

Fiberdyne Labs, Inc.

**Model FD-VFL1A
Visual Fault
Locator**

**Operating
Instructions**

General

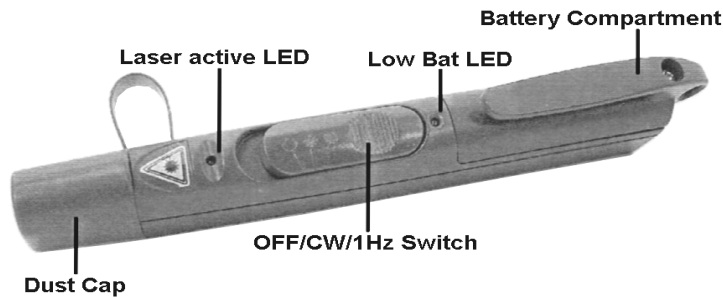


Figure 1. FD-VFL1A Visual Fault Locator

The Fiberdyne Labs, Inc. FD-VFL1A Visual Fault Locator is a Class II laser product under the requirements of the U.S. Center for devices and Radiological Health. As such, it presents no hazard to users who view the output when using proper operating procedures. It is recommended that users should not stare directly into the beam.

Customer Service

If repair of the Fiberdyne FD-VFL1A Visual Fault Locator is necessary, return the unit in accordance with the warranty instructions on the last page of this manual to the address listed below:

Fiberdyne Labs, Inc.
127 Business Park Drive
Frankfort, New York 13340
Tel: 1-800-894-9694 --or-- (315)895-8470
Fax: (315)895-8436

Should you need technical assistance with the FD-VFL1A, you may also contact Customer Service at the above telephone numbers.

Introduction

The Fiberdyne FD-VFL1A Visual Fault Locator is a hand-held, lightweight, visible laser light source used to isolate high losses and faults in fiber cables (see Figure 1). By emitting a bright beam of red light into a fiber, breaks can be seen as a glowing red light. The FD-VFL1A can be used with either singlemode or multimode cable sections. The Model FD-VFL1A is recommended for applications in cable length up to 5 km.

Basic Applications

The FD-VFL1A is used to pin point faults by locating its glow at points of high loss. The FD-VFL1A is not intended to be used on its own as a fault finding device. Usually, the general location of a fault will be determined by some other method, such as using an OTDR. When the fault location has been narrowed, the FD-VFL1A can be used to make a visual inspection of the fiber and determine the exact location of the fault.

The FD-VFL1A is extremely useful for identifying tight bends or crimps, faulty connectors, damaged components, bad splices and fiber breaks.

Operating the FD-VFL1A

The FD-VFL1A is powered by a single AA-size battery. A low battery condition is indicated when the **LOWBAT** LED lights. Sliding the switch to the appropriate **ICON** as shown below will enable the **OFF**, **CW** or **1Hz** mode.

Operation

A **Laser Active** LED indicates whether laser power is continuously on or is being pulsed at a rate of 1 Hz.

The FD-VFL1A is equipped with a universal style optical port connector. This will allow any connector style with a 2.5mm ferule to be used.

Use the following procedure for fault location detection:

1. Remove the dust cap covering the unit's **OPTICAL PORT**.

2. Connect a cable to the **OPTICAL PORT** connector.

3. Slide the switch to the desired **ICON** position.

⊙ - Turns the LASER off.

* - Turns the Laser on with a continuous laser output. The red **Laser Active** LED remains on.

⊖ - Turns the LASER on with a pulsing laser output. The red **Laser Active** LED pulses at a 1 Hz rate.

4. Visually examine the fiber components, locating the faults by a red glow (see Figure 2).

5. Turn the unit off.

6. Remove the cable from the port and replace the cap.

Maintenance

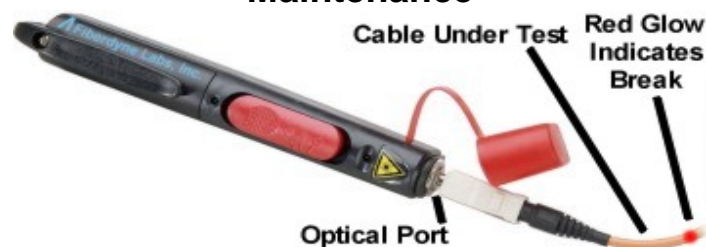


Figure 2. Fault Locate Detection

Maintenance

The dust cap is provided for the optical output port, and must be in place when the unit is not in use to prevent foreign material from entering the port.

Battery Replacement

To replace the AA battery, remove the screw at the end of the pocket clip. The clip is part of the battery compartment cover. After new the new battery has been replaced, replace the clip/cover and screw.

Specifications

Specifications	
Model	FD-VFL1A
CDRH Laser Class	Class II
Wavelength	650 +/- 20nm @ 25°C
Output Power	> -4 dBm into SMF-28 fiber
Transmission Mode	Continuous or 1 Hz pulsed signal
Range	Visibility to 5 km
Power	Single replaceable AA-size battery
Environmental	
Operating Temperature:	-10°C to +50°C
Storage Temperature:	-20°C to +80°C
Humidity:	0 – 95% (non-condensing)
Altitude:	50,000 ft. (15000m)
Physical	
Length:	6.2 in. (157 mm)
Diameter:	0.63 in. (18 mm)
Weight: (Approx.)	2.36 oz. (67 g)
Connector Style:	Universal Compliant

Warranty

All products are warranted against defects in materials and workmanship. This warranty applies for a period of two (2) years from the date of delivery, except for Fiber Optic instrumentation and equipment which have a one (1) year warranty on parts and two (2) years on labor. Fiberdyne Labs, Inc. obligation under this warranty is limited to servicing or adjusting each instrument returned to our factory within the warranty period, and to replace any components found to be defective. If determined that the defective condition is a result of misuse or abnormal operation, repairs will be billed.

Limitation of Warranty

The foregoing warranties are the exclusive warranties provided by Fiberdyne Labs, Inc. Fiberdyne will not be liable for any special, indirect, incidental or consequential damages whatsoever resulting from loss of use, loss of data or loss of profits arising out of, or in connection with, the use or performance of the product, even if Fiberdyne has been informed of the possibility of such damages in advance. All implied warranties, including without limitation warranties of merchantability and fitness for a particular purpose, as well as warranties arising from a course of dealing or usage of trade are expressly disclaimed.

More Information

This document and others like it may be downloaded from our Internet Webpage at:

<http://www.fiberdyne.com/techinfo/index1.html>

Our products and services may be purchased online at:

<http://www.fiberdyne.com>

