Fiber Optic Dual Switch
FOS-2x2-TTL

Installation and Operation Manual
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Warranty

Mikropack GmbH warrants to the original user of this instrument that it shall be free of any defects resulting from faulty manufacture of this instrument for a period of 12 months from the original data of shipment. There is no warranty for the bulb.

This instrument should not be used for any Clinical or Diagnostic purposes. Data generated is not warranted in any way by Mikropack GmbH. Any defects covered by this Warranty shall be corrected either by repair or by replacement, as determined by Mikropack GmbH.

There are no warranties that extend beyond the description herein.

This Warranty is in lieu of, and excludes, any and all other warranties or representations expressed, implied, or statutory, including merchantability and fitness, as well as any and all other obligations or liabilities of Mikropack GmbH including, but not limited to, special or consequential damages. No person, firm, or corporation is authorized to assume for Mikropack GmbH. Any additional obligation or liability not expressed provided for herein except in writing duly executed by an officer of Mikropack GmbH:

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Warranty Handling

- Clear the problem or fault with your local distributor.
- In case of warranty, your local distributor will give you an RMA number.
- Send your instrument, free of charge and insured, to your local distributor.
- Your distributor will inform you of the delivery time. If there is repair out of warranty, you will be informed of the repair cost. The instrument will be placed on hold until you have officially ordered the repair.

The instrument will be sent back to you free of transport cost and insured (in case of warranty).

Table of Contents

About This Manual

Document Purpose and Intended Audience

This document provides you with an installation section to get your system up and running.

What's New in this Document

This version of the *Fiber Optic Dual Switch FOS-2x2-TTL Installation and Operation Manual* changes the name from FODS to FOS, updates the logo and the contact information.

Document Summary

Chapter	Description
Chapter 1: *Setup*	Contains package contents and instructions for unpacking, setting up and adjusting the optical power of your FOS unit.
Chapter 2: *FOS-2x2-TTL Specifications*	Contains operating specifications and pinout information.
Chapter 3: *Operating Instructions*	Provides instructions for setting the operating mode of the FOS unit.

Product-Related Documentation

You can access documentation for Ocean Optics products by visiting our website at **http://www.oceanoptics.com**. Select *Technical → Operating Instructions*, then choose the appropriate document from the available drop-down lists. Or, use the **Search by Model Number** field at the bottom of the web page.

You can also access operating instructions for Ocean Optics products on the *Software and Technical Resources* CD included with the system.

Engineering-level documentation is located on our website at *Technical → Engineering Docs.*

Upgrades

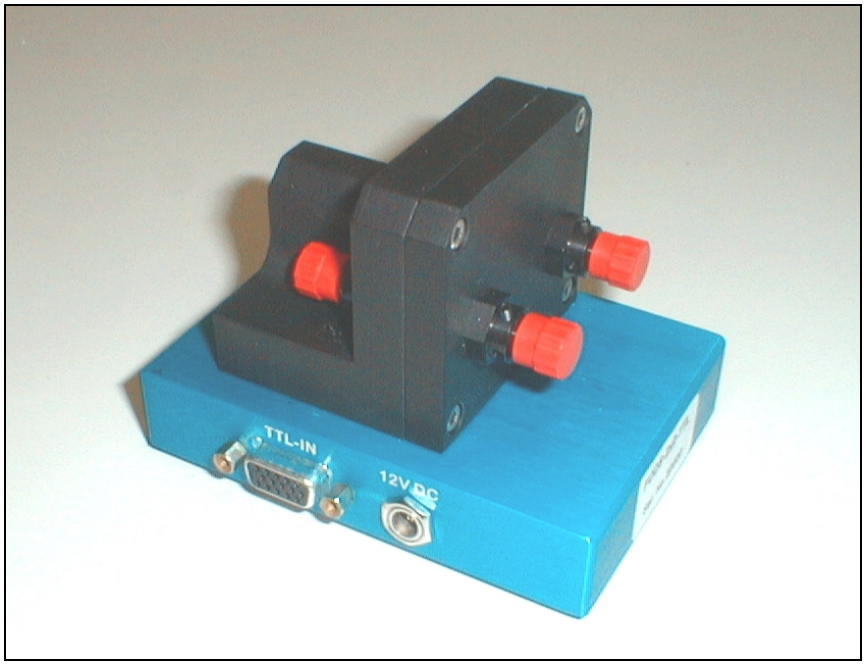
Occasionally, you may find that you need Ocean Optics to make a change or an upgrade to your system. To facilitate these changes, you must first contact Customer Support and obtain a Return Merchandise Authorization (RMA) number. Please contact Ocean Optics for specific instructions when returning a product.

Chapter 1

Setup

Overview

The following sections provide instructions on unpacking, setting up and adjusting your Fiber Optic Dual Switch (FOS) unit.



Unpacking the FOS Unit

► *Procedure*

1. Unpack your instrument carefully.
2. Inspect the outside of the instrument and make sure that there is no damage. Do not use the instrument if damage is present. Contact your dealer for repair or replacement information, if necessary.
3. Use this instrument in a clean laboratory environment.

Contents

Your package should contain the following:

- FOS-2x2-TTL unit
- One IC-DB15-2 interface cable for switch operation

Setup

Refer to Figures 1 and 2 when setting up your FOS unit.

► *Procedure*

To set up your FOS unit,

1. Plug the power supply into the main connection.
2. Plug the connector of the power supply into the sleeve (1) of FOS.
3. Remove the caps of SMA-connectors (2).
4. Connect the SMA connectors of your fibers to the SMA plugs.
5. Plug in your SUB-D 15-pol. connector-in sleeve (3) for automatic TTL-operation (cable included).

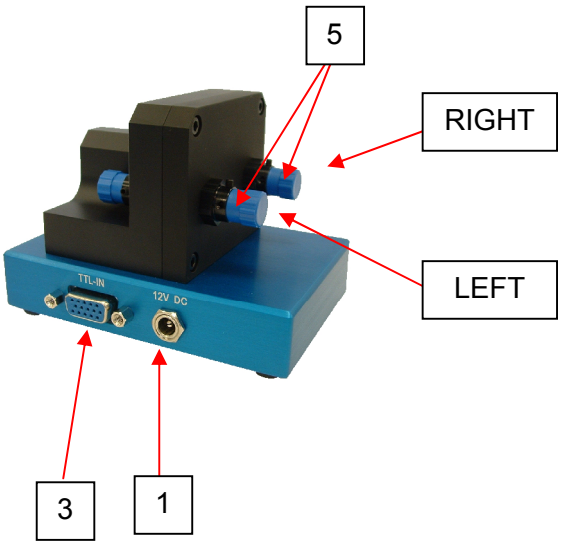


Figure 1: Rear of FOS Unit

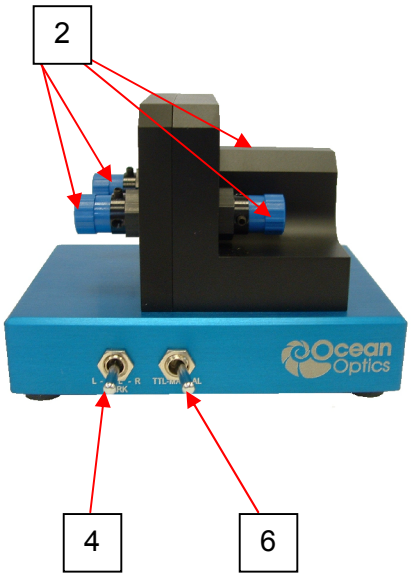


Figure 2: Front of FOS Unit

Adjusting Optical Power

The FOS is factory optimized on a fiber-core-diameter of 200µm. If other core diameters are used, you can change the focal points. Refer to Figures 1 and 2 when adjusting the optical power.

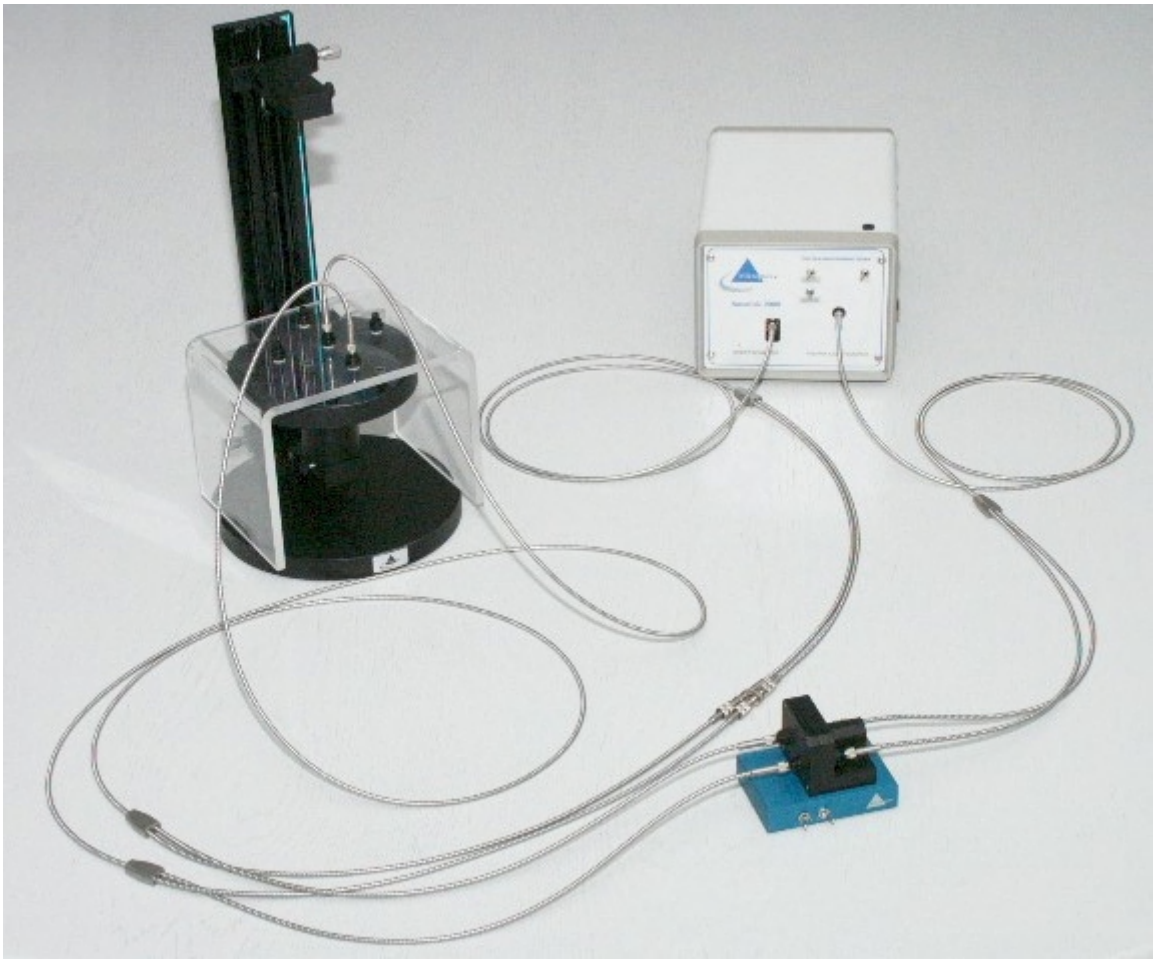
► *Procedure*

Follow the steps below to change your focal points:

1. Move the shutter switch (4 – Figure 2) into the OPEN position to open the shutter.
2. Connect a fiber optic spectrometer or an optical power meter to one side of the FOS.
3. Connect a light source to the other side of the FOS.
4. Loosen the locking screw (5 – Figure 1) with a hexagonal socket screw key (SW 2.0 mm).
5. Move the SMA connector (2 – Figure 2) to adjust the optics of the FOS.
6. Tighten the locking screw (5 – Figure 1) when properly adjusted.

Application Set-up

The following photograph shows a typical FOS set-up using a NonoCalc Thin Film Reflectometry System.



Chapter 2

FOS-2x2-TTL Specifications

This section provides information on the environmental and physical specifications of the FOS-2x2-TTL. It also provides pinouts for the 15-pin connector.

Note

Modification of specifications and design to improve device performance are possible without notice.

Operating Environment

The following table provides information on optimizing the operating environment of your FOS unit.

Operating Environment	The FOS Unit . . .
Moisture	Is designed for operation in dry rooms only.
Ventilation	Should be situated so that its location or position does not interfere with proper ventilation.
Heat	Should be situated away from any device that emits excessive heat.
Object and Liquid Entry	Should be positioned so that objects do not fall on top of the unit. Additionally, ensure that no liquids are spilled into the enclosure through openings.
Power Sources	Should be connected to an approved power supply, such as the Mikropack 12 VDC 1250mA analog regulated power supply (PS-12V/1.25A)

Specifications

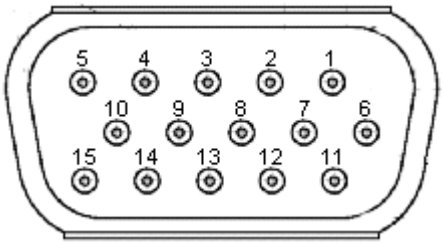
Specifications	Criteria
Spectral Range	UV-VIS
Shutter Input	TTL maximum 5 Hz
Power Requirements	12 VDC
Power Consumption	Maximum 200 mA
Weight	Approximately 500 g
Size	100 x 90 x 70 mm

Pinout Information

The following table contains pinout information for the FOS-2x2-TTL:

Pin	Description
1	na
2	na
3	na
4	na
5	na
6	na
7	na
8	na
9	na
10	Ground
11	na
12	na
13	TTL Signal
14	na
15	na
na = not applicable	

Pinout Diagram



Chapter 3

Operating Instructions

Setting the Operating Mode

Operating the FOS unit requires setting its operating mode with the two switches on the unit's front panel to the appropriate positions (see Figure 3).

Figure 3: FOS Unit Switches

Switch (4) Position	Switch (6) Position	Result
L	MANUAL	Left Channel Open
TTL/DARK	MANUAL	Both Channels Closed
R	MANUAL	Right Channel Open
TTL/DARK	TTL	Operation by external TTL signal: High - Left Channel Open Low - Right Channel Open

Note

Other switch positions are not defined.

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