WARNING! Please read the following instructions. Bicycle assembly is a complicated task, which requires training and experience. If you have any doubt regarding your mechanical ability and/or installation of this product, visit your Specialized Authorized Dealer. Specialized recommends that the cable system be installed by a qualified mechanic. Failure to follow this warning may result in serious personal injury or death.

Please read the following warnings. Failure to follow the warnings in this instruction guide may result in a catastrophic failure, resulting in serious personal injury or death. This phrase may not be repeated in connection with each and every warning.


**WARRANTY**

For the warranty provisions of this product, please visit [www.specialized.com](http://www.specialized.com).

### MECHANICAL SHIFTING

**PRE-INSTALLING THE CABLE AND HOUSING**

- **Frames with cables pre-installed:** Routing sheaths are included in the box for future cable replacements.
- **Frames without cables pre-installed:** Routing sheaths are pre-installed in the frame to facilitate the routing of the cable through the frame.
- To simplify the replacement of worn cables, it is recommended to route the sheaths onto the cables and through the frame before removing the cables.

**INSTALLING THE DERAILLEUR HOUSINGS, BARREL ADJUSTERS AND CABLES**

**Fig. 1:** Decide to which side of the down tube each cable will be routed. The cables can go from the shifters to either side of the down tube. If the cable housings cross each other to the opposite sides of the down tube (California Cross), the cables will have to cross again inside the down tube (Fig. 3). More than a single cross inside the down tube will cause the cables to wind around each other and impede proper shifting.

**Fig. 1:** Cut the cable housing to the required length so that the handlebars can rotate fully past 90° in each direction without pulling on the housings.

**Fig. 2:** Cut out a section of housing (see inset) that equals the inner length of the barrel adjusters (approximately 1") at the desired location along the length of each shifter cable housing. Avoid placing the barrel adjusters too close to the shifters or the ICR stops.

**Fig. 2:** Install a housing ferrule (B) and the first part of cable housing (C), followed by the barrel adjuster (D) and the second piece of housing (E).

**Fig. 2:** Install a housing ferrule (F) on the second piece of housing.

**Fig. 2:** Install a plastic mini-sheath (G), then install a cable housing guide hat (H).

**Fig. 3:** Run the cables (A) through the routing sheaths (I) until they exit the down tube at the bottom bracket. Once routed, remove the sheaths.
Install the front and rear derailleurs on the frame as instructed in the derailleur manufacturer’s instruction guide.

**Fig. 4:** Route the front derailleur cable coming out of the down tube hole through the non-drive-side portion of the bottom bracket cable guide (J), and up through the front derailleur cable guide hole. Make sure the cables are not crossing each other more than once inside the down tube (Fig. 1).

**Fig. 4:** Route the rear derailleur cable coming out of the down tube through the drive-side portion of the bottom bracket cable guide (K), then through the chainstay routing sheath.

**Fig. 4:** Place the cable guide bridge or cover (L) over the cable guides and install the bolt (M). Torque to 25 in-lbf (2.8 N*m).

- Trim the rear derailleur cable housing to the required length for the rear derailleur to function properly.
- **Fig. 5, 6:** Once the cable comes out the drive-side dropout hole, remove the routing sheath.
- **Fig. 7:** Install the extended dropout guide (Q) (notch pointing up), followed by the cable ferrule (R) and cable housing (S).
- **Fig. 8:** Route the rear derailleur cable housing to the rear derailleur and insert the cable into the derailleur.
- Adjust the cable position for proper shifting and torque the cable bolt according to the manufacturer’s torque specification.
Electronic shifting installation instructions are provided by the shifting system manufacturer. The following information covers steps that are specific to Specialized road frames, and are designed to be applied in conjunction with the manufacturer instructions.

- **Fig. 1**: Route the rear derailleur wire through the dropout. All other wires should be routed as shown in the Shimano Di2 technical documents.
- **Fig. 2**: The rear derailleur wire must go over the top and around the front of the bottom bracket shell. To achieve this, it will be necessary to rotate the frame so that the chainstay is vertical and the front of the frame is pointed toward the ground.
- **Fig. 3**: Route each wire so that all wires exit the frame through the hole at the bottom of the down tube.
- **Fig. 4**: Connect each wire to its matching color-coded wire on Junction B, with a heat-shrink tube placed over each cable junction.
- **Fig. 5**: Once all the wires are connected to Junction B, re-insert the box and wires back through the down tube hole and into the frame.
- **Fig. 6**: Insert the split rubber grommet over the rear derailleur wire and insert it into the dropout hole. Repeat at the head tube/down tube hole.
- Follow the remaining steps in the Shimano Di2 technical documents.

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**MOUNTING THE BATTERY AT THE BOTTOM BRACKET**

Specialized offers different options for mounting the battery, by either using a water bottle bracket, or a bottom bracket mounted bracket. When running a bottom bracket mounted battery, tuck the wires and junction box back into the large bottom bracket hole, except the battery wire.

- Replace the Shimano battery bracket with the custom Specialized battery bracket (A).
- Connect the battery mounting assembly (B) to the junction box battery wire.
- Place the custom Specialized bottom bracket mounting bracket (C) that matches the frame into the bottom bracket cavity.
- Place the serrated washer between the battery bracket and the mounting bracket (D).
- Bolt the battery bracket to the frame (E).
- Finish tucking the battery wire up into the large bottom bracket hole.
INSTALLING THE REAR BRAKE

RIM BRAKES:

- Fig. 1: Install the brake cable (A), cable housing (B), brake cable housing ferrule (C), plastic mini-sheath (D) and cable housing guide hat (E).
- Fig. 1: Route the cable through the sheath (F) and through the brake ICR stop hole in the top tube, then remove the sheath.

**TECH TIP:** To prevent brake cable rattle, it is recommended to install three rubber donuts onto a piece of routing sheath (approximate length 8” [20cm]), then install the sheath with the three donuts onto the cable and through the ICR hole at the top tube/seat tube junction.

- Fig. 2: Install the brake ICR stop (G), then torque the stop in place (10 in-lbf (1.1 N·m)).
- Trim the cable housing to the required length and install the housing. Fasten the cable as instructed in the brake manufacturer’s instruction guide.

DISC BRAKES WITH PARTIAL HOUSING (compatible CruX and Roubaix models only):

- Fig. 1: Install the brake cable (A), cable housing (B), housing ferrule (C), mini-sheath (D) and guide hat (E), then run the cable through the sheath (F).
- Fig. 2: Remove the sheath, then route the cable through the bottom bracket brake cable guide (H). Install the guide door or bridge (I) and bolt (J).
- Install the cable into the chainstay sheath. Once the cable exits through the brake ICR stop hole in the chainstay, remove the sheath.
- Fig. 3: Install the cable noodle (K), followed by a housing ferrule (L). Trim a section of brake cable housing (M) to the required length and install the housing. Install the housing on the cable, then fasten the cable to the brake caliper as instructed in the brake manufacturer’s instruction guide.

DISC BRAKES WITH FULL HOUSING (compatible CruX and Roubaix models only):

- Fig. 1: Place a guide hat (A) on the housing (B), then route the housing into the down tube ICR guide hole.
- Fig. 2: Route the housing through the bottom bracket cable guide holes. Do not use the supplied cable guide.
- Fig. 3: Continue installing the housing into the non-drive-side chainstay. Once the housing exits through the brake ICR stop hole in the chainstay, install a guide hat (A) on the housing (B).
- Trim the housing to the desired length, then connect the housing to the caliper as instructed in the brake manufacturer’s instruction guide.