

SERVICE INSTRUCTIONS

MONTAGE-INSTRUCTIES

EINBAUANLEITUNG

INSTRUCTIONS DE MONTAGE

INSTRUCCIONES DE SERVICIO

取扱説明書

ISTRUZIONI per l'ASSISTENZA

MANUAL DE INSTRUÇÕES

SERVICEVEJLEDNING

BRUKSANVISNING

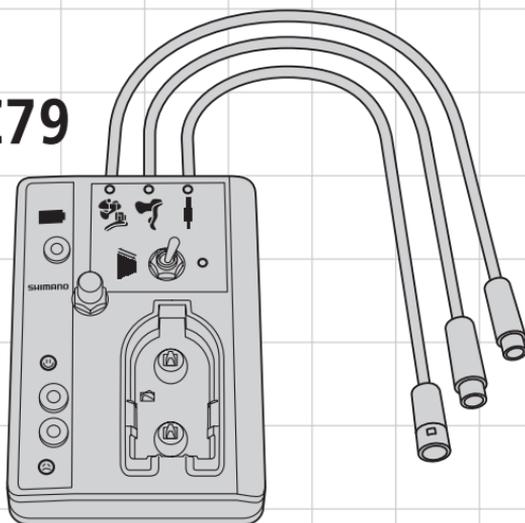
ΟΔΗΓΙΕΣ ΣΕΡΒΙΣ

HUOLTO-OHJEET

使用说明书

SM-EC79

Checker
 Testapparaat
 Prüfgerät
 Testeur
 Verificador
 チェッカー
 Checker
 Verificador
 Kontrol
 Kontroll
 Ελεγκτής
 Tarkistuslaite
 测试器



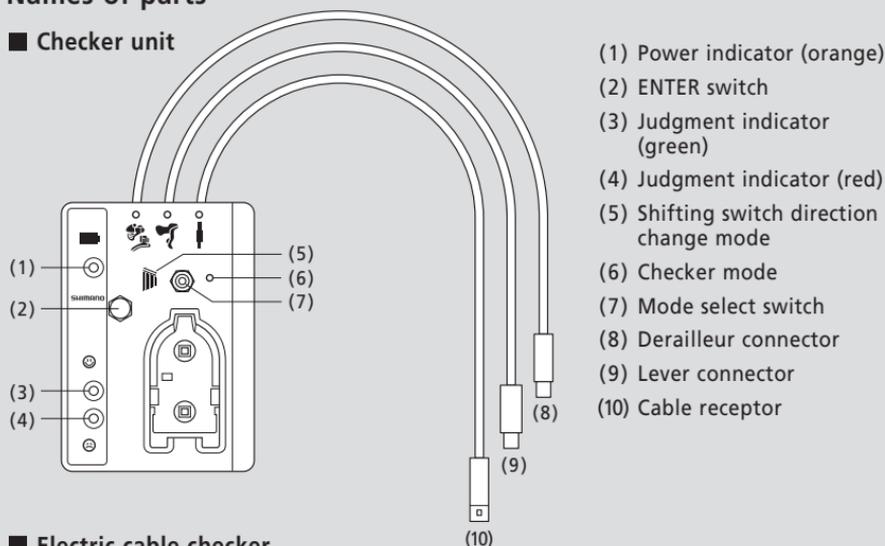
SHIMANO

SM-EC79 INDEX

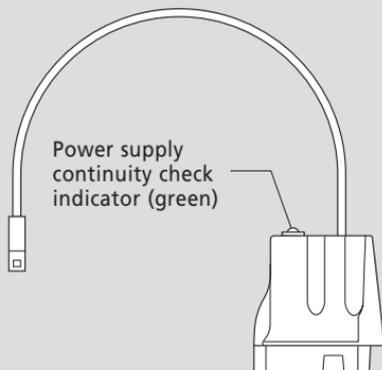
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Names of parts

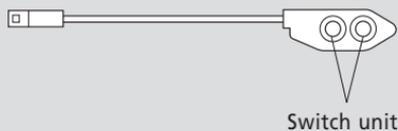
■ Checker unit



■ Electric cable checker



■ Shifting switch checker



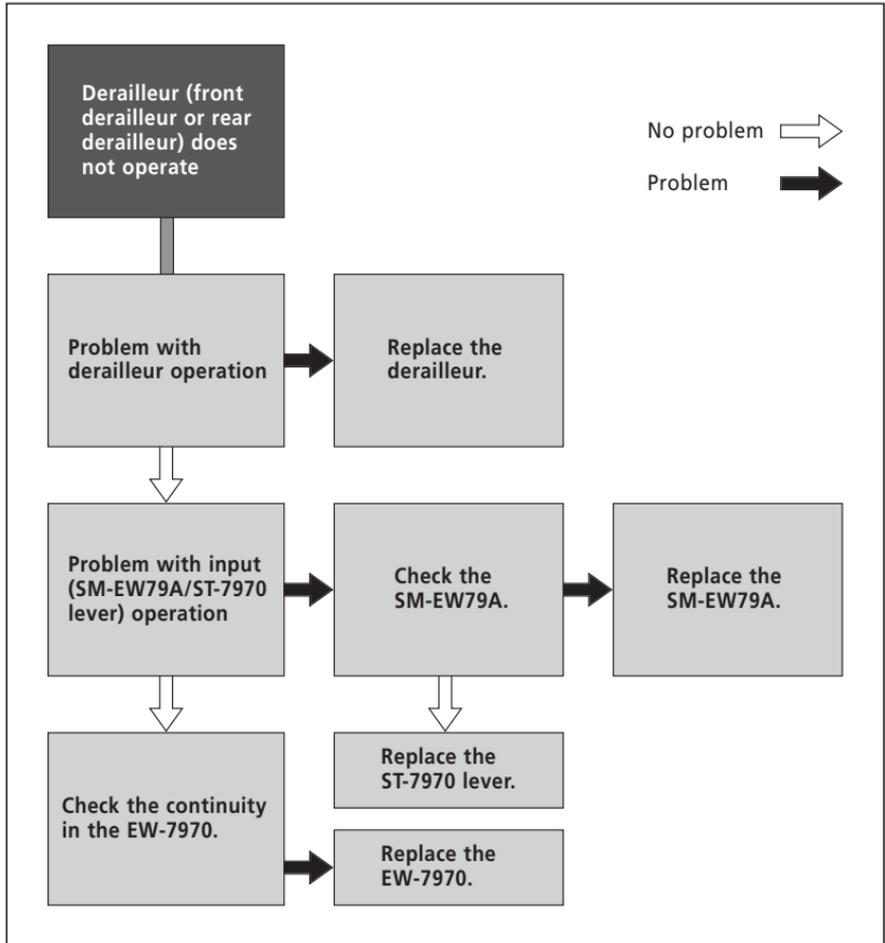
Using the checker

The two functions of this checker are to determine locations of problems and to change the switch directions.

NOTE:

This checker may not be possible to determine the locations of some types of problem.

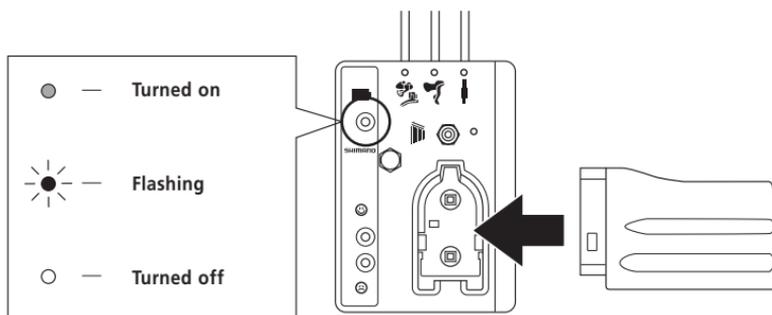
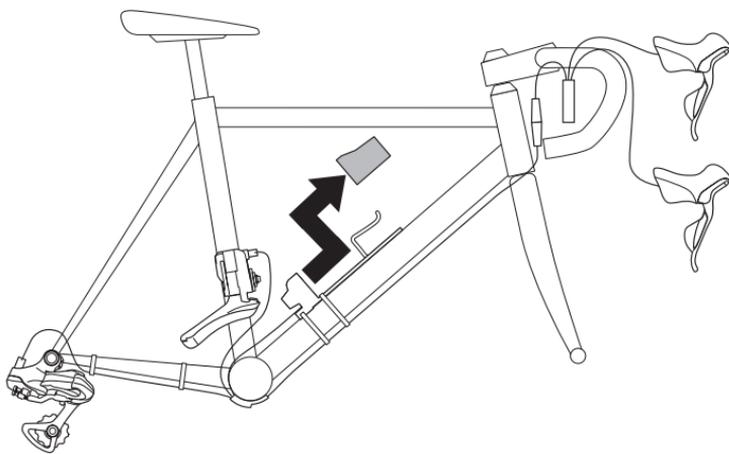
■ Problem location procedure using the checker



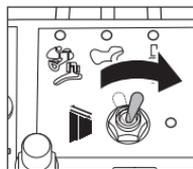
Problem with front derailleurs or rear derailleurs

1. First remove the battery from the battery bracket, and then insert the battery into the checker. The power indicator will turn on or flash. (If it turns on, the battery can be used; if it flashes, recharge the battery.)

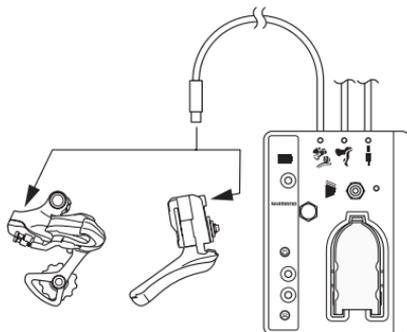
* If there is no response from the checker when the battery is inserted into it, there may be a problem with the battery.



2. Move the mode select switch to the checker mode position.

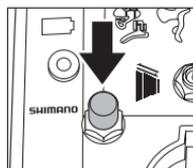


3. Disconnect the connector for the rear derailleur (front derailleur). Insert the derailleur connector of the checker into the rear derailleur (front derailleur).



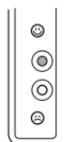
4. Press the ENTER switch on the checker. The check will start automatically and the judgment will be given.

* To try actual operation, press the ENTER switch several times while turning the crank arm.



No problem

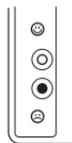
- If the judgment indicator (green) turns on



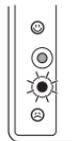
Illuminates green:
No problem

Problem - - - Replace the derailleur.

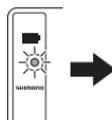
- If the judgment indicator (red) turns on
- If the judgment indicator (green) turns on, and then after 1 or 2 seconds the judgment indicator (red) flashes
- If there is no reaction from the derailleur after 10 seconds from ENTER switch input and the orange indicator turns on, and the judgment indicators turn off after 10 seconds



Illuminates red:
Problem

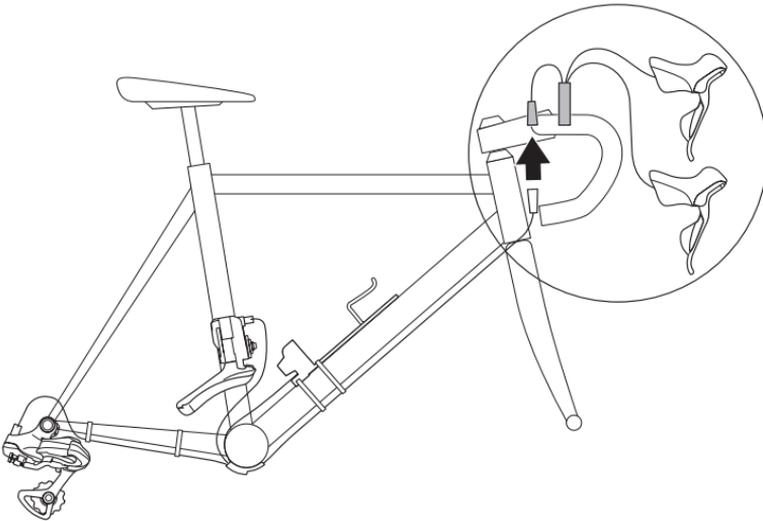


Illuminates green and flashes red:
Problem

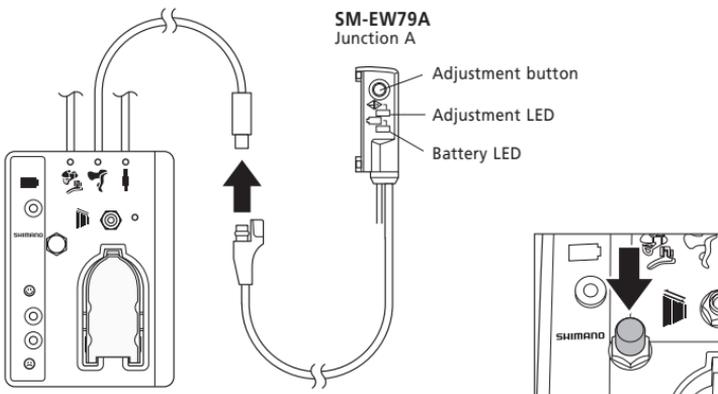


Illuminates orange, then turn off after 10 seconds:
Problem

Problem with SM-EW79A + ST-7970 operation

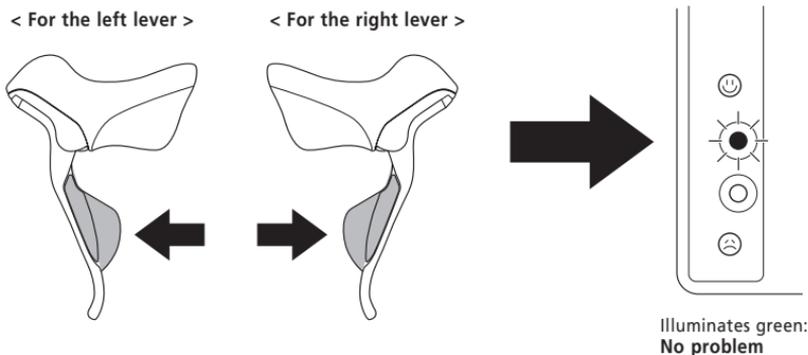


1. Disconnect the connector for the SM-EW79A junction, connect the lever connector of the checker to the connector from SM-EW79A junction A, and then press the ENTER switch.



2. Before a further 10 seconds have passed, press the shifting switch for the ST-7970 lever.

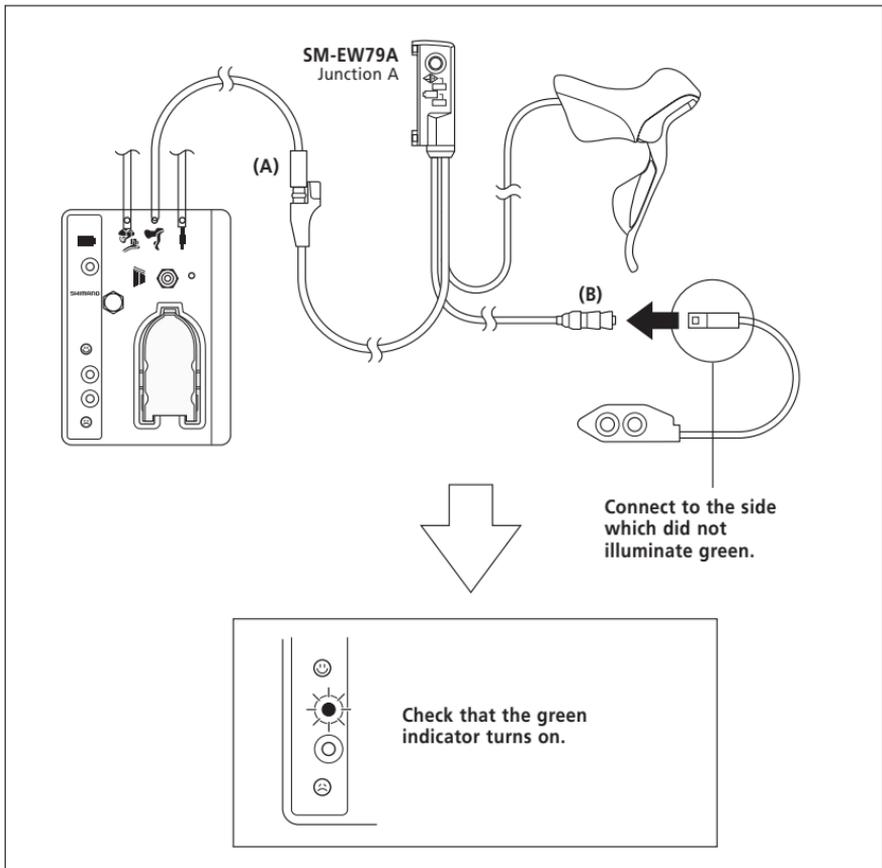
If there is no problem, the judgment indicator (green) on the checker will turn one. If the green indicator does not turn on when the switch is pressed, check the SM-EW79A.



* If the switch is pressed and held, the battery LED of the SM-EW79A will illuminate green. If no other operation is carried out for 30 seconds after the switch input, the power will turn off automatically.

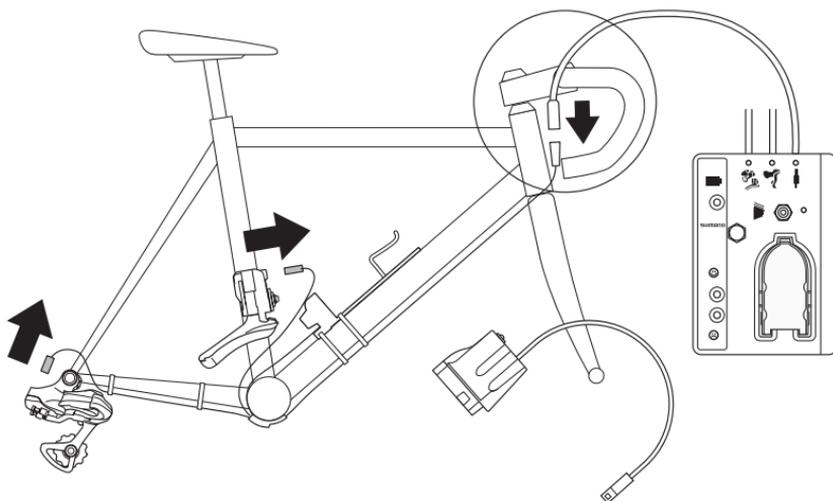
SM-EW79A check

1. With the checker still connected to (A), connect the switch checker to (B).
2. Press the ENTER switch.
3. Press a switch on the switch checker, and check that the green indicator turns on.
 - Green indicator turns on
--- The SM-EW79A is OK. Replace the ST-7970 lever.
 - Green indicator does not turn on
--- Problem with SM-EW79A. Replace the SM-EW79A.



Electric cable continuity check

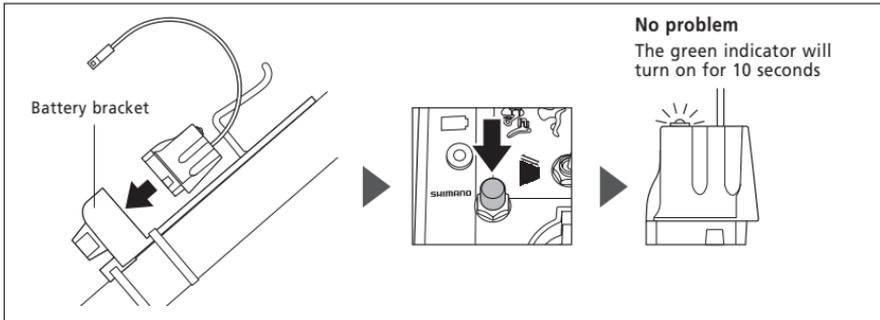
1. Disconnect all of the rear derailleur, front derailleur and junction A connectors.



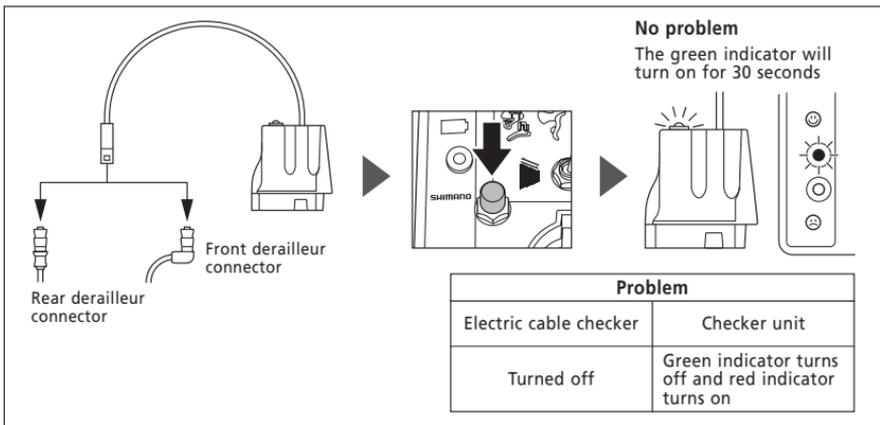
2. Connect the electric cable connector (5-wire) to the cable receptor of the checker, connect the electric cable to the component (rear derailleur cable connector, front derailleur cable connector or battery bracket) that you would like to check, and then press the ENTER switch on the checker unit.

* If the switch input is connected, the indicator will remain turned on while the switch is being pressed. If the switch is released, a signal will continue to be output for a further 10 seconds.

■ For the battery bracket



■ For the front derailleur or rear derailleur



NOTE:

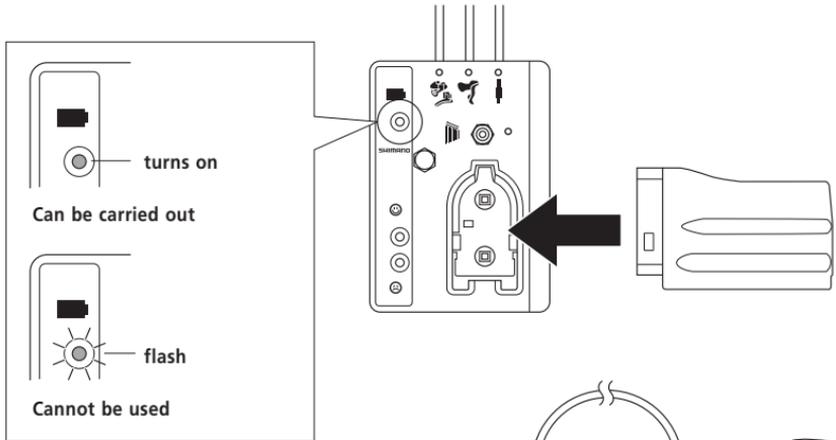
- If the green indicator turns on while checking the cable using the checker to indicate that the cable is normal, you should still shake and twist the cable while the indicator is still turned on to check that there are no open circuits. If even a momentary indication of a problem appears, replace the cable.
- The power will turn off automatically after 10 seconds. If you press the ENTER switch, the operation will be repeated for another 10 seconds.
- If two batteries (main checker unit and battery bracket) are fitted while checking is in progress, the orange and red indicators on the main checker unit will flash simultaneously, so if this happens, remove the battery from the battery bracket.

Changing the shifting switch direction

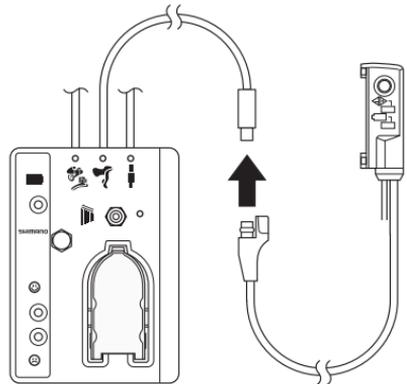
- * Make the mode selection while the power indicator is turned off or while the battery has been removed.

Insert the battery into the checker. Check that the orange power indicator turns on, and then continue to the next step of making the connections and carrying out the test.

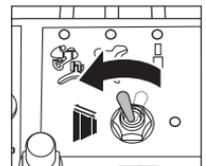
- * If the indicator is flashing, the battery cannot be used and must be recharged.



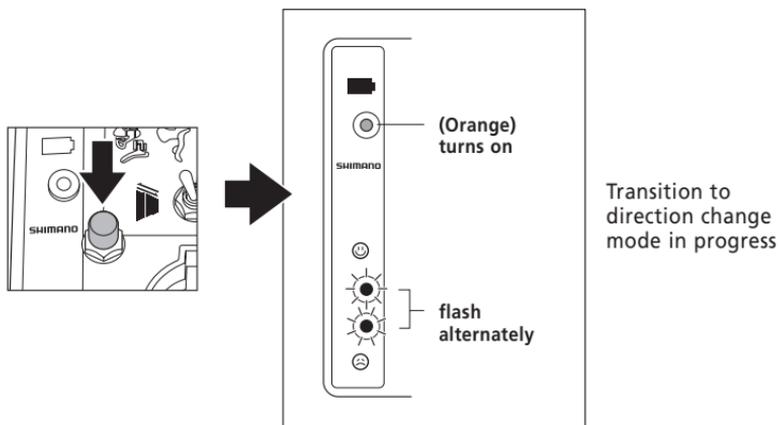
1. Connect the 5-wire connector of the SM-EW79A to lever connector.



2. Move the mode select switch to the shifting switch direction change side.



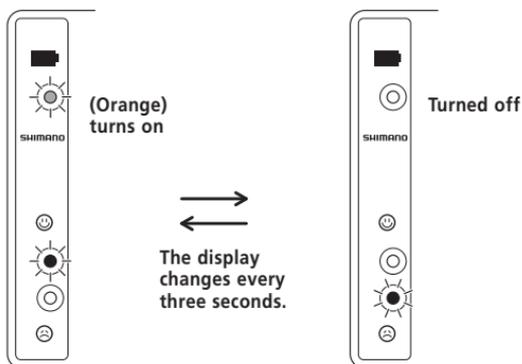
3. When the ENTER switch is pressed, the power indicator (orange) will turn on, and the judgment indicator (green) and the judgment indicator (red) will flash alternately.



4. Once the transition to direction change mode is complete, the three indicators on the checker unit will turn on alternately. The power indicator (orange) will flash. In addition, the battery level indicator (green) for the SM-EW79A will remain turned on.

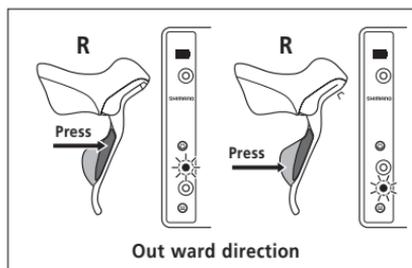
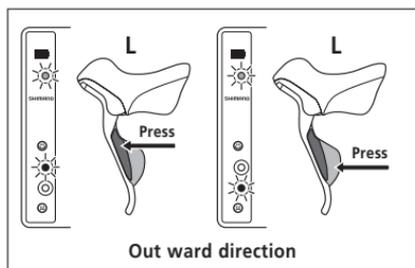
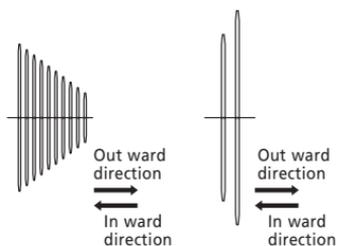
Indicates the left ST-7970 switch condition

Indicates the right ST-7970 switch condition



Changing the shifting switch direction

During this mode, press the shifting switch that you would like to use for shifting gears toward the outward direction. Depending on the input, the outside indication will change according to the following pattern. The directions of the shifting switches will change and their status will be displayed.



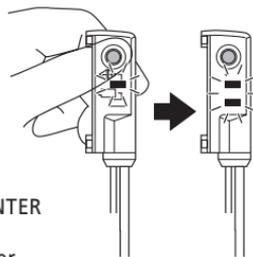
5. Press and hold the SM-EW79A adjustment mode button to confirm the changed setting.

If an error occurs, the battery indicator will become red and the mode will be canceled. When the new setting is confirmed, both adjustment LEDs will turn on for 2 seconds and will then turn off.

If an error occurs, the battery LED will change from green to red and then turn off. If this happens, press the ENTER switch once more to change the setting.

After the change has been confirmed, press the ST-7970 lever switches and check that the switch directions (direction of movement of the derailleur) has been changed. If you cancel the direction change mode without confirming the new setting, the previous setting will be retained.

- * If no operation is carried out for one minute, the mode will be canceled automatically. It is necessary to press the adjustment button as described above in order to save the changed direction. If it is not pressed, the new setting will not be saved.





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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.

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