

# EW-7970 (SM-EWC1 : Code cover)

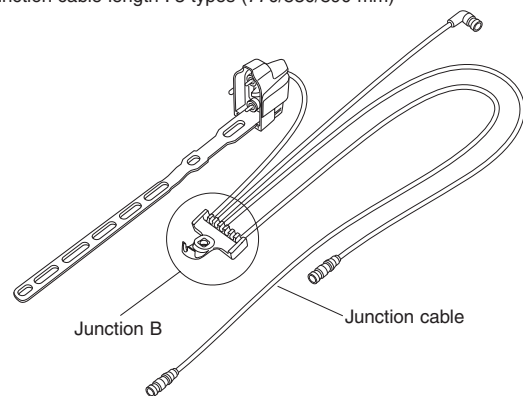
## Electric Cables (External Specifications)

### Note

- Secure the cables to the frame so that they will not caught by the tire or any other parts while pedaling.
- Always be sure to use the TL-EW01 special tool to remove the cable.
- Be careful not to let water get into the terminal.
- The adhesive strength of the cable cover fixing tape is fairly weak so that the paint on the frame will not come off together with the tape when the tape is peeled off at times such as when replacing the cable. Once the tape has come off, replace it with new tape.

### Components

- Junction B
- Connectors : 3 places (Front derailleur/rear derailleur/junction)
- Battery bracket
- Junction cable length : 3 types (770/830/890 mm)

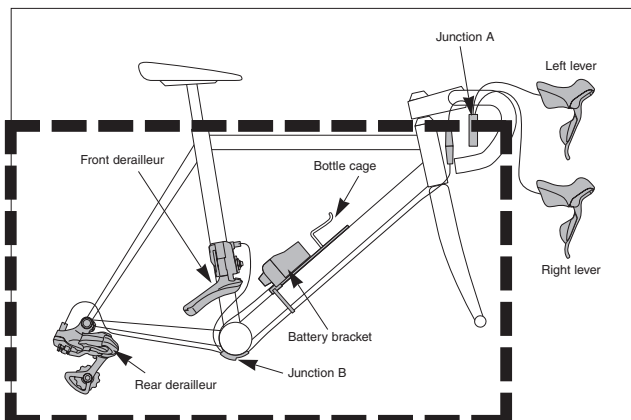


### Accessories

- Cable cover (black) :  
 Long = For Chainstay, Down tube x 3  
 Short = For Battery / Rear derailleur / Front derailleur x 3
- M5 bolt : L = 10.5 mm x 1, L = 15 mm x 1
- Cable tie x 1

### Routing Map

Names and locations of each part



## SHIMANO

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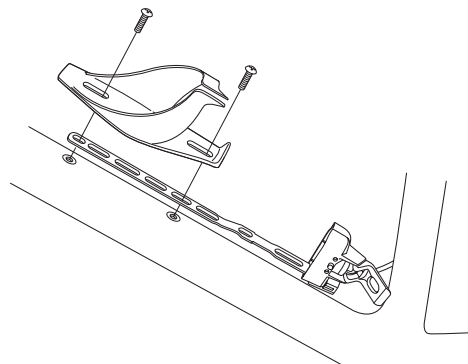
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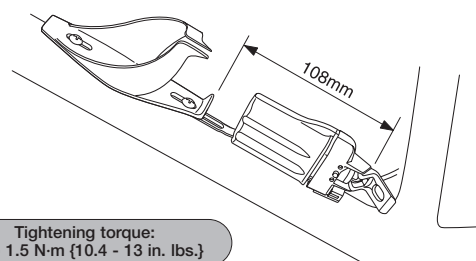
\* Service Instructions in further languages are available at : <http://techdocs.shimano.com>  
 Please note: specifications are subject to change for improvement without notice. (English) © May 2009 by Shimano Inc. XBC IZM Printed in Japan.

## Installation of the battery bracket

Position the battery bracket.  
 Use the bottle cage mounting bolt to provisionally install the battery bracket to the bottom of the bottle cage.

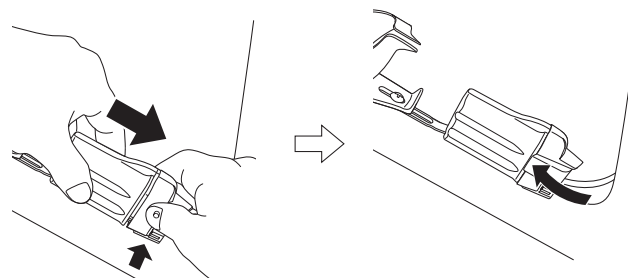


Leave a space of 108 mm or more at the end of the battery bracket.  
 Check that the battery can be inserted and removed while the bottle cage is installed. Secure the battery bracket with using 2.5mm allen key.

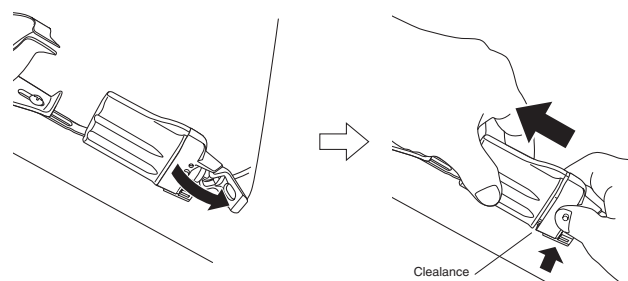


### <Battery installation and removal>

Open the clamp, and then install the battery so that it follows the groove in the battery bracket. Close the clamp until it clicks into place.

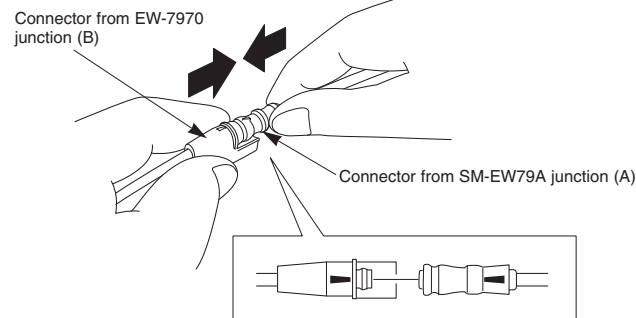


Open the clamp, pull out the battery slightly, and then press the button to fully remove the battery.



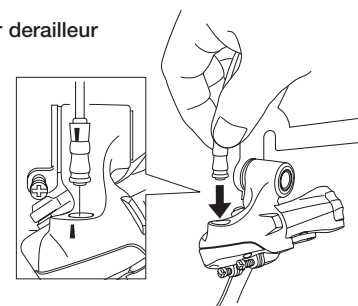
## Connection of the electric cables

Insert the connector coming from junction (A) into the connector coming from junction (B) so that the triangular marks (▲) on the connectors are aligned with each other. Push the connectors together until they connect with a click. Because of the waterproof structure of the connectors, they do not fit together rigidly. Be sure to push them together until they connect with a click.

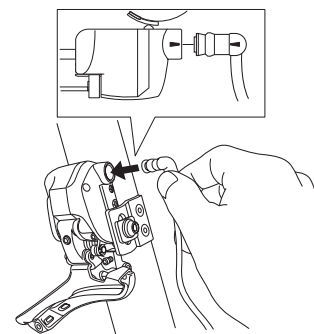


Connect the electric cable connectors to the terminals of the derailleur. Insert the connectors so that the triangular marks (▲) on the connectors and the derailleur terminals are aligned with each other. Because of the waterproof structure of the connectors and terminals, they do not fit together rigidly. Be sure to push them together until they connect with a click.

### For rear derailleur



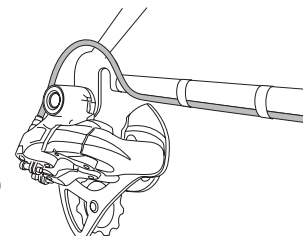
### For front derailleur



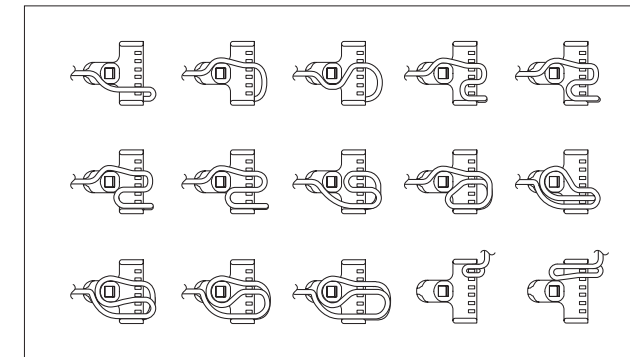
## Routing of the electric cables

Provisionally attach the electric cables to the frame with tape.

- When routing the electric cable to the rear derailleur, be sure to install it to the bottom of the chainstay to avoid any interference between the cable and the chain.
- Wind any excess length of electric cable inside junction (B) to adjust the length. Up to a maximum of 120 mm of excess cable can be wound in this way.

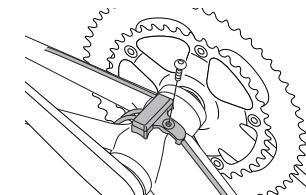


## Length adjustment examples (Junction B)

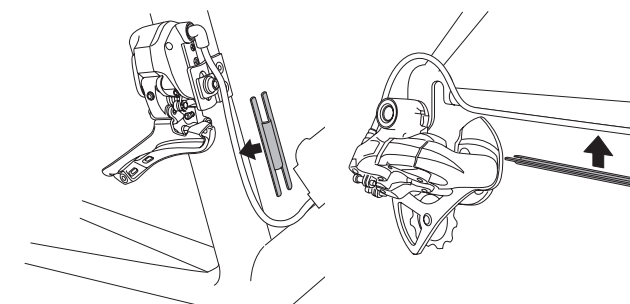
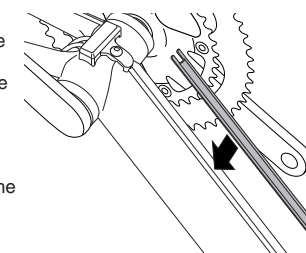


Once the electric cable has been routed, secure junction (B) to the bottom of the bottom bracket shell with a bolt (length 10.5 mm or 15 mm).

Tightening torque:  
 1.5 - 2.0 N-m {13 - 18 in. lbs.}



Next, install the cable cover to the frame. In order to make sure that the cable cover is securely installed, clean the frame with alcohol or some other cleaning agent to remove any grease or other substances before installing the cable cover. Place the cable cover over the electric cable, and then attach the cable cover to the frame.



### <Removal of the connectors>

