

[Noyes OFS 300-200C Specs](#)
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OFS 300
Optical Fiber Scope
User's Guide

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Limited Warranty

One Year Limited Warranty

All Noyes products are warranted against defective material and workmanship for a period of one year from the date of shipment to the original customer. Any product found to be defective within the warranty period will be repaired or replaced by Noyes. In no case will Noyes liabilities exceed the original purchase price of the product.

Exclusions

The warranty on your equipment shall not apply to defects resulting from the following:

- Unauthorized repair or modification
- Misuse, negligence, or accident



CE Information

These instruments have been designed and tested to comply

with the relevant sections of any applicable specifications including full compliance with all essential requirements of all applicable EU Directives.

Returning Equipment

To return equipment, please contact Noyes to obtain additional information and a Service Request (S.R.) number. To allow us to serve you more efficiently, please include a brief description specifying the reasons for the return of the equipment.

AFL Telecommunications

Noyes Test & Inspection
16 Eastgate Park Road
Belmont, NH 03220
Phone: 800-321-5298
603-528-7780
Fax: 603-528-2025

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Important Safety Information



WARNING! To avoid serious eye injury, never look directly into optical outputs of fiber optic network equipment, test equipment, patch cords, or test jumpers. Always assume that optical outputs are on.



CAUTION! This instrument contains no user serviceable parts. Except for changing a battery, this instrument must be returned to Noyes Fiber Systems for repair.

Section 1: General Information

Thank you for purchasing the Noyes Fiber Systems OFS 300 optical fiber inspection scope. The purpose of this manual is to provide information relative to the application, operation, and basic maintenance of the OFS 300. Please check our web site at **www.AFLtele.com (click on Products > Test & Inspection)** for updates to this manual and additional application information. For technical or sales support, please contact Noyes Customer Service.

Contacting Noyes Customer Service

You may call Noyes Customer Service between 8 a.m. and 5 p.m., United States Eastern Time, as follows:

Phone: 800-321-5298

603-528-7780

Fax: 603-528-2025

Web: www.AFLtele.com (click on Products > Test & Inspection)

Unpacking and Inspection

This instrument has been carefully packed in accordance with standard shipping procedures.

Examine the equipment for damage that may have occurred during shipment. If you find any damage, or if any of the following items are not included, please contact Noyes Fiber Systems.

The OFS 300 package includes:

- OFS 300 Scope
- Internal batteries
- 2.5 mm universal adapter cap
- Blue holster
- User's guide

Feature Overview

The OFS 300 is a versatile instrument for the inspection of optical fiber connectors. By employing a universal adapter mount, the OFS 300 offers the ability to inspect virtually any connector style for scratches, dirt, or other problems normally associated with poor transmission performance.

Two models of the OFS 300 are available. The OFS 300-200C offers precision 200x magnification to easily inspect both multimode and single-mode fiber optic connectors.

The OFS 300-400C with 400x magnification is available for more critical inspection during termination, especially with single-mode fibers.

The OFS 300 offers 60 hours of continuous battery life. A low battery indicator will flash when approximately 8 hours of optimum brightness remains reducing the risk of eye strain.

Various adapter caps are available to convert the mount to the desired connector style. The OFS 300-200C uses the same common threaded connector adapter caps as the Noyes Optical Power Meters and Loss Test Sets. The OFS 300-400C utilizes special precentered snap-in adapter caps, which ensure proper fiber location in the viewing area.

Recommended Accessories

The OFS 300 is supplied with the universal adapter cap that accepts 2.5 mm ferrule connectors, such as ST, FC, and SC. However, for greatest inspection flexibility additional adapter cap styles are recommended. Refer to Appendix for a complete list of available adapter caps.

Optical ports and connector end faces must be kept free from dirt or other contaminants to ensure accurate measurements and operation.

For cleaning connector end faces on test jumpers and in fiber frames or adapters, Noyes recommends using our exclusive FCC2 non-hazardous cleaning fluid and CCT molded cleaning tips.

The FCC2 fluid is a non-flammable, environmentally safe, residue free solvent engineered to clean fiber connector end-faces.

The CCT molded cleaning tips introduce a new fiber connector end face cleaning technology. Rather than a fabric-covered or foam-covered stick, we are offering a molded cleaning tip that will trap contamination and wick cleaning solvents from bulkhead connectors. This new cleaning tip is a molded, sintered polymer that is both porous and pliable conforming to virtually any fiber end-face polish geometry while trapping and absorbing contaminants.

CCT cleaning tips and FCC2 cleaning fluid may be combined into FCP1 fiber optic cleaning kits. Noyes offers a complete selection of FCP1 cleaning kits for field cleaning. The FCP1 Series of kits delivers compact, safe, easy to use, reliable cleaning for all types of fiber optic connector end faces.

Visit our web at **www.AFLtele.com** (click on **Products > Noyes Test & Inspection > Cleaning Supplies**) for more information.

For cleaning the lenses and adapter caps, a supply of optical cleaning wipes and IPA (Reagent Grade Isopropyl Alcohol 99% or better) and a can of filtered compressed air may be used.

Section 2: Functional Description

OFS 300 Optical Fiber Scope

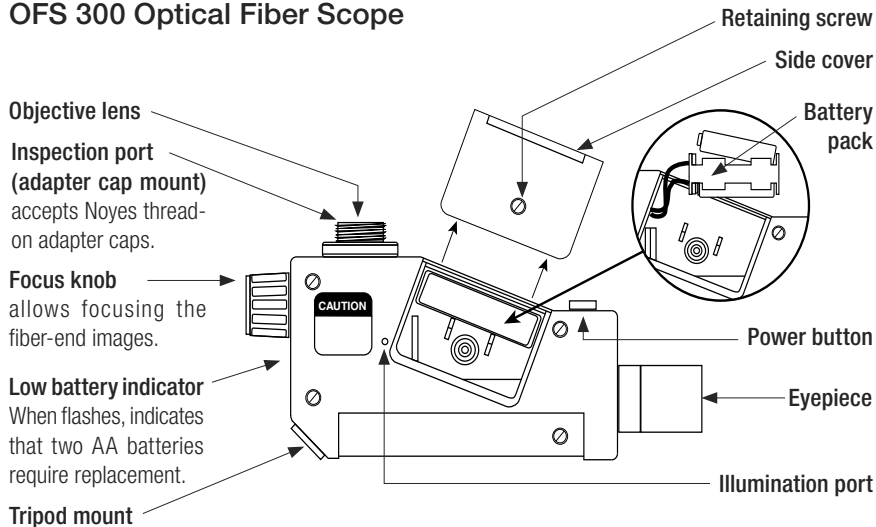
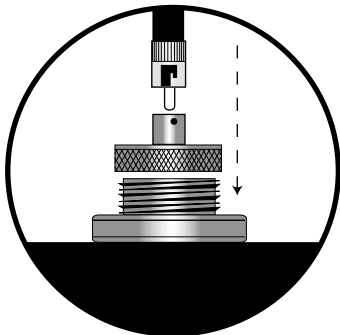


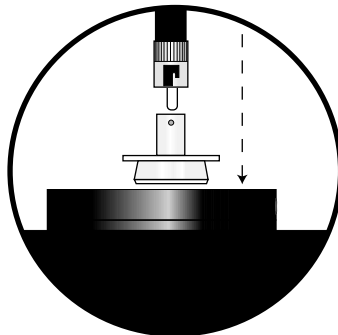
Figure 1: OFS 300

Adapter Cap Mounts

The OFS 300-200C uses the same common threaded connector adapter caps as used with all Noyes Fiber Systems Optical Power Meters and Loss Test Sets. The OFS 300-400C utilizes special precentered snap-in adapter caps, which ensure proper fiber location in the viewing area. The figure below illustrates the difference between the two adapter cap mounts.



OFS 300-200C



OFS 300-400C

Section 3: Operating Instructions

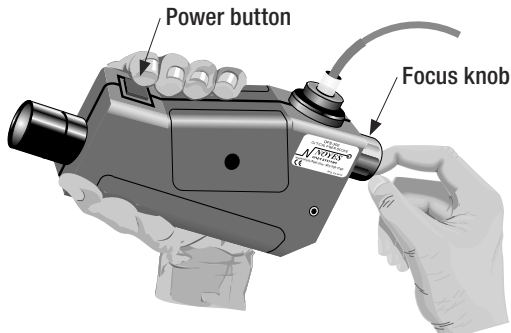
Setup

- 1 Select the appropriate adapter cap and affix to the adapter cap mount.

- 2  Use an Optical Power Meter to verify the fiber optic connector to be inspected is not “live”.

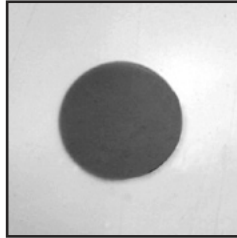
Note: The OFS 300 includes a KG3, 40 dB IR Safety Filter.

- 3 Connect the cable to be inspected by the OFS 300 to the adapter cap. **Optional:** If the opposite end of the cable is accessible, it may be placed into the Illumination Port (see Figure 1) to illuminate the fiber core for viewing.
- 4 Press the ON button with one hand while adjusting the Focus Knob with the other hand.

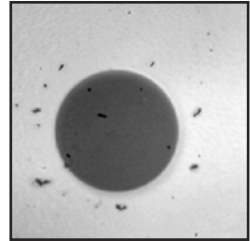


Viewing Fiber Ends

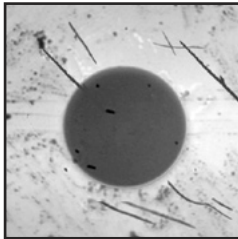
After focusing is complete, the magnified view will reveal the condition of the core and cladding. Below are the various examples of fiber ends ranging from excellent to very poor conditions.



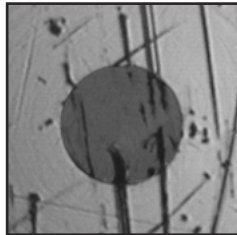
Excellent condition



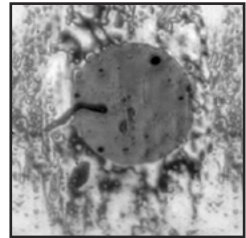
Uncleaned, lint or dust



Scratches and dirt



Severely scratched face



Cleaning residue, water
or alcohol

Section 4: Maintenance

This chapter explains how to clean the lenses and replace the batteries in the OFS 300. Other than battery replacement, the repair of this unit in the field is NOT recommended. If repair of the OFS 300 is necessary, please contact Noyes Fiber Systems

Battery Replacement

To replace batteries (refer to Figure 1):

- 1 Remove the retaining screw.
- 2 Remove the side cover.
- 3 Pull out the battery pack and remove the discharged batteries.
- 4 Replace batteries with two new AA alkaline.
- 5 Replace the battery pack, side cover, and retaining screw.

Cleaning the Lenses

The Objective lens and Eyepiece lens (refer to Figure 1) must be kept free from dirt or other contamination. They should be periodically cleaned using a supply of optical cleaning wipes and IPA (Reagent Grade Isopropyl Alcohol 99% or better) or a can of filtered compressed

air. Vigorous rubbing or the use of a semi-abrasive cloth may impair the efficiency of the instrument. Be sure to replace the dust cap when the OFS 300 is not being used.

Note: The eyepiece is not to be unscrewed and taken apart. The only maintenance to be done is to the outer lens.

Section 5: Specifications

OFS 300-200C and OFS 300-400C models

Optical Specifications	OFS 300-200C	OFS 300-400C
Nominal magnification	200X	400X
Adapter cap Mount	thread-on (Universal)	snap-in
Safety filter	Schott KG3 > 40 dB IR	
General Specifications		
Operating temperature	0 to +50°C	
Storage temperature	-20 to +50°C	
Power	2 AA alkaline batteries	
Weight in use	1.5 lbs. (.67 kg)	
Size (H x W x D)	5 x 2 x 8 in. (13 x 5 x 20 cm)	



Specifications are subject to change without notice.

Appendix A: Accessories and Adapter Caps

OFS 300 accessories

Part Number	Description
2460-10-0002	Spare bulb for OFS 300-200B (5 minimum)
2460-10-0001	Spare bulb for OFS 300-400 and OFS 300-200 (5 minimum)
2900-10-0003	OFS 300-400 zoom lens (200X - 400X zoom)
1400-01-0055	Soft Carry Case
OFS1-00-0100	Hard Carry Case
2900-10-0001	Tripod Stand (table top)
1400-01-0025	Holster
2900-10-0004	20X Eyepiece

OFS 300-200 adapter caps

Noyes standard thread-on adapter adapter caps fpr OFS 300-200C models.

Part Number	Description
8800-00-0224	1.25mm Universal
8800-00-0214	2.5mm Universal
8800-00-0200	FC
8800-00-0209	SC
8800-00-0202	ST
8800-00-0221	E-2000
8800-00-0204	Biconic
8800-00-0203	SMA
8800-00-0225	LC Simplex/Duplex
8800-00-0219	Backplane SC
8800-00-0212	Radial PFO/VFO
8800-00-0210	ESCON

Specifications are subject to change without notice.

Part Number	Description
8800-00-0211	DIN 47256
8800-00-0205	FDDI
8800-00-0201	D4
8800-00-0223	1000 μ m (bare fiber)
8800-00-0226	MU Simplex
8800-00-0230	MT-RJ (A side only)
8800-00-0231	MT-RJ (A side or B side)
8800-00-0232	Nickle Silver 2.5mm
8800-00-0236	Backplane 1.25
8800-00-0215	FDDI Kit
8800-00-0218	Angled FC
8800-00-0220	Angled SC
8800-00-0229	Angled E-2000
8800-00-0233	MTP®* 0°

Part Number	Description
8800-00-0234	MTP®* 8°
8800-00-0235	SMC 0°
8800-00-0236	Backplane 1.25 mm
8800-00-0237	MPX®**
8800-00-0238	Angled MPX®**
8800-00-0239	RCG
8800-00-0241	0° MT Ferrule
8800-00-0242	8° MT Ferrule
8800-00-0244	1.6mm Ferrule (pin)
8800-00-0248	2.0mm Ferrule (pin)

* Registered Trademark of US Conec Ltd.

** Registered Trademark of TYCO Electronics Corp.

OFS 300-400 adapter caps

Noyes snap-on adapter caps for OFS 300-400C models.

Model	Description
8800-02-0252	1.25 mm Universal
8800-02-0019	2.5 mm Universal
8800-02-0007	FC
8800-02-0009	SC
8800-02-0014	ST
8800-02-0011	DIN 47256
8800-02-0012	SMA
8800-02-0008	Biconic
8800-02-0010	D4
8800-02-0017	Hughes
8800-02-0032	EC
8800-02-0030	Angled FC

Model	Description
8800-02-0031	Angled SC
8800-02-0102	MTP
8800-02-0103	Angled MTP
8800-02-0056	1.6 mm Ferrule (pin)
8800-02-0057	2.0 mm Ferrule (pin)

NOTE: For an up-to-date list of adapter caps contact Noyes, or visit our web site at

www.AFLtele.com (click on Products > Noyes Test & Inspection)

Thank you for choosing Noyes Test & Inspection

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