

User Manual

SCOPELENER-7™

FIBER OPTIC CLEANER COMBINED SCOPE



TheFibers™

www.thefibers.com
2016-03-28

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1. Welcome Message

First of all, we would like to express our appreciation for purchasing **Scopleaner-7™**. We hope that **Scopleaner-7™** of TheFibers Inc can assist you with optical equipment, maintenance and repair of the apparatus.

Scopleaner-7™ scopes and cleans (washes) ferrule fiber optic of work places and job sites and is therefore excellent equipment. You will be able to use this equipment to observe the fiber optic system, optic module and optic apparatus cleans ferrule fiber at the same time. I strongly believe that the **Scopleaner-7™** which is the first cleaning apparatus combined scoping apparatus worldwide will become your great helper.

Please check if all parts have been delivered with the purchased **Scopleaner-7™** before you start using it. Please contact our service below, if anything is missing. We will solve the problem immediately.

TheFibers Inc.

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Tel: 031-381-6108

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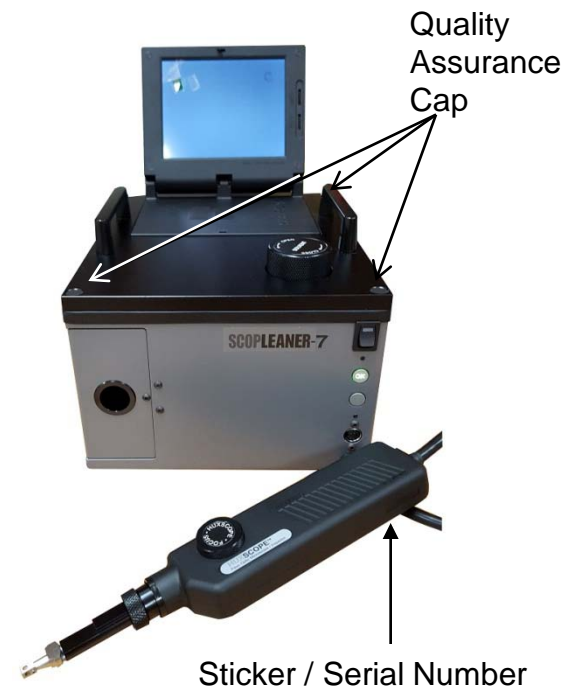
2. Quality Assurance

At the time of sending out Scopleaner-7™, the apparatus has passed several tests. In case apparatus is defect before use, please give us a call (see information on previous page).

TheFibers, Inc. provides a warranty for a time period of one year from date of original purchase for quality of the item. Within this period, we are responsible for all repair and replacement costs, the customer just pays for shipping to TheFibers.

We do not provide warranty in the following cases:

- **quality assurance cap is damaged or removed**
- **sticker with serial number is damaged or removed**
- **damages resulting from use of mistakes of the user**
- **damages resulting from use of inappropriate parts**
- **Open Scopleaner-7 without consent of Supplier**



3. Safety Instructions

- ▶ Please read and follow safety instructions to assure safe and correct use of the apparatus and to prevent dangerous situations
- ▶ Safety instructions are stated in “warning” and “caution” and have the following meaning:

Warning: signifies a serious potential for property damage, personal injury or death

Caution: signifies a potential for trivial property damage

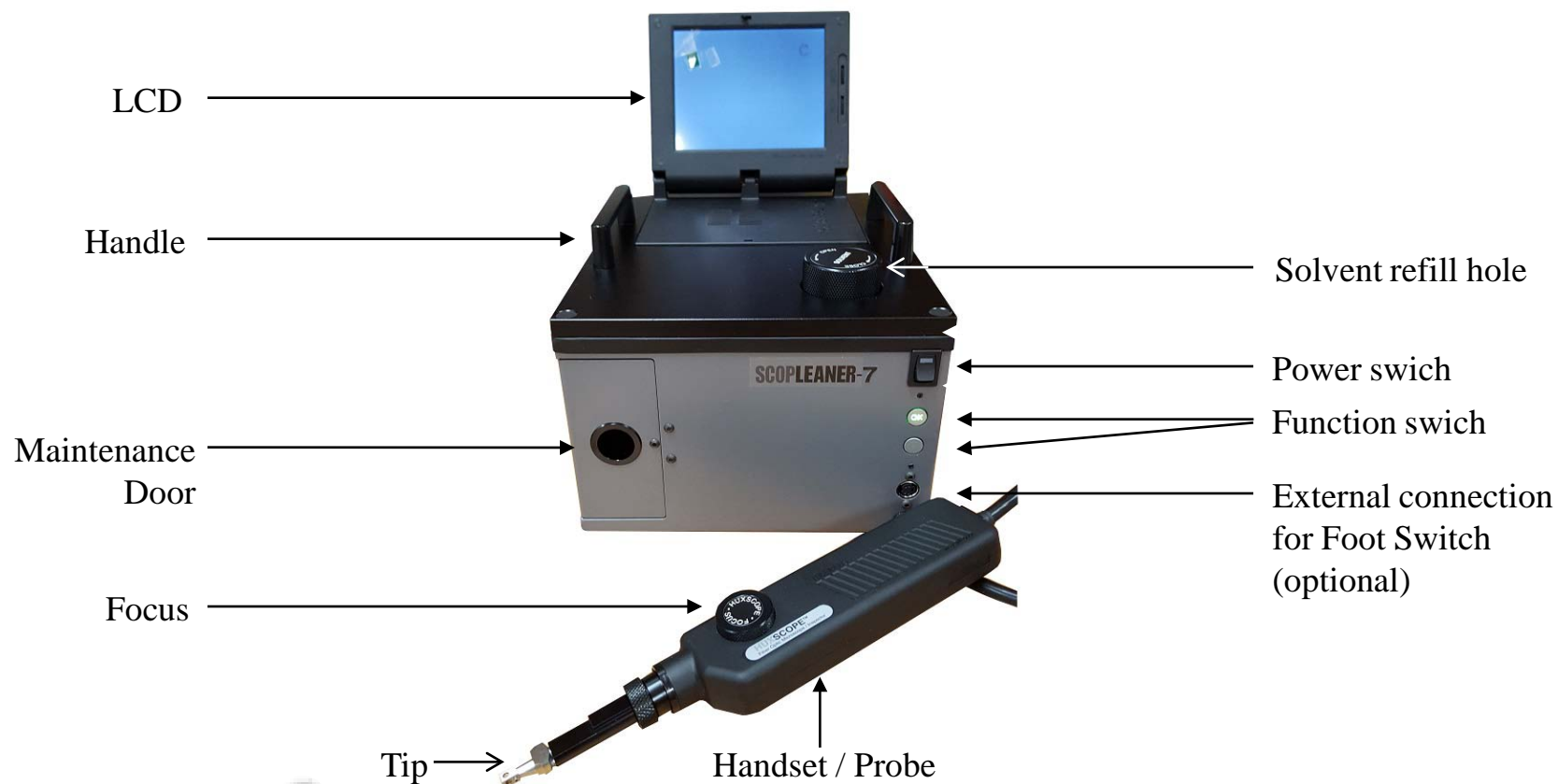
4. Warning

- ▶ Do not touch the terminal block when apparatus is powered on, due to the risk of electric shocks and other danger.
- ▶ Avoid metallic items and water in the inside of the apparatus; this might lead to fire, electric shocks, electric leakage, and other danger.

5. Caution

- **Do not use apparatus for other purposes than cleaning fiber optic.** The apparatus was developed to scope and clean fiber optic. If it is used for other purposes, we do not warrant for damages resulting from inappropriate use.
- **Do not use other adaptors.** We do not warrant for damages resulting from using other adapters. **Scopleaner-7™** and accompanying AC are in accordance with FCC/CE standards. We do not take any responsibilities for errors or damages that result from using other AC adapter.
- **Do not modify or disassembly apparatus.** If apparatus is disassembled or operated otherwise than stated in the manual, we do not warrant for damages resulting therefrom.
- **Do not use other solvents than suggested.** If other solvents or materials than suggested in the manual are used and filled into the solvent tank, we do not warrant for damages resulting therefrom.

6. Introduce of Product

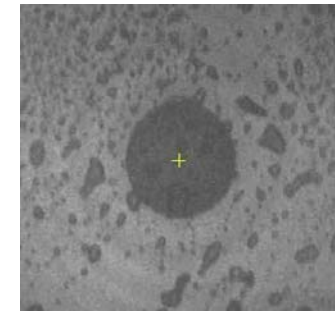


6-1. Information

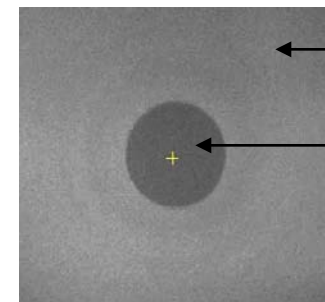
Scopleaner-7™ is a cleaner combined scope for connector ferrule used on parts of fiber optic.

During connecting fiber optic parts each other, ferrule surfaces in parts should be clean because should removing dust and foreign substances prevent loss and return of signal. It is an inconvenient and difficult process at field which is used optical fiber parts like connector and attenuator to hold up the fiberscope and insert the adapter, adjust the focus, identify the fiber section, insert the cleaner into the adapter, clean, hold up the fiberscope and check cleaning results.

Scopleaner-7™ is the first fiber optic cleaner combined scope worldwide. Cleaning nozzle which can be disassembled and spray with refillable cleaning liquid and the fiberscope (video microscope) accurately form a line and enables to use both functions of scoping and cleaning; the improved combine tip even allows a “scoping – cleaning – scoping” process with one move.



[before cleaning]



← Ferrule

← Optical Fiber

[after cleaning]

6-2. Properties

- Cleaning dynamization: The inconvenient cleaning process becomes very easy with the **Scopleaner-7™**. Enterprisers for Backbone network of each country dominate the fiber optic market. If you compare the old fashioned method that engineers used with the new apparatus you will see that the “optical fiberscope cleaner” is an epoch-making discovery. Especially due to the fact that the apparatus is portable, engineers can easily carry it with them.
- Reduction of cleaning time: The average time for the whole standard program “scoping – cleaning – scoping” takes about 3 seconds. **Scopleaner-7™** is capable to do all three processes simultaneously in 3 seconds. This is a great advantageous property, especially because Labor Costs can be reduced to 70%.
- Improvement of quality: **Scopleaner-7™** reduces errors during the cleaning process and prevents from harmful damages caused by contact and reflection; errors are minimized and quality is improved. This helps to reduce of maintenance fees and ensures improvements of quality and a improvement of the broadband communication.

6-3. Originality

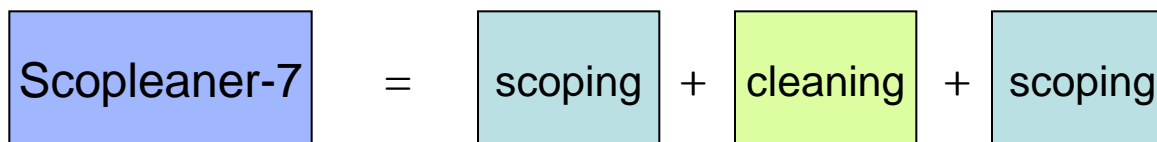
Scopleaner-7™ has the originality to be the first cleaner combined fiber optic scope worldwide. The invention and development of combined mechanism of “fiberscope” and “cleaner” was registered at the patent office; it has a pending status at the PCT (patient cooperation treaty) at present.

○ existing cleaning method (7 steps):

insert scope and focus ► remove scope ► insert cleaner ► cleaning ► remove cleaner ► insert scope and check cleaning results

○ new cleaning method (3 steps):

insert scope and focus ► find foreign substances ► turn switch and check cleaning results



6-4. PATENT

특 허 증
CERTIFICATE OF PATENT

특 허 제 10-0718601 호 출원번호 제 2006-0128544 호
(PATENT NUMBER) 출원일 2006년 12월 15일
등록일 2007년 05월 09일
(REGISTRATION DATE)

발명의명칭 (TITLE OF THE INVENTION)
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위의 발명은 「특허법」에 의하여 특허등록원부에 등록되었음을 증명합니다.
(THIS IS TO CERTIFY THAT THE PATENT IS REGISTERED ON THE REGISTER OF THE KOREAN INTELLECTUAL PROPERTY OFFICE.)

2007년 05월 09일

특 허 청
COMMISSIONER, THE KOREAN INTELLECTUAL PROPERTY OFFICE

[Patent registration certificate]

발급번호 : 5-5-2007-4(9945861)

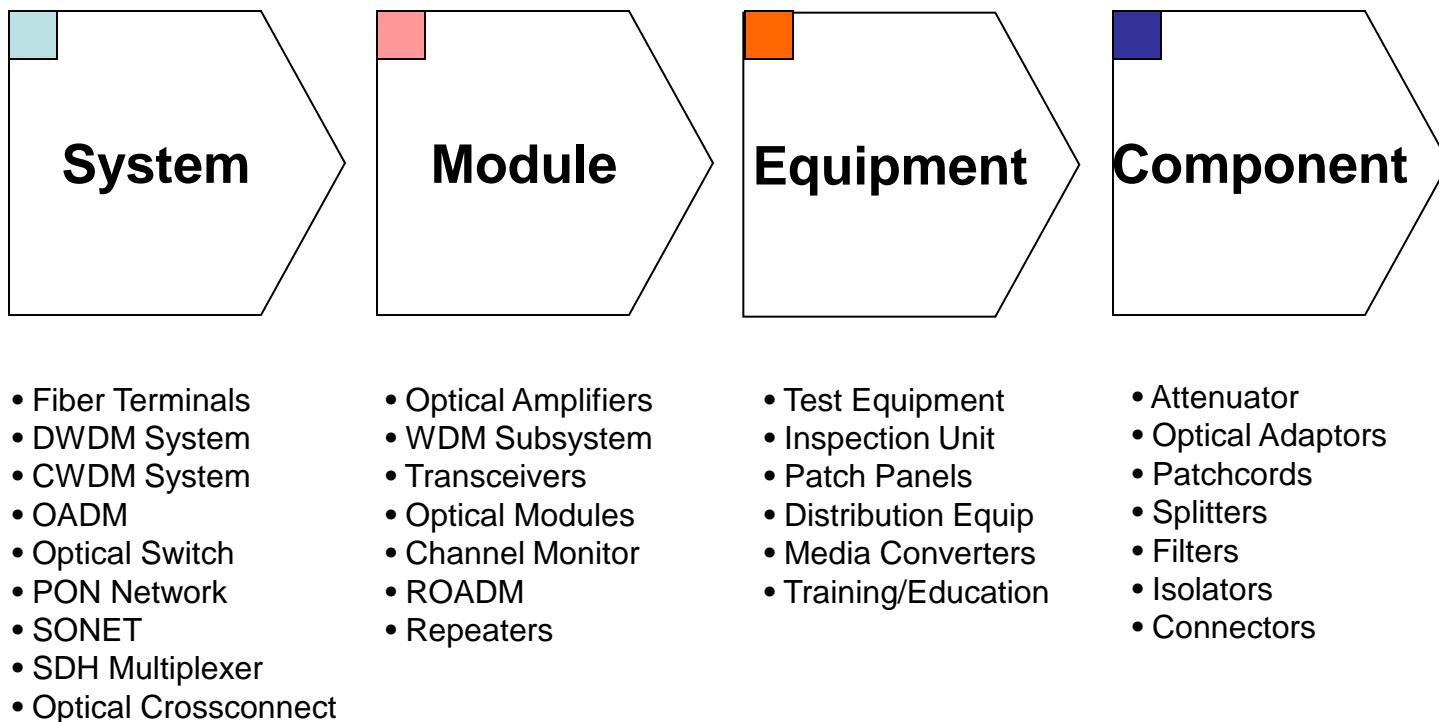
출원사실증명원
CERTIFICATE OF APPLICATION

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출원번호 Application Number		PCT/KR2007/001719	출원일자 Filing Date	년 월 일
발명(고안)의 명칭, 디자인을 표현할 문문, 상표(서비스마크)류 구분		APPARATUS FOR CLEANING AND SCOPING OF OPTICAL FIBER		
Title of Invention, Product(s) Embodied in Design, or Classification of Mark				
용 · 도	지출용			
최종지본상대	최종지본일			
위 사실을 증명함. This is to certify that the above applicant has filed as stated in this certificate at the Korean Intellectual Property Office. 2007년 04월 16일 특 허 청 COMMISSIONER				

◆본 증명서는 특허청에서 발급한 것으로, 특허청 홈페이지(www.kipo.go.kr)의 「특허청·출원정보공개시스템」을 통해 발급번호 또는 문서번호의 내역으로 내역의 유·무, 연도, 국명, 출원번호, 심사사실, 심사, 발명명칭을 증명하는 서류입니다.

[PCT pending]

6-5. Application



6-6. Key Accounts

❑ Important key accounts: a enterpriser for backbone network

▪ Domestic: Korea Telecom, Hanaro Telekom, Powercom, KTF, SKT, LGT, etc

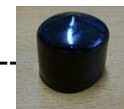
▪ Abroad: AT&T, BY, NTT, China Unicom, France Telecom, UK Cable and Wireless, Deutsche Telecom, Sprint, Swiss Telecom, Italia Telecom, Voice Stream Wireless, Vodafone Air Touch, Hutchison 14, KPN, Bellsouth, etc.

❑ Next target: partnership with key communications network industry/cooperation with construction company (installers)

❑ fiber optic system and server equipment, module, etc. supplying network construction companies, key accounts like Nortel, JDSU, Lucent, Alcatel, ADC, Sisco, Juniper, Liverston, Extreme Networks, 3 Com, Huawei, etc.

7. Description of Product (Standard Package)

- Main Apparatus + Handset ----- 1 Set -----
- LC/PC Female side Cleaning Tip ----- 1 piece -----
- Rubber Cap ----- 1 piece -----
- Transport Bag ----- 1 piece -----
- PushCleaner-1.25 ----- 1 piece -----
- Funnel ----- 1 piece -----
- AC Power Cord ----- 1 piece -----
- [Optional]
- USB Device ----- 1 piece -----
- Solvent ----- 150ml -----



7-1. Specification

Cleaning Method	Solvent Non-Contact Cleaning System Use 3M Solvent (P/N:HFE-72DE) or Puretecs puresolve 7200 Non-Flammable, Zero Ozone Depletion
Driving Type	Compressed air by Pump
Cleaning time (scoping-cleaning-scoping)	3 sec
Cleaning tip	LC/PC Female Tip (standard)
Light source	LED (Internal)
Power	12V 7.5A by AC 100~240V
LCD and magnification	5.6" TFT LCD, 260X
Dimension	200(w) x 210(l) x 170(h)mm
Weight	8kgs

7-2. Product Installment

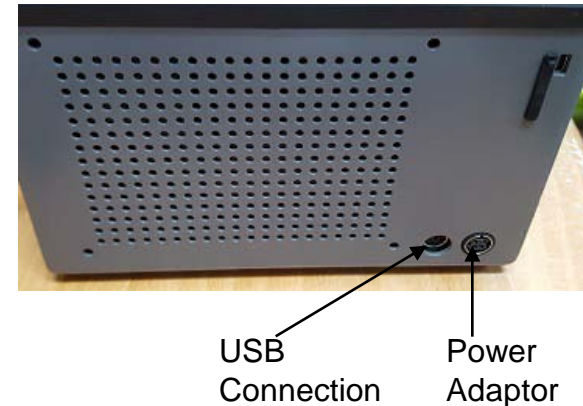
For your safety, please read the safety instructions carefully before installing the product. The apparatus uses internal AC/DC adaptor for power. So never open the adaptor cover at discretion. Please check your code type and volt before connecting code.

7-2-1. Connecting power : Connect power cord with power outlet at the backside of the apparatus. AC range can be used for 100~240V. Turn the power switch on of front side.

7-2-2. Check LCD: 2 button by LCD are used to control brightness and contrast each. Rotate focus button to adjust.

7-2-3. Check Pump : A cleaning with the **Scopleaner-7™** requires compressed air. To obtain compressed air, a pump can be used. To fill compressed air, push Start Button/Switch for twice times before use Scopleaner-7. To check whether the refill cap has been installed properly. If you hear air escaping from the cap, the cap should be taken out and installed again.

7-2-4. Check Handset : Handset has 2 function : scoping and cleaning. To check cleaning, push the start switch/button about twice and check whether some solvent is burst out. To check scoping, please see the LCD. Never lens has pollutants like finger print or dust. Always keep the lens clean.



7-2. Product Installment

7-2-5. Solvent refill: **Scopeleaner-7™** bursts out a solvent into the compressed air to make cleaning process possible. For the solvent, 3M Solvent (P/N:HFE-72DE), which can be easily obtained in stores locally is used. 3M Solvent is not flammable and is ozone-friendly. Please see the attached Material Safety Data Sheet for further information. To refill solvent, pull the refill cap which is on the upper part of the apparatus to your left, open and refill the solvent with a funnel. Afterwards, turn the refill cap clockwise all the way.

Do not refill more than 150 ml at once.



After refill solvent, absolutely **push OK Switch for over 5 seconds** to fill enough air-pressure in **Solvent Tank** and push Start Button for 3~5 times before use Scopeleaner-7.

Caution: The solvent is not flammable, but it is recommended to store the solvent at room temperature. Keep out of reach of children. Please check is cap is placed appropriately before storing, because evaporation would minimize cleaning effects. Store away from heat or open flames . Do not swallow and inhale. If it comes in contact with eyes, wash immediately with plenty of water. If it comes in contact with skin, rinse immediately

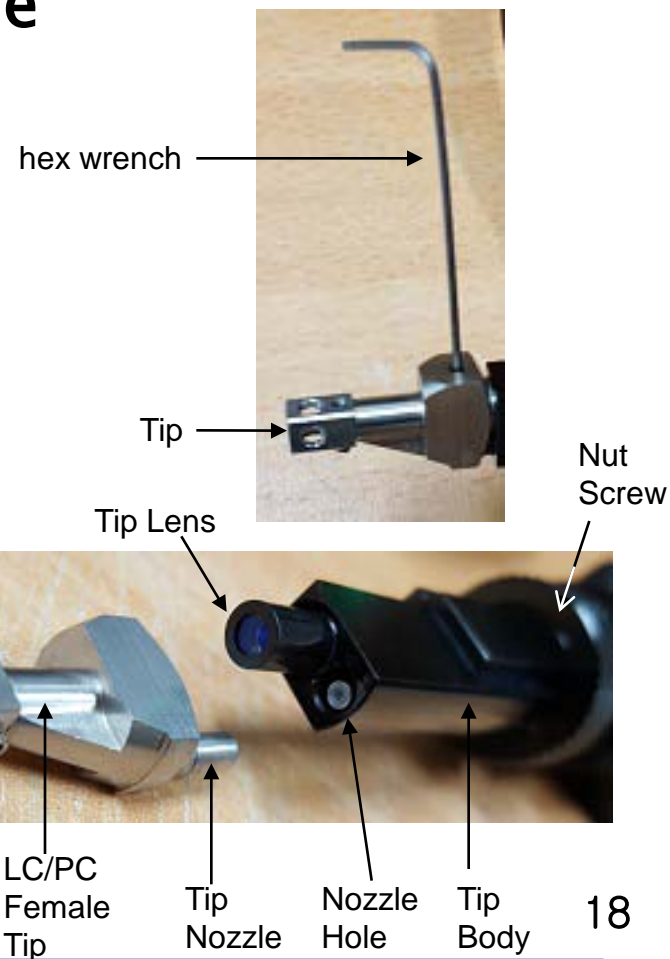
7-3. Method of Use

Scopleaner-7™ is very simple to use. It is yet recommended to know about a few operational facts, e.g. tip exchanging, etc. Please read the following instructions carefully:

7-3-1. Tip assembly and exchange: The apparatus comes with LC/PC Female Tip for 1.25mm Ferrule type. If necessary, Tip can be exchanged. Tip has a Nut Screw thread to connect Tip Body with a handset. **No recommend to disassemble this Nut Screw** except to clean main Lens. To exchange Tip, please use hex wrench and then LC/PC Female Tip could be easily assembled and disassembled. Insert the end of Tip Nozzle to Nozzle Hole.

The end of Nozzle must be fitted well into Nozzle Hole of Tip Body.

Do not place hands on Tip Lens during this process. Substances on the lens can affect the quality. If lens is contaminated, use a cotton swap or a lens cleaning tissue.



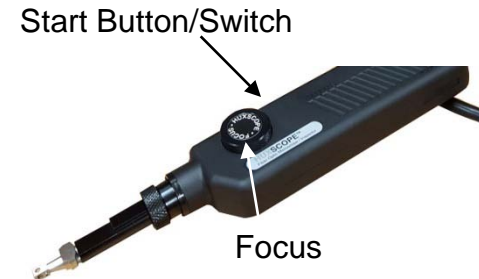
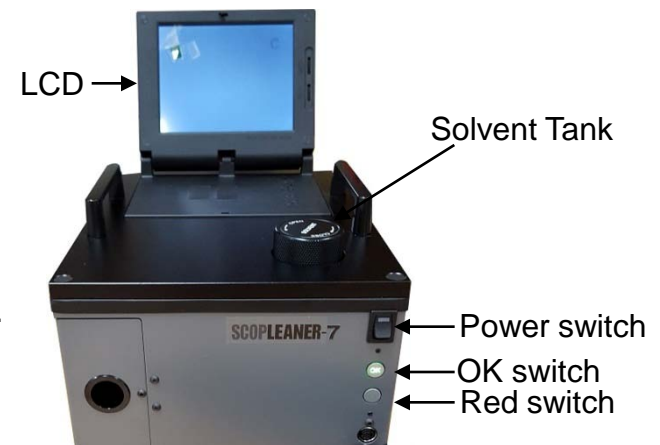
7-3. Method of Use

7-3-2. Turn on the main power switch. And then OK switch will be lighted with green color if solvent tank is not empty. If solvent tank is empty, OK switch is not lighted and Red Switch will be lighted with red color. (Red Switch could be used as troubleshooting to exhaust air-pressure when over-load of air-pressure but Red Switch is not used usually)

7-3-3. To check cleaning performance, push the Start Button/Switch (or OK Switch) about twice and check whether some solvent is burst out well.

7-3-4. To insert the tip into an optical adapter to see : place tip on the ferrule surface, turn the the focus on the handset and tune until a clear picture is obtained.

7-4-5. Use the contrast and bright buttons on the side of the LCD panel to adjust LCD monitor.



7-3. Method of Use

7-3-6. If contaminants are detected on LCD screen, slightly press the start switch on your handset. Cleaning will start immediately. Please check the results of the cleaning.

7-3-7. If cleaning result is not satisfying, press the start switch again and / or use HUXCleaner enclosed afterwards.

7-3-8. After cleaning results are checked, tip is separated from optical adapter and closed with a cap.

Caution: If apparatus was not used for more than 3 hours, push the start switch over twice. In case of apparatus is used after long time break or weekend break, please push the OK switch for over 5 seconds before actual cleaning.



Contaminations

8. USB Device

A USB Device (optional) can be optionally delivered with the **Scopleaner-7™**. If USB Device is plugged into the DIN connector of the back side of the apparatus and connected to a computer, the screen on LCD will be shown on the computer monitor. Pictures can be saved by using the capture function on the computer.

Easy-to-install Pass/Fail Analysis Software is delivered with the USB Device. Place CD in the CD-Rom of the computer, program will be installed automatically.

Connect USB Device DIN connection of back panel and connect USB to PC/Computer each before running the program. After optical adapter ferrule surface is seen on the screen, use capture button to save on computer.



USB Device DIN connection



USB to Computer

DIN

9. Air Filter Maintenance

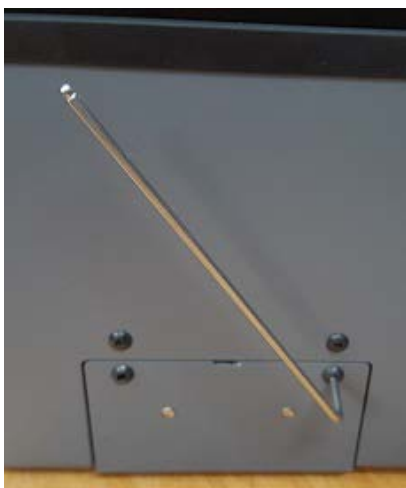
Air Filter should be cleaning continuously because this Air Filter is related with cleaning effect directly. Because the dirty air was caused to damage Solvent Nozzle which is in Solvent Tank. Sometimes the collected water inside of Air Filter should be removed to water drain cock too.

- ① Turn screw on Maintenance Door ② Open the Door ③ Turn screw of Air Filter
④ Take the Clip out by finger ⑤ Take Filter out by hand ⑥ Disconnect Air-Tube from Air-Filter

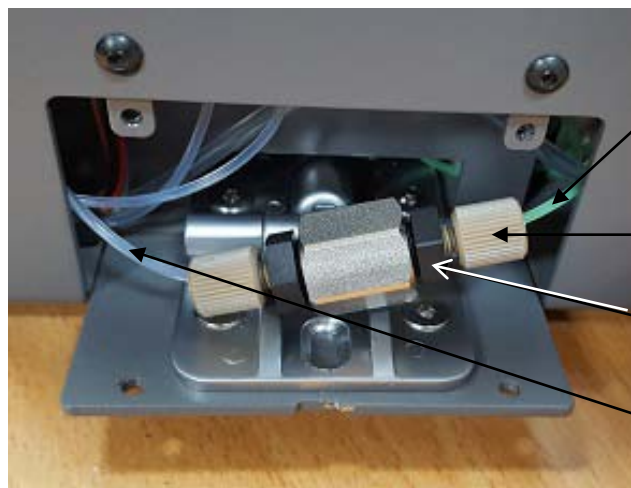


- ⑦ Clean inside of Filter Body or exchange to new Filter.

10. Solvent Filter Maintenance



Turn screw of side maintenance door



Green Color Solvent Tube

Nut of Solvent Filter

Solvent Filter

White Color Solvent Tube

Don't turn White Color Tube side Nut of Solvent Filter.

To exchange Solvent Filter, turn Green Color Tube side Nut counterclockwise. After disconnected this Nut, turn Solvent Filter counter-clockwise.

11. Trouble shooting

Problem	Cause	Solution
Low cleaning effect	Air pressure of cleaning tank minimized	Check whether solvent refill cap is closed tightly well.
	Lack of solvent	Refill solvent
	Inappropriate assembly of tip	Disassemble and re-assemble Tip
	Damage of tip	Replace Tip
	Spread of solvent on ferrule surface after 1st cleaning	Use HUXCleaner
Cleaning switch or main switch does not work	Power supply not connected	Check power connection
	Main switch is OFF	Main switch is ON
LCD screen does not work or not clear well	Problem of adjusting Contrast and Bright functions	Adjust Contrast and Brightness
	Contamination of Tip Lens	Remove pollutant on Tip Lens
	Static Electricity by Hand	Main Power Switch OFF and ON again

12. Part Number

Scopleaner-7	Fiber Optic Cleaner Combined Scope Set
Scopleaner-7-T-SF	Scopleaner-7 Tip for SC/PC and FC/PC Female side
Scopleaner-7-T-L	Scopleaner-7 Tip for LC/PC Female side
Scopleaner-7-T-2.5	Scopleaner-7Tip for 2.5mm/PC Male side
Scopleaner-7-T-1.25	Scopleaner-7 Tip for 1.25mm/PC Male side
Scopleaner-7-AC	AC 100~220V Power Cord
Scopleaner-7-CAP	Cap for Scopleaner-7
Scopleaner-7-B	Hand-carry Case for Scopleaner-7
Scopleaner-7-USB	USB Device with Pass/Fail Analysis Software
Scopleaner-7-P25	PushCleaner-2.5
Scopleaner-7-P125	PushCleaner-1.25
Scopleaner-7-SOL-R	Solvent for Refill 150ml
Scopleaner-7-F	Funnel
Scopleaner-7-AF	Air Filter
Scopleaner-7-FS	Foot Switch

Contents of this manual can be modified without notice. Manual may not be modified without permission.

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www.thefibers.com.