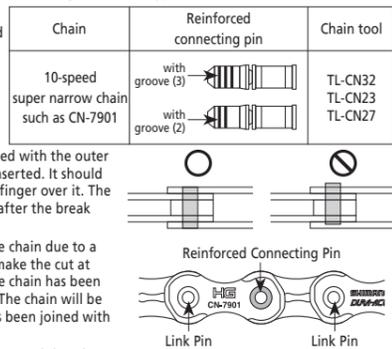


General Safety Information

WARNING

"Maintenance interval depends on the usage and riding circumstances. Clean regularly the chain with an appropriate chaincleaner. Never use alkali based or acid based solvents such as rust cleaners. If those solvent be used chain might break and cause serious injury."

- In order to obtain good gear shifting performance, the CN-7901 has a forward side and a reverse side, and the sides are marked so that the CN-7901 will face the correct way when installed. The proper design performance will be obtained when the CN-7901 is installed so that it faces the correct way. If it is installed so that it faces the opposite way, the chain may come off and the bicycle may fall over and serious injury may occur as a result.
- Use the reinforced connecting pin only for connecting the narrow type of chain.
- If connecting pins other than reinforced connecting pins are used, or if a reinforced connecting pin or tool which is not suitable for the type of chain is used, sufficient connection force may not be obtained, which could cause the chain to break or fall off.
- Make sure that the connecting pin is aligned with the outer link surface from the side that the pin is inserted. It should feel smooth and flush when you run your finger over it. The pin will protrude slightly on the backside after the break off pin is removed.
- If it is necessary to adjust the length of the chain due to a change in the number of sprocket teeth, make the cut at some other place than the place where the chain has been joined using a reinforced connecting pin. The chain will be damaged if it is cut at a place where it has been joined with a reinforced connecting pin.
- Check that the tension of the chain is correct and that the chain is not damaged. If the tension is too weak or the chain is damaged, the chain should be replaced. If this is not done, the chain may break and cause serious injury.
- Obtain and read the service instructions carefully prior to installing the parts. Loose, worn or damaged parts may cause the bicycle to fall over and serious injury may occur as a result. We strongly recommend only using genuine Shimano replacement parts.
- Obtain and read the service instructions carefully prior to installing the parts. If adjustments are not carried out correctly, the chain may come off and this may cause you to fall off the bicycle which could result in serious injury.
- Read these Technical Service Instructions carefully, and keep them in a safe place for later reference.



Note

- <RD-7970 / RD-7970-A>
- Be sure to adjust the top adjustment bolt and the low adjustment bolt by following the procedures in the Service Instructions. If these bolts are not adjusted, the chain may become clamped between the spokes and the largest sprocket and the wheel may lock, or the chain may slip onto the smallest sprocket.
- If the amount of looseness in the links is so great that adjustment is not possible, you should replace the derailleur.
- Periodically clean the derailleur and lubricate all moving parts and pulleys.
- If gear shifting adjustment cannot be carried out, check the degree of parallelism at the rear end of the bicycle.
- If you hear abnormal noise as a result of looseness in a pulley, you should replace the pulley.
- The tension pulley has a mark which indicates the direction of rotation. The side with the arrow is the front side.
- Be sure to use the following tools when removing cables. RD-7970-TL-EW01 RD-7970-A-TL-EW02
- Be careful not to let water get into the terminal.
- For any questions regarding methods of installation, adjustment, maintenance or operation, please contact a professional bicycle dealer.
- Products are not guaranteed against natural wear and deterioration from normal use and aging.
- For maximum performance we highly recommend Shimano lubricants and maintenance products.

<SM-RD79-A>

Be sure to also inform users of the following:

- This is a small waterproof connector. Do not repeat connecting and disconnecting it. It may impair the function.
- Be careful not to let water get into the terminal.
- The components are designed to be fully waterproofed to withstand wet weather riding conditions; however, do not deliberately place them into water.
- Do not clean the bicycle in a high-pressure wash. If water gets into any of the components, operating problems or rusting may result.
- Handle the products carefully, and avoid subjecting them to any strong shocks.
- Do not use thinners or similar substances to clean the products. Such substances may damage the surfaces.
- Do not leave the product in an area exposed to strong sunlight for an extended period of time.
- Do not disassemble the product as it cannot be reassembled.
- When cleaning the product, use a cloth moistened with a diluted neutral detergent.
- Be sure to use the Shimano original tools TL-EW01 and TL-EW02 when removing electric wires.
- Be sure to use the specified electric wire.
- Secure the electric wires with plastic tape so that they do not interfere with the chainrings, sprockets and tires.
- Before riding check that the rubber band is not cracked or damaged. If the rubber band is cracked or damaged use a new one.
- If the double-sided tape on SM-RD79-A peels off, replace it with a new one.
- Products are not guaranteed against natural wear and deterioration from normal use and aging.
- For maximum performance we highly recommend Shimano lubricants and maintenance products.

Notes when reinstalling and replacing components

- When installing to the bicycle, do not forcibly bend the electric wire plug. It may result in a poor contact.

The actual product may differ from the illustration because this manual is intended chiefly to explain the procedures for using the product.

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Please note: specifications are subject to change for improvement without notice. (English) © Apr. 2016 by Shimano Inc. HTR

Technical Service Instructions

RD-7970 / RD-7970-A / SM-RD79-A
Rear derailleur

In order to realize the best performance, we recommend that the following combination be used.

Series	DURA-ACE
Dual control lever	ST-7970
Gears	10
Electric cable	EW-7970 / SM-EW79A
Battery	SM-BTR1 RD-7970
Rear derailleur	RD-7970-A / SM-RD79-A
Type	SS
Freehub	FH-7900
Cassette sprocket	CS-7900 (Except for 11-28T)
Chain	CN-7901

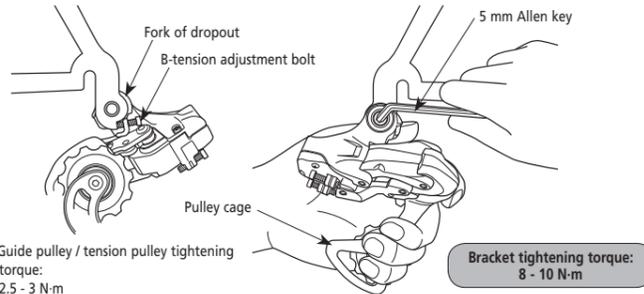
Specifications

Type	SS
Total capacity	32 teeth or less
Largest sprocket	27 T
Smallest sprocket	11 T
Front chainwheel tooth difference	16 teeth or less

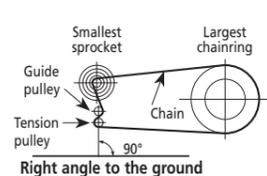
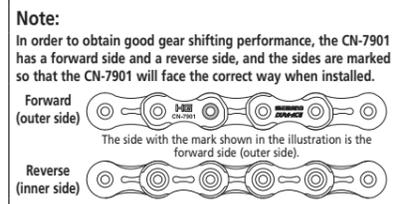
Refer to the Service Instructions for the electric cable when connecting and routing the electric cable.

Installation of the rear derailleur

When installing the rear derailleur, make sure that the B-tension adjustment bolt does not touch the fork of the dropout and cause it to bend.

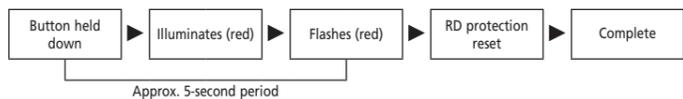
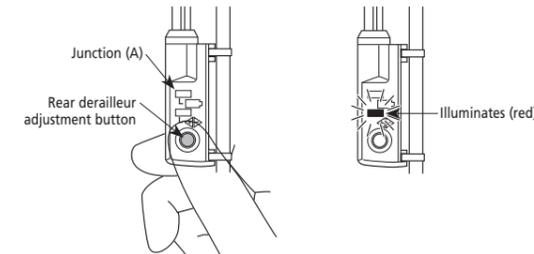


Chain length



About RD Protection

* Rotate the front chainwheel when activating RD Protection Reset. If the bicycle receives a strong impact, the RD Protection operates and the connection between the motor and the link is momentarily severed so that the rear derailleur will no longer operate. If this happens, hold down the rear derailleur adjustment button on junction (A) of SM-EW79A for 5 seconds or longer to activate RD Protection Reset, which will restore the connection between the motor and the link. If RD Protection Reset does not activate, manual recovery is also possible. Consult with a distributor in advance.



When the red LED on junction (A) is illuminated, the rear derailleur cannot shift gears. Press the rear derailleur adjustment button until the red LED turns off.

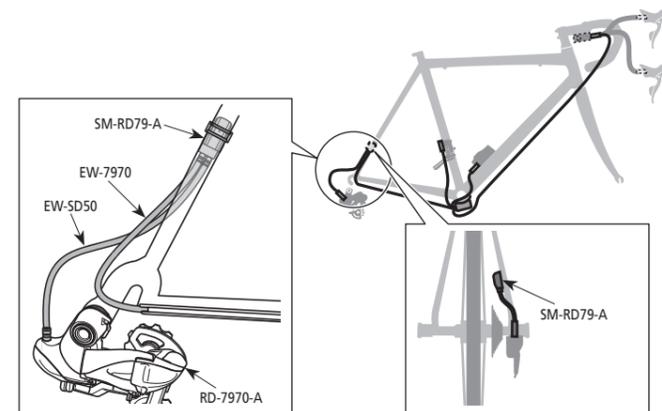
Installation of RD-7970-A / SM-RD79-A

LIST OF TOOLS TO BE USED:

- Tool used when connecting/removing the electric wire to/from RD-7970: TL-EW01
- Tool used when connecting/removing the provided 200mm electric wire: TL-EW02

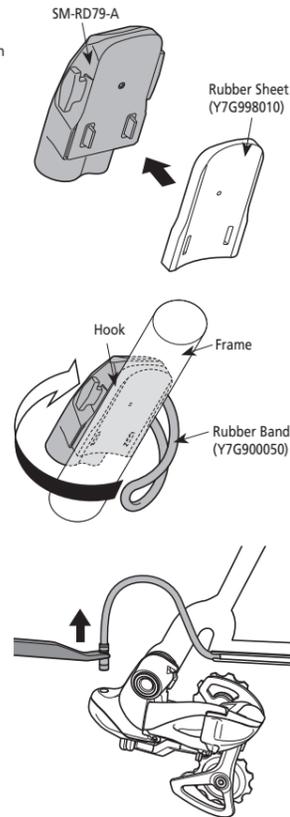
Attach SM-RD79-A to the seat stay of the bicycle frame.

* Not compatible with seat stays with a cross-sectional width greatly exceeding the width of SM-RD79-A.

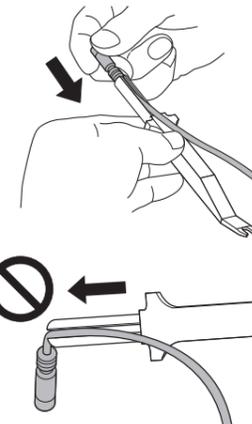


Note: Use SM-RD79-A in combination with RD-7970-A. Use the provided 200mm electric wire (EW-SD50) to connect SM-RD79-A and RD-7970-A. RD-7970-A / SM-RD79-A are not compatible with E-TUBE PROJECT.

- Shift to the largest front chainring and to the smallest rear sprocket. Wipe the dirt and dust off the frame, and if the frame is wet, dry it well before attaching.
- There are two types of rubber sheet. Choose the rubber sheet that fits the frame. Peel the rubber sheet from its release liner and attach it to SM-RD79-A. Be careful about the orientation of the rubber sheet. Attach it with its wider side facing the connector. After attaching the rubber sheet, hold down the entire surface with your finger for approximately 1 minute.
- Provisionally attach SM-RD79-A to the frame using the rubber band. Connect the rubber band to one of the hooks, pull it around and then attach it to the other hook.
- Remove the electric wire from RD-7970 using the Shimano original tool TL-EW01. Remove RD-7970 and attach RD-7970-A.



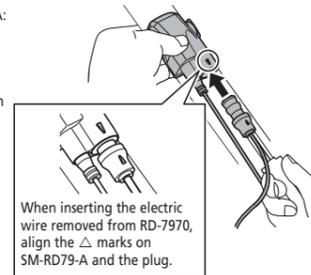
- Pass the electric wire through the provided Shimano original tool TL-EW02. Set so that the projection on the connector is aligned with the groove on the narrow end.



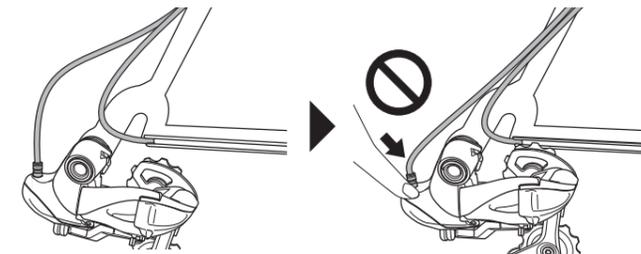
* When installing the electric wire, do not forcibly bend the plug. It may result in a poor contact. When connecting the electric wire, push it in until it clicks in place.

- Connect the following 2 electric wires to SM-RD79-A:
 - Electric wire disconnected from RD-7970
 - Provided 200mm electric wire (EW-SD50)

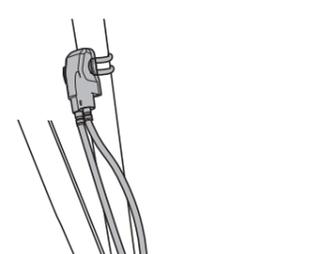
* Hold the wireless unit in your hand when connecting or disconnecting the electric wire from SM-RD79-A.



- Connect the electric wire to RD-7970-A.
- Check the excess length of the electric wire. (Push up the rear derailleur until it makes contact with the frame and keep it in that position when checking the electric wires.) If the electric wire does not have enough slack, make some fine adjustments to the height of SM-RD79-A.

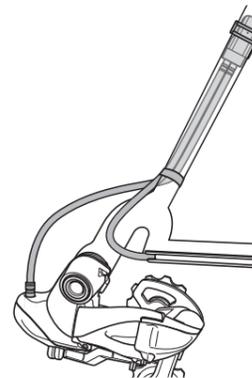


- Secure SM-RD79-A to the frame.



- Secure the electric wire to the frame.

* If the electric wire is too long, it may interfere with the cassette sprocket or chain. Use plastic tape, etc. to secure the slack electric wire to the frame.



* Refer to the Service instructions for the ST-7970 for details on stroke adjustment.