



**CLARK™**  
WIRE & CABLE

## **FOT-SCPD**

FIBER OPTIC CLEANING SCOPE KIT



### **User Guide**

Fiber Microscope Operation Manual

# **SAFETY SUMMARY**

Any user or operator of this unit must thoroughly understand and follow the safety guidelines below. The manufacturer assumes no liability for the operator's failure to observe these guidelines.

## **Warning – Laser Radiation Hazard**

Operators must always remember that laser radiation at or above 1mW has the potential to cause serious damage to the human eye. Never look into the open end of an optical fiber where high level of laser radiation may be present.

## **Warning - Explosive Atmospheres**

To avoid explosion, do not operate this instrument in the presence of flammable gases or fumes.

## **Caution**

Operators should not operate this instrument with any of its covers removed, nor should they allow anyone else to do so.

Do not attempt any unauthorized service to this instrument. Always return the instrument to Clark Wire & Cable for repair to ensure that safety features are maintained.

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## **Overview**

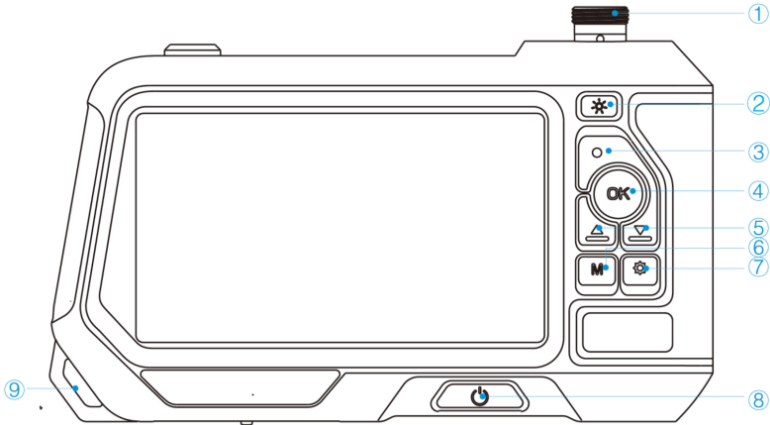
Reliability and performance of a fiber optic link largely depends on the quality of interconnects. Contaminated connectors can cause the mating surfaces to separate leading to high insertion loss and back-reflection. Furthermore, dirt particles can scratch or dig into the glass causing permanent damage to the end-face of the connector. Therefore, inspection of fiber optic connectors should be performed whenever a connection is to be made. The FOT-SCPD scope is a handheld microscope specifically designed for fiber optic connector end face inspection.

## Features

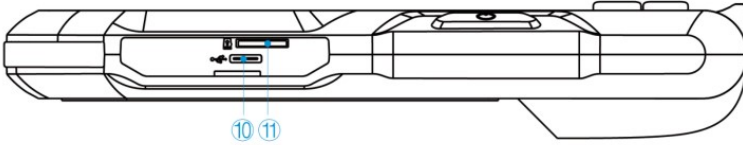
- FC/SC/ST/E2000/LC/MU/SMPTE compatible
- 5-inch TFT display
- Up to 200X/400X overall magnification
- TF card storage up to 32G
- Snapshot, video recording and playback
- 180° image rollovers
- Flashlight function

# Description

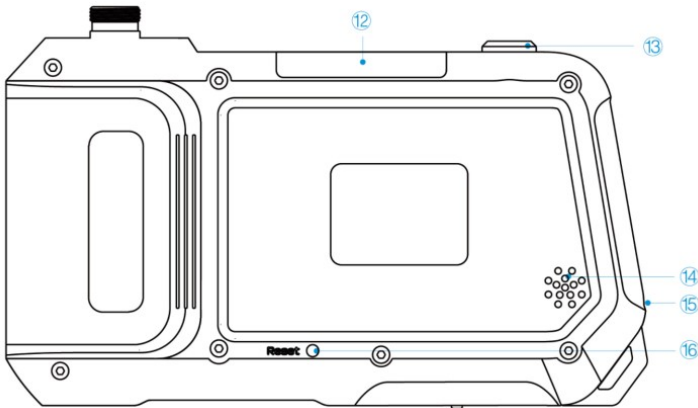
## 1. Main Unit



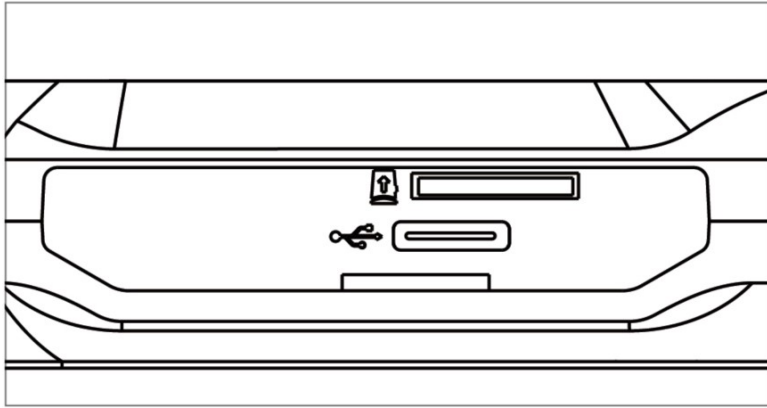
- ① Handle and probe interface
- ② Handle internal light control (factory-locked)
- ③ Snap key: take photos / start video / end video
- ④ Enter key: confirm the selection / freeze frame screen
- ⑤ Select key: up and down
- ⑥ Mode switch button: switch between the three functional modes of photo, video and playback
- ⑦ Set the key: Enter / exit the setting interface
- ⑧ Power button: long press power-on / shutdown
- ⑨ metal hanging ring



- ⑩ USB-C charging interface
- ⑪ TF card slot



- ⑫ Auxiliary lighting
- ⑬ Auxiliary lighting lamp switch
- ⑭ Loudspeaker
- ⑮ Mic pick-up
- ⑯ Reset button



The device is equipped with a TF memory card, which has been installed in the body card slot. Press in the card slot to pop up the storage card. Use the card reader to view or copy photos or videos taken by the inspection host.

## 2. Probe





### 3. Standard adapters



2.5mm tip for PC male connectors



1.25mm tip for PC male connectors



Tip for SC/PC female connectors



Tip for LC/PC female connectors



Tip for SMPTE 304m male pins



Tip for SMPTE 304m female pins

## Operation

### 1. Probe installation



#### 1.1 Component installation

Always install adapter tips carefully to avoid damage to the mechanism.

#### 1.2 Focus adjustment

Gently rotate the focus adjustment knob to bring the image into focus. Do not overturn or force the knob into position as damage may occur.

### 2. Display installation and control

#### step 1

Connect the fiber microscope display to the handle.

#### step 2

If necessary, connect an external power adapter.

### **3. Card**

Insert the TF card before using the device.

### **4. Power on/off**

Press the "Power On/Off" button to turn the unit on and off.

### **5. Photo and video**

Press the photo button to take a photo/video, and the photo/video file is saved in the DICM folder of the TF card.

### **6. Accessibility button**

Press the flashlight button to on/off the activate.

### **7. Setting**

Press the setting button to perform the language/time/auto power off setting/formatting card.

### **8. Document management**

Press the M button, then press the SET button to enter the file management interface. This can be locked/deleted.

### **9. Charging**

Use the adapter or mobile power to connect to the USB-C cable for charging. The charging voltage and current are 5V / 2A

## Specifications

<b>Mainframe</b>	
Display	5" LCD
Video resolution	AVI (1280x720)
Photo resolution	JPEG (1920x1080)
Image / Video Storage	32GB TF card
Image rollovers	180°
Dimensions	180mm x 100mm x 30mm
Weigh(including battery, Protective sleeve)	11.29 oz.
Power Supply	Replaceable battery or universal input 5V DC adapter
Battery	Rechargeable Li-Ion,5V/2A, 3500mAh
Battery life	> 2 hours (continuous)
Menu language	Simplified Chinese, English, French, German, Spanish, Japanese, Russian
Operating Temperature	-20°C to 50°C
Storage Temperature	-30°C to 60°C

<b>Inspection Probe</b>	
Magnification	400X / 200X
Detection Limit	0.5µm
Focus Control	Manual , in-probe
Dimensions	150mm x 40mm x 45mm
Weight	4.23oz.

<b>Standard Accessories</b>	
Inspection Probe	x 1
Mainframe	x 1
AC power adapter/battery charger	x 1
Rechargeable battery pack	x 1
2.5mm tip for PC male connectors	x 1
1.25mm tip for PC male connectors	x 1
Tip for SC PC female connectors	x 1
Tip for LC PC female connectors	x 1
2.0 Tip male pins	x 1
2.0 Tip female pins	x 1
Operation Manual / Carrying case	x 1

<b>Optional Accessories</b>
Tip for ST PC female connectors
Tip for FC PC female connectors
Tip for MU PC female connectors
2.0mm tip for PC male connectors
Tip for 2.0mm PC female connectors
2.5mm tip for APC male connectors
1.25mm tip for APC male connectors
Tip for SC APC female connectors
Tip for FC APC female connectors
Tip for LC APC female connectors
Tip for MPO PC female connectors
Tip for MPO APC female connectors

# **User Guide**

## **Fiber optic cleaning supplies**

### **FC/SC/ST/E2000/SMPTE304M One-click Cleaners**

The oil and dirt on the fiber adapter head can be removed with a single touch or "click" "One-click" is a high performance, high efficiency fiber adapter head cleaning tool.

Please read the operating instructions carefully before using this product. Please also save this how-to guide for future needs.

#### **Precautions**

Please do not disassemble to prevent damage to the product.

Do not reuse the cleaning line.

Do not touch the cleaning line to prevent contamination. Do not pull the cleaning line, only handle the body and cap. This is a disposable product, when the cleaning line is used up, please discard. Replacement units are sold on an individual basis.

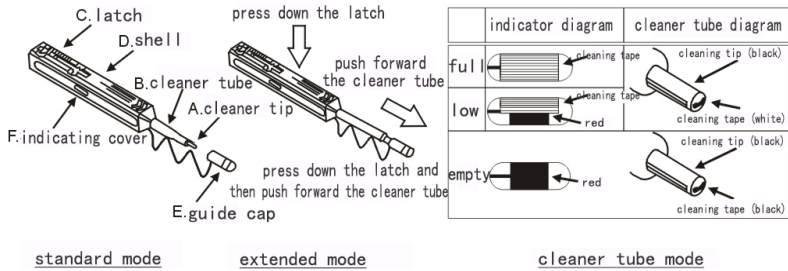
#### **Save instructions**

Do not expose this product to direct sunlight, high temperatures or humidity. When product is not in use, fasten the cap on the guide cover.

#### **Features**

One touch design for APC and UPC connectors; easy to operate; precise cleaning, long-term maintenance; low cost, 800 cleans per stick.

## Product structure



No.	Description	Function
A	cleaner tip	Lead the cleaning tape to the optical connector endface
B	cleaner tube	Lead the cleaning tape to the optical connector endface
C	latch	Press the latch to lengthen or shorten the cleaner tube
D	shell	Move the shell to clean optical endface
E	guide cap	As the dust cover or be the adapter for the cleaning tip
F	indicating cover	Show the available quantity of cleaning tape

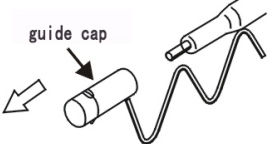
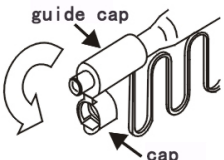
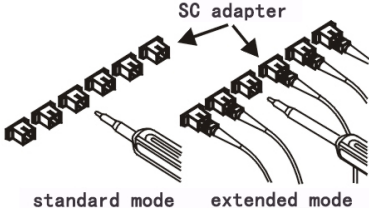
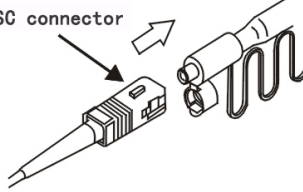
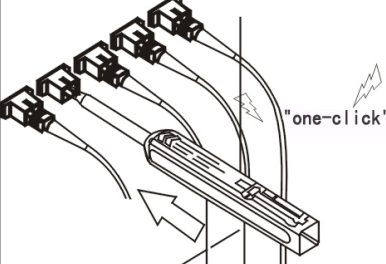
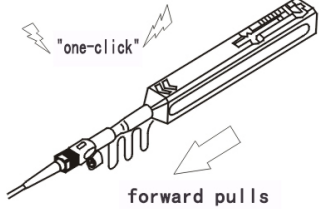
Complies with EU/95/2002/EC standards

## Product specifications

Cleaning range: 17.5X17.5mm Length: 172 mm

Extended length: 252 mm, adjustable top from 40 mm to 80 mm to clean deep position

## Application

<p>1. Move down the guide cap from the cleaner</p>  <p>guide cap</p>	<p>1. Open the guide cap</p>  <p>guide cap</p> <p>cap</p>
<p>2. Insert the cleaning tip into the SC adapter</p>  <p>SC adapter</p> <p>standard mode</p> <p>extended mode</p>	<p>2. Insert the SC connector into the cleaner guide cap</p>  <p>SC connector</p>
<p>push forward the cleaner shell to clean the connector endface behind the adapter, after "one-click" sound it finish the cleaning, and then cover the cleaner cap</p> <p>3.</p>  <p>"one-click"</p>	<p>push forward the cleaner shell to clean the connector endface behind the adapter, after "one-click" sound it finish the cleaning, and then cover the cleaner cap</p> <p>3.</p>  <p>"one-click"</p> <p>forward pulls</p>

When inserting the adapter, be careful not to tilt the "one-click" cleaning rod. When inserting, do not use excessive force, otherwise it may damage the adapter head and the cleaning rod.



## **MU/LC Fiber One-Click**

The oil and dirt on the fiber adapter head can be removed with a single touch or "click". "One-click" is a high performance, high efficiency fiber adapter head cleaning tool.

Please read the operating instructions carefully before using this product. Please also save this how-to guide for future needs.

### **Precautions**

Please do not disassemble to prevent damage to the product.

Do not reuse the cleaning line.

Do not touch the cleaning line to prevent contamination. Do not pull the cleaning line, only handle the body and cap. This is a disposable product, when the cleaning line is used up, please discard.

Replacement units are sold on an individual basis.

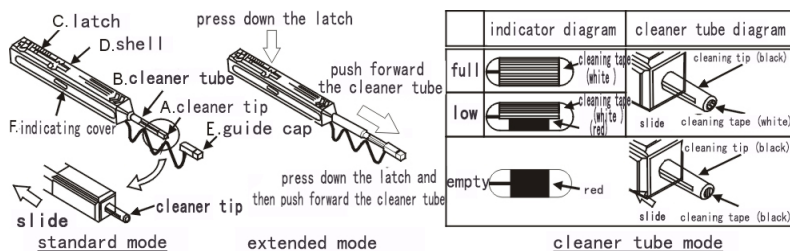
### **Save instructions**

Do not expose this product to direct sunlight, high temperatures or humidity. When product is not in use, fasten the cap on the guide cover.

### **Features**

One touch design for APC and UPC connectors; easy to operate; precise cleaning, long-term maintenance; low cost, 800 cleans per stick.

## Product structure



No.	Description	Function
A	cleaner tip	Lead the cleaning tape to the optical connector endface
B	cleaner tube	Lead the cleaning tape to the optical connector endface
C	latch	Press the latch to lengthen or shorten the cleaner tube
D	shell	Move the shell to clean optical endface
E	guide cap	As the dust cover or be the adapter for the cleaning tip
F	indicating cover	Show the available quantity of the cleaning tape

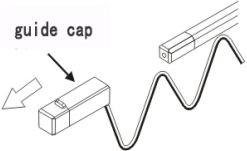
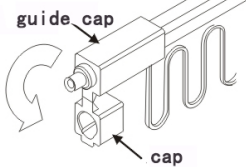
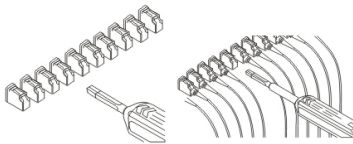
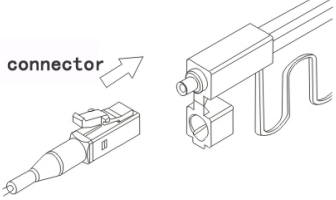
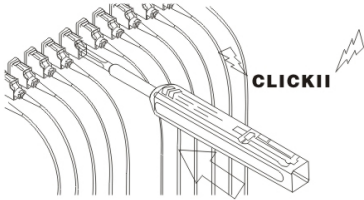
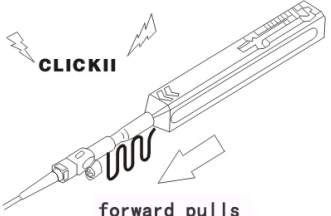
Complies with EU/95/2002/EC standards

## Product specifications

Cleaning range: 17.5X17.5mm Length: 172 mm

Extended length: 252 mm, adjustable top from 40 mm to 80 mm to clean deep position

# Application

<p>1. Move down the guide cap from the cleaner</p>  <p>guide cap</p>	<p>1. Open the guide cap</p>  <p>guide cap</p> <p>cap</p>
<p>2. Insert the cleaning tip into the MU/LC adapter</p> <p><b>MU/LC adapter</b></p>  <p><u>standard mode</u>      <u>extended mode</u></p>	<p>2. Insert the MU/LC connector into the cleaner guide cap</p>  <p>LC connector</p>
<p>3. push forward the cleaner shell to clean the connector endface behind the adapter, after "one-click" sound it finish the cleaning, and then cover the cleaner cap</p>  <p><b>CLICKII</b></p>	<p>3. push forward the cleaner shell to clean the connector endface behind the adapter, after "one-click" sound it finish the cleaning, and then cover the cleaner cap</p>  <p><b>CLICKII</b></p> <p>forward pulls</p>

When inserting the adapter, be careful not to tilt the "one-click" cleaning rod. When inserting, do not use excessive force, otherwise it may damage the adapter head and the cleaning rod.

# Fiber optic cassette cleaner

## Overview

The cassette type optical fiber cleaner is composed of a casing, a rotating mechanism, a thrust mechanism and a cleaning belt. The cleaning belt is woven by special fiber, has good water absorption, anti-static function and works well for ground in dirt and dust removal.

Applicable to any instrument and equipment with fiber optic connectors: SDH / SONET optical transmission equipment, PDH transmission equipment, wavelength division multiplexing equipment, cable television optical transmission equipment, digital multiplexing and transmission equipment, relay switches, program-controlled user switches / Digital program-controlled switching systems, Gigabit Ethernet and other suitable connector models are: SC, FC, MU, LC, ST, D4, DIN, and other types of fiber.

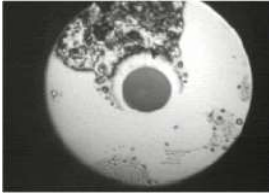
## Operation guide

Simcleaner, also known as Clep-Top cleaner. To open and expose the cleaning cloth, place thumb on the push lever and push down to slide open the lid. This motion will rotate the cloth inside giving access to a clean sheet. Place the fiber end face directly on the cloth and with slight pressure drag the contact in one direction along the slot. there are two slots exposed for multiple wipes.

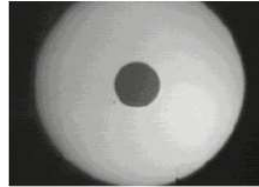
Note: Every time the lid closes and is opened again it will automatically expose a new cloth. It is not recommended to use one slot more than once as dirt particles may be transferred on the cloth, however, while holding the lid open both slots can be used individually. Do not slide the contact in a back and forth motion as stuck debris can scratch the end face. For ground in dirt, cleaning solution can be sprayed on the cloth, additional pressure may be applied and both slots can be used.

## Effect test

The cleaning effect of the product can be evaluated by the fiber end face detector. The enlarged photo before cleaning, as shown in Figure 1, can be seen that the obvious dirt adheres to the surface of the connector; the photo after using the cleaning cleaner, as shown in Figure 2, and the photo before cleaning In sharp contrast.



Before cleaning



After cleaning

## Technical Parameters

Housing material: ABS engineering plastics

Cleaning material: special special microfiber

Cleaning times: > 500 times

Cleaning effect: -20 to -50dB (return loss)

Operating temperature: -20 to +50 degrees

Storage temperature: -40 to +60 degrees

Product weight: <300g

Applicable dust-free grade: > CLASS10000