Cylindrical RF Lock SV1C

State of: December 2006

SimonsVoss technologies

Important Information

Safety remark:

Caution! – Incorrect handling of the batteries and storage batteries used in this product can result in the risk of fire or burns. Do not charge, open or burn these batteries or heat them to more than 100 °C (212 °F).

Installation of a SimonsVoss RF Lock requires knowledge in the areas of door mechanics, door certifications, installation of electronics and the use of the SimonsVoss software. For this reason, only trained and authorized personnel should install the unit.

Compliance Statement (Part 15.19)
This device complies with Part 15 of the FCC Rules.
Operation is subject to the following two conditions:
1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

Warning (Part 15.21)
Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC Interference Statement (Part 15.105 (b))
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Industry Canada Statement per Section 4.0 of RSP-100
The term "**IC:**" before the certification / registration number only signifies that the Industry Canada technical specifications were met.

Section 7.1.5 of RSS-GEN
Operation is subject to the following two conditions:
1) this device may not cause harmful interference, and
2) this device must accept any interference received, including interference that may cause undesired operation.

SimonsVoss Technologies Inc. will not accept any liability for damages caused by incorrect installation.

An incorrectly installed RF Lock may block the access through a door. SimonsVoss Inc. is not liable for the consequences of incorrect installation, such as blocked access to injured or endangered persons, property damage or other damages.

If you will be storing the RF Lock for more than one week, remove the backup battery.

1.0 Operation

1.1 General Information

The SV1 Digital RF Lock is an ANSI Grade 1 lock and can easily be installed in any door prepared according to the ANSI/BHMA A156.2-1996 standard. In comparison to standard mechanical locks, this RF lock is just as easy to install, provides greater security, is more flexible and costs less to operate..

1.2 Opening and Locking From Outside

When locked, the outer lever turns freely, not engaging the latch. It is not possible to open the door from the outside. Hold the transponder at a distance of approximately 4 to 16 inches (10 to 40 cm) from the RF lock and briefly press the transponder button once. If this is an authorized transponder, a double signal tone sounds and the lock engages the latch. Now turn the outer lever. You have approximately three seconds for this process. You can use the software to increase the unlock time if needed. The longer the unlock time, the shorter the service life of the battery. After the specified unlock time has expired, a single signal tone sounds and the outer lever turns freely again.

If this transponder is not authorized at this time because of the time zone plan, a single signal tone sounds, but the RF lock does not engage or unlock and you cannot open the door.

1.3 Opening and Locking From Inside

It is always possible to open doors with the SV1 RF Lock from the inside without operating the transponder

2.0 Additional Functions

You can activate the following functions with the software settings:

2.1 OMRON

All product versions can be operated in OMRON mode. You will find a detailed description in the Smart Relay manual.

2.2 Extending the Unlock Time

The default unlock-time for the RF Lock is approximately 3 seconds. You can use the software to extend this time to approximately 10 seconds. This shortens the lifetime of the battery.

2.3 Logging Unauthorized Access Attempts

For RF Lock version 10.2 and later, it is possible to log unauthorized access attempts, as well as authorized accesses. This includes both access attempts without authorization and access attempts outside the specified time zone. In this connection, however, only transponders from the same lock system are logged, which means that the transponder must have the same lock system ID (SID).

2.4 No Acoustic Programmer Acknowledge

When programming over the network, it can be desirable to deactivate the acoustic programmer acknowledge. You can do that with this function.

3.0 Battery Warnings

3.1 RF Lock

Warning level 1 for main battery
If the main battery of the lock goes empty, eight short signal tones, coming quickly one after another, sound after you operate the transponder and before the cylinder unlocks. You must replace both batteries now.

Warning level 2 for backup battery (SW Version 10.0 & SW Version 10.1)
In addition to the main battery warning, an additional eight short signal tones, coming quickly one after another, now sound for the backup battery warning. The RF Lock does not unlock until after the signals. From now on, the backup battery is active. You must replace both batteries as soon as possible.

Warning level 2 for backup battery (SW Version 10.2 and later)
Now the signal tones of the backup battery warning sound for only approximately 30 seconds (without the main battery warning). The RF Lock does not couple until after the signals. From now on, the backup battery is active. You must replace both batteries as soon as possible.

Warning level 3 (SW Version 10.2 and later)
If you continue to ignore this backup battery warning, either the door can be used 50 more times or the RF Lock switches off after 4-5 weeks if there is no further operation. In both cases, the lock switches into the so-called storage mode. After this, you can only open the lock with the programming device.

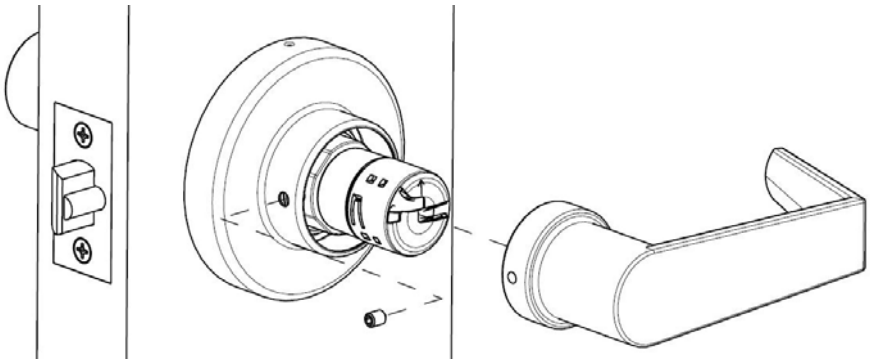
3.2 Transponder

If the transponder battery voltage is getting low, eight short signal tones, coming quickly one after another, sound each time the transponder is operated on the lock after the unlock.

Do not take out the transponder battery because this will probably result in the loss of data. See the “Transponder” manual for more information.

4.0 Battery Replacement

Only authorized personnel are permitted to replace the battery. Use only batteries that are approved by SimonsVoss.



Twist the inner rose so that the access hole is aligned with the latch and exposing the set-screw.

Use a 7/32 Hex key to remove the set-screw being careful to hold the inner handle so that it does not fall off. Set the inner handle aside along with the set-screw.

Twist the battery just a few degrees counter clockwise as you are looking at the inside of the door. The cap then slides off exposing the batteries.

Remove both batteries and replace them with the new batteries in the same orientation. The two batteries are inserted with the largest sides (positive terminals) facing each other and the smaller sides (negative terminals) facing out.

Reversing the polarity can result in damage to the lock. Incorrect handling of the batteries used in this device can result in the risk of fire or burns. Do not charge, open, heat to more than 100 C (212 C) or burn. Replace the batteries only with original batteries supplied by SimonsVoss.

Please dispose of lithium batteries immediately when discharged. Store away from children, do not open and do not throw into fire.

Replace the battery cap by aligning it so that it slides on easily and then twist a few degrees in the clockwise direction until it locks in place.

If the inner rose was removed, replace it so the access hole is lined up to allow the replacement of the set-screw. Use a 7/32 Hex key to replace the set-screw being careful to hold the inner handle so that it does not fall off.

When the set-screw has been tightened down (finger pressure), rotate the inner rose so that the access hole is facing down concealing the set-screw..

You must reprogram the lock after the battery change because the clock does not work without power (Software Operating Instructions: Programming > Setting the Clock on the Lock).

5.0 Installation Instructions

5.1 General Information

When installing the SimonsVoss RF Lock, make sure that there are no sources of RF interference in the vicinity. You should install these locks at least 1.5 feet (0.5 m) from other RF locks or SmartRelays at a distance of at least 5 feet (1.5 m).

Attention Installer

If Installation instructions are not followed this may result in damage to the lock and void the factory warranty.

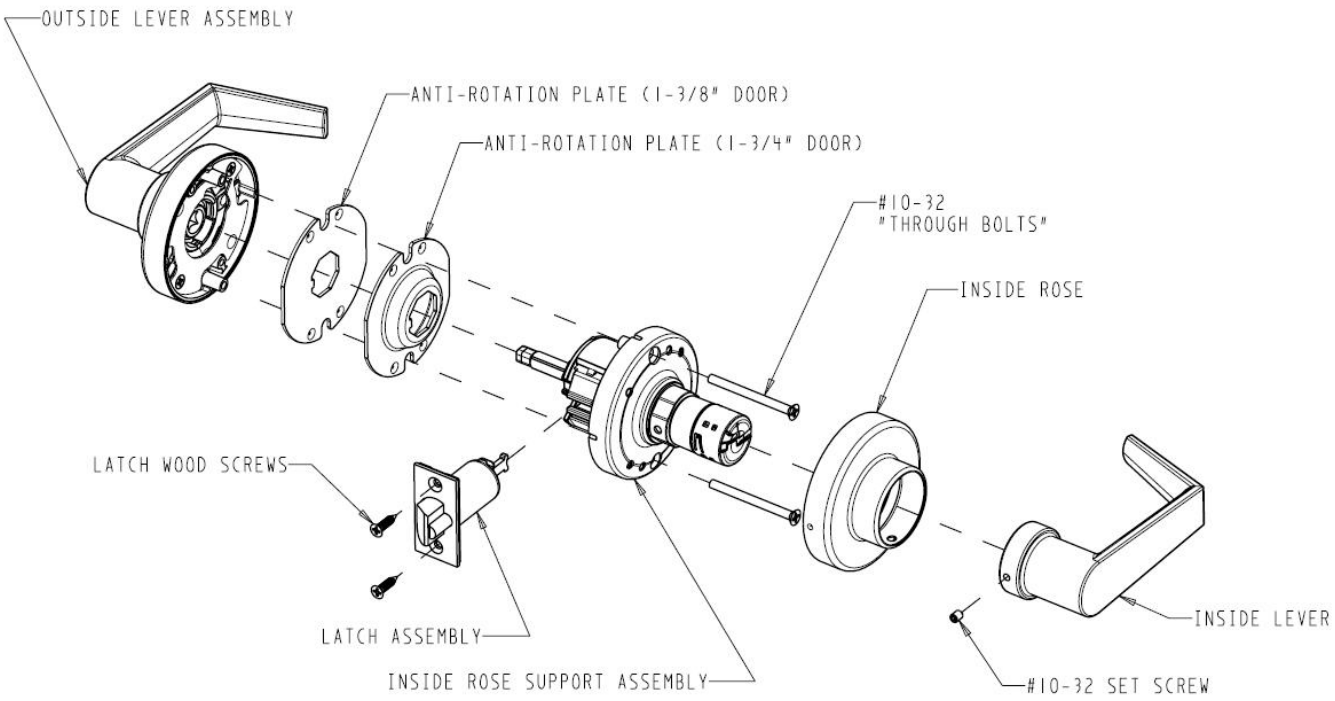
The SimonsVoss SV1 Cylindrical RF Lock is designed to fit the ANSI/BHMA A156.2-1996 door preparation standard. If the door has not been prepared you will need the following tools:

2 1/8” (54mm) hole saw	for the main cylindrical hole
1” (25mm) boring bit	for the latch
5/16” (8mm) drill bit	for the lock through-bolt screws
7/64” (2.5mm) drill bit	for the latch mounting screws
Chisel and hammer	to create the inset for the latch
32 Phillips screw driver	to mount the lock
3/8” or ½” drill	

Important: The accuracy of the door preparation is critical for the proper function and security of this lever handle lock. Misalignment can cause pre-mature wear and tear and a lessening of security.

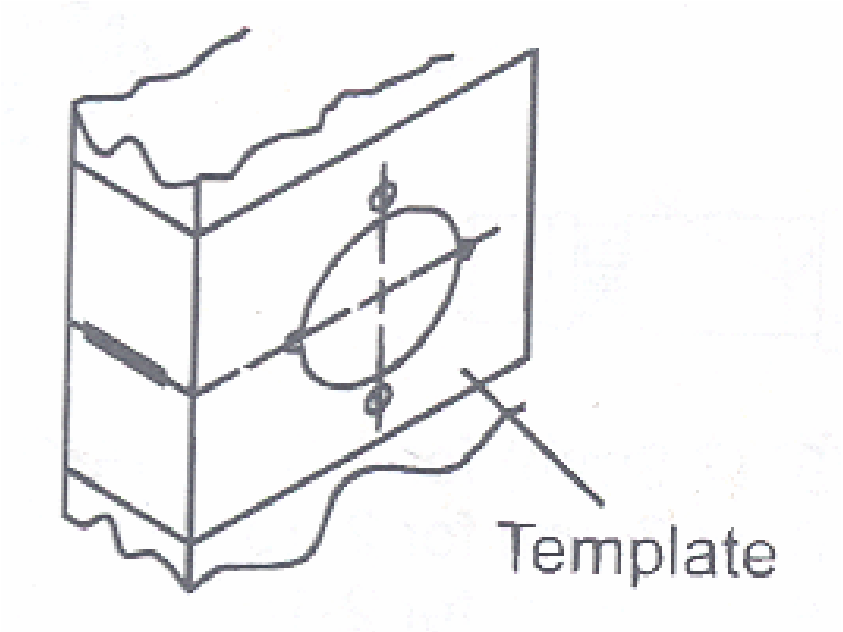
5.2 Unpack Pack

A. Remove the lock components from the box.



5.3 Mark Door

Mark horizontal line across edge of door 40 5/16” (1024mm) is standard height from floor. Fold template over edge of door, centering on horizontal line. Mark centers of holes at proper backset.



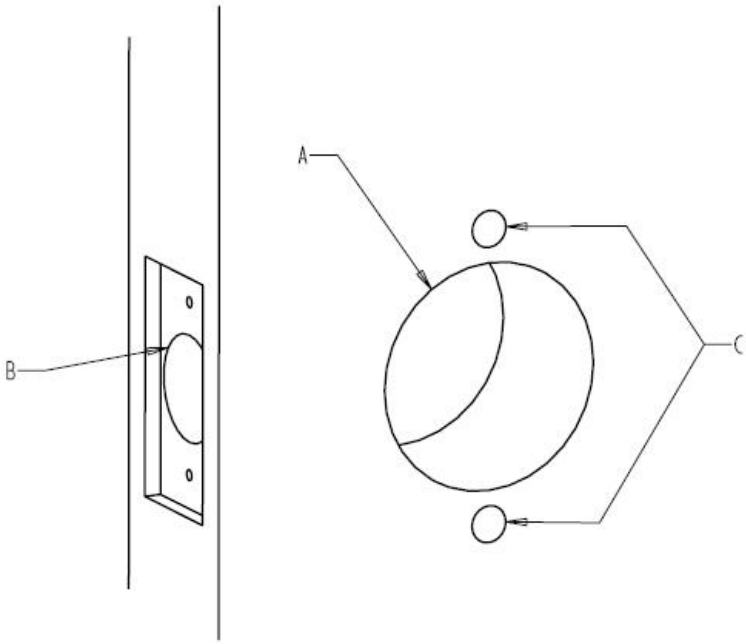
5.4 Drill Door

A. Drill 2 1/8” (54mm) diameter hole through the door.

B. Drill 1” (25mm) diameter hole in edge of door. Cut out for latch front 1 1/8” (29mm) wide by 2 ¼” (57mm) high by 5/32” (4mm) deep. Check latch unit for proper width front and square or round corners.

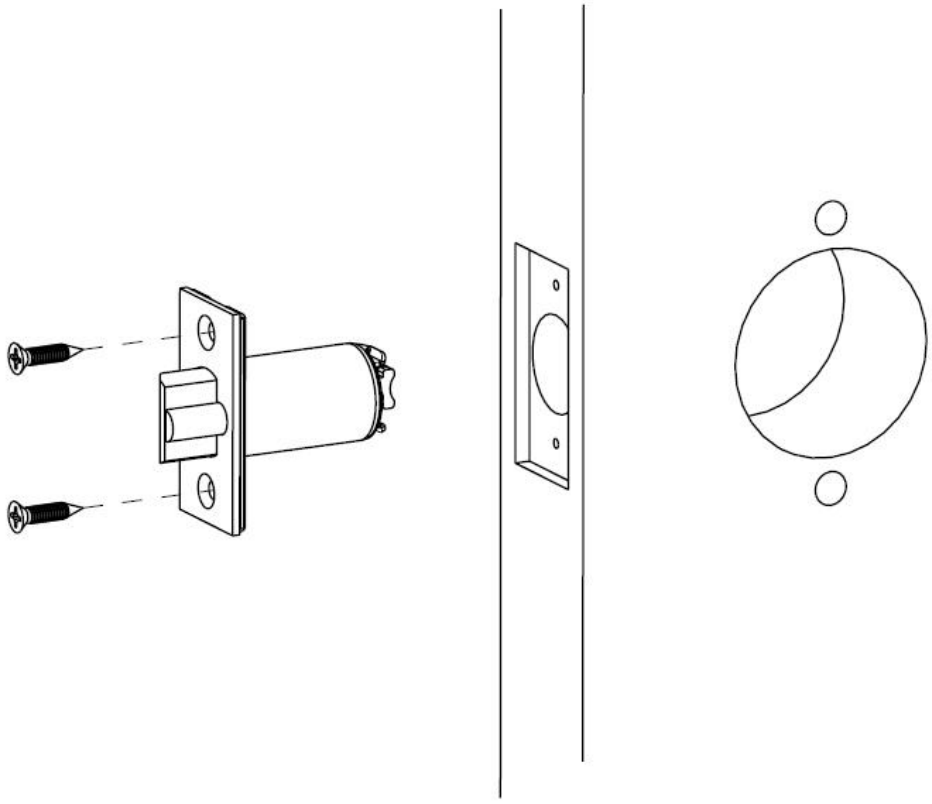
C. Drill two (2) 5/16” (8mm) diameter holes through door.

Caution:
To avoid splintering wood drill holes through both sides of door.



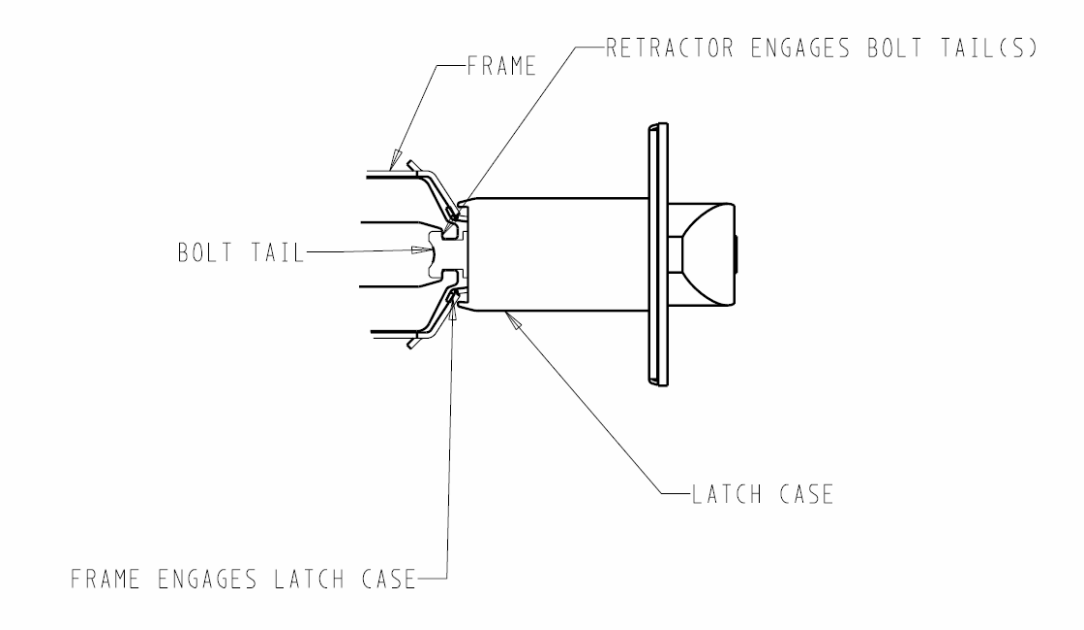
Install Latch Unit

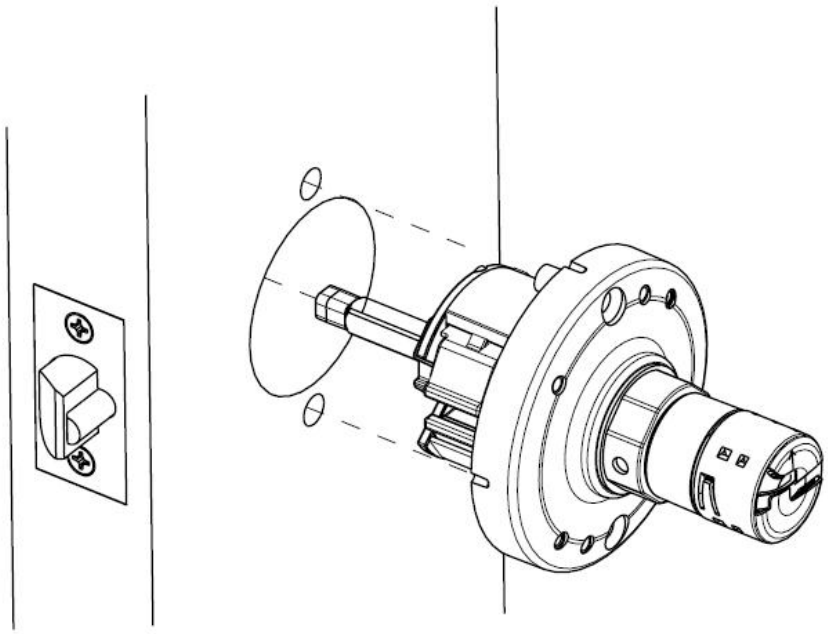
Insert latch unit in door.
(Be sure bevel edge of bolt faces strike plate.) Attach with two screws supplied.



Install Lock

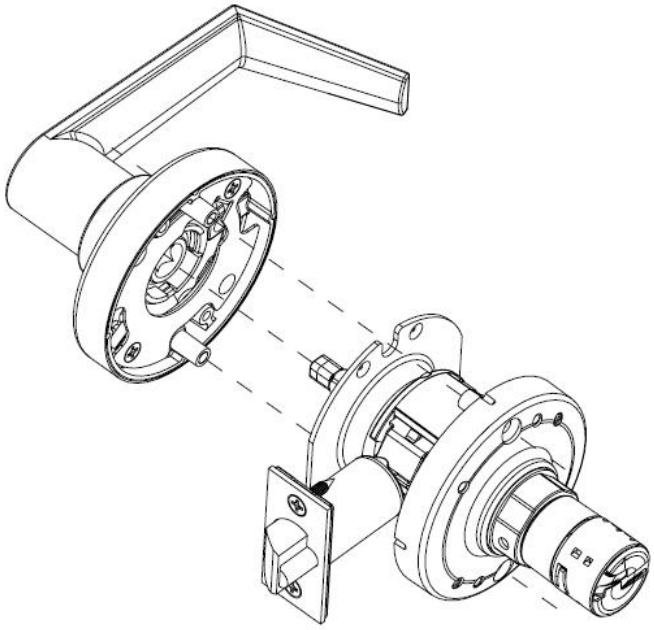
Insert the inside rose support assembly into door from inside making sure that lock body frame hooks latch case and retractor engages bolt tail(s). DO NOT FORCE (If lock body does not engage latch easily, check door preparation for errors.)



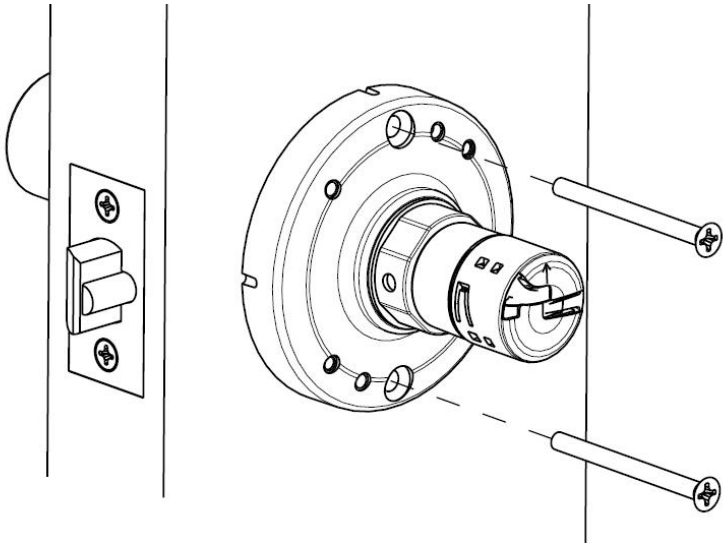


Install Outside Components

A. Choose and install the anti-rotation plate on the outside of the door. For a 1 ¾" door use the deep plate. For a 1 3/8" door use the flat plate.

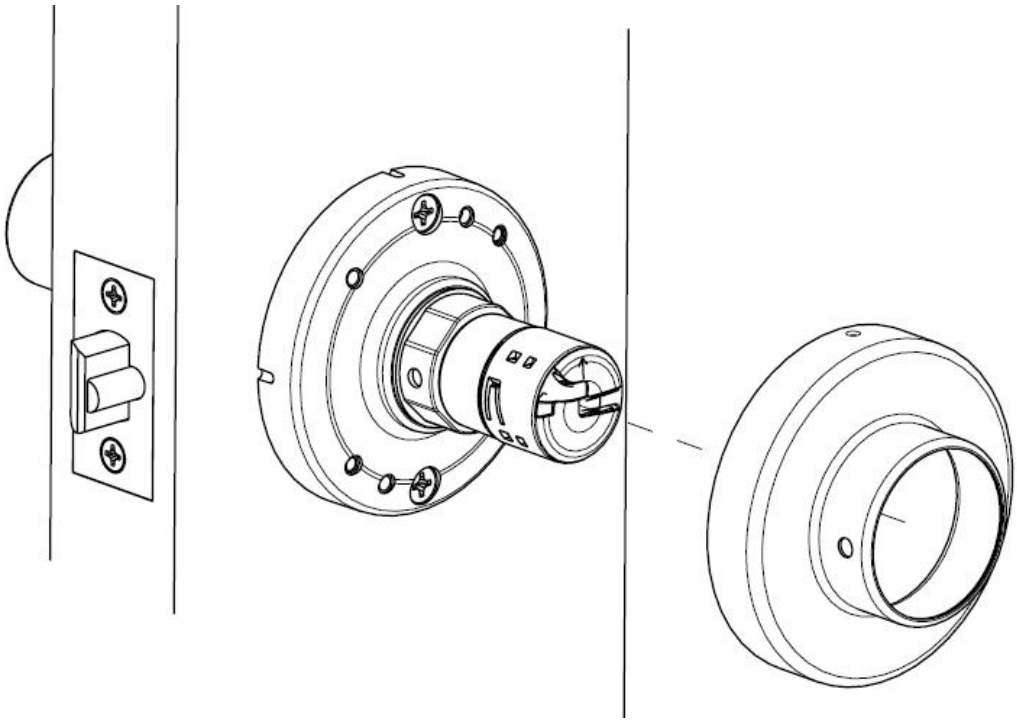


B. With the battery arrow pointing up on the inside, slide the outside lever assembly onto the lock shaft. Fasten rose assembly with two through bolts from the inside.

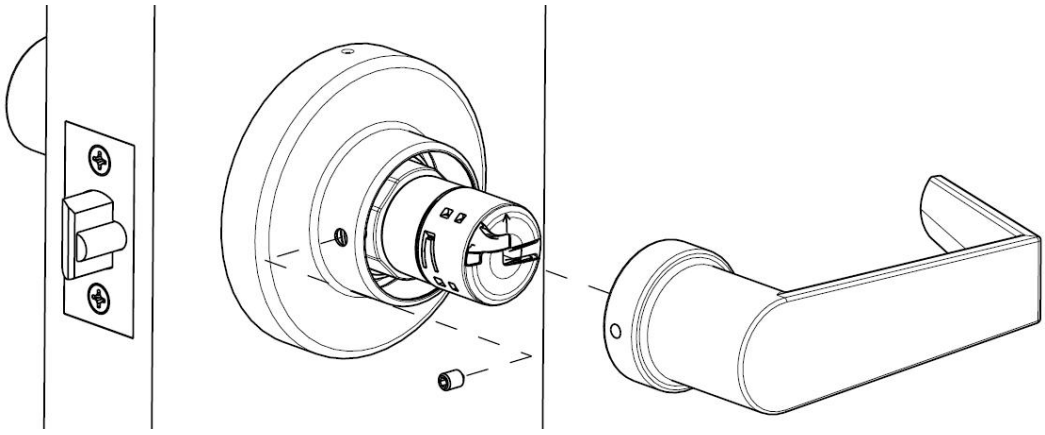


Install Inside Components

A. Place rose on inside rose support assembly so that the side hole points towards the shut face of the door. Snap into place against the door.



B. Install the inside lever handle. Fasten inside lever handle with setscrew inserted in the side hole of the inside rose.



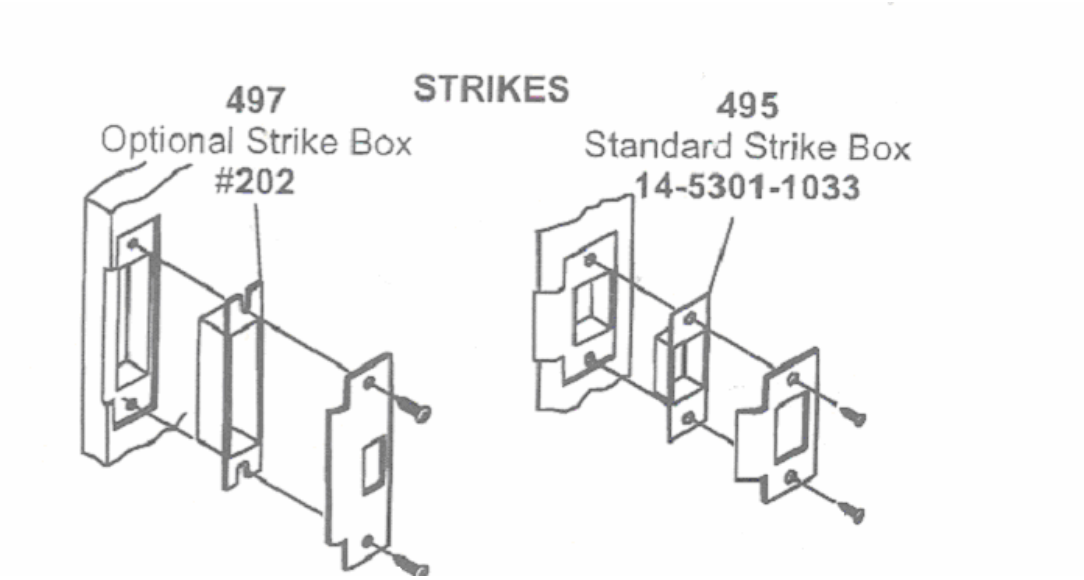
C. Rotate the rose so that the side hole faces down. The rose will snap in to place.

Strike Installation (Wood Frame Only)

A. Close door and mark a horizontal line from the center of the template to the frame of the door.

B. Measure half the thickness of the door; mark this same distance with a vertical line starting from the stop side of the frame and where both lines cross make a 1” (25mm) diameter hole and 1/2” (13mm) in depth.

C. Align the holes of the strike with the vertical line, trace the outline of the strike and mortise to 1/16” (1.6mm) depth. Attach the strike with two screws (provided).



5.5 Troubleshooting

1. Check door.
2. Check hinges. They should not be loose or have excessive wear on knuckles.
3. Latch will not deadlock. Either strike is out of line or gap between door and jamb is too great. Realign strike or shim out towards flat area or latch.
4. Latch does not retract or extend properly. Latch tail and retractor not properly positioned.
    i. Remove lockset. Look through 2 1/8 hole and verify latch tail centered between top and bottom of hole.
    ii. Remove latch and insert lockset, look through latch hole and verify retractor mouth centered in hole. Adjust outside rose plate if not.
    iii. Re-bore holes if necessary to line up retractor and tail.

5.6 Programming the RF Lock

You must program the SimonsVoss SV1 Cylindrical RF Lock and accompanying transponders in the lock plan software before you install them. Please refer to the Software Operating Instructions for more detailed information.

The SimonsVoss RF Locks are delivered in storage mode, which means that no communication is possible with the transponder. You can use software and the programming device to remove the storage mode. Please refer to the Software Operating Instructions for more detailed information.

5.7 Perform Function Test

1. With the door open, turn the inner lever. The lever must move easily.
2. Close the door and repeat the process. If the latch or lock is stiff, you probably need to align the door or correct the strike plate.
3. Then perform the same test on the outer lever. To do this, operate an authorized transponder near the lock.

6.0 Data Sheet

Levers	Material	Stainless steel
	Styles	 Castle
		 Manor
		 Harbor
	Finishes	630 Satin Stainless Steel 629 Bright Stainless Steel 606E Satin Brass 605E Bright Brass 619E Satin Nickel 613E Satin Oil-Rubbed Bronze
Battery	Type	(2) Lithium 3 V, CR2450 Use only original replacement batteries from SimonsVoss
	Service life	Approx. 100,000 operations, or 4 years Standby
Environmental Conditions	Operating temperature	-4°F to +122°F (-20°C to +50°C)
	Storage temperature	-31°F to +158°F (-35°C to +70°C)
	Enclosure	IP54 (when installed)