



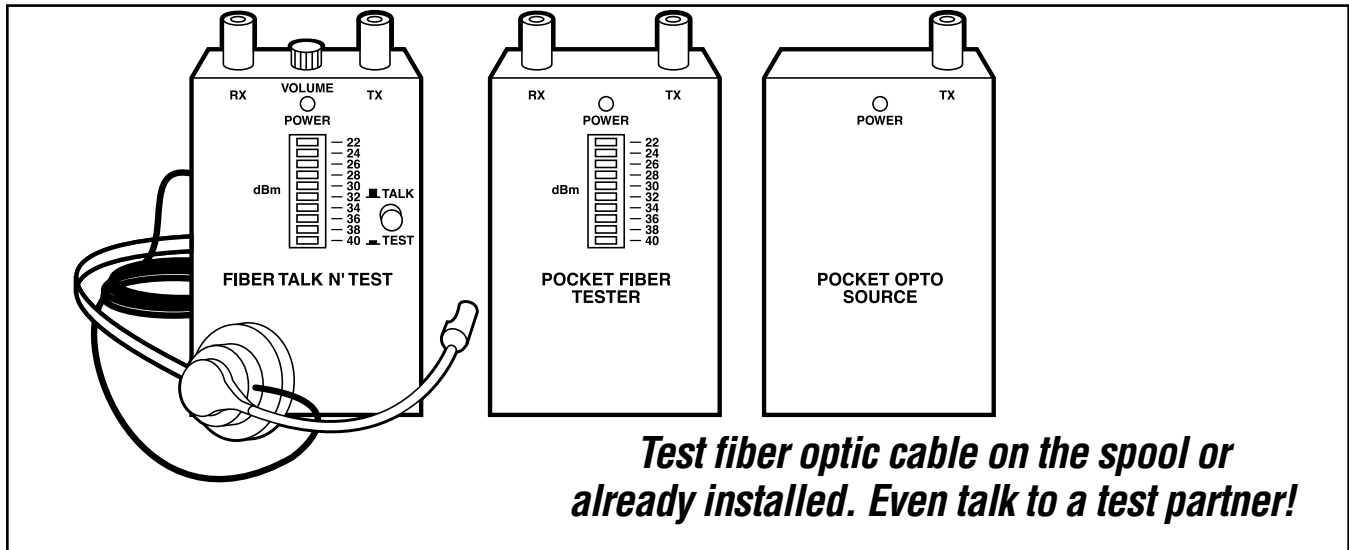
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# BLACK BOX<sup>®</sup>

## NETWORK SERVICES

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## FIBER TALK'N TEST, POCKET FIBER TESTER, POCKET OPTO SOURCE



### Key Features

- ▶ **Compact test devices that are powered by a standard 9-V battery.**
- ▶ **Use to determine dB loss.**
- ▶ **For fiber optic cable with ST connectors.**
- ▶ **Use Talk'n Test to communicate with a partner during testing. Headset is included.**
- ▶ **Pocket Opto Source provides a light source for a tester.**
- ▶ **Pocket Fiber Tester also tests for continuity.**
- ▶ **Test measurements shown on easy-to-read LED bar scale.**

For simple and affordable testing of multimode fiber optic cable, order one of these battery-powered testing devices from Black Box:

The Pocket Fiber Tester is a simple, convenient, general-purpose tool that enables you to check the integrity of your fiber optic interconnections. It's the perfect tool when all you want is a quick measure of a fiber cable's dB loss and continuity.

The Pocket Fiber Tester has a simple test format that gives you a rough idea of the quality of a particular fiber cable, whether it's installed or still on the spool.

Test measurements are displayed on an LED scale, which can be easily read in even dimly lit environments. This scale is calibrated in dBms, which is a standard unit for fiber optic power measurements, and marked in increments of 2 dBm.

The Pocket Fiber Tester works with the following types of ST-

terminated fiber cables: multimode (50-, 62.5-, or 100-micron) single, duplex, or bundled. Its transmitter has a current-controlled capability to launch -20 dBm of continuous 850-nm light into a properly prepared terminus of a 100-micron fiber cable. The launch power into 62.5-micron cable is -23 dBm, and into 50-micron cable, it's -28 dBm.

Small enough to fit into a shirt pocket, this compact tester also features a power-on indicator, which reminds you to switch the unit off after use.

The Fiber Talk'n Test functions like the Pocket Fiber Tester but also enables you to talk to a test partner at the cable's other end via amplitude modulation (AM). Shipped with a folding headset with a boom microphone, the Fiber Talk'n Test has a "press to test" pushbutton switch and a volume control so you can optimize communications with your test partner.

The Fiber Talk'n Test must be used in pairs.

The Pocket Opto Source, which can be used with the Pocket Fiber Tester, injects a continuous, nonpulsed signal at a known power level into a terminated multimode fiber optic cable link. In simple terms, you use it to send a beam of light to someone with a tester at the end of the fiber cable.

When used with the Pocket Fiber Tester, the Pocket Opto Source is ideal for measuring an installed cable's continuity or attenuation in situations where the cable's ends are too far apart to be connected.

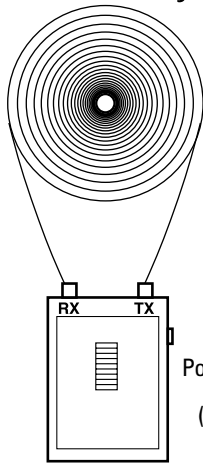
It's also small enough to fit into a shirt pocket and draws its power from a standard 9-volt battery.

#### Tester components

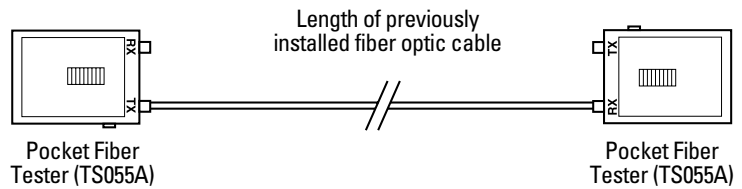
The Pocket Fiber Tester and Fiber Talk'n Test feature four main components: an optical source, an optical receiver, receive-level

# Test just-arrived or already installed fiber optic cable.

Recently delivered spool of fiber optic cable



Pocket Fiber Tester (TS055A)



Pocket Fiber Tester (TS055A)

Pocket Fiber Tester (TS055A)

circuitry, and receive-level scale.

The Pocket Opto Source is a single component, a regulated optical source.

All of these test devices shoot light into the fiber optic cable at the varying intensities: 100-micron cable core: -20-dBm intensity; 62.5 micron: -23 dBm; and 50 micron: -26 dBm.

The optical receiver and receive-level circuitry of the Pocket Fiber Tester and the Fiber Talk'n Test include an optoelectronic transducer and active voltage-divider circuitry. These components convert the light received into a voltage, which is then modified by the receive-level circuitry and displayed on the testers' receive-level LED scale.

The receive-level LED scale, which is calibrated in -2-dBm steps from -22 dBm to -40 dBm, shows you the intensity of light, in dBm, received by the tester.

### Interpreting a tester reading

You can determine the approximate measurement of received power of light in the cable by simply observing the highest bar illuminated on the tester's LED scale. For example, if all bars on the scale light up to and include the "28" segment of the bar graph, you know the measured received power is at least -28 dBm but less than -26 dBm, the next highest scale

value (that is, the signal received is between -28 and -26 dBm).

You would then compare the difference between the amount of light sent and the amount received to immediately know how well your fiber cable transmits light signals and to determine its quality.

### Tester applications

You can use the Pocket Fiber Tester or Fiber Talk'n Test in a variety of measurement modes. Use a single tester as both transmitter and receiver to test continuity in a spool of cable. Or use a single tester to detect light activity on a particular cable that you're trying to locate within a bundle of cable.

You can also use two testers in tandem to check both sides of duplex cables simultaneously. Connect one tester to terminals at the start of the cable, and connect the other tester to the cable's other end. You can then compare the measurements for each side of the duplex cable with the values you expect.

Want to examine long-distance cable runs? Well, the Pocket Fiber Tester can be used with a Pocket Opto Source to examine such lengthy runs. In this setup, the transmitter of the Pocket Opto Source sends the light signal while the optical receiver of the Pocket Fiber Tester measures the signal loss.

## Specifications

**Accessories:** TS054A: Folding headset with boom mike

**Modulation:** TS054A: AM

**Output Wavelength:** 850 nm,  $\pm 15$  nm at  $\pm 3$  dB

**Power Output:** -20 dBm  $\pm 0.5$  dBm into 100- $\mu$  core fiber, -23 dBm  $\pm 1$  dBm into 62.5- $\mu$  core fiber, -26 dBm  $\pm 1$  dBm into 50- $\mu$  core fiber

**Readout Range:** TS054A, TS055A: -22 to -40 dBm

**Readout Resolution:** TS054A, TS055A: 2 dBm

**Controls:** TS054A: Volume, "press to test" button

**Connectors:** TS054A: (2) ST, (1) RJ-11 (headset); TS055A: (2) ST; TS056A: (1) ST\*

**Indicators:** All models: (1) Power LED; TS054A, TS055A: (1) bar-graph-style LED, graduated in 2-dBm steps

**Power:** 9 volts, supplied by alkaline or nickel-cadmium transistor battery

**Size:** 4.5"H x 2.3"W x 1"D (11.4 x 5.8 x 2.5 cm)

**Weight:** 0.3 lb. (0.1 kg), including battery

## Ordering Information

ITEM	CODE
Pocket Fiber Tester, ST .....	TS055A
Fiber Talk'n Test, ST .....	TS054A
Pocket Opto Source, ST .....	TS056A

**NOTE:** Testers are for use with glass-core fiber optic cable only. Fiber Talk'n Test must be used in pairs.