LS-2/LS-2P

ACCESS CONTROL LOCKSET

Installation Instructions

REFER TO DOC. #6041000 FOR PROGRAMMING MANUAL
REFER TO DOC. #6041002 FOR INSTALLATION INSTRUCTIONS
REFER TO DOC. #6108004 FOR INSTALLATION TEMPLATE

1 Door Preparation (use enclosed template)

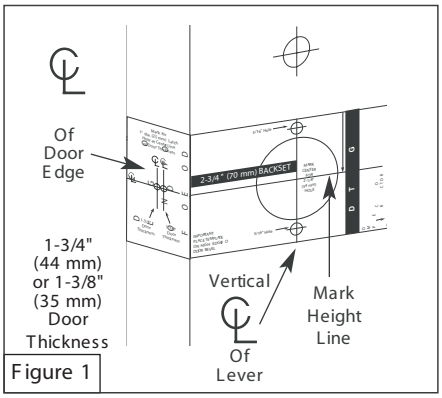


Figure 1

A. Affix paper template to door and follow template instructions in preparing door.

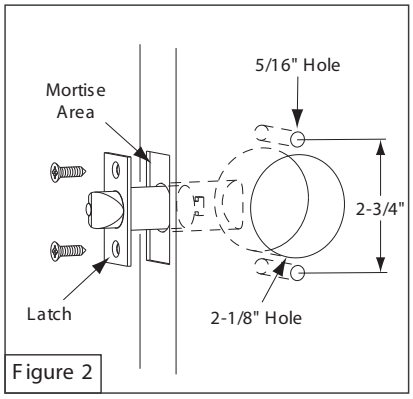


Figure 2

B. Install latch

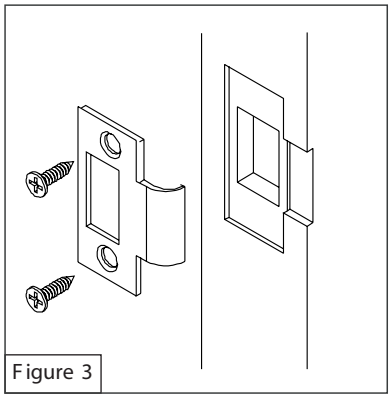


Figure 3

C. Install strike.

Adjusting for door thickness and handing

2

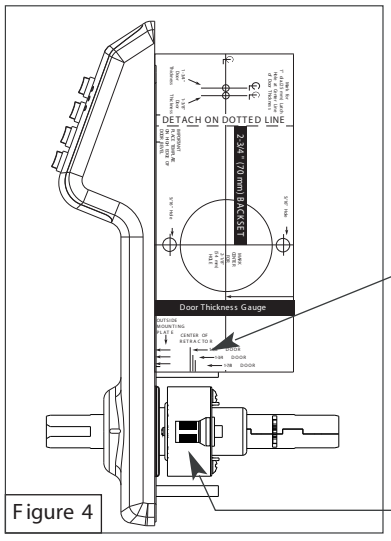


Figure 4

1. Locks are factory assembled with a split spacer ring for 1-3/4" door thickness.
2. Locks can be adjusted for 1-5/8" to 1-7/8" door thickness. Before installation, use door thickness gauge on template (as shown), to check lock chassis position. Center of latch retractor should align with mark on gauge for appropriate door thickness.

2A

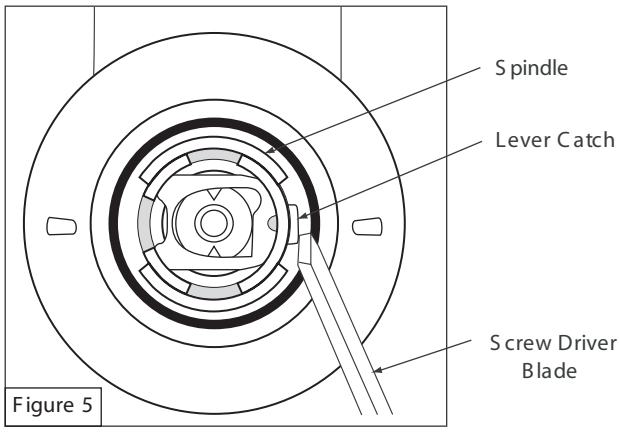


Figure 5

3. If adjustment is needed , turn lock chassis in the direction to adjust for narrow or thick doors. (For narrow doors, remove split spacer ring.) It may be necessary to depress the lever catch on spindle in order to rotate the chassis and spindle.
4. Once lock is adjusted for door thickness, check that lever engages lever catch before completing lock installation. Lever should snap securely into place with no play. If lever wobbles or does not engage with catch, turn spindle until lever snaps into place. For proper handing be sure that lever aligns with latch, see figure 6A. (See section 8 for more detail.)

3 Installing Exterior Housing

Figure 6

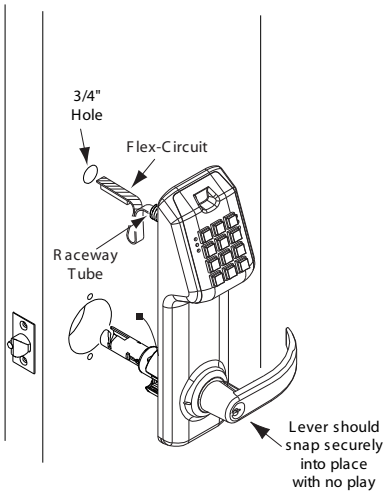
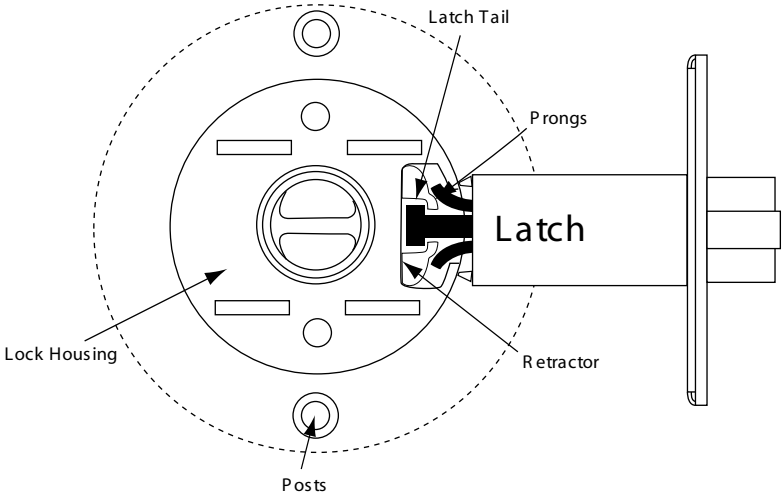


Figure 6A



Pass the Flex Circuit and the raceway tube through the 3/4" hole, then mount the exterior housing through door preparation. Make sure that the lock chassis and latch are properly engaged as shown in Figure 6A.
(See Figures 6 and 6A)

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4 Installing Interior Assembly (part I)

1. Remove two top center screws to battery case cover.
2. Disassemble top battery cover and lower housing from interior backplate.
3. Remove battery cover case and control electronics from top of backplate.
4. Feed the FlexCircuit from the raceway tube through the backplate, lock washer and raceway nut.
5. While holding the interior backplate in position, loosely install the two thru-bolts. (included in hardware kit)
6. Tighten the raceway nut on the raceway tube. When this connection is tight, secure the thru-bolts.
7. Install two screws to the backplate to the door (screws for wooden door application included). The two predrilled holes on the backplate are located below the raceway nut.

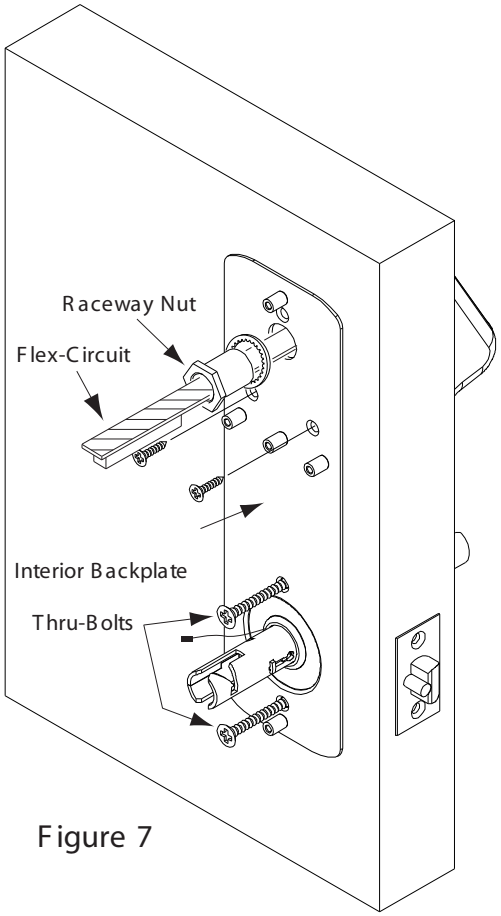


Figure 7

NOTE: raceway nut, cylinder retainer, removal tool, mounting screws and other items are included in the hardware pack.

5 Control Module and Battery Pack

Note: Use only alkaline batteries.

1. Connect the Flex Circuit from raceway to Control Module (note orientation of cable). Make sure cable is fully seated.
2. Connect the red/grey wires from Control Module to the red/grey wires from the Lockset. At this time, plug in the optional request to exit (REX)/ Door Switch cable. (See the chart below and Figure 8A.)
3. Hang the Control Module on the center stud on the backplate allowing the smaller portion of the hole in the Control Module Bracket to fit down into the groove on the stud. Note: The fork in the lower part of the Control Module bracket will fit over the stud at the Inside Lower Housing screw on the backplate.

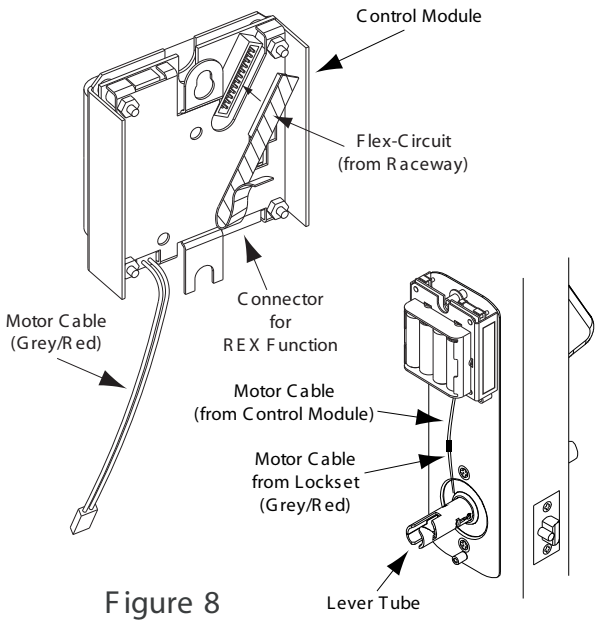


Figure 8

5A Connecting REX and Door Position Switch to J4 (OPTIONAL)

1. Connect NORMALLY OPEN free exit (REX) device to the BROWN and ORANGE wires
2. Connect NORMALLY CLOSED door position switch to WHITE and YELLOW wires

Connector	Description
J1	**Battery Connector** Pin 1 — Red — Battery + Pin 2 — Black — Battery – Pin 3 — not used
J2	**Keypad Connector** for Flex Cable (26 Pin Connector). Flex cable connector is keyed to guarantee proper connection
J4	**REX and Door input loops** Pin 1 — Brown — REX Loop Pin 2 — Orange — REX Loop Pin 3 — Green — not used Pin 4 — White — Door Loop Pin 5 — Yellow — Door Loop Pin 6 — Gray — not used
J5	**Motor Cable** Pin 1 — Red — Motor A Pin 2 — Gray — Motor B

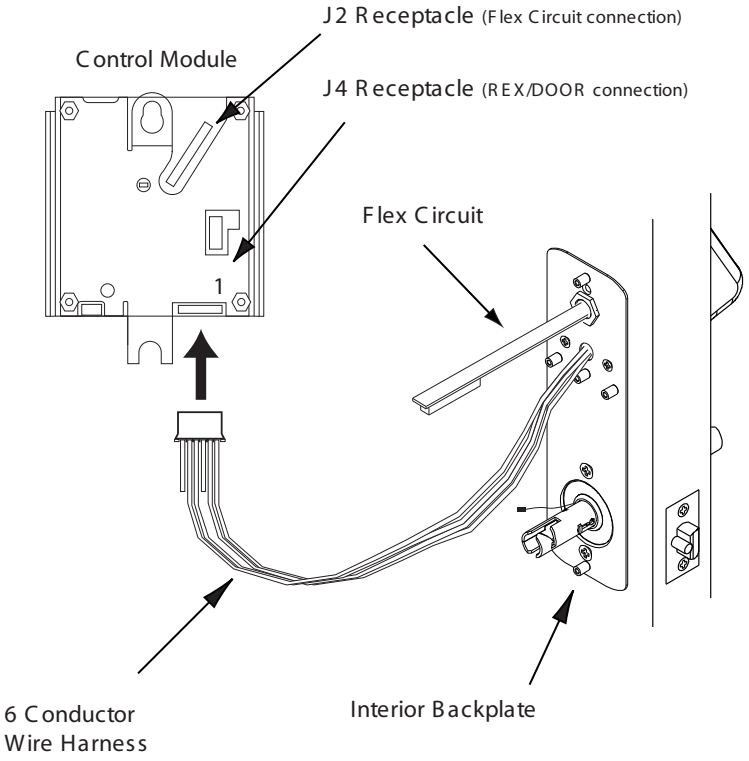


Figure 8A

6 Installing Interior Assembly (part 2)

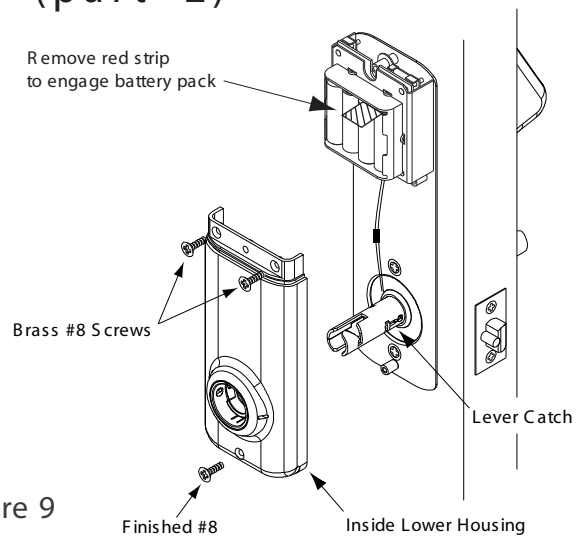


Figure 9

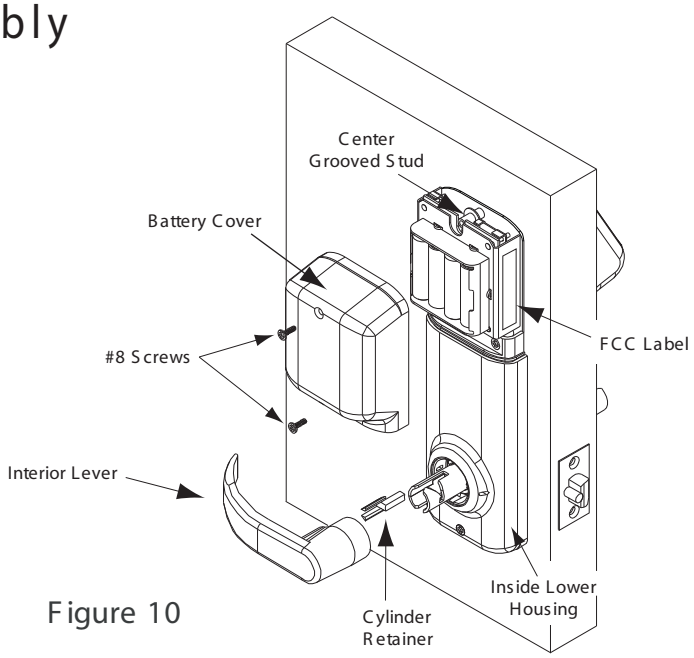


Figure 10

A Lower Housing

1. Slide the inside lower housing over the lever tube until it has passed over the lever catch. Make sure no wires are pinched by the lower housing.
2. Fasten with two brass #8 screws. Once secure, fasten the finished #8 screw at the bottom.
3. Remove red strip form battery pack to power the unit before continuing.

B Battery Cover

1. Attach the battery cover with two finished #8 screws. Battery cover has a lip which engages the lower inside housing, it is important that this lip be seated properly to insure correct alignment.

C Interior Lever

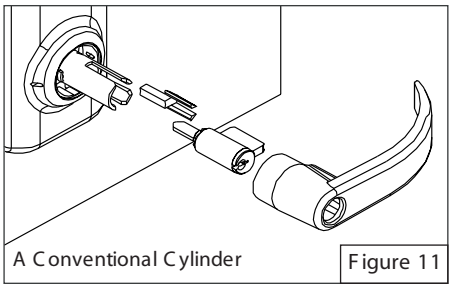
1. Insert cylinder retainer into lever until flush with base of lever.
2. Push lever on door in horizontal position until secure.

7 TROUBLESHOOTING

Electrical		
Symptom	Probable Cause	Correction
1. Beeping after assemby is completed (4 long beeps)	Low Voltage	Replace Batteries
2. Solid green LED, no motor action	Control Module not sending lock/unlock pulse	Verify continuity of wire harness and replace if necessary
3. Yellow LED flashes and sounder chirps after install	Unit not intialized	Contact IEI
4. Motor locks but will not unlock	REX loop is shorted (Brown and Orange on P4 wire harness)	Inspect connection and remove short
5. Unable to change system default	Various	Contact IEI
6. Does not read proximity cards	Unit may not be an LS-2P	Check the FCC Label (see Figure 10). If the label does not refer to model LS-2P then it is an LS-2 and not an LS-2P.

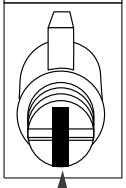
Mechanical		
Symptom	Probable Cause	Correction
1. Lever Sticks or is sluggish	Hand is too close to front escutcheon	Tighten motor spacer ring
2. Handle rests in down position	Bushing is not set correctly	Remove handle and set bushing in escutcheon
3. Cannot snap on handle	A. Chassis not adjusted correctly B. Chassis lever locking tab is damaged or missing	A. Adjust to correct setting B. Contact IEI
4. Cannot tighten the raceway by hand	Race threads are damaged	Use thread chaser to clean threads or contact IEI
5. Latch works in only one direction	The backset is not centered on the latch retractor	Center the backset on the latch retractor

8 Installing The Exterior Levers
For Right or Left Handed Operation



A Conventional Cylinder — Figure 11

Figure 11A



Tailpiece in vertical position

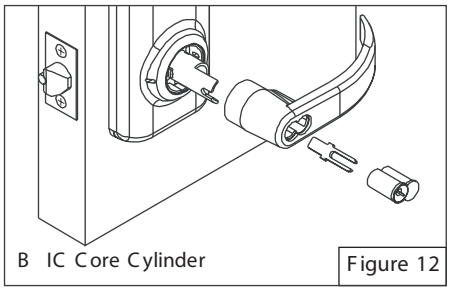
A Conventional Cylinder (Figure 11)

Outside Lever

1. Tailpiece must be in a vertical position in cylinder. (Fig. 11A)
2. Insert cylinder in lever.
3. Press cylinder retainer into lever until flush with base of lever
4. Align lever catch to face latch front (see Fig. 5).
5. Turn key in cylinder 45° in either direction.
6. Slide lever on tube until it stops at the lever catch.
7. Slightly wiggle and push until lever engages lever catch and connector.

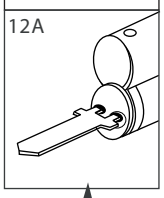
Conventional Tailpieces included for the Door Gard LS-2 levers

	Part No.	FOR
E1	LS1P-TLS	IEI Cylinders
E2	LS1P-TIL	Ilco Cylinders
E3	LS1P-TSG	Schlage Cylinders



B IC Core Cylinder — Figure 12

Figure 12A



Tailpiece in horizontal position

B IC Core Model (Figure 12)

Note: Cylinders provided by others

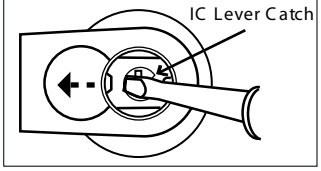
Installing IC Core

1. Push lever on door in horizontal position until secure.
2. Insert control key (marked with a "C") into IC core and turn clockwise.
3. Insert tailpiece (See chart below.) into core. (Fig. 12)
4. With control key in core, insert core fully into lock.
5. Turn control key 15° to lock cylinder in place. Remove control key.

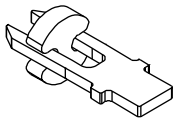
I.C. Tailpieces For the Door Gard LS-1

	Part No.	For
ER	LS1P-TIC7	7 pin IC Core Cylinder
	LS1P-TICS	Spacer to convert 7 pin

To Remove IC Core Lever Handle



Correct Orientation of Spacer



9 Removal of Levers (Interior/Exterior)

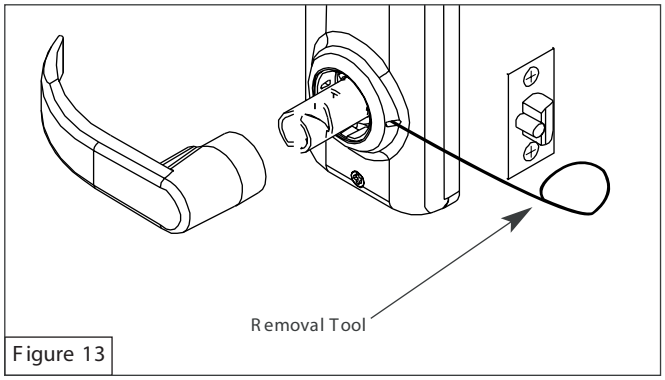


Figure 13

Inside Lever

1. Insert lever removal tool in slot. (Fig.13)
2. Depress lever catch and pull lever to remove

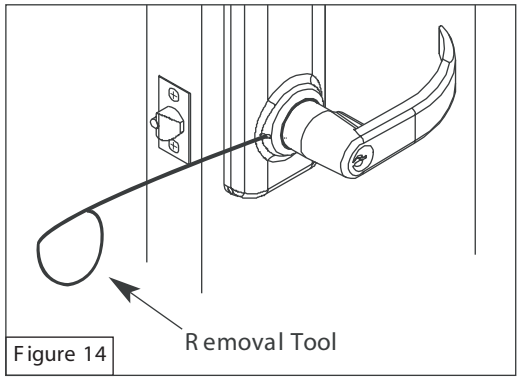
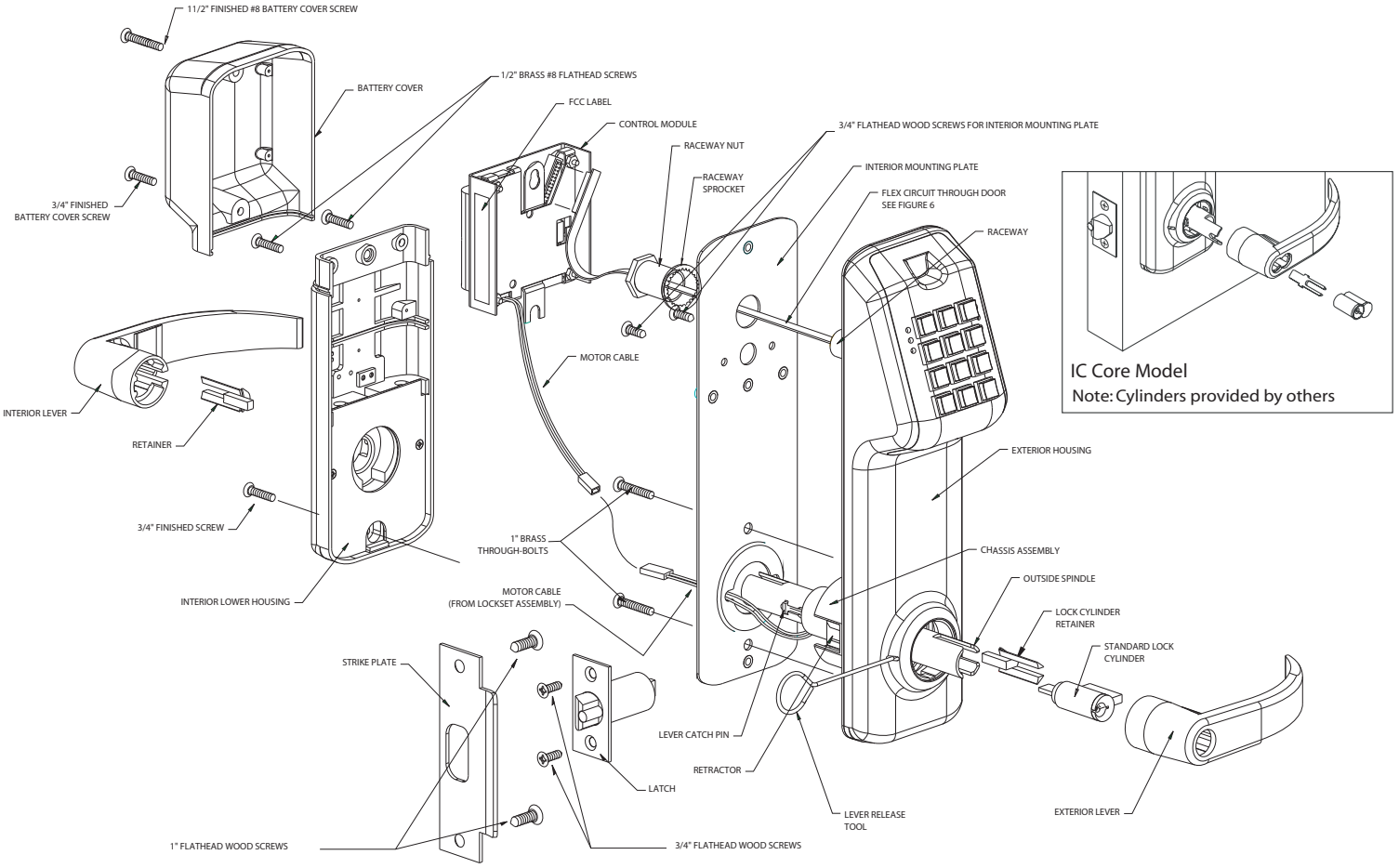


Figure 14

Outside Lever

1. Insert key into cylinder and turn 45°in either direction.
2. Insert lever removal tool in slot. (Fig. 14)
3. Depress lever catch and pull lever to remove.

INSTALLATION INSTRUCTION EXPLODED VIEW



LS2/LS2P Exterior	Interior Backplate	Latch	Cyliner Retainer (2)
Inside Lower Housing	Battery Pack/ Control Module	Lock Cylinder	Raceway Nut
Chassis Assembly	Interior and Exterior Handles	Tailpiece See Step 8 for details	Raceway Washer
Battery Cover	Strike Plate	Spacer See Step 8 for details	Lever Release Tool

Hardware Pack

Qty	Description
2	1/2" brass #8 flathead screws
2	1" brass through-bolts for lockset (oval head)
2	1" flathead wood screws for strike plate
4	3/4" flathead wood screws (for latch and interior mounting plate)
2	3/4" finished #8 screws (oval head)
1	1 1/2" finished #8 screw (battery cover top)