

WARNING

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

- This front derailleur is for triple front chainwheel use only. It cannot be used with the double front chainwheel, as the shifting points do not match.
- If gear shifting operations do not feel smooth, wash the derailleur and lubricate all moving parts.
- If the amount of looseness in the links is so great that adjustment is not possible, you should replace the derailleur.
- When the chain is in the position shown in the illustration, the chain may contact the front chainrings or front derailleur and generate noise. If the noise is a problem, shift the chain onto the next-larger rear sprocket or the one after.
- For frames with suspension, the chain stay angle will vary depending on whether the bicycle is being ridden or not being ridden. When the bicycle is not being ridden and the chain is positioned on the largest/larger chainring and on the smallest sprocket, the chain guide outer plate of the front derailleur may touch the chain.
- Shimano does not provide the bottom bracket mount fixing bolts.
- For smooth operation, use the specified outer casing and the bottom bracket cable guide.
- 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.
- Be sure to read the service instructions for the Front Drive System in conjunction with these service instructions.

Front chainrings

Rear sprockets

Technical Service Instructions

SI-5M50A-002

FD-M980 / FD-M980-E
FD-M981 / FD-M981-D

Front derailleur

Specifications				
				X = Available
Model number	FD-M980	FD-M980-E	FD-M981	FD-M981-D
Normal type		X		
Top route type		X		
Front chainwheel tooth difference		18T		
Min. difference between top and intermediate		10T		
Front derailleur installation band diameter	S, M, L	—	S, M, L	—
Chainstay angle (α)		66° - 69°		
Applicable chain line		50 mm		
Applicable front chainwheel		For triple chainwheel only (42-32-24T)		

Installation of the front derailleur

For bracket type

Install as shown in the illustration.

1, 2

Tightening torque :
35 - 50 N·m {305 - 435 in. lbs.}

3

Tightening torque :
5 - 7 N·m {44 - 60 in. lbs.}

Adapter

2

Front Derailleur

Bolt

3

Front Chainwheel

Adapter

1

Note:

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.

• FD-M980 / M981

Install the front derailleur as shown in the illustration. At this time, adjust the position of the front derailleur while installing it so that there is a clearance of 1 - 3 mm between the chain guide outer plate and the maximum outer diameter of the larger chainring.

Chain guide outer plate

Clearance: 1-3mm

Pro-Set gauge

Maximum outer diameter

Pro-Set alignment block

Chainwheel (largest chainring)

Chain guide

Tightening torque :
5 - 7 N·m {44 - 60 in. lbs.}

• FD-M981-D

Tightening torque :
5 - 7 N·m {44 - 60 in. lbs.}

155.5mm*
42T

159.5mm*
42T

155.5 mm / 159.5 mm*
(From bottom bracket center)

* The installation height will vary depending on the position of the frame washer.

Models without BB plate

• FD-M980-E

Bottom bracket mount fixing bolt

Note: Shimano does not provide the bottom bracket mount fixing bolts.

Bottom bracket mount

Bracket

Example: When using an Allen key

Tightening torque :
5 - 7 N·m {44 - 60 in. lbs.}

SIS Adjustment

Be sure to follow the sequence described below.

1. Low adjustment

First remove the Pro-Set alignment block.

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

Pro-Set alignment block

Chain position

Largest sprocket

Smallest chainring

Chain guide inner plate

Chain

FD-M981
FD-M981-D

FD-M980
FD-M980-E

Low adjustment screw

2. Connecting and securing the inner cable

Switch the mode converter to the 3x (triple mode) position, and then check the lowest position. Operate lever B two times or more to set the lever to the lowest position. Remove the inner hole cover, and install the cable.

Mode converter

2x

3x

Mode select switch

Inner hole cover

Lever (B)

Inner cable

Inner hole cover

Note:

Do not force the mode select switch to turn. If you force it to turn, it will break.

Install the inner hole cover by turning it as shown in the illustration until it stops.

Do not turn it any further than this, otherwise it may damage the thread on the cover.

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.

Outer end cap

SHIMANO SIS-SP

SHIMANO SIS-SP

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

• FD-M980 / FD-M980-E
FD-M980-E (Models without BB plate)

Use an 8 mm spanner or a 4 mm Allen key to tighten the wire fixing bolt.

< Normal type >

8 mm spanner

Note: Pass the cable through as shown in the illustration.

Wire fixing bolt

4 mm Allen key

< Top route type >

• FD-M981

< Normal type >

Note: Pass the cable through as shown in the illustration.

Wire fixing bolt

< Top route type >

5 mm Allen key

• FD-M981-D

< Normal type >

Note: Pass the cable through as shown in the illustration.

Wire fixing bolt

< Top route type >

5 mm Allen key

Tightening torque :
6 - 7 N·m {52 - 60 in. lbs.}

After taking up the initial slack in the cable, re-secure to the front derailleur as shown in the illustration.

Normal type

Top route type

Pull

Pull

3. Top adjustment

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

Chain position

Smallest sprocket

Largest chainring

FD-M980
FD-M980-E

FD-M981
FD-M981-D

Top adjustment screw

Chain guide outer plate

Chain

4. Adjustment of the intermediate chainring

When carrying out adjustment, set the chain to the largest sprocket, and at the front, set the chain to the intermediate chainring. Adjust using the outer casing adjustment barrel so that the clearance between the chain guide inner plate and the chain is 0 - 0.5 mm.

Chain position

Largest sprocket

Intermediate chainring

Chain guide inner plate

Chain

Outer casing adjustment barrel

5. Troubleshooting chart

After completion of steps 1 - 4, move the shifting lever to check the shifting. (This also applies if shifting becomes difficult during use.)

If the chain falls to the crank side.	Tighten the top adjustment screw clockwise (about 1/4 turn).
If shifting is difficult from the intermediate chainring to the largest chainring.	Loosen the top adjustment screw counterclockwise (about 1/8 turn).
If shifting is difficult from the intermediate chainring to the smallest chainring.	Loosen the low adjustment screw counterclockwise (about 1/4 turn).
If there is interference between the chain and the front derailleur inner plate at the largest chainring.	Tighten the top adjustment screw clockwise (about 1/8 turn).
If there is interference between the chain and the front derailleur outer plate at the largest chainring.	Loosen the top adjustment screw counterclockwise (about 1/8 turn).
If the intermediate chainring is skipped when shifting from the largest chainring.	Loosen the outer casing adjustment barrel counterclockwise (1 or 2 turns).
If there is interference between the chain and front derailleur inner plate when the rear sprocket is shifted to the largest sprocket when the chainwheel is at the intermediate chainring position.	Tighten the outer casing adjustment barrel clockwise (1 or 2 turns).
If the chain falls to the bottom bracket side.	Tighten the low adjustment screw clockwise (about 1/2 turn).
If the lever is stiff when shifting from the intermediate chainring to the largest chainring	Loosen the top adjustment screw counterclockwise (about 1/4 turn).

SHIMANO

SHIMANO AMERICAN CORPORATION

One Holland, Irvine, California 92618, U.S.A. Phone: +1-949-951-5003

SHIMANO EUROPE B.V.

Industrieweg 24, 8071 CT Nunspeet, The Netherlands Phone: +31-341-272222

SHIMANO INC.

3-77 Oimatsu-cho, Sakai-ku, Sakai-shi, Osaka 590-8577, Japan

* Service Instructions in further languages are available at :

http://techdocs.shimano.com

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

© Jly. 2010 by Shimano Inc. XBC SZK Printed in Japan.