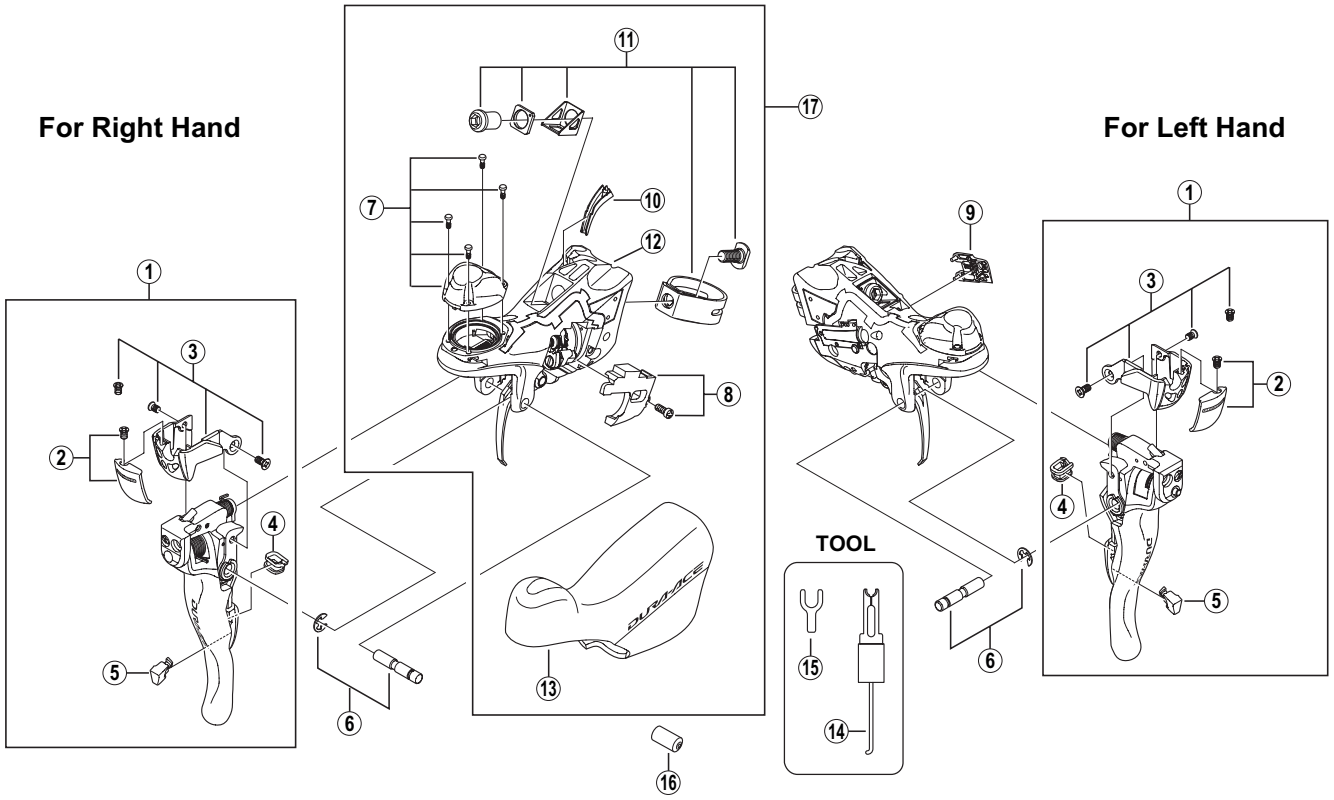
DURA-ACE Dual Control Lever (FLIGHT DECK Compatible)

ST-7900



ITEM NO.	SHIMANO CODE NO.	DESCRIPTION	INTERCHANGE-ABILITY
* 1	**Y-6RT98200**	R.H. Main Lever Assembly	
* 1	**Y-6RT98210**	L.H. Main Lever Assembly	
2	**Y-6RT98030**	R.H. Name Plate A & Fixing Screw	
2	**Y-6RT98040**	L.H. Name Plate A & Fixing Screw	
3	**Y-6RT98050**	R.H. Name Plate B & Fixing Screws & Fixing Screw for Name Plate A	
3	**Y-6RT98060**	L.H. Name Plate B & Fixing Screws & Fixing Screw for Name Plate A	
4	**Y-6RT56000**	R.H. Main Lever Support	
4	**Y-6RU43000**	L.H. Main Lever Support	
5	**Y-6RT37010**	R.H. Release Lever Support	
5	**Y-6RU87010**	L.H. Release Lever Support	
6	**Y-6RT98070**	Lever Axle & E-ring	
7	**Y-6RT98080**	R.H. Top Cover Unitless & Fixing Screws	
7	**Y-6RT98090**	L.H. Top Cover Unitless & Fixing Screws	
* 8	**Y-6SC98210**	Unit Cover & Fixing Screw	
9	**Y-6RU54000**	SL Cable Cover	
10	**Y-6RT46000**	R.H. SL Cable Guide	
10	**Y-6RU81000**	L.H. SL Cable Guide	
11	**Y-6RT98130**	Clamp Band Unit (φ23.8 mm—φ24.2 mm)	
* 12	**Y-6RT98230**	R.H. Bracket	
* 12	**Y-6RT98150**	L.H. Bracket	
13	**Y-6RT98160**	Bracket Covers (Pair)	
14	**Y-6RT68000**	Tool A for E-ring	
15	**Y-6RT66000**	Tool B for E-ring	
16	**Y-6RT98170**	Nomal Outer Cap for ST-7900 (4 pcs.)	
* 17	**Y-6RT98240**	R.H. Shifting Lever Unit	
* 17	**Y-6RT98190**	L.H. Shifting Lever Unit	

A: Same parts.
B: Parts are usable, but differ in materirals, appearance, finish, size, etc.
Absence of mark indicates non-interchangeability.

Aug.-2009-2874G

SHIMANO

SI-6RT0A-004-00

General Safety Information

⚠ WARNING

- **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.
- Use the ST-7900/BL-TT79 with the BR-7900. Do not use the BR-7900 in combination with previous STI levers for road riding or with the BL-R770/BL-R550 brake levers for flat handlebars, otherwise the braking performance provided will be much too strong.
- Because of the characteristics of the carbon fiber material, you must never modify the levers, otherwise the lever may break and the brakes may no longer work as a result.
- Before riding the bicycle, check that there is no damage such as carbon fiber peeling or cracking. If there is any damage, replace with a new part immediately without trying to repair the damage, otherwise the lever may break and the brakes may no longer work as a result.
- Read these Technical Service Instructions carefully, and keep them in a safe place for later reference.

Note

- Use a soft cloth to clean the carbon fiber levers, and be sure to moisten the cloth with neutral detergent before using it, otherwise the lever material may become damaged and lose its strength.
- Avoid leaving the carbon fiber levers in places where high temperatures are present. Also keep them well away from fire.
- Operation of the levers related to gear shifting should be made only when the front chainwheel is turning.
- For smooth operation, use the specified outer casing and the bottom bracket cable guide.
- Grease the inner cable and the inside of the outer casing before use to ensure that they slide properly.
- Because the high cable resistance of a frame with internal cable routing would impair the SIS function, this type of frame should not be used.
- A special grease is used for the gear shifting cable. Do not use DURA-ACE grease or other types of grease, otherwise they may cause deterioration in gear shifting performance.
- Parts are not guaranteed against natural wear or deterioration resulting from normal use.
- For maximum performance we highly recommend Shimano lubricants and maintenance products.
- For any questions regarding methods of installation, adjustment, maintenance or operation, please contact a professional bicycle dealer.

Technical Service Instructions **SI-6RT0A-004**

ST-7900

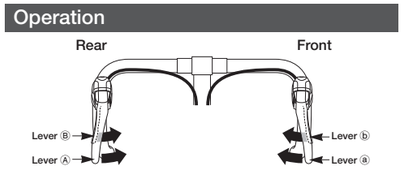
Shimano Total Integration

DURA-ACE

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

Series	DURA-ACE
Shifting lever	ST-7900
Outer casing	OT-SP41 (SIS-SP41)
Gears	20
Front derailleur	FD-7900
Front chainwheel	FC-7900
Rear derailleur	RD-7900SS
Freehub	FH-7900
Cassette sprocket	CS-7900
Chain	CN-7900
Bottom bracket cable guide	SM-SP17
Cable adjuster	SM-CA70 / SM-CA50

Operation

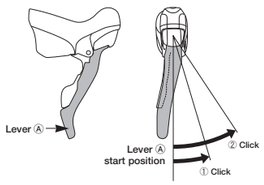


Lever Ⓐ : Shifts from smaller to larger rear sprocket.
Lever Ⓑ : Shifts from larger to smaller rear sprocket.
Lever ⓐ : Shifts from smaller to larger chainring.
Lever ⓑ : Shifts from larger to smaller chainring.

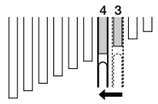
All levers return to the starting position when released.

Operation of rear derailleur lever

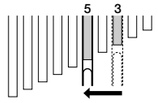
• **Lever Ⓐ** : Shifts from smaller to larger rear sprocket.
Lever Ⓐ has a click stop at positions ① and ②.



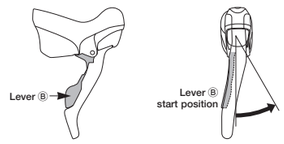
① **: Shifts one sprocket**
E.x. : from 3rd to 4th



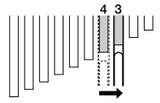
② **: Quick-shifts two sprockets**
E.x. : from 3rd to 5th



• **Lever Ⓑ** : Shifts from larger to smaller rear sprocket.
Press lever Ⓑ once to shift from a larger to one smaller sprocket.



E.x. : from 4th to 3rd



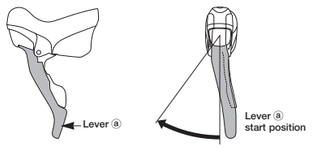
Caution on operation

Lever Ⓑ will also move when lever Ⓐ is operated, but be careful not to apply pressure to lever Ⓑ. Similarly be careful not to press lever Ⓐ when operating lever Ⓑ. Gears will not shift when both levers are pressed simultaneously.

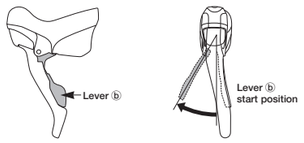
Be sure to read these service instructions in conjunction with the service instructions for the RD-7900 before use.

Operation of front derailleur levers

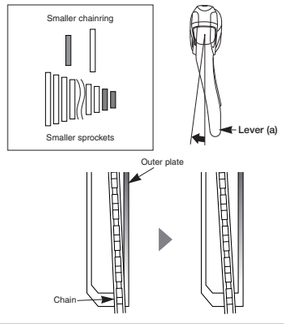
• **Lever ⓐ :** Shifts from smaller to larger front chainring.



• **Lever ⓑ :** Shifts from larger to smaller front chainring.



If the outer plate touches the chain when the chain is at the gear position shown in the illustration, operate lever (a) slightly to move the derailleur so that the chain no longer touches the outer plate.



Caution on operation (FD-7900)

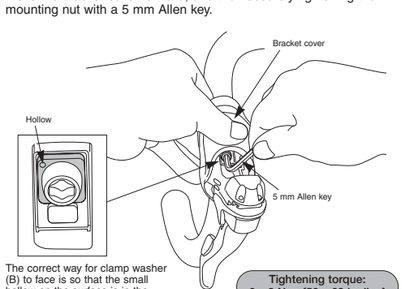
Lever ⓑ will also move when lever ⓐ is operated, but be careful not to apply pressure to lever ⓑ. Similarly be careful not to press lever ⓐ when operating lever ⓑ. Gears will not shift when both levers are pressed simultaneously.

Be sure to read these service instructions in conjunction with the service instructions for the FD-7900 before use.

Installation

Installation to the handlebar

Move the bracket cover forward, and then securely tightening the mounting nut with a 5 mm Allen key.



The correct way for clamp washer (B) to face is so that the small hollow on the surface is in the top-left corner.

Tightening torque:
6 – 8 N·m {52 – 69 in. lbs.}

When installing the components to carbon frame/handle bar surfaces, verify with the manufacturer of the carbon frame/parts for their recommendation on tightening torque in order to prevent over tightening that can cause damage to the carbon material and/or under tightening that can cause lack of fixing strength for the components.

Installation of the brake cable

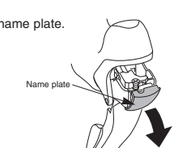
Cable used

• Inner cable (PTFE inner cable) ····· ϕ1.6 mm

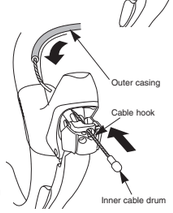
• SLR outer casing ····· ϕ5 mm

Be sure to leave some excess cable, even if cutting it to the full length of the handlebars.

1. Loosen the screw and remove the name plate.



2. Pass the inner cable through as shown in the illustration, and then set the inner cable drum into the cable hook.



3. Install the name plate.

Tightening torque:
0.15 - 0.2 N·m {1.3 - 1.8 in. lbs.}

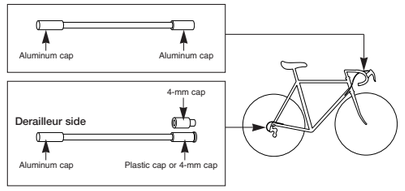
Installing the shifting cable

• Use a proper inner cable.
• It is recommended that you use an outer casing with an aluminum cap.

Cable used

• Inner cable (PTFE inner cable) ····· ϕ1.2 mm

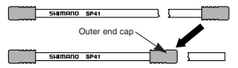
• SP41 sealed outer casing ····· ϕ4 mm



Cutting the outer casing

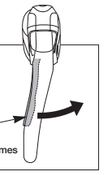
When cutting the outer casing, cut the opposite end to the end with the marking. After cutting the outer casing, make the end round so that the inside of the hole has a uniform diameter.

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

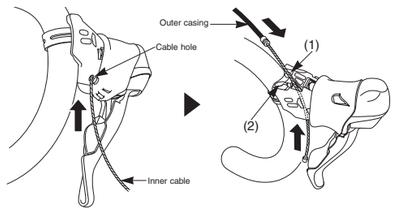


• **Rear lever**

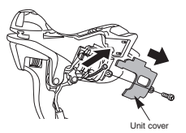
Operate lever Ⓑ at least 9 times to set the lever to the highest position.



Pass the inner cable through the cable hole. The outer casing can be routed in two directions: either through cable guide (1) (inside) or cable guide 2 (outside).

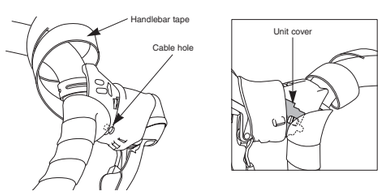


When removing parts in order to replace the inner cable, the work can be carried out more easily if the unit cover is removed as shown in the illustration.



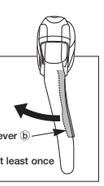
Tightening torque:
0.2 N·m {1.8 in. lbs.}

Be careful not to cover the cable holes or the unit cover when wrapping on the handlebar tape. If the handlebar tape covers these places, it will not be possible to replace the inner cable.

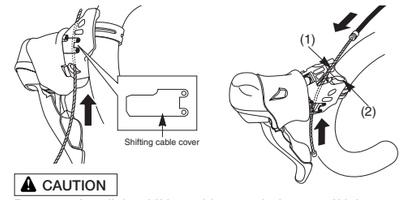


• **Front lever**

Operate lever ⓑ once or more to set the lever to the low position.



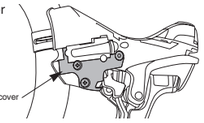
Pass the inner cable through the cable hole.
The outer casing can be routed in two directions: either through cable guide (1) (inside) or cable guide 2 (outside).



⚠ CAUTION

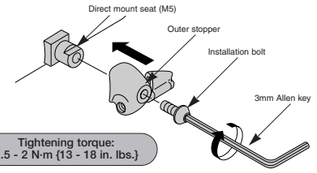
Be sure to install the shifting cable cover before use. If it is not installed, injury may occur.

Do not disassemble the unit cover at the front, otherwise it may cause problems with operation.



• **Outer stopper**

1. Install the outer stopper to the down tube.

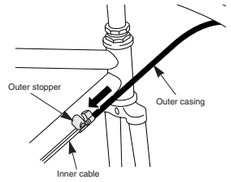


Tightening torque:
1.5 - 2 N·m {13 - 18 in. lbs.}

Install the outer stopper for the rear chainwheels with the handle in the default position.

2. Pass the inner cable through, and set the outer casing.

Be sure leave some excess in the outer casing, even if cutting it to the full length of the handlebars.



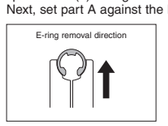
Confirm
Make sure the outer casing is firmly seated in the outer stopper.

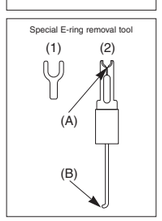
Maintenance

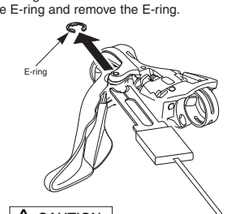
* The illustration shows the right-hand lever.

Bracket and lever disassembly

1. First use the special tool to remove the E-ring. Use part (B) of the special tool (2) to align the E-ring with the direction of removal. Next, set part A against the E-ring and remove the E-ring.





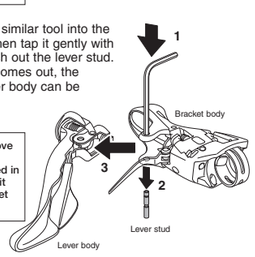


⚠ CAUTION

When removing the E-ring, it may suddenly spring out, so check the safety of any nearby people or objects before removing it.

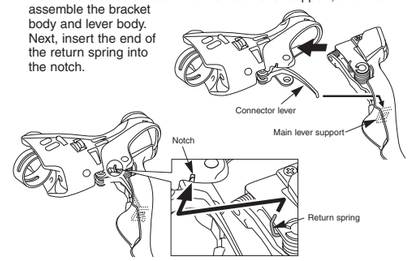
2. Insert an Allen key or similar tool into the lever stud hole, and then tap it gently with a plastic mallet to push out the lever stud. When the lever stud comes out, the bracket body and lever body can be disassembled.

Always be sure to remove the lever stud in this direction. If it is removed in the opposite direction, it may damage the bracket body.

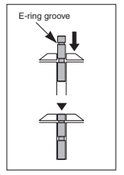


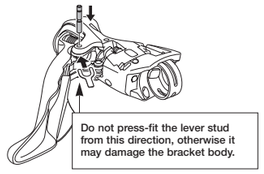
Assembling the bracket body and lever body

1. Insert the connector lever into the main lever support, and then assemble the bracket body and lever body. Next, insert the end of the return spring into the notch.



2. Align the stud holes, and then set the special tool (1) in the position shown in the illustration to press-fit the lever stud.

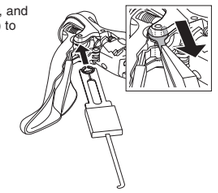




Do not press-fit the lever stud from this direction, otherwise it may damage the bracket body.

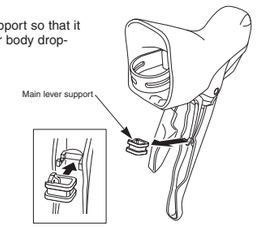
- The correct direction for the lever stud to face is with the E-ring groove at the top.
- Check that the surface of the bracket body is flush with the top of the lever stud to ensure that the E-ring can fit into the groove.

3. Remove the special tool (1), and then use the special tool (2) to install the E-ring.

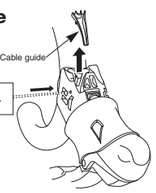


Replacing the main lever support

Installation:
Insert the main lever support so that it pushes against the lever body drop-prevention notch.



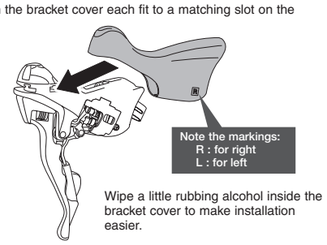
Replacing the cable guide



Use this hole to replace the cable guide.

Replacing the bracket cover

The tabs on the bracket cover each fit to a matching slot on the bracket.



Wipe a little rubbing alcohol inside the bracket cover to make installation easier.

SHIMANO

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* Service Instructions in further languages are available at :
http://techdocs.shimano.com