

# Dealer's Manual

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

# Shift Lever

## **EZ-FIRE Plus**

ST-EF500

ST-EF510

# CONTENTS

<b>IMPORTANT NOTICE.....</b>	<b>3</b>
<b>TO ENSURE SAFETY.....</b>	<b>4</b>
<b>LIST OF TOOLS TO BE USED.....</b>	<b>7</b>
<b>INSTALLATION .....</b>	<b>9</b>
Installation to the handlebars .....	9
Installation of the brake cable .....	9
Installing the shifting cable .....	10
<b>ADJUSTMENT .....</b>	<b>14</b>
Lever stroke adjustment .....	14
Adjusting the inner cable .....	14
<b>MAINTENANCE .....</b>	<b>16</b>
Replacing the inner cable .....	16

## 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, contact your place of purchase or a local bicycle dealer for their assistance.

- Make sure to read all instruction 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 manuals and technical documents are accessible online at <https://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

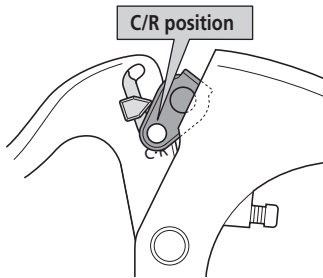
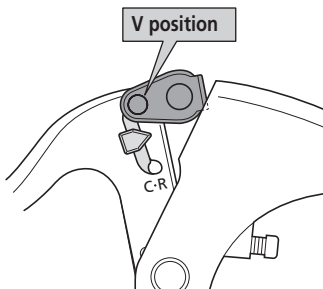
## ⚠ WARNING

- **Be sure to follow the instructions provided in the manuals when installing the product.**  
Only use SHIMANO genuine parts. If a component or replacement part is incorrectly assembled or adjusted, it can lead to component failure and cause the rider to lose control and crash.
-  Wear approved eye protection while performing maintenance tasks such as replacing components.
- Because each bicycle may handle slightly differently depending on the model, be sure to learn the proper braking technique (including brake lever pressure and bicycle control characteristics) and operation of your bicycle. Improper use of your bicycle's brake system may result in a loss of control or a fall, which could lead to severe injury.

**Be sure to also inform users of the following:**

- **When using a lever with mode switching mechanism, follow the figure to select the correct mode. If the incorrect mode is selected it may result in either excessive or insufficient braking force, which is highly dangerous.**

The ST-EF500-L4A/ST-EF500-2L4A/ST-EF500-7R4A/ST-EF500-8R4A/ST-EF510-L4A/ST-EF510-7R4A/ST-EF510-8R4A (four finger) brake levers are equipped with a mechanism to make them compatible with V-BRAKE brakes, which contain a power modulator, cantilever and roller brakes. Assemble them as shown in the figure.

Mode position		Applicable brake
<p><b>C</b> : Mode position for compatibility with cantilever brakes</p> <p><b>R</b> : Mode position for compatibility with roller brakes</p>	 <p style="text-align: center;">C/R position</p>	<ul style="list-style-type: none"> <li>• Cantilever brakes</li> <li>• Roller brakes</li> </ul>
<p><b>V</b> : Mode position for compatibility with V-BRAKE brakes with power modulator</p>	 <p style="text-align: center;">V position</p>	<ul style="list-style-type: none"> <li>• V-BRAKE brakes with power modulator</li> </ul>

- Do not apply the front brake too strongly. If you do so, the wheel may lock and the bicycle may fall forward, and serious injury may result.
- Because the required braking distance will be longer during wet weather, reduce your speed and apply the brakes early and gently. You may fall or collide and be seriously injured.
- A wet road surface may cause tires to skid; therefore, to avoid this, reduce your speed and apply the brakes early and gently. If the tires skid, you may fall and be seriously injured.

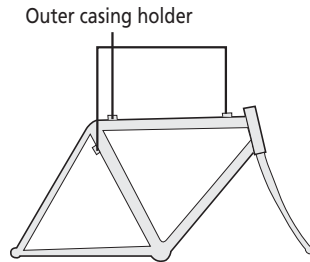
## NOTICE

**Be sure to also inform users of the following:**

- Be sure to keep turning the crank during gear shifting.
- Read the dealer's manuals for the front derailleur, rear derailleur, and brake.
- 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:**

- When installing the top route type, choose a frame that has three outer casing holders as shown in the illustration on the right.






- Use an outer casing which still has some length to spare even when the handlebars are turned all the way to both sides. Furthermore, check that the shifting lever does not touch the bicycle frame when the handlebars are turned all the way.
- Use the specified cable and cable guide for smooth operation.
- Grease with SIS SP41 grease (Y04180000) the inner cable and the sliding portions of the outer casing before use to ensure that they slide properly.
- Using a frame with internal cable routing is strongly discouraged as it has tendencies to impair the SIS shifting function due to its high cable resistance.
- A special grease is used for the gear shifting cable. Do not use Premium Grease or other types of grease, otherwise, they may cause deterioration in gear shifting performance.
- If gear shifting adjustments cannot be carried out, check the alignment of the dropout and check if the cable is lubricated or if the outer casing is too long or too short.

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

# **LIST OF TOOLS TO BE USED**

## LIST OF TOOLS TO BE USED

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

Tool		Tool	
	5 mm hexagon wrench		Screwdriver [#2]
	TL-CT12 cable cutter		

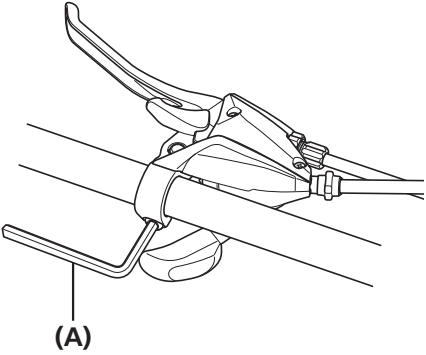
# INSTALLATION



# INSTALLATION

## ■ Installation to the handlebars

5



(A)

Secure to the handlebars using the clamp screw.

The tools and tightening torque vary depending on the product.

Tighten to a tightening torque that matches the tool size.

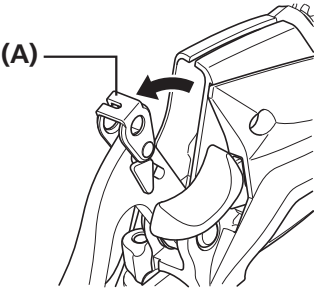
\* Use a handlebar grip with an outer diameter of Ø32 mm or less.

(A) 5 mm hexagon wrench

Tightening torque	
<div style="background-color: #333; color: white; padding: 5px; font-weight: bold; font-size: 24px; width: 30px; height: 30px; margin: 0 auto; display: flex; align-items: center; justify-content: center;">5</div>	6 - 8 N·m

## ■ Installation of the brake cable

1

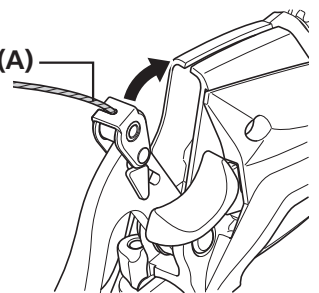


(A)

Pull the brake lever in the direction of brake operation.

(A) Cable hook

2

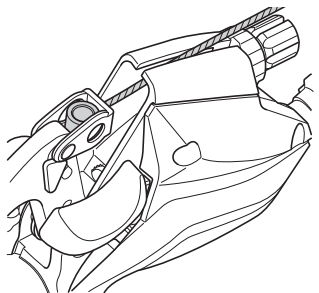


(A)

Set the inner end of the brake cable in the cable hook and pass through the brake cable.

(A) Brake cable

3



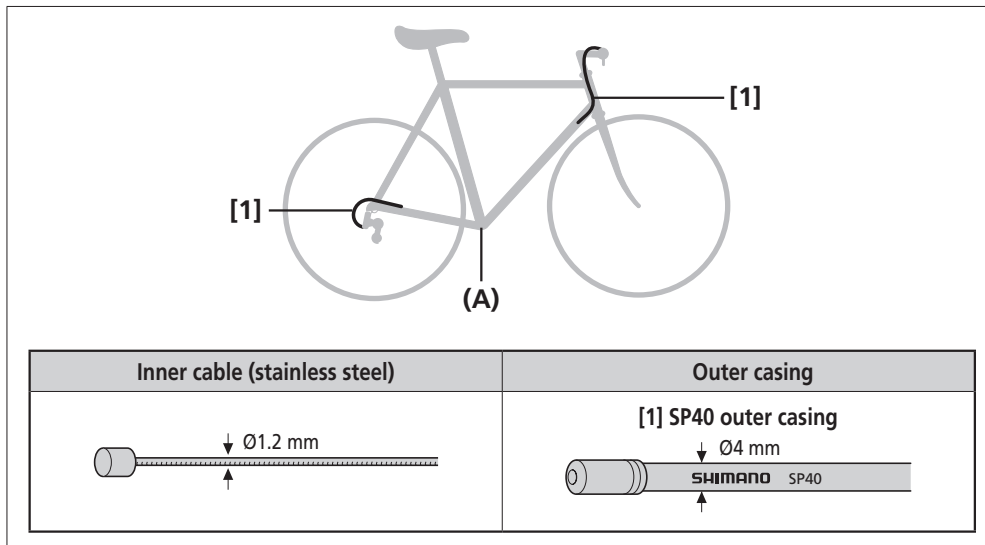
Run the brake cable through the slit to set it in place.

## INSTALLATION

### ▶▶ Installing the shifting cable

## ■ Installing the shifting cable

### Cable used

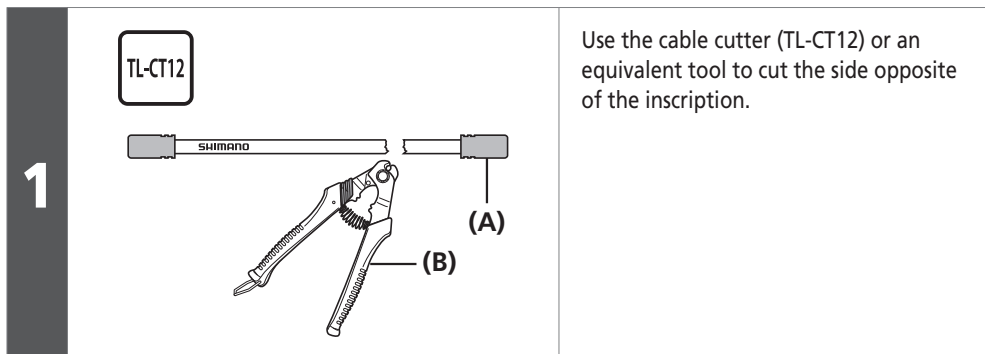


(A) Wire lead

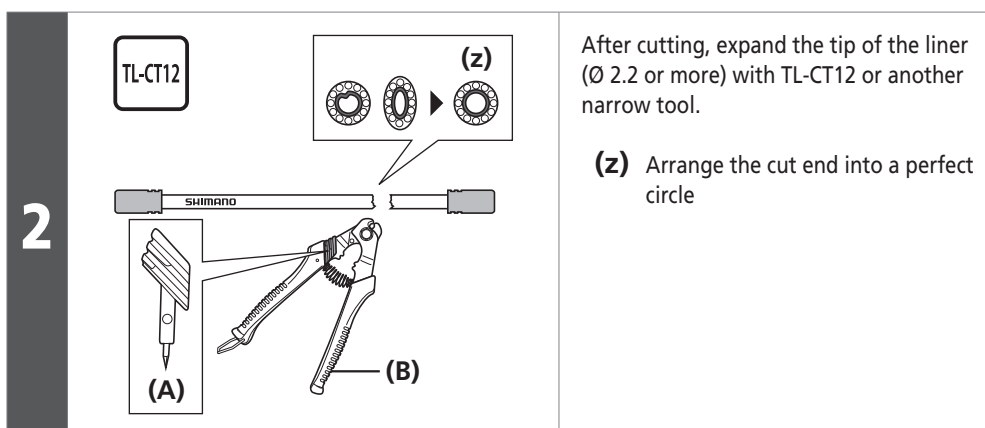
### Cutting the outer casing

#### NOTICE

- Use a cable which still has some length to spare even when the handlebars are turned all the way to both sides.
- Be careful not to injure your hand with the TL-CT12 needle section.



(A) Outer cap  
(B) TL-CT12

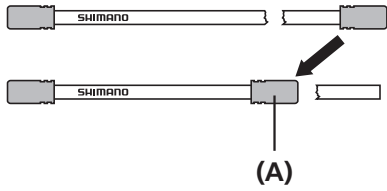


(A) TL-CT12 needle  
(B) TL-CT12

## INSTALLATION

### ▶▶ Installing the shifting cable

3

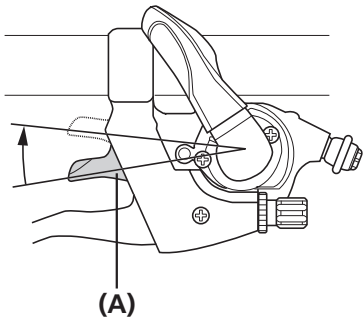


Attach the same outer end cap to the cut end of the outer casing.

(A) Outer cap

**Installing to the dual control lever**

**1**



For the left-hand lever, operate lever (B) two times or more to set it to the initial position.

For the right-hand lever, operate lever (B) seven times or more to set it to the initial position.

**(A)** Lever (B)

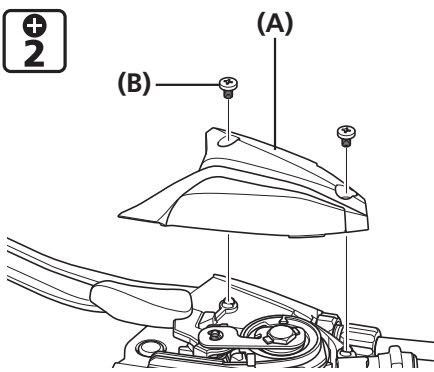


**TECH TIPS**

The number of times differs depending on the model.

**2**

**2**

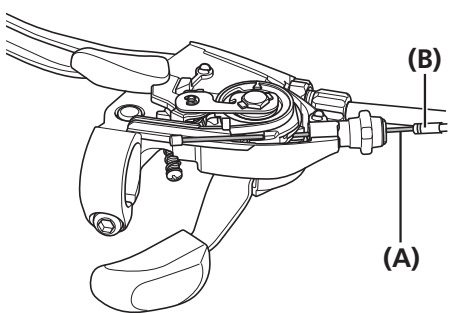


Remove the screws, then remove the cover.

**(A)** Cover

**(B)** Screw

**3**



Remove the indicator, and install the inner cable.  
Run the inner cable through the outer casing.

**(A)** Inner cable

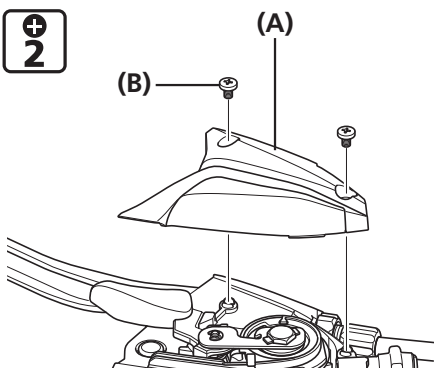
**(B)** Outer casing

**4**

Install the indicator to the rotating body.

**5**

**2**



Install the cover.

**(A)** Cover

**(B)** Screw

**Tightening torque**

**2**

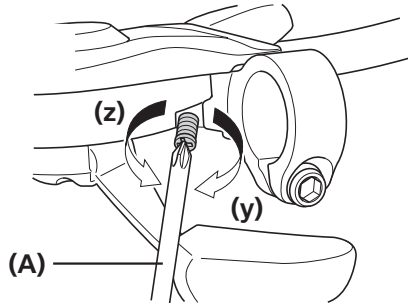
0.25 - 0.5 N·m

# ADJUSTMENT

## ADJUSTMENT

### ■ Lever stroke adjustment

②



Lever stroke adjustment can be carried out in the following ways.

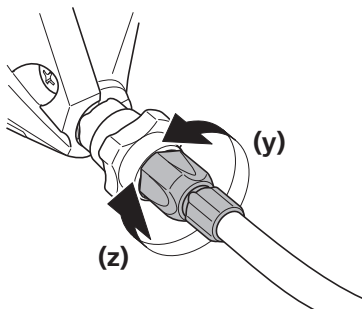
For the tools to be used and adjustment area(s), refer to the following.

- (y) Clockwise: The lever stroke becomes smaller.
- (z) Counterclockwise: The lever stroke becomes larger.

(A) Screwdriver [#2]

### ■ Adjusting the inner cable

When a cable adjuster is provided



The adjustment margin for the cable adjuster is five turns from its fully-tightened position.

The adjuster is initially tightened to the point where it is 1 turn loose of the fully-tightened state.

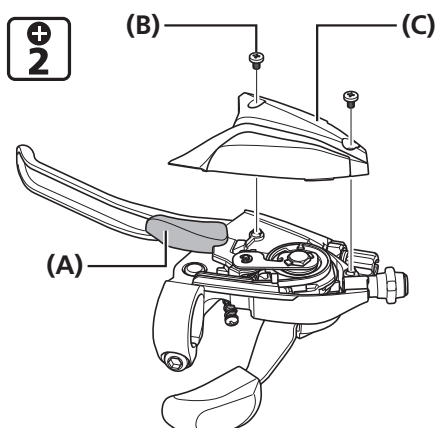
- (y) Loosens (stretches the cable)
- (z) Tightens

# MAINTENANCE

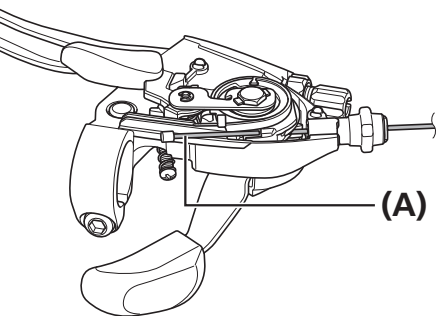
# MAINTENANCE

## ■ Replacing the inner cable

**1** Operate lever (B) to set the chain on the smallest chainring and the smallest sprocket.

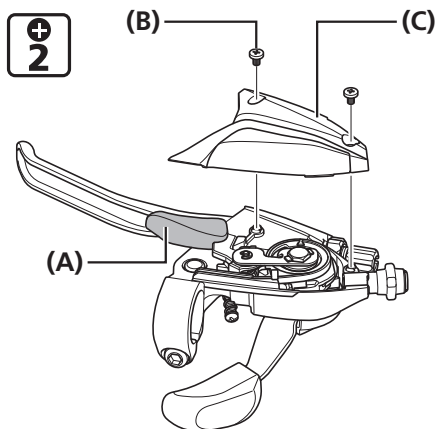
**2**  Unscrew the screws to remove the cover.

(A) Lever (B)  
(B) Screw  
(C) Cover


**3**  Remove the indicator, then pull out the inner cable and follow by installing a new inner cable.

(A) Inner cable

**4** Install the indicator to the rotating body.

**5**  Install the cover.

(A) Lever (B)  
(B) Screw  
(C) Cover

Tightening torque	
	0.25 - 0.5 N·m



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

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