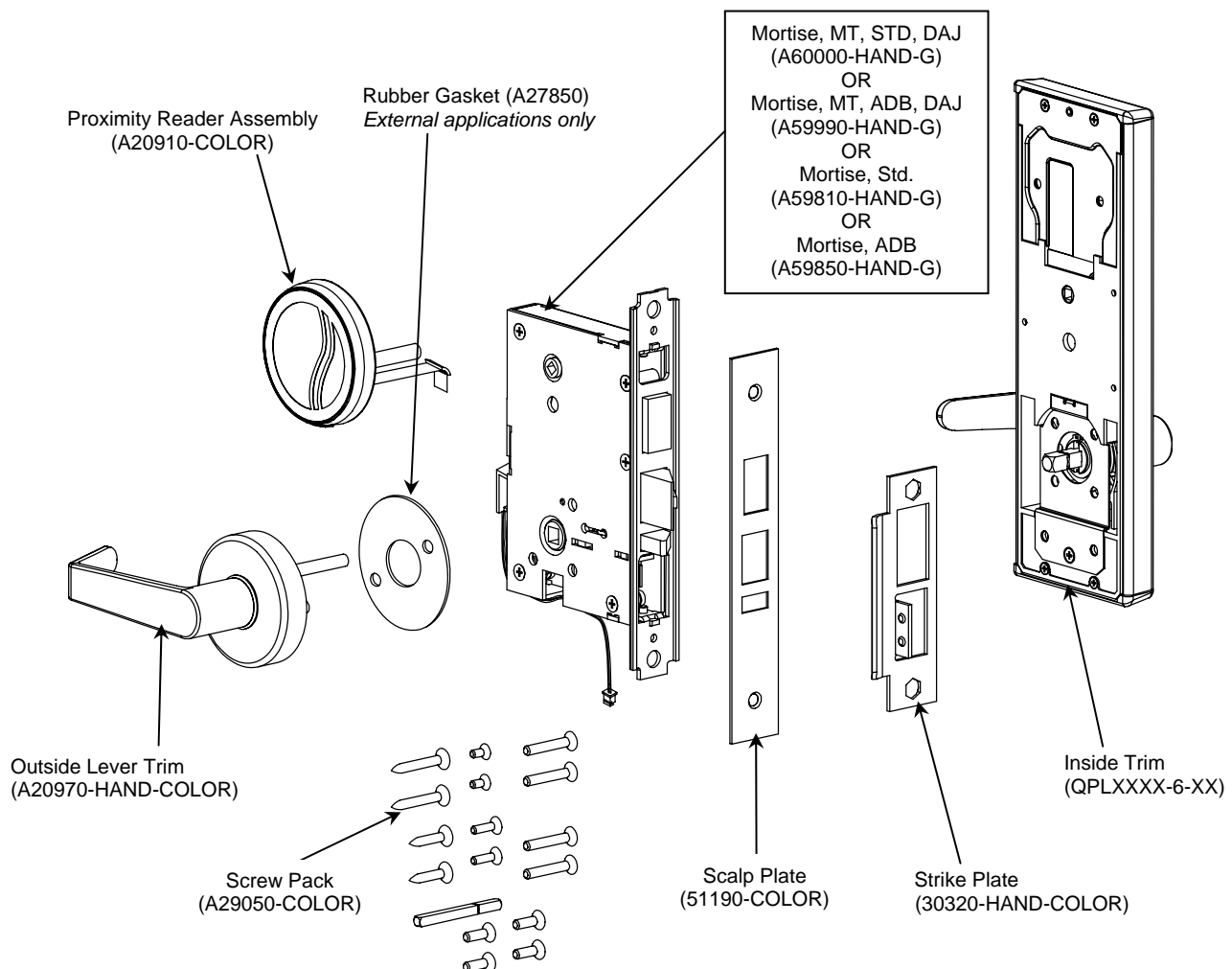




# Quantum™ MT™ RFID Installation Instructions

All parts needed to install the Quantum™ MT™ RFID lock are included with each unit. Please check to make sure all parts are accounted for before beginning installation. Do not substitute any of the parts. The use of substitute parts will result in poor performance of the lock.



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## Preparing the door and door frame

1. Prepare the door using the Quantum RFID reader installation template or drill fixture. The door edge prep is a standard, full-mortise prep for a 1-1/4" x 8" front plate (1" x 8" and 1" x 7-3/4" custom front plates are optional). The door surface holes and mortise are customized for the SAFLOK trim.

**Important:** Some holes are only on the inside surface of the door. See the door prep template.

- For new construction installations, the door manufacturer may prepare the door using the installation template.
- For retrofit installations, remove the existing hardware and confirm that the existing door edge prep is appropriate for the SAFLOK mortise lock.

**Drill fixture:** If you are using a SAFLOK drill fixture, position and clamp the fixture on the door. The fixture has two positioning posts that rest inside the mortise, establishing the proper backset for the trim. When the fixture is clamped, its surfaces should be parallel with the door surfaces and door edges. Not all holes go through the door (refer to the template). Notch the material on the inside surface for easier routing of the motor wire. After machining, remove any debris from the mortise and cutouts.

2. Prepare the door frame using the template and install the strike plate using the screws provided (12 x 1-1/2 screws for wood frames, 12-24 x 3/8 screws for metal frames).

## Preparing the door and door frame (continued)

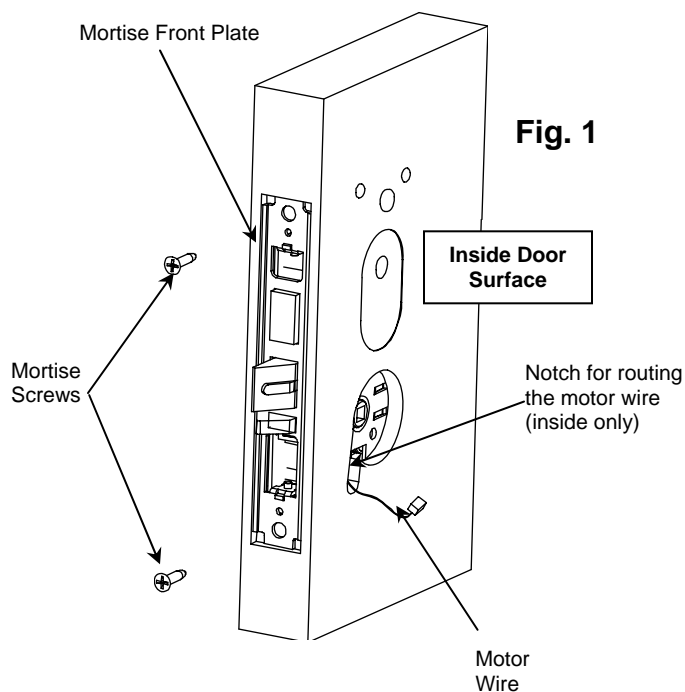
3. The mortise plate has an adjustable bevel. Align the mortise front plate with the bevel of the door edge and tighten the two bevel adjustment screws at the top and bottom of the mortise case. Position the mortise case in the door edge with the motor wire routed through the notch (see Fig. 1).

**Note:** Use care to ensure that the wires do not get pinched or pulled as the mortise is inserted into the pocket.

4. Attach the mortise front plate to the door using the two mortise screws (12 x 1-1/4 screws for wood doors, 12-24 x 3/8 screws for metal doors). Be sure that the screws are fully tightened.

**Important:** DO NOT leave the screws loose. The screws must be fully tightened before the trim is installed. If you must leave the mortise loose to install the trim, the door preparation is incorrect.

5. Install the scalp plates with the 8-32 x 1/4 screws provided and test for proper mechanical latch engagement into the strike plate.



## Installing the lock trim

The outside lever trim has two carriage bolts that fit into the diagonal holes in the mortise case. These carriage bolts establish an accurate trim position with respect to the mortise case assembly, allowing the levers and bolt mechanism to operate without binding. The holes machined in the door surfaces should not influence the position of the trim or the card reader assembly.

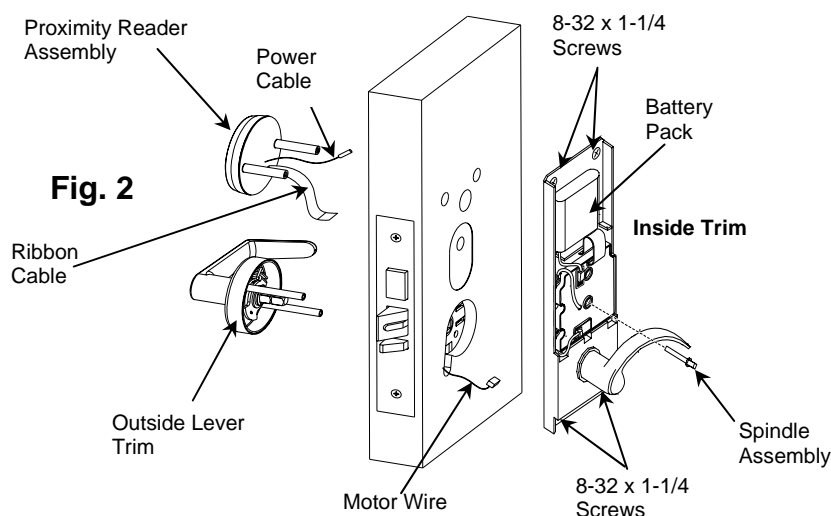
Do not tap or bend the carriage bolts to manipulate the fit of either trim piece during installation. The door prep holes should accommodate the outside lever trim and the card reader assembly. If the carriage bolts or card reader enclosure fit too tightly in the door prep holes, remove the mortise and enlarge the holes to achieve a free fit.

1. Remove the battery pack and retaining spring from the inside trim.
2. Position the outside proximity card reader assembly on the outside of the door (see Fig. 2). Route the ribbon cable and power cable through the 13/16" hole in the door. **Do not pull on the ribbon cable.**
3. Position the inside trim on the inside of the door.
4. Secure inside trim to the proximity card reader assembly to the inside trim using two M5 x 31 mm screws.

**Important:** Do not fully tighten the screws at this point.

5. Align the outside lever trim with the diagonal holes located on either side of the mortise hub and secure it using the remaining two 8-32 x 1-1/4 screws (see Fig. 2).
6. Once the outside lever trim is fully secured, check the alignment of the inside trim and be sure that the both levers rotate without binding. Once the trim is properly aligned, fully tighten the screws that secure the proximity reader assembly to the door and check for proper rotation.
7. Place the battery pack in position above the PCB and secure it in place using the retaining spring. Be sure that the battery wire is routed through the lower left corner of the battery compartment.

**Note:** Do not plug in the battery until the other connections have been made at the circuit board.



## Installing the lock trim (continued)

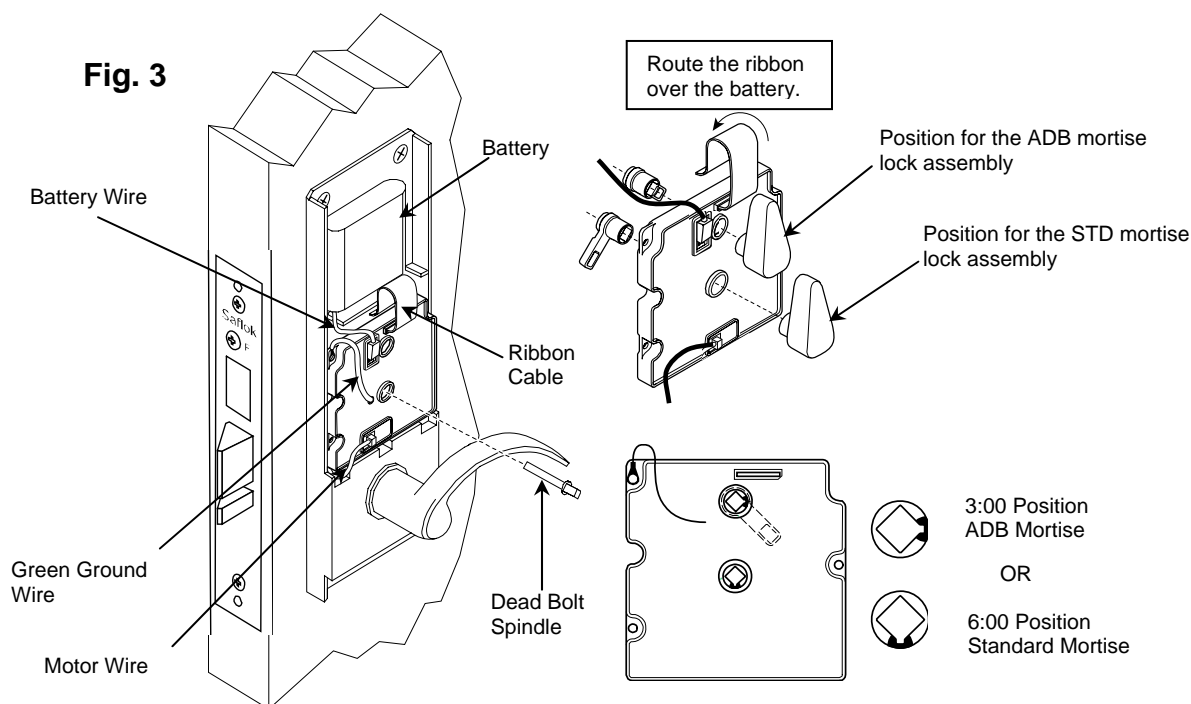
9. Connect ribbon cable, motor cable, and power wire to the PCB. See Fig. 3.
10. Watch for the green LED on the card reader to flash four times while you connect the battery wire to the PCB. The green light indicates that the PCB has reset.

**Important:** The battery wire should be the last connection made to the PCB.

11. With the dead bolt retracted, insert the long end of the dead bolt spindle assembly through the PCB switch cam hole and into the mortise dead bolt hub. When the mortise dead bolt is retracted, the indicator marks on the switch cam should be at the right (3:00 position) for ADB mortises or at the bottom (6:00 position) for standard mortises (see Fig. 3). The retaining ring should rest on the switch cam when fully inserted (the proper positioning of the cam will allow the door to be opened when the dead bolt is retracted and block entry when the dead bolt is thrown for privacy, except when emergency keycards are used). Position dead bolt spindle assembly into cam assembly.

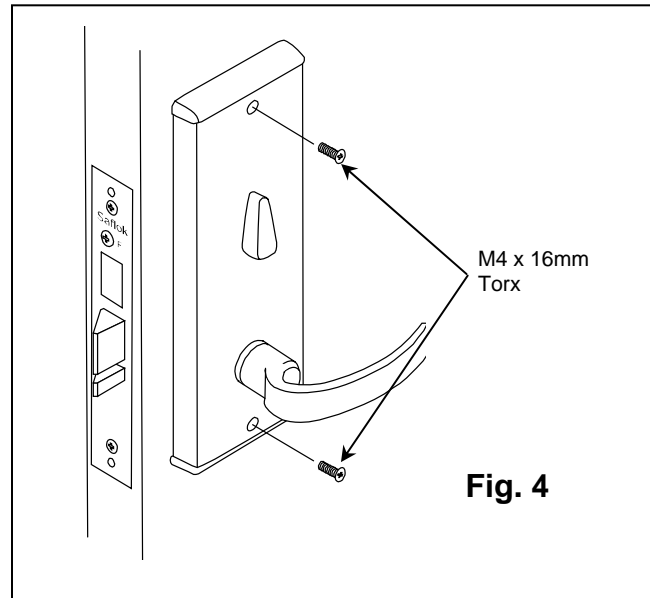
**Important:** As illustrated in Fig. 3, be sure that the cam is in correct orientation.

12. Install the inside escutcheon with the thumb turn pointed upward.



## Installing the lock trim (continued)

13. Secure the inside trim cover to the inside trim using two M4 x 16mm Torx screws (see Fig. 4).



14. Program the lock using the Lock Programmer and Interrogator (LPI) probe with the LPI-R device cable. Test the functioning of the lock as discussed in the following section and in the programming manual before closing the door. When the construction key is used, the green and red LEDs will blink together, indicating that the lock's time and date are not set.
15. For humid outdoor environments, apply dielectric grease inside the USB connector after programming to guard against corrosion from persistent moisture.

**WARNING:** DO NOT COVER READER AFTER INSTALLATION.  
Application of painter's tape or paper will cause the reader to drain the battery in a short time.

## Testing Lock Functionality

Pass a Construction key over the Quantum RFID reader. The yellow light will flash, indicating that the key is present, and then the green light will flash for five seconds. Be sure that the green light flashes for five seconds while the exterior lever remains operable. If the yellow or green lights do not flash, refer to the table below.

Lock Communication	Electronic Function Description
<b>Red and green LEDs flash nine times simultaneously</b>	Time and date not set, use the Quantum RFID LPI probe to reset
<b>Yellow LED flashes 12 times</b>	Dead bolt is thrown or switch cam is not properly aligned
<b>Yellow LED flashes two times</b>	Keycard not allowed OR keycard cancelled by new keycard
<b>Red and green LEDs flash alternately nine times</b>	Low battery (contact the SAFLOK service department)
<b>Yellow and red LEDs flash two times simultaneously</b>	Bad keycard read or corrupted data (may require new keycard)
<b>Red LED flashes two times</b>	Keycard not read (keycard inserted upside-down, wrong end, wrong key?)
<b>Yellow LED flashes one time when the key is presented</b>	Reader detects the presence of the key

## SAFLOK Door Unit Inspection Criteria

### Appearance

- Finish is free of blemishes or scratches that would distract from lock appearance
- Lock body and under plate (if used) are mounted straight on the door
- Door scalp is mounted straight and flush with the door edge
- Jamb strike is mounted straight and is flush with the jamb face
- Correction of minor blemishes on the door jamb are the responsibility of the property's maintenance department

### Lock Function

- Knob or lever rotates and moves freely
- Lever is horizontal to floor when at rest position
- Dead bolt extends fully and retracts without binding (door open)
- Lock latch and dead bolt engage jamb strike plate freely
- Anti-pick latch when depressed (door open)
- Anti-pick latch is depressed when contact is made with the strike plate (door closed)

### Electronics/Keycards

- Reader optic check: Present hand or keycard in front of reader, and the yellow light flashes twice when incorrect keycard is used
- Red light flashes twice if keycard is used incorrectly and cannot be read (e.g., a credit card is used)
- Green light flashes when the proper keycard is used
- Green light is flashing when the lever is operated
- Green light continues to flash for a five-second cycle
- Yellow light flashes 12 times when the dead bolt is extended and a guest/hotel keycard is used
- All keycards function to the specifications of the master plan

### Door function

- Door closes and latches with little or no interference
- Dead bolt extends fully through the strike plate without interference (door closed)
- Spacing between door edge and inside door jamb does not exceed 3/16" (door closed)

**Note:** If bumpers or other seals are added after strike plate installation and causes alignment and latch problems, it is the property's responsibility to correct this condition. This note generally applies to new construction or new door installation.

**FCC Warning:** The users of this equipment shall not change or modify the equipment in any way, or they could void their authority to operate the equipment under FCC rules.

**Questions?** Call Customer Service at 800.999.6213 and select option 3.  
For online assistance, visit [support.saflok.com](http://support.saflok.com).



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Manufactured under one or more of the following patents:

U.S.: 4,177,657; 4,411,144; 4,534,194; 4,890,870; 5,198,643;  
5,477,041; 5,820,177; 5,986,564; 7,051,561; D494,841; D501,131  
D512,899; D519,021; D531,629; D533,009; D533,047; D533,762;  
D533,763; D535,629 CANADA: 1,252,854; 1,298,902  
U.K. 2,010,375  
Other U.S. and foreign patents pending

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