

Dealer's Manual

ROAD	MTB	Trekking
City Touring/ Comfort Bike	URBAN SPORT	E-BIKE

FRONT DERAILLEUR

GRX

FD-RX810

FD-RX400

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IMPORTANT NOTICE

- **This dealer's manual is intended primarily for use by professional bicycle mechanics.**
Users who are not professionally trained for bicycle assembly should not attempt to install the components themselves using the dealer's manuals.
If any part of the information on the manual is unclear to you, do not proceed with the installation. Instead, consult a place of purchase or a bicycle dealer for their assistance.
- Make sure to read all owner's manuals included with the product.
- Do not disassemble or modify the product other than as stated in the information contained in this dealer's manual.
- All owner's manuals and dealer's manuals can be viewed on-line our website (<http://si.shimano.com>).
- For consumers who do not have easy access to the internet, please contact a SHIMANO distributor or any of the SHIMANO offices to obtain a hardcopy of the User's Manual.
- Please observe the appropriate rules and regulations of the country, state or region in which you conduct your business as a dealer.

For safety, be sure to read this dealer’s manual thoroughly before use, and follow it for correct use.

The following instructions must be observed at all times in order to prevent personal injury and physical damage to equipment and surroundings.
The instructions are classified according to the degree of danger or damage which may occur if the product is used incorrectly.

 DANGER	Failure to follow the instructions will result in death or serious injury.
 WARNING	Failure to follow the instructions could result in death or serious injury.
 CAUTION	Failure to follow the instructions could cause personal injury or physical damage to equipment and surroundings.

TO ENSURE SAFETY

⚠ WARNING

- Be sure to follow the instructions provided in the owner's manual when installing the product.

It is recommended to use SHIMANO genuine parts only. If parts such as bolts and nuts become loose or damaged, the bicycle may suddenly fall over, which may cause serious injury.

In addition, if adjustments are not carried out correctly, problems may occur, and the bicycle may suddenly fall over, which may cause serious injury.

-  Be sure to wear safety glasses or goggles to protect your eyes while performing maintenance tasks such as replacing parts.
- After reading the dealer's manual thoroughly, keep it in a safe place for later reference.

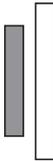
Be sure to also inform users of the following:

- Be careful not to let the hemming of your clothes get caught in the chain while riding. Otherwise, you may fall off the bicycle.

NOTICE

Be sure to also inform users of the following:

- If gear shifting operations cannot be carried out smoothly, clean the derailleur and lubricate all moving parts.
- When the chain is in any of the positions shown in the figure, the chain may come into contact with the front chainring or front derailleur and generate noise. If noise is a problem, shift the rear sprocket to the next largest gear or the one after.

	Double
Front chainring	
Rear sprocket	

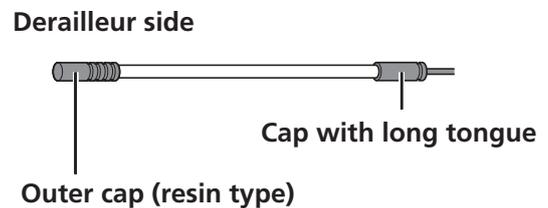
- Products are not guaranteed against natural wear and deterioration from normal use and aging.
- For maximum performance we highly recommend SHIMANO lubricants and maintenance products.

For Installation to the Bicycle, and Maintenance:

- Use an OT-SP sealed cable and cable guide for smooth operation.
- Grease the inner cable and the sliding portions of the outer casing before use to ensure that they slide properly.

Do not let dust adhere to the inner cable. If the grease on the inner cable is wiped off, the application of SIS SP41 grease (Y04180000) is recommended.

- If using a full outer model, the end of the outer casing with the outer cap (resin type) should be at the derailleur side.
- If using it in a cold region, use a sealed outer cap (resin type) to prevent freezing.



- If looseness in the links is so great that gear shifting adjustments cannot be made, replace the derailleur.

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

LIST OF TOOLS TO BE USED

The following tools are needed for installation, adjustment, and maintenance purposes.

Tool	
	2 mm hexagon wrench
	4 mm hexagon wrench
	5 mm hexagon wrench
	Nippers

INSTALLATION/REMOVAL

NOTICE

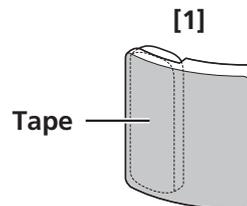
- With a carbon frame, even the recommended tightening torque may be too tight and cause damage to the frame, or too loose and not sufficiently attached to the frame. For the appropriate torque value, consult with the manufacturer of the completed bicycle or the manufacturer of the frame.

Installing the front derailleur

Installing the backup plate

If installing the front derailleur to a brazed-on type frame, a backup plate must be attached to the seat tube.

Be sure to install this in order to prevent damage to the frame from the pressure of the front derailleur support bolt.

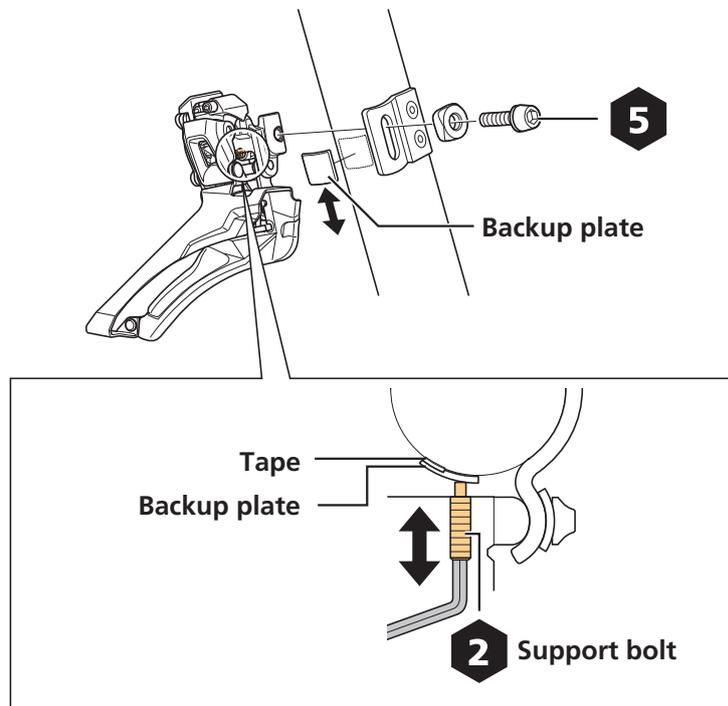


1. Check the installation location.

Check the position where the support bolt directly touches the frame when the support bolt of the front derailleur is being adjusted.

2. Install the backup plate.

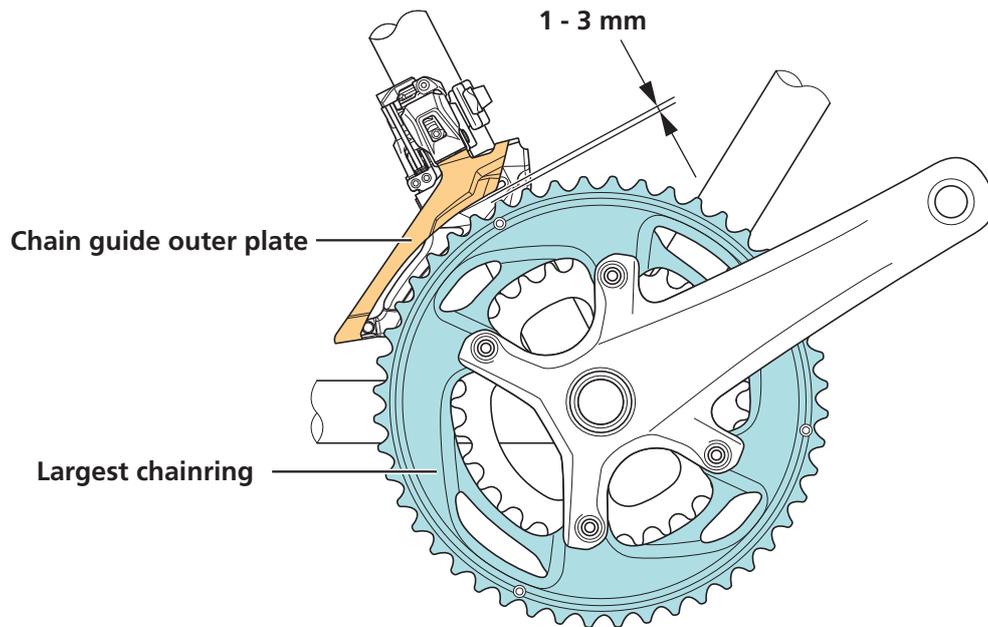
Avoid positioning the tape that attaches the backup plate to the seat tube in the location where the support bolt directly touches the frame.



Installing the front derailleur

1. Adjust the installation height and temporarily attach the front derailleur to the frame.

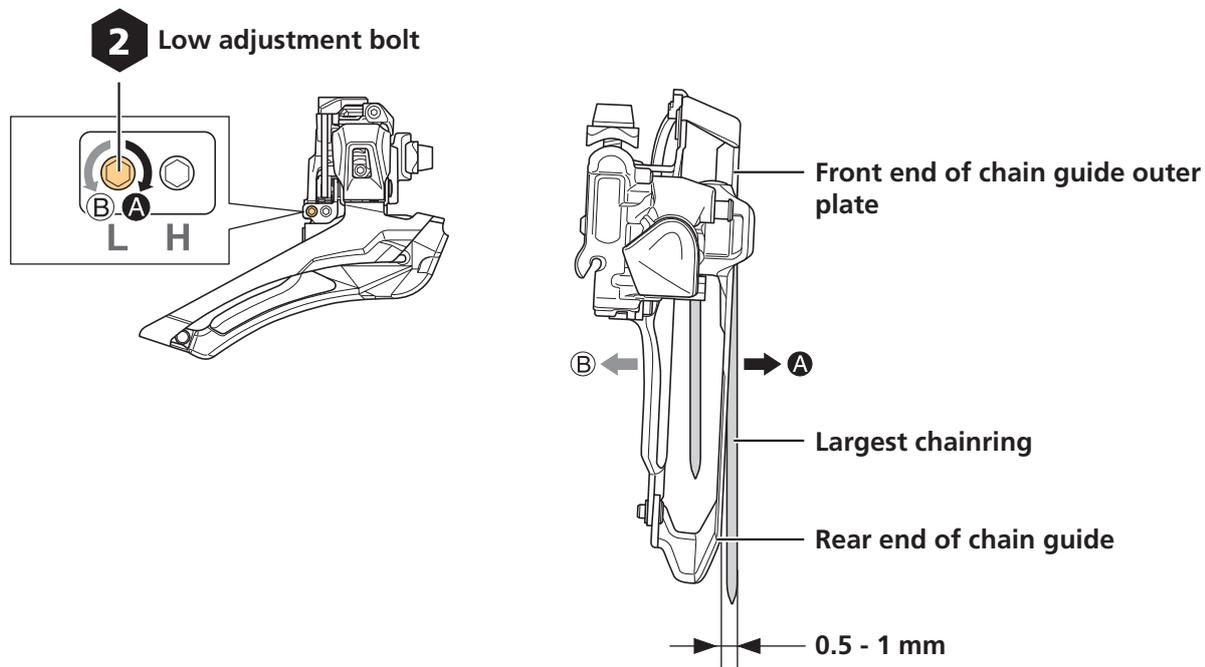
Adjust the installation height so that the distance from the tips of the teeth of the largest chainring is 1 - 3 mm.



2. Adjust the position of the chain guide.

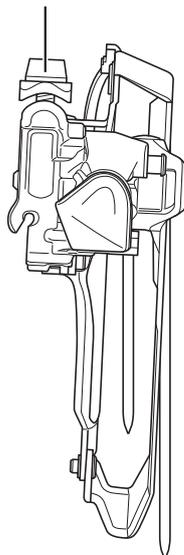
Use the low adjustment bolt to align the front end of the chain guide outer plate with the surface of the largest chainring.

At this point, adjust the chain guide so that its rear end is 0.5 - 1.0 mm inside.



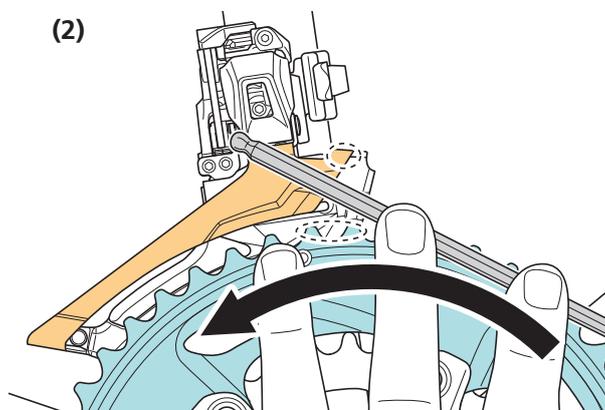
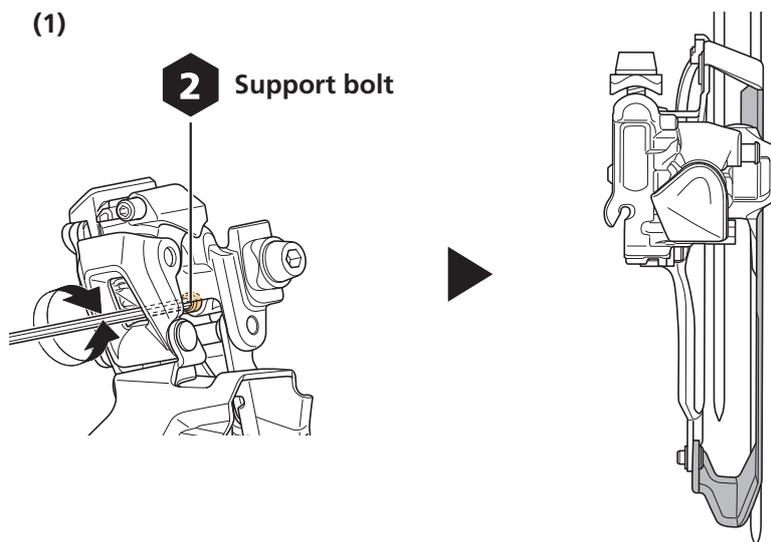
3. Fix the front derailleur in place.

Mounting bolt
5 5 - 7 N·m



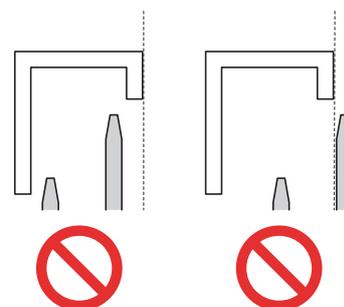
4. Readjust the chain guide position.

- (1) Adjust the support bolt so that the flat portion of the chain guide outer plate is aligned with the surface of the largest chainring. At that time, make sure that the support bolt is in contact with the backup plate.
- (2) Check the adjustment position by pressing a hexagon wrench or other tool to the flat portion of the largest chainring.



NOTICE

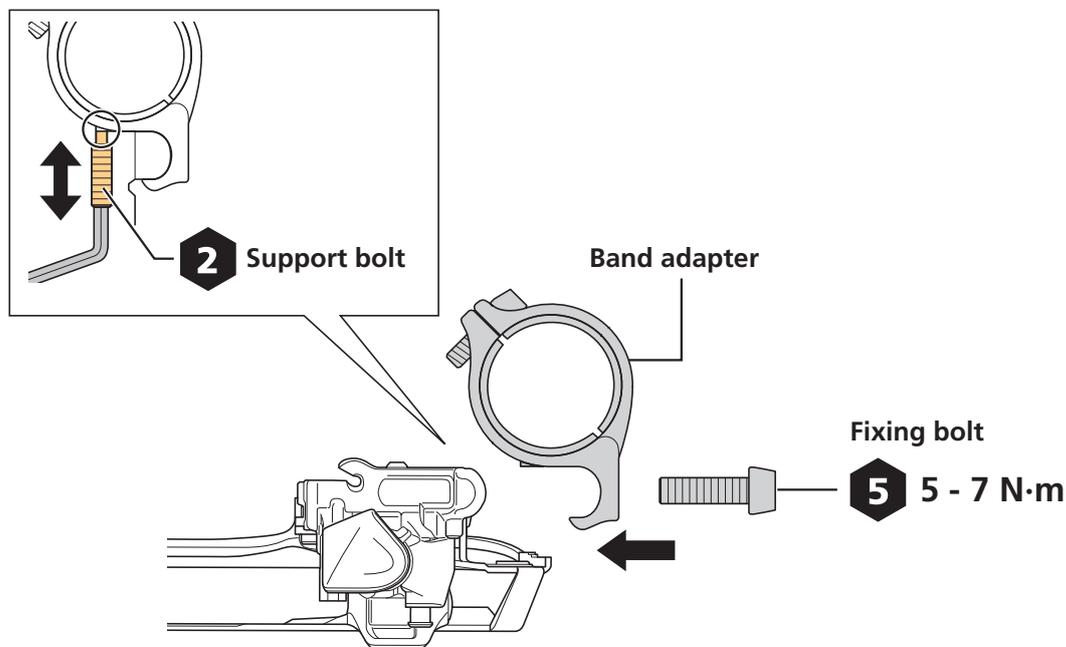
- Make sure not to position the chain guide as shown in the figure.



If using a band adapter (SM-AD91) to install the front derailleur

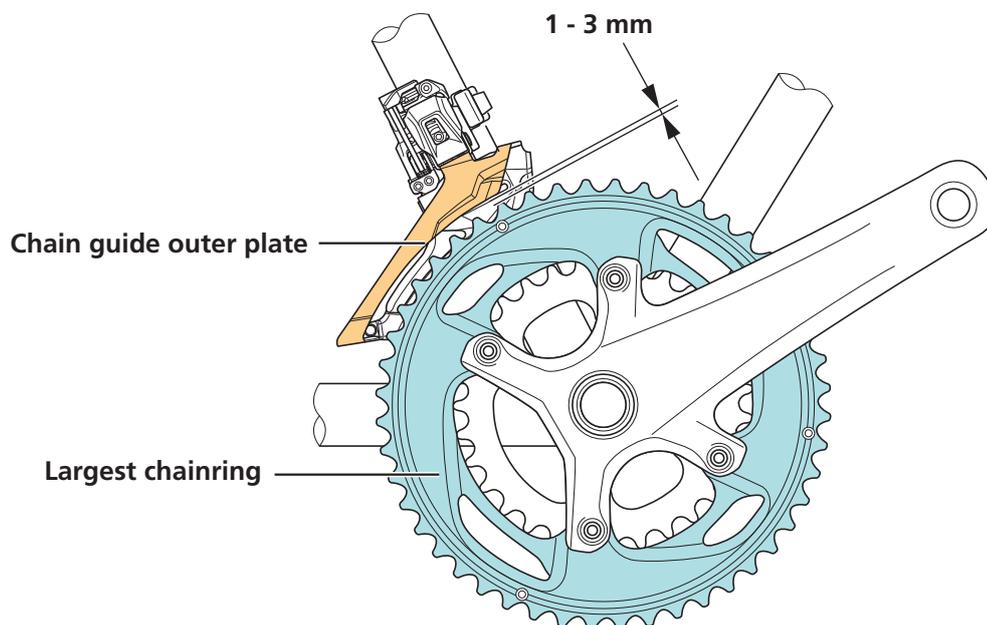
1. Mount the band adapter (SM-AD91) to the front derailleur.

Touch the support bolt to the band adapter.



2. Adjust the installation height and temporarily attach the front derailleur to the frame.

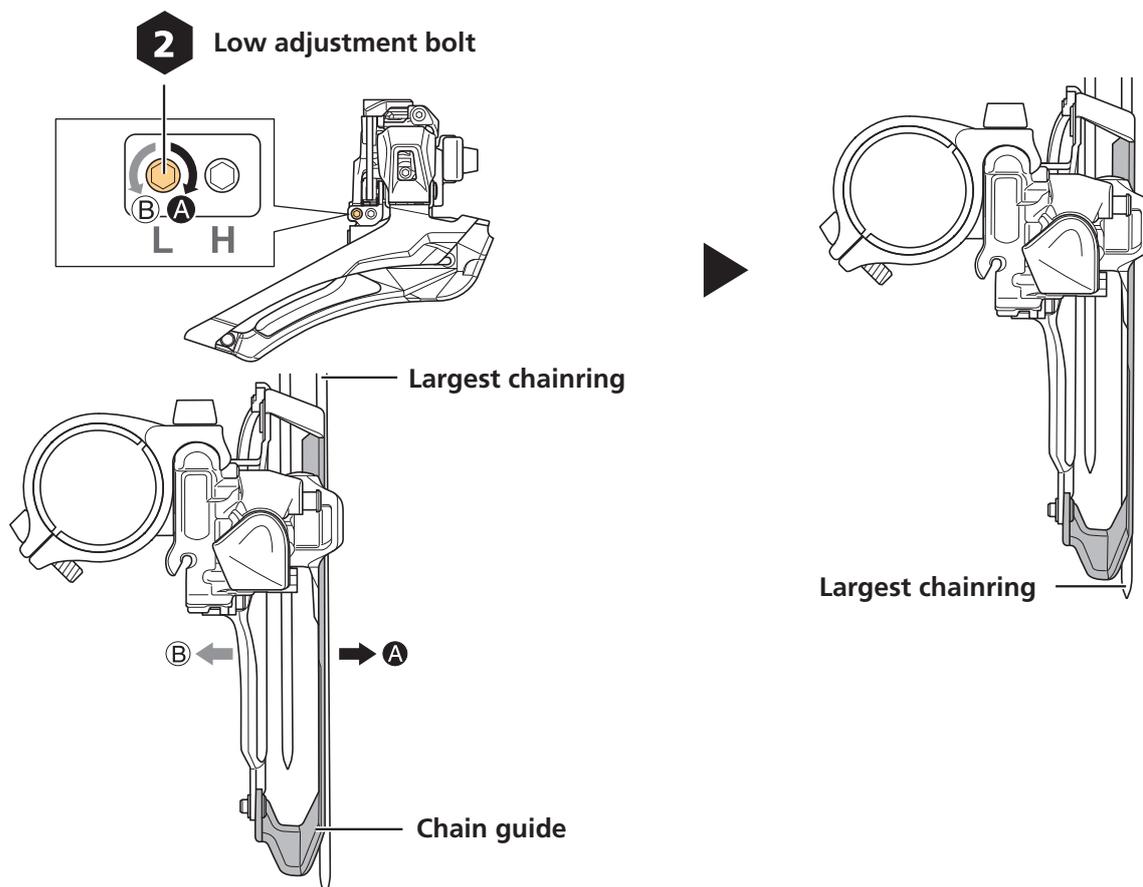
Adjust the installation height so that the distance from the tips of the teeth of the largest chainring is 1 - 3 mm.



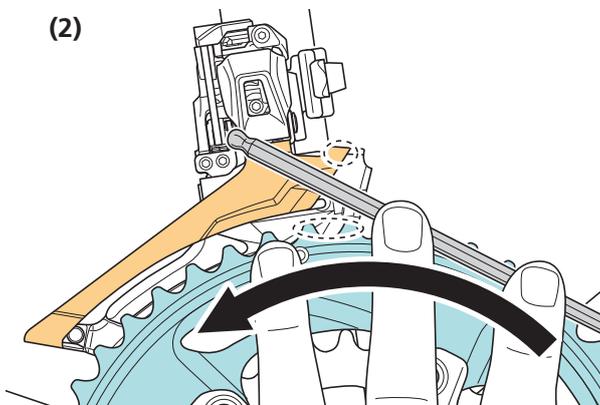
3. Adjust the position of the chain guide.

- (1) Use the low adjustment bolt to align the flat portion of the chain guide outer plate with the surface of the largest chainring.
- (2) Check the adjustment position by pressing a hexagon wrench or other tool to the flat portion of the largest chainring.

(1)



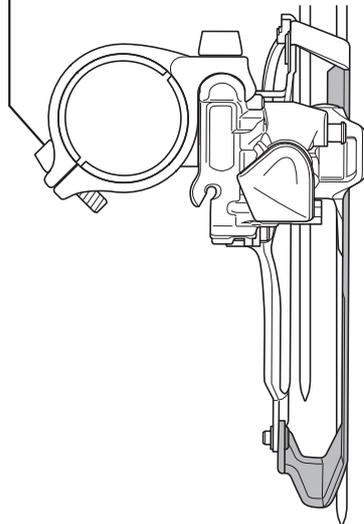
(2)



4. Secure the clamp bolt.

Clamp bolt

5 5 - 7 N·m

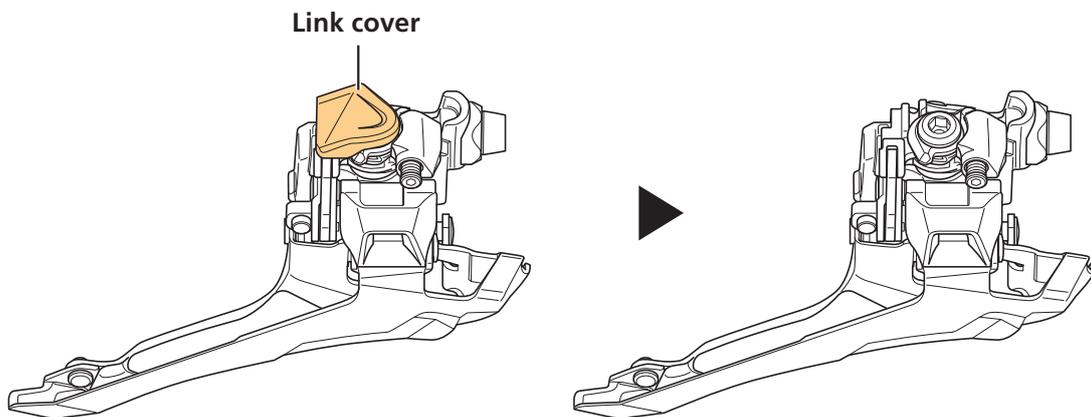


ADJUSTMENT

Installing the inner cable and adjusting gear shifting

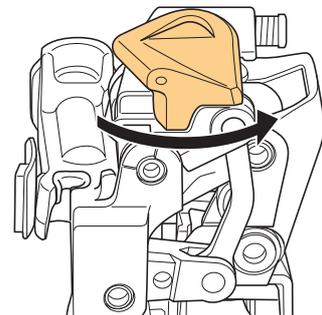
Securing the cable

1. Operate the release lever on the dual control lever and set it to the initial position (on the smallest chainring side).
2. Remove the link cover.



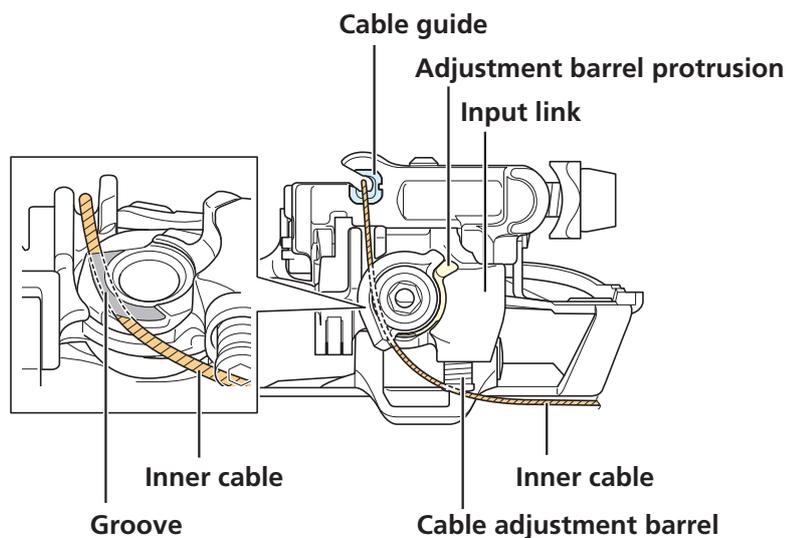
TECH TIPS

- When removing the link cover, lift it up while rotating it in the direction of the arrow as shown in the figure.



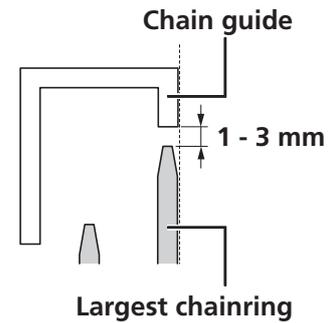
3. Pass the inner cable through the front derailleur.

- (1) Use the low adjustment bolt to align the flat portion of the chain guide outer plate with the surface of the largest chainring.
- (2) Confirm that the adjustment barrel protrusion is in contact with the input link.
 - * If it is not in contact, loosen the cable adjustment barrel until it is in contact with the input link.
- (3) Run the cable through as shown in the figure.
 - * Be sure to run it through the groove.

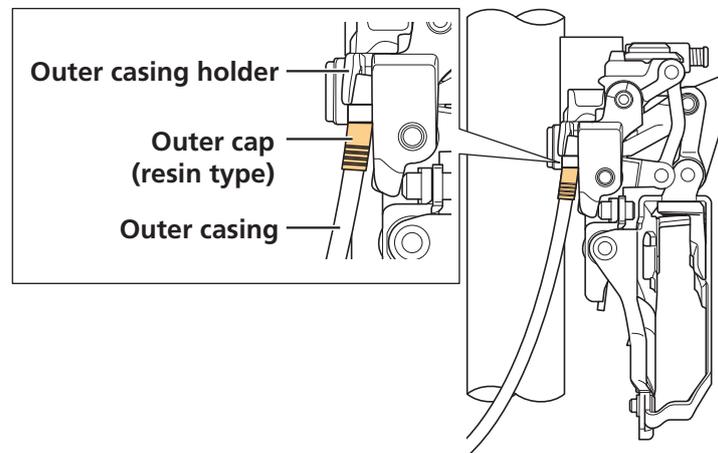


TECH TIPS

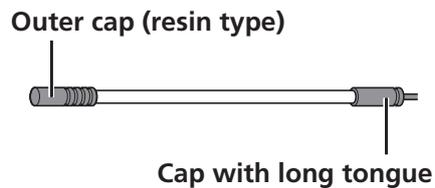
- Fixing the cable with the chain guide outer plate and the surface of the largest chainring aligned, allows you to decrease the amount of cable tension adjustment when adjusting gear shifting.



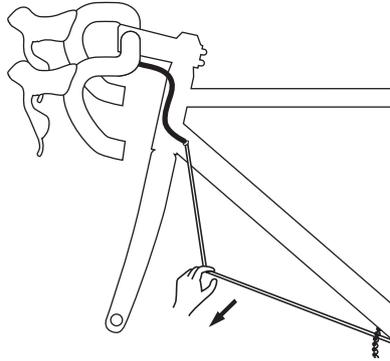
- For the full outer model and built-in type, make sure that the outer casing is firmly secured to the outer casing holder before use.

**NOTICE**

- Be sure to check that the inner cable runs through the cable guide.
- If using a full outer model, the end of the outer casing with the outer cap (resin type) should be at the derailleur side.
- If using it in a cold region, use a sealed outer cap (resin type) to prevent freezing.



4. Temporarily fix the inner cable and remove the initial extension from the cable.



TECH TIPS

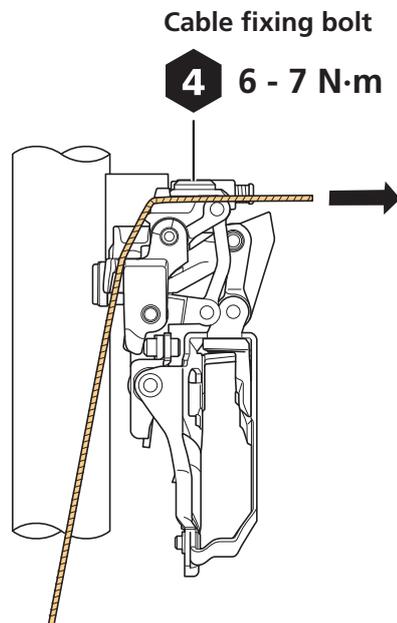
- For a full outer model, operate the lever normally, move the front derailleur several times, and then remove the initial extension. After removing the initial extension, secure the cable in place and then adjust.

NOTICE

- Remove the initial extension before installing the chain.
- If a chain is already installed, turn the crank as you operate the lever.
- Do not apply excessive force when operating the lever. Otherwise, the lever could malfunction.

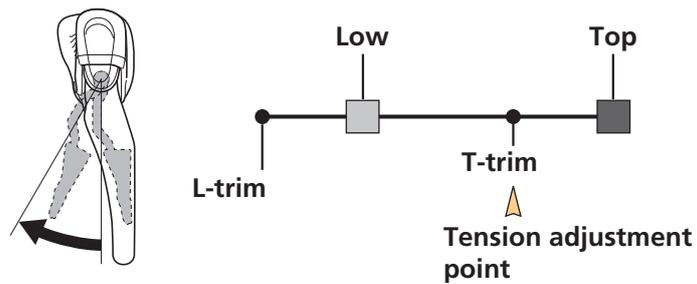
5. Secure the inner cable.

Secure while pulling the cable.



Adjusting cable tension

1. Align with the gear where the lever is released from the top position to the T-trim position.

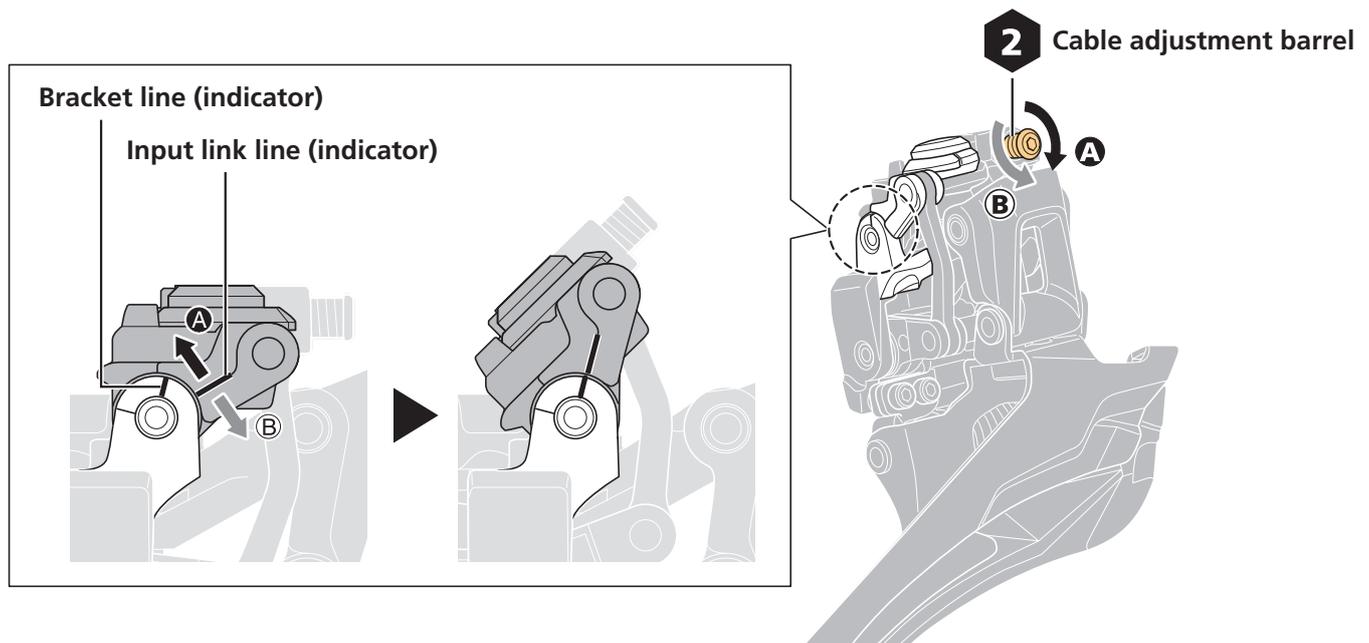


2. Adjust the cable tension.

Adjust the cable tension with the cable adjustment barrel or cable adjuster on the frame, so that the indicator lines of the bracket and input link are aligned.

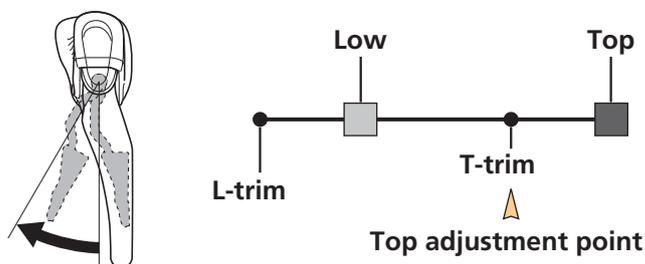
If the cable was given too much tension and the bolt was loosened, be sure to release it first in the lowest position. Then, check the indicator position once again at the T-trim position.

Once the cable tension has been adjusted, install the chain.

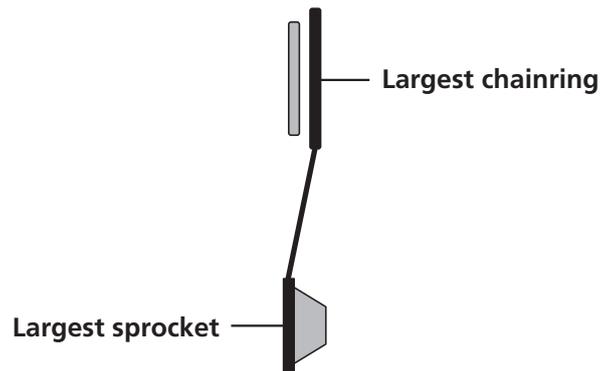


Top adjustment

1. Align with the gear where the lever is released from the top position to the T-trim position.

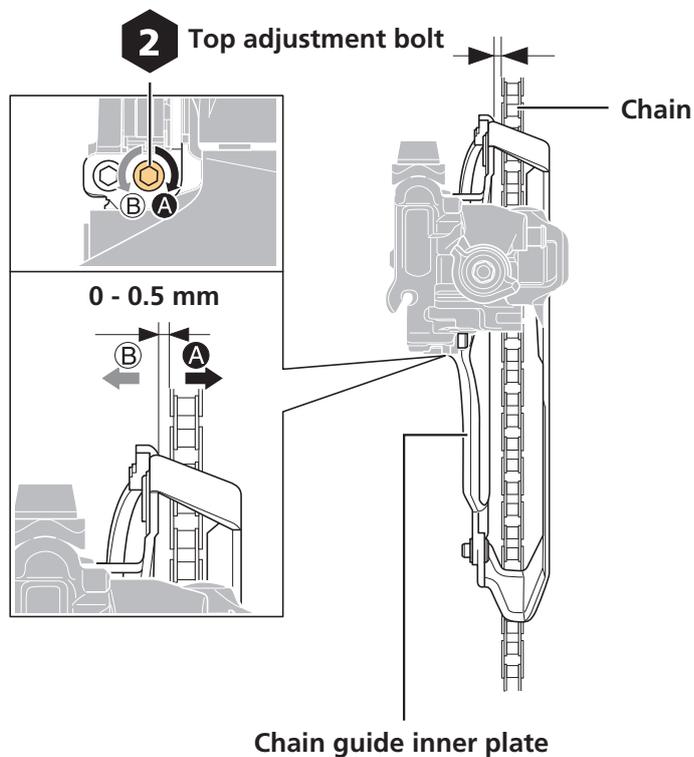


2. Align the chain with the largest sprocket.



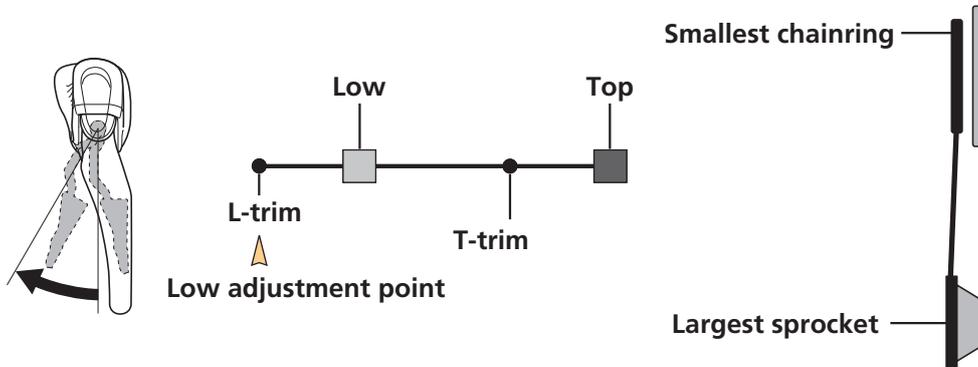
3. Adjust the top position of the chain guide.

Set so that the clearance between the chain guide inner plate and the chain is 0 - 0.5 mm.



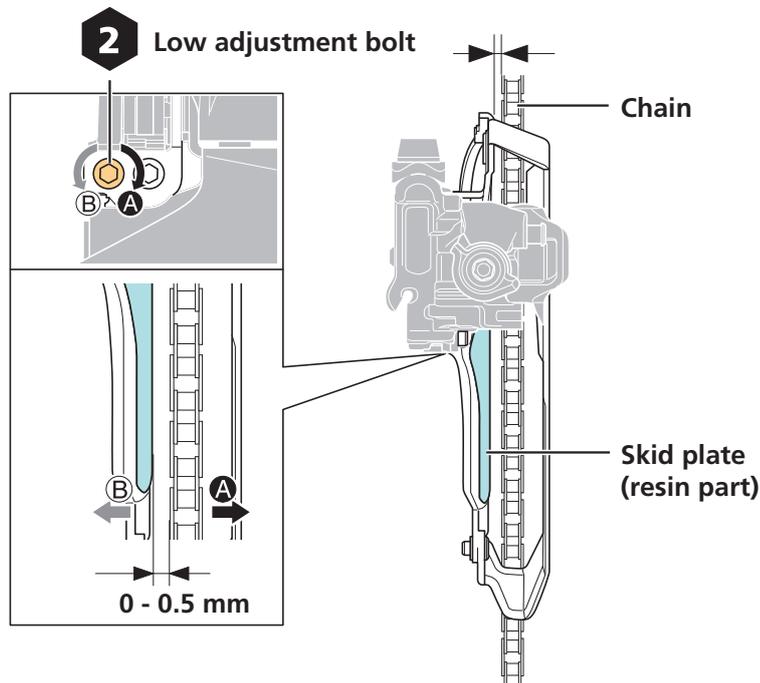
Low adjustment

1. Align with the gear where the lever is released from the low side to the L-trim position.



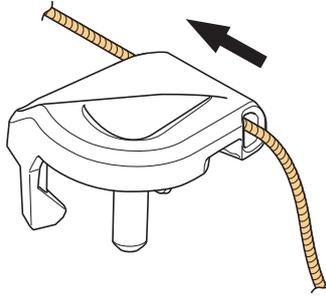
2. Adjust the lowest position of the chain guide.

Adjust so that the clearance between the skid plate of the chain guide and the chain is 0 - 0.5 mm.

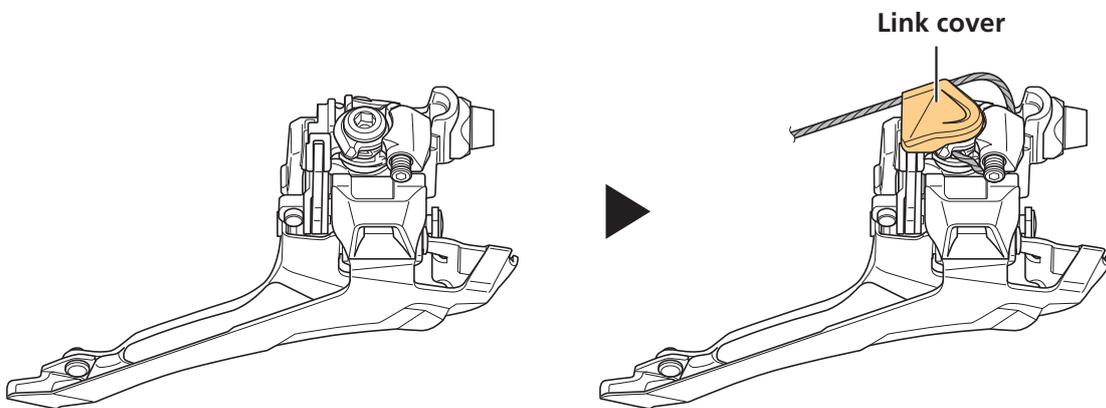


Handling the cable end

1. Run the end of any excessive cable through the hole in the link cover.

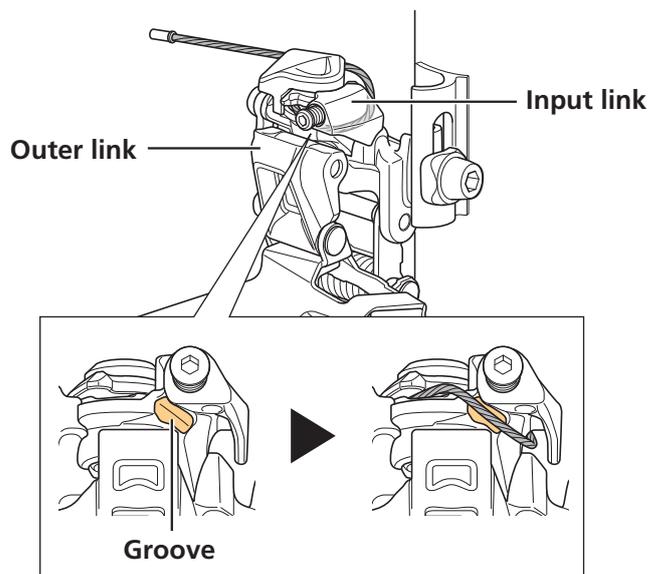


2. Install the link cover.



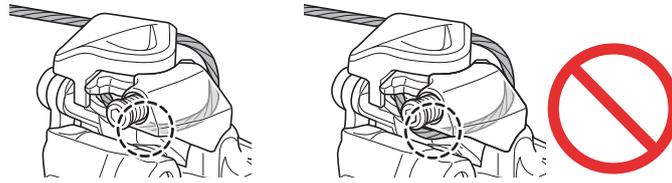
3. Run the cable through as shown in the figure.

Next, cut the cable and install an end cap.



NOTICE

- Check that the cable is not pinched in between the outer link and input link when the lever is released in the L-trim position.



Checking gear shifting and fine tuning

After the cable is installed and adjusted, check the gear-shift by operating the shifting lever.

If the chain falls to the crank side	Turn the top adjustment bolt counterclockwise.
If shifting is difficult from the smallest chainring to the largest chainring	Turn the top adjustment bolt clockwise.
If shifting is difficult from the largest chainring to the smallest chainring	Turn the top adjustment bolt counterclockwise.
If the chain falls to the bottom bracket side when the gear is shifted to the lowest position	Turn the top adjustment bolt clockwise.
If the chain falls to the bottom bracket side when the gear is shifted to the L-trim position	Turn the low adjustment bolt clockwise.

NOTICE

- First, check whether the tension of the cable is appropriate using the indicator.
- Also, perform this check if it becomes difficult to perform gear shifting during use.

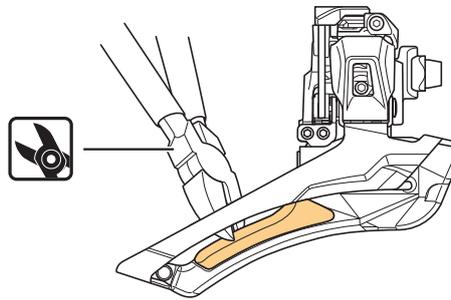
MAINTENANCE

Replacing the skid plate

Removing the skid plate

1. Remove the skid plate.

Make a slit in the skid plate at the position illustrated using nippers, and then remove the skid plate.



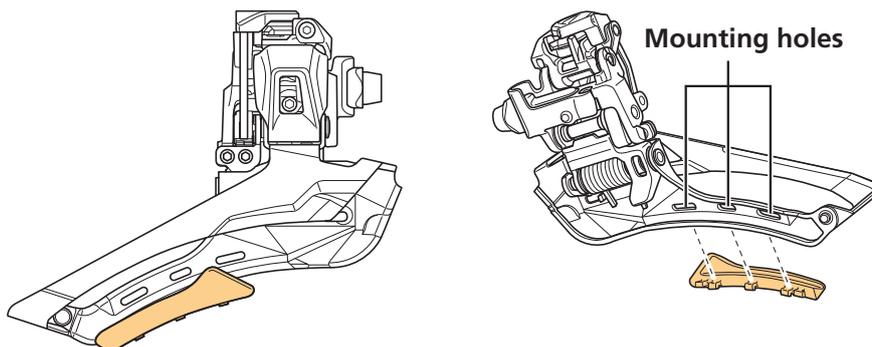
NOTICE

- The skid plate on the outer plate side cannot be replaced.

Installing the skid plate

1. Install a new skid plate.

- (1) Insert the skid plate into the mounting hole.
- (2) Check that the claws on the skid plate are engaged properly on the back side of the inner plate.



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Please note: specifications are subject to change for improvement without notice. (English)

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