OCC
OPTICAL CABLE CORPORATION

Installation Instructions
Xpress Connector Kits

1.0 GENERAL

1.1 These installation instructions describe the assembly procedure for the new OCC Xpress SC, LC, and ST connectors which allow termination on 250 μm, 900 μm, 2.0mm and 3.0mm fiber/cable.

NOTE: DO NOT use these instructions to install previous versions of OCC's Xpress connectors which are only used to terminate 250 μm and 900 μm fiber.

WARNING: Always wear eye protection when handling optical fibers. Dispose of cut or cleaved ends properly.

1.2 The following items are required but are not included with this kit:

- CT-30A cleaver
- 3mm cable clamp
- 2mm cable clamp
- 0.25/0.9mm cable clamp
- Fiber stripper
- Kevlar scissors
- Fiber preparation fluid
- Lint-free cloth wipes
- Marker pen
- Installation instructions
- Strip length template

2.0 COMPONENTS

2.1 Identify components of the connector kit (see Figure 1-3)

LC Connector

SC Connector
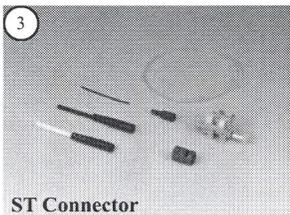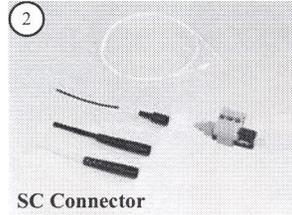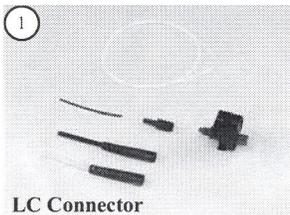
ST Connector

NOTE: Keep the ferrule's dust cap on until ready to install the connector

3.0 FIBER TERMINATION - 250 μm

3.1 Tools required for installation are the CT-30A Cleaver and a fiber striper.

3.2 Slide the protective tubing, 900μm boot, and 250μm protective tube (in order) on to the fiber. (see Figure 4)

3.3 Strip the fiber to a length of 40 mm. (see Figure 5)

3.4 Clean the stripped fiber with an alcohol wipe to remove any debris. Check the fiber integrity by bending the stripped end slightly at 60°. (see Figure 6)

3.5 Set fiber into cleaver so that 250μm coating edge is at 10.5mm position and cleave. (see Figure 7)
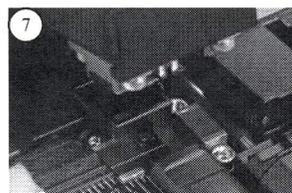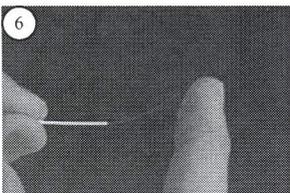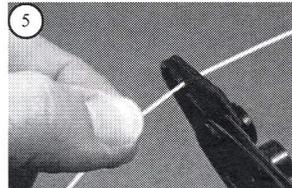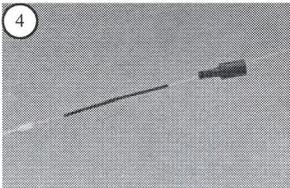

3.6 The wedge clip is engaged at shipment. If it becomes dislodged, squeeze the top and bottom of the wedge clip, insuring it is inserted in the connector body. A click will be heard. (see Figure 8)

3.7 Slide the 250μm protective tubing towards the end of the 250 μm coating. (see Figure 9)

3.8 **OPTION A:**

1. Insert the cleaved fiber into the rear of the connector until the connection is made. Make a bend in the fiber to maintain connection. (see Figure 10)

2. Release the wedge clip by squeezing both sides until the wedge clip dislocates itself from the connector body. Remove the wedge clip. (see Figure 11)
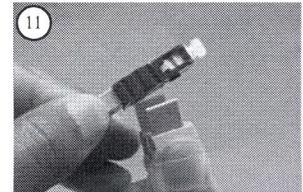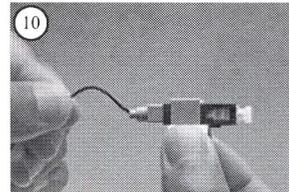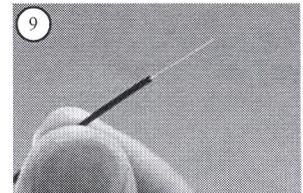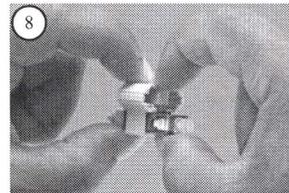

OPTION B: Use a Visual Fault Identifier or VFI as an aid to determine if the cleaved fiber and stubbed fiber are connected properly.

1. Remove the Xpress connector dust cap and insert the connector into the VFI. Turn the VFI on, there will be a red glow in Position 1 of the wedge clip. (see Figure 12)

2. Insert the cleaved fiber into the rear of the connector until the red glow dims in Position 1 of the wedge clip. Make a bend in the fiber to maintain connection. (See Figure 13)

3. Release the wedge clip by squeezing both sides until the wedge clip dislocates itself from the connector body. Remove the wedge clip. Remove the VFI from the connector and place the dust cap back onto the connector's ferrule.

Before Fiber Insertion

After Fiber Insertion
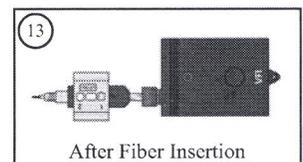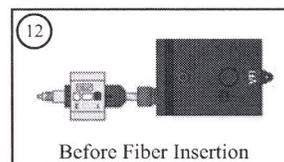
3.9 Slide the boot up and over the rear of the connector body. Slide the clear 900 μm protective tubing - over the black 250μm protective tubing - to the back of the connector's boot. Termination is complete. (see Figure 14)

3.10 **ST CONNECTOR ONLY** - Install the connector housing onto the connector. (see Figure 15)
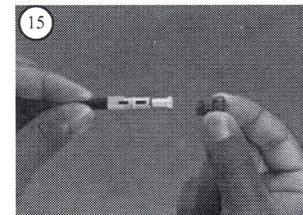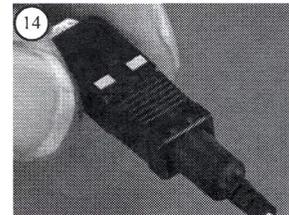
4.0 FIBER TERMINATION - 900 µm

4.1 Tools required for installation are the CT-30A Cleaver and a fiber stripper.

NOTE: When using a 900µm Fanout/Breakout kit to upjacket 250 µm fiber, follow the manufacturer's instructions. After the kit is installed properly, the following procedures for Xpress connector termination are applicable. A 0.25/0.9mm cable clamp is required.

4.2 When using a 900µm Fanout/Breakout Kit:

Measure 10 inches from end of 900µm tube and place the 0.25/0.9mm tube into 900µm cable clamp. Slide the cable clamp to tighten tube down. (see Figure 16)

4.3 Slide the 900µm boot onto the fiber. (see Figure 17)

4.4 Strip the fiber to a length of 40mm by removing 10mm at a time. (see Figure 18)

4.5 From the end of the 900µm buffered fiber, place a mark at 15.5mm for SC and ST or a mark at 11.5mm for LC. (see Figure 19)

4.6 Clean the stripped fiber with an alcohol wipe to remove any debris. Check the fiber integrity by bending the stripped end slightly at 60°. (See Figure 19)
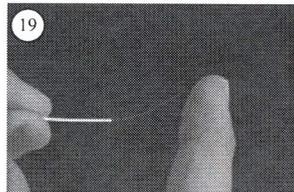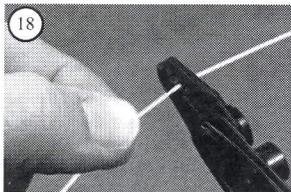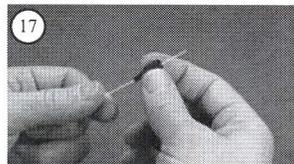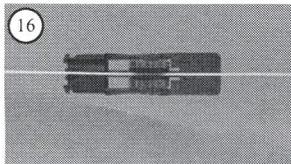

4.7 Set the stripped fiber onto the cleaver such that the 900µm buffered fiber's edge is at the 10.5mm position and cleave. (see Figure 20)

4.8 The wedge clip is engaged at shipment. If it has become dislodged, squeeze the top and bottom of the wedge clip, insuring it is inserted in the connector body. A click will be heard. (see Figure 21)
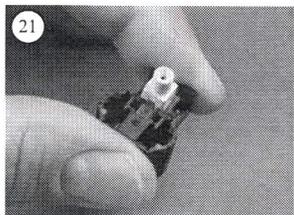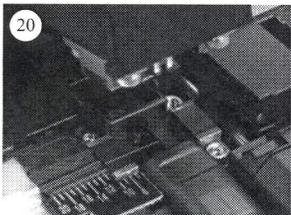

4.9 **OPTION A:**

1. Insert the cleaved fiber into the rear of the connector until the connection is made. Make a bend in the fiber to maintain connection. (see Figure 22 and 23)
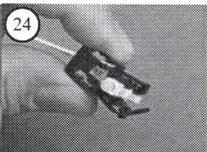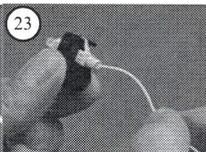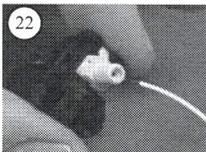

2. Release the wedge clip by squeezing both sides until the wedge clip dislocates itself from the connector body. Remove the wedge clip. (see Figure 24)

OPTION B: Use a Visual Fault Identifier or VFI as an aid to determine if the cleaved fiber and stubbed fiber are connected properly.

1. Remove the Xpress connector dust cap and insert the connector into the VFI. Turn the VFI on, there will be a red glow in Position 1 of the wedge clip. (see Figure 25)

2. Insert the cleaved fiber into the rear of the connector until the red glow dims in Position 1 of the wedge clip. Make a bend in the fiber to maintain connection. (See Figure 26)

3. Release the wedge clip by squeezing both sides until the wedge clip dislocates itself from the connector body. Remove the wedge clip. Remove the VFI from the connector and place the dust cap back onto the connector's ferrule.


Before Fiber Insertion | After Fiber Insertion
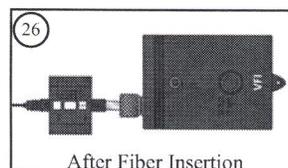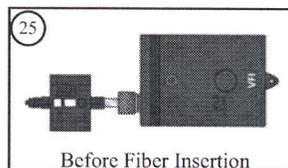
4.10 Slide the boot up and over the rear of the connector body. Termination is complete. (see Figure 27)

4.11 **When using a 900µm Fanout/Breakout Kit:** Remove the cable clamp from the 900 µm tubing.

4.12 **ST CONNECTOR ONLY** - Install the connector housing onto the connector. (see Figure 28)

NOTE: The ferrule's dust cap should remain in place until you are ready to insert the connector.
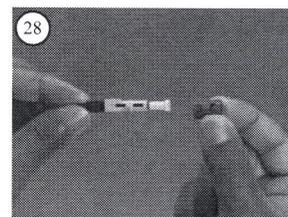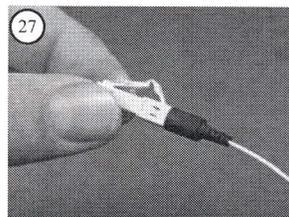

5.0 FIBER TERMINATION - 2mm and 3mm

5.1 Required components and tools are the CT-30A Cleaver, a fiber stripper, appropriate cable clamp, and Kevlar scissors.

5.2 Measure 10 inches from end of cable and place the cable into the appropriate cable clamp. Slide the cable clamp to tighten cable down. (see Figure 29)

5.3 Slide 2mm or 3mm boot onto cable. (see Figure 30)
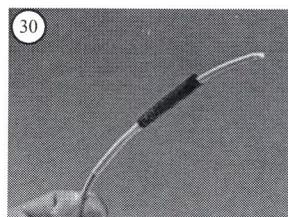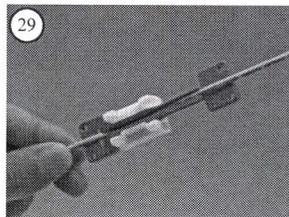
5.4 Remove 70mm of cable jacket. (see Figure 31)

5.5 Strip 40mm of the 900µm buffered fiber by removing 10mm at a time. (see Figure 32)

5.6 From the end of the 900µm buffered fiber, place a mark at 15.5mm for SC and ST or a mark at 11.5mm for LC. (see Figure 32)

5.7 Clean the stripped fiber with an alcohol wipe to remove any debris. Check the fiber integrity by bending the stripped end slightly at 60°.

5.8 Set the stripped fiber onto the cleaver such that the 900µm buffered fiber's edge is at the 10.5mm position and cleave. (see Figure 33)

5.9 Set connector into the Assembly Tool. (see Figure 34)

5.10 The wedge clip is engaged at shipment. If it has become dislodged, squeeze the top and bottom of the wedge clip, insuring it is inserted in the connector body. A click will be heard. (see Figure 35)
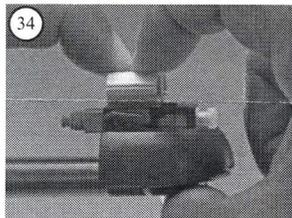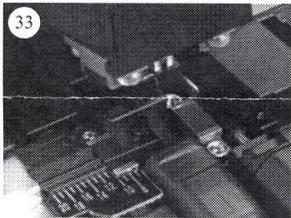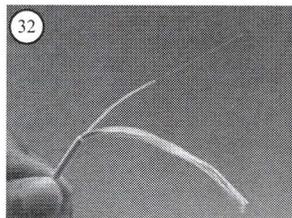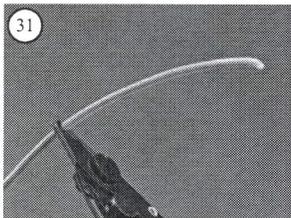
5.11 Place cable onto the Assembly Tool cable grip. (see Figure 35)

5.12 **OPTION A:**

1. Insert fiber slowly into the connector until connection is made. Form a bend in the fiber to maintain connection. Be sure fiber bend does not exceed top of wedge clip. (see Figure 35)

2. Release the wedge clip by squeezing both sides until the wedge clip dislocates itself from the connector body. Remove the wedge clip. (see Figure 36)
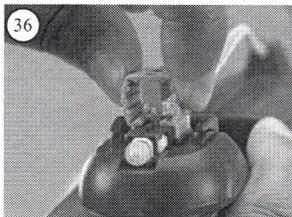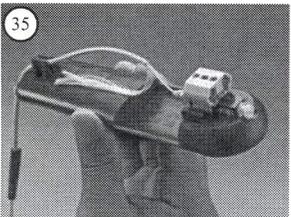

OPTION B: Use a Visual Fault Identifier or VFI as an aid to determine if the cleaved fiber and stubbed fiber are connected properly.

1. Remove the Xpress connector dust cap and insert the connector into the VFI. Turn the VFI on, there will be a red glow in Position 1 of the wedge clip. (see Figure 37)

2. Insert the cleaved fiber into the rear of the connector until the red glow dims in Position 1 of the wedge clip. Make a bend in the fiber to maintain connection. (See Figure 38)

3. Release the wedge clip by squeezing both sides until the wedge clip dislocates itself from the connector body. Remove the wedge clip. Remove the VFI from the connector and place the dust cap back onto the connector's ferrule.

Before Fiber Insertion | After Fiber Insertion
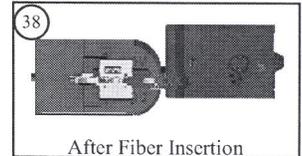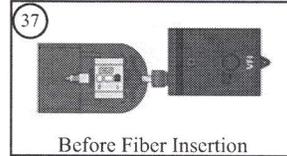
5.13 Remove cable from the Assembly Tool cable grip.

5.14 Slide the boot past the Assembly Tool cable grip. Straighten cable and return cable to the cable grip.

5.15 Divide Kevlar into two (2) equal portions. Place Kevlar into the Assembly Tool Kevlar grips on each side. Tug Kevlar lightly to ensure it's pulled taut and 900µm buffered fiber is not bent (see Figure 39)

5.16 Grip Kevlar on both sides of the tool to maintain tension. Screw boot onto back of connector to fix Kevlar firmly. (see Figure 40)

5.17 Remove connector from Assembly Tool.
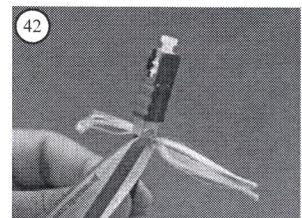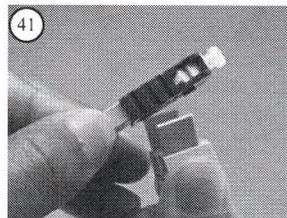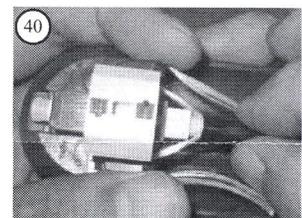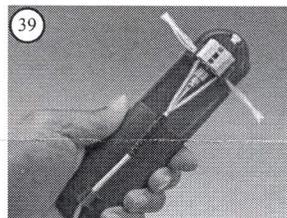
5.18 Remove wedge clip unit from connector. (see Figure 41)

5.19 Trim excess Kevlar using Kevlar scissors. (see Figure 42)

5.20 Release and remove cable clamp. Termination is complete. (see Figure 43)

5.21 **ST CONNECTOR ONLY** - Install the connector housing onto the connector. (see Figure 44)

NOTE: The ferrule's dust cap should remain in place until you are ready to insert the connector.

Installation Instructions
Xpress Connector Kits

OPTICAL CABLE CORPORATION
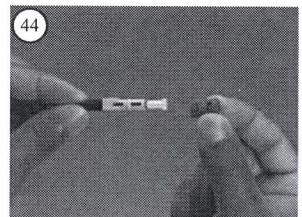
FIBER CLEAVE SPECIFICATIONS (illustrations not to scale)
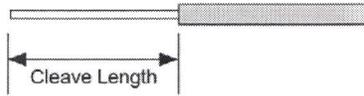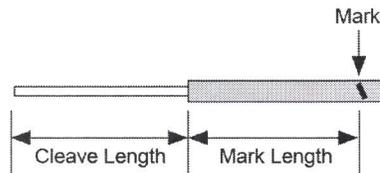
Cleave Length for 250µm Coated Fiber

TYPE	CLEAVE LENGTH
SC/ST	10.5mm
LC	10.5mm

Cleave Length for 900µm Buffered Fiber or Fanout Tubing

TYPE	CLEAVE LENGTH	MARK LENGTH
SC/ST	10.5mm	15.5mm
LC	10.5mm	11.5mm

Cleave Length for 2.0mm or 3.0mm Cable
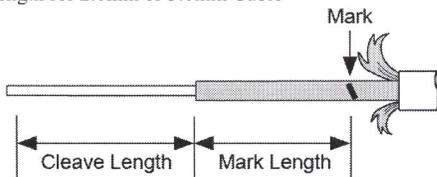
TYPE	CLEAVE LENGTH	MARK LENGTH
SC/ST	10.5mm	15.5mm
LC	10.5mm	11.5mm

ORDERING INFORMATION

SC Connectors:

FIBER TYPE	HOUSING COLOR	CABLE SIZE	XPRESS CONNECTOR PART NO.
Multimode, 50/125	Black	0.25mm, 0.9mm, 2.0mm, 3.0mm	FXC-SC5-y
Multimode, 62.5/125	Beige	0.25mm, 0.9mm, 2.0mm, 3.0mm	FXC-SC6-y
Single-mode	Blue	0.25mm, 0.9mm, 2.0mm, 3.0mm	FXC-SC8-y
L.O. Multimode, 50/125	Aqua	0.25mm, 0.9mm, 2.0mm, 3.0mm	FXC-SC5Gy

LC Connectors:

FIBER TYPE	HOUSING COLOR	CABLE SIZE	XPRESS CONNECTOR PART NO.
Multimode, 50/125	Black	0.25mm, 0.9mm, 2.0mm, 3.0mm	FXC-LC5-y
Multimode, 62.5/125	Beige	0.25mm, 0.9mm, 2.0mm, 3.0mm	FXC-LC6-y
Single-mode	Blue	0.25mm, 0.9mm, 2.0mm, 3.0mm	FXC-LC8-y
L.O. Multimode, 50/125	Aqua	0.25mm, 0.9mm, 2.0mm, 3.0mm	FXC-LC5Gy

ST Connectors:

FIBER TYPE	HOUSING COLOR	CABLE SIZE	XPRESS CONNECTOR PART NO.
Multimode, 50/125	Black	0.25mm, 0.9mm, 2.0mm, 3.0mm	FXC-SC5-y
Multimode, 62.5/125	Beige	0.25mm, 0.9mm, 2.0mm, 3.0mm	FXC-SC6-y
Single-mode	Blue	0.25mm, 0.9mm, 2.0mm, 3.0mm	FXC-SC8-y
L.O. Multimode, 50/125	Aqua	0.25mm, 0.9mm, 2.0mm, 3.0mm	FXC-SC5Gy

** Replace "y" with count: 6, 12, 50, or 100