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Product Overview

Latch C1 - [Installation guide](#)
Latch C1 - [Latch C Cut Sheet](#)

Best Practices and Field Notes

Best Practices

1. **Inspect Mechanical Operation**
   a. Prior to service, inspect the existing hardware and how it functions: Is there friction or drag when operating the existing hardware? If so, this could impact the new Latch hardware and should be corrected prior to the Latch installation.

2. **Inspect Door Frame**
   a. Inspect the door frame to confirm depth is appropriate for the deadbolt (1" minimum).

3. **Consider Environmental Factors**
   a. Be mindful of any weather stripping or gaskets on the door or door frame that may produce added pressure when the door is closed. The added pressure can produce added side load to the deadbolt and impact performance.

4. **Evaluate Door Prep**
   a. Double-check door prep to confirm all boreholes are level and centered. Door prep that is NOT level can result in drag and can impact performance.

5. **Be Mindful of Beveled Doors**
   a. Take special care when working on a door with a door bevel. See the guide under "Using Latch C cut sheets with a door bevel."

6. **Ensure Device Handing is Configured & Configured Properly**
   a. Take care that the mechanical handing configuration has been set properly according to the installation instructions.

7. **Troubleshoot with Deadbolt in Proper Position**
   a. Start the service with the deadbolt in the position identified by the installation instructions.

8. **Do Not Torque or Over Tighten Set Screws**
   a. Do not over-tighten screws. Particularly when working on a hollow door. Overtightening can warp the door, leading to misalignment.

9. **Test Thumbturn Functionality**
   a. Test the thumb turn and confirm that it turns easily. If not, the door prep might not be correct.

10. **Verify Device is Working as Intended Before Securing the Door**
    a. Test unlock and lock prior to closing and securing the door.

Field Notes

1. When locking the device, the deadbolt needs 1" to fully extend, failure to accommodate will result in [jamming](#).
2. Failure to address any door prep issues (level boreholes, adequate size of boreholes) could result in jamming.
3. Anytime a unit is power cycled - either power is disconnected and/or batteries are removed or replaced - the unit will require a manual door update using the Latch App (instead of the Latch Manager App) once it has rebooted.

For Install and Service

1. **Tools**
   a. Phillips #2 Screwdriver
   b. iOS Mobile Device
      i. Supported devices
      ii. The latest version of the Latch Manager App (only available on iOS devices)

2. **Lockout**
   a. Drill
   b. Metal Center Punch
   c. ⅛" & ¼" size drill bits

3. **Permissions (Confirm Access)**
   a. Confirm the user has the correct access permissions
      Latch Manager App
      i. Device Management Permissions
      ii. Unlock Access
      Latch App
      iii. Unit Unlock Access
      iv. This is needed to perform a test call on the unit - note PM will have to set this up.

Latch Specification Guide

Onboarding

1. **Add a device**
   a. Once you have installed the Latch device, you need to add and save the device's information:
      i. Open the Latch Manager App.
      ii. Select the 'New Door' icon in the top right corner.

iii. You'll then be prompted to scan the QR Code on the Latch Device.
iv. Scan the QR Code on the back panel of the device on the inside of the door.
v. Select the desired Portfolio and Property Information of the property you are installing in.

2. **Assign or create a door**
   a. If you have pre-created a door in Latch Manager you can assign it by selecting 'Door Name.'
   b. If you have not [pre-created](#) the door you'll need to create one. To do so:
      i. Enter the door or apartment name.
      ii. Select the door type ([Learn more about door types)](#).

3. **Set-Up the device**
   a. Requires at least 20% battery life on battery-powered devices.
   b. Select the latest firmware version.
   c. You'll then be prompted to go through the setup process.
   d. Select 'Start.'
   e. The Latch Device should then start updating (Note: the update can take 10-15 min, do not step away from the device or navigate out of the Manager App).
   f. Once successful, select 'Next.'

4. **Test unlock**
   a. You will then be prompted to test unlock by tapping 'Tap to unlock.'
   b. Check that the device is unlocked and the door opened.
   c. Select 'Next.'
   d. Select 'Finish.'

5. **Test lock**
   a. Depending on the device and configuration, the door will re-lock after 5s (Latch R), 10s (Latch M, Latch R), when the thumb-turn is thrown (Latch C2), or when the lens is tapped (Latch C).
   b. Make sure that the device re-locks as expected prior to closing and securing the door.

Troubleshooting Workflow

1. **Confirm User device is functioning properly**
   a. Confirm that the device being used to interface with the Latch device.
      i. Is compatible with Latch ([supported models here](#))
      ii. Has strong and reliable cellular or WiFi service
         1. Without adequate cellular or wifi service to the user's device, Updates and Firmware Upgrades will fail
      iii. Has Bluetooth enabled
      iv. Isn't in a protective case that may interfere with the performance

2. **Update and Firmware Upgrade**
   a. Ensure the Latch device has been updated with the Latch App
   b. Ensure that the Latch Device has been upgraded to the latest version of the firmware

3. **Issues with the Latch App or Latch Manager App**
   a. Check for any updates that may be available for your Latch App ([iOS](#) and [Android](#)) and [Latch Manager App](#)
   b. Toggle the mobile device's Bluetooth settings off, and then back on.
   c. Power cycle the mobile device (turn it off, wait for 30 seconds, and restart the device).
      i. If Android device, perform the Bluetooth cache clear and location services toggle.
   d. Log out of and back into the Latch App.
   e. Delete and reinstall the Latch App.
      i. Ensure your phone's Bluetooth and Location settings are on, as well as the Latch App Bluetooth and location settings.

4. **Check the Lens**
   a. Do the LEDs on the lens light up when the lens is touched?
      i. If not, follow the power troubleshooting steps below
   b. Test the "Tap to Lock" function **Latch C series Gen 1 device only**
      i. When the device is unlocked (the deadbolt is pulled into the door) the user can lock the door by tapping the lens.
      ii. If this feature fails to send the deadbolt into a "deadlock" position (the deadbolt is extended and locked, unable to be pushed in by hand) the door prep should be evaluated for any side loading, debris, or unlevel/off-center boreholes that could be impacting the deadbolt and

keeping it from fully locking.

c. Are any LEDs lit continuously and/or pulsing?
   i. LED feedback instances.
      1. <u>Denial of Service (DoS):</u>
         a. The LED on the Latch Lens located in the "12 o'clock" position, when illuminated indicates **that another device is connected to the lens over BLE.** If the Latch device detects continuous attempts to connect via Bluetooth, it will automatically go into DoS mode after 50 failed attempts and BLE unlock will no longer be available.

         b. DoS mode is a feature that has been incorporated into the Latch Lens functionality to prevent unauthorized blocking of a Latch device via continuous Bluetooth connection attempts.

         c. Once a lock is put into DoS mode, it remains in that state for 5 minutes, or until the device is reset or a user successfully authenticates using either an NFC card or a passcode.

         d. After 5 minutes of inactivity, the device will resume normal advertising in order to prevent inadvertently extended lockouts.

      2. **Rate Limiting Mode (RLM):**
         a. Rate limiting mode is indicated by the digits 5 and 6 flashing on the Lens.
         b. 20 consecutive NFC or Passcode failures put the device into rate limiting mode (RLM). While in this state, the device will not accept those types of accesses for 5 minutes. After 5 minutes, SOS mode starts where NFC and passcodes will be allowed thrice before entering RLM mode again if they continue to fail.
         c. Successive RLM entries will increase the blocking access time by 5 minutes up to 25.
         d. In order to exit Rate Limiting Mode, simply enter a correct Door Code, use a valid keycard, or perform a BLE unlock

via the Latch App. If one of the authentication attempts results in a successful unlock the lock moves into normal mode, if not it moves back into RLM mode.

5. **Check Power**
   a. When a user touches the lens on the Latch device, the LEDs should light up with a numeric display.
   b. If the device is unresponsive the first thing to do is replace the batteries and then perform a door update using the Latch App (instead of the Latch Manager App).
      i. 6 AA non-rechargeable batteries.
      ii. Install batteries with the correct orientation.
      iii. The new batteries should all be the same brand name.
         1. Duracell is recommended.
      iv. Perform a door update using the Latch App (instead of the Latch Manager App).
   *See the Advanced Technical Support guide for additional troubleshooting steps.

6. **Check for broken hardware / environmental impacts**
   Check for overall damage to the device.
      i. Are there any signs of force or any noticeable scratches, cracks, or breakage?
      ii. Is there anything noticeable impacting the hardware?
         1. Is the weather stripping unusually thick, requiring the user to manually push or pull the door closed and into the secure position to be able to engage the deadbolt? If so, this is a potential jamming risk and should be dealt with by building maintenance.
            a. The deadbolt should easily glide into the frame without any noticeable drag or friction.

7. **Check Latch device functionality**
   Does the device unlock when access is attempted?
      i. Normal unlock sequence:
         1. (Bluetooth) The user opens the app and clicks unlock (or the app automatically starts to unlock through proximity once the lock is open) OR (NFC) a card is brought up to the lens OR (Doorcode) a code is input.
         2. The center LEDs light up and then the circle of LEDs opens clockwise.

3. The user should hear the motor pulling in the deadbolt

8. Check Device Configuration in the App
   a. Confirm Latch device has been activated.
   b. Add a device.
   c. Assign or create a door.
   d. Set up the device.
   e. Test unlock/lock.
   f. Configure device settings in the app.
      i. Detailed steps can be found in this Activation Steps support link.

RMA Process

Overview

In order to replace a defective device, receive a replacement unit, and return the defective unit to our QA team for evaluation, an RMA will need to be submitted through our RMA process.

Process Overview

1. Contact Latch Support with RMA details:
   a. support@latch.com
   b. +1 (888) 808-0670
2. Required Details
   a. Device Serial
   b. Associated Property Name
   c. Associated Door Name
   d. Issue Description / Symptoms
   e. Troubleshooting Steps Attempted
   f. Shipping Address (for a new device)
   g. Shipping Contact Name
   h. Shipping Contact Email
   i. Shipping Contact Phone Number

Advanced Technical Support Guide

***NOTE:** If the below troubleshooting steps do not resolve your issue, please reach out to Support@latch.com and our Support Team will be happy to assist you.*

Deadbolt Operation Troubleshooting

Symptoms

1. The device fails to properly and successfully lock and unlock.
2. Deadbolt visibly does not fully extend or retract.
3. The device displays jamming behavior.
4. Rapid Battery Degradation.

If Deadbolt is Not Extending

1. ***Test with the door open***
2. If the problem is not present with the door open:
    a. Likely a door alignment issue, not an issue with the Latch device.
    b. Move to door alignment & door prep troubleshooting.
3. If a problem is present with the door open:
    a. Confirm correct handing configuration
        i. Open the Latch Manager App.
        ii. Navigate to the door you are working on.
        iii. Select "Configure."
        iv. Confirm that handing is appropriately set to "left" or "right."
    b. Confirm the tailpiece has been set correctly for the door handing (see photo)
        i. Right-handed door - Horizontal tailpiece.
        ii. Left-handed door - Vertical tailpiece.
            1. *NOTE: See the installation guide for more diagrams if necessary. Photo reference below.*
4. Check battery percentage in the Latch Manager App
5. Verify Firmware is on the latest version.
    a. Upgrade if necessary
6. Replace batteries (Duracell preferred)

Viewing From Exterior/Outside of Unit/Door
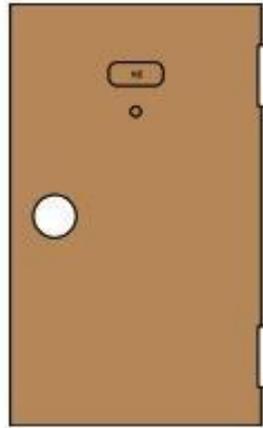
Right-handed door
Horizontal tailpiece
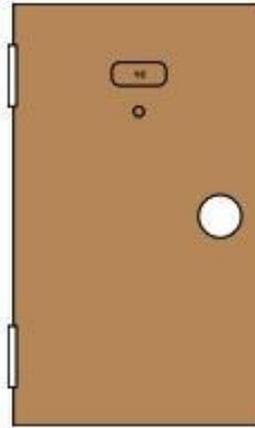
Left-handed door
Vertical tailpiece
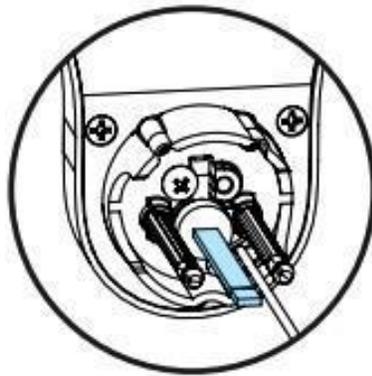
Touching lens retracts the deadbolt, and unlocking extends the deadbolt

1. Change handing configuration in the Latch Manager App.
    a. Select "configuration" under the relevant door in the Latch Manager App.
    b. Switch handing from "left" to "right" or vice-versa.
    c. Save.

2. Confirm the tailpiece has been set correctly for the door handing.
    a. Horizontal for a right-handed door.
    b. Vertical for a left-handed door.

Device Jamming Troubleshooting

Symptoms

1. The device fails to properly and successfully lock & unlock.
2. Deadbolt visibly does not fully extend or retract.
3. The device displays [jamming behavior](#).
4. A user may hear the motor attempting to lock but the deadbolt is not extending.
5. A user may hear the motor attempting to lock multiple times during each use.
6. Rapid battery degradation.

Jamming Behavior

- In the case that the deadbolt on a Latch C is unable to extend entirely, the device will go into a jamming sequence, where it will keep attempting to lock 3 to 4 times. This may cause the batteries on a Latch C to drain unusually quickly.

Verify Device Battery and Firmware Version

1. Check that the thumb-turn lever moves smoothly, and easily throws the deadbolt.
2. Check battery percentage.
    a. Open App > My Doors > Select Door > Device Details.
3. If the battery percentage is below 50%, change batteries, and re-test.
4. Confirm that the Latch C is on the latest Firmware version.

Door Prep Evaluation & Troubleshooting

Symptoms

1. The thumb-turn is difficult to turn.
2. The deadbolt does not extend fully/lock into place.

3. Friction or rubbing occurring.

Evaluate with Door Open/Uninstall Device

1. Test if the deadbolt is able to extend with the door open.
   a. If the deadbolt is not able to extend, there may be an alignment issue with the door frame.
      i. Ensure there is sufficient room in the door frame for the deadbolt to fully enter (1").
      ii. Ensure there is no pressure or side load on the deadbolt. It should move freely.
      iii. If the deadbolt does not extend, make sure that the faceplate is not in the way of the deadbolt.
2. Remove the Device from the Door Entirely.
3. Connect the Battery module and perform unlock.
4. If the device continues to fail when uninstalled please contact Latch Support for further assistance.

Evaluation/Troubleshooting

1. Check the 2" bore hole for proper clearance of hardware.
   a. You can also confirm the backset (distance from door to hole) by utilizing the [cut sheet](#) provided in the installation kit.
   b. If the hardware does not fit easily, make necessary adjustments to the door with the file or drill. *See Note in Red
2. Check the 1" side bore for proper clearance of hardware.
   a. Also, verify that the side bore is centered on the door edge.
   b. If the hardware does not fit easily, make necessary adjustments to the door with the file or drill. *See Note in Red
   NOTE: If a doorknob/lock installation jig is available, this is a great way to verify the sizes and alignment of the bore and side bore from #1 and #2.

3. Check to see if any weather stripping or seals are causing misalignment or pressure.
   a. If weatherstripping is an issue, an alternative seal thickness may be used or the strike plate may be moved slightly to accommodate the thicker seal. *See Note in Red
4. Check to ensure the hole in the door frame where the deadbolt enters is at least 1" deep.

a. If the depth isn't at least 1", it could cause the device to go into jamming mode.
5. Check to ensure the door is not "sagging" and that the deadbolt is properly aligned with the hole in the door frame.
   a. You can do this by closing the door and extending the deadbolt. It should extend and retract freely. If there is an obstruction, shine a light into the crack of the door while attempting to extend the deadbolt to see at what point the obstruction is.

NOTE: If any fabrication of the door or frame is necessary, escalate to property management to advise.

1. *Example of Door Knob/Lock Installation Jig*

Firmware Upgrade Troubleshooting

Symptoms

● During the Firmware Upgrade process on a Latch device, you may receive a red error screen appearing on the Latch Manager app. This can happen either during the initial

activation process or during a routine Firmware Upgrade after installation. This indicates that the firmware upgrade process failed.

Troubleshooting

Firmware upgrade should be reattempted after completion of each step.

1. Technicians should reattempt Firmware Upgrade at least twice after failure.
   a. Often the issue will resolve upon a second or third attempt with no further action.
2. Confirm that the iOS device is connected to WiFi. If it isn't, please connect to a WiFi network rather than using cellular data.
3. Toggle the iOS device's Bluetooth settings off, and then back on.
   a. Settings > Connection Settings > Bluetooth
4. Power cycle the iOS device (turn it off, wait for 30 seconds, restart the device).
5. Power cycle the Latch device by removing and reinstalling a battery.
6. Update the Device using the Latch App.
   a. Open the Latch App > My Doors > Select Door > Update > Press the "Update" button when close to the door/device.
   b. Detailed instructions for updating can be found in this [Support Article](#).
7. Repeat steps 4 and 5.
8. If Firmware Upgrade continues to fail although all steps above were followed, please contact Latch technical support at support@latch.com.

Power Failure Troubleshooting

Symptoms

1. Numeric LEDs do not illuminate when the device lens is tapped.
2. Unlock Failures (Latch App, Door code, Keycards).
3. Update Failures.
4. The device does not lock when the device is unlocked & the lens is tapped.
5. Device Jamming.

Lens Not Lighting Up or Unresponsive

1. Install NEW batteries ([follow the steps in this article on Changing Batteries](#)).
   a. 6 AA non-rechargeable batteries.

    b. Install batteries with the correct orientation.

    c. The new batteries should all be the same brand name (Duracell is recommended).

    d. Perform a door update using the Latch App (instead of the Manager App).

2. If new batteries have been installed and the unit does NOT power on:

    a. Confirm batteries have been installed with the correct orientation.

    b. Remove all batteries to inspect the battery tray for noticeable damage.

        i. Are all battery tray contacts in place?

        ii. Are all the metallic springs and tabs in the tray?

        iii. Is the battery tray cracked or broken?

        iv. Are there signs of battery degradation?

            1. Are they leaking?

            2. Are they expanded or split open?

            3. Is there corrosion?

        v. Are there signs of water damage?

            1. Is there water present in the battery tray?

            2. Are there signs of corrosion?

3. If the battery tray appears in order, batteries have been installed, and the unit does NOT power on: move to lens cable evaluation.

Example of Corrosion

Inspecting Lens Cable

If the battery tray appears in order, batteries have been installed, and the unit does NOT power on: **Inspect the Lens Cable**

1. Remove the back escutcheon.
    a. This is completed by removing the screws on the top and bottom of the escutcheon.

2. Remove the battery tray.
    a. Do this by removing the screws, two at the top and one at the bottom.
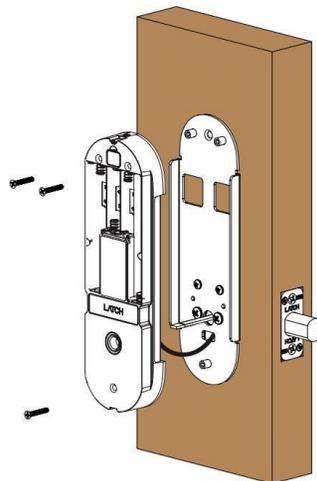
3. On the back of the battery, tray is where the lens cable plugs into the home system.
    a. Confirm that there is no damage to the cable.
        i. *The cable should be free to move around and not be pinched or kinked.*
    b. Confirm that the six pins that the cable plugs into are not bent or missing.
    c. Confirm that the lens cable is properly/fully seated in the connector.