

# Model 10888A

## Fiber-Optic Transmitter

## Operating Instructions



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## Introduction

The Model 10888A Fiber-Optic Transmitter converts a TTL/CMOS, electrical signal to 820 nm light wave for transmission over multimode fiber. This product provides GPS clock users with another option for connecting to fiber for transmission of digital timing signals. The Model 10888A uses a BNC connector for the electrical connection and Type ST connector to the fiber-optic cable. It is powered by a 9.0 to 13.5 Vdc source.

## Features

- Field Installable: optional DIN Rail mounting
- Simple Installation: BNC electrical and Type ST fiber-optic connections
- Powered by external 9.0 to 13.5 Vdc source
- 820 nm Wavelength Technology
- Link distances up to 2.7 km<sup>1</sup>
- Specified with 50/125  $\mu\text{m}$ , 62.5/125  $\mu\text{m}$ , 100/140  $\mu\text{m}$ , and 200  $\mu\text{m}$  HCS Fiber.

## Applications

- New installations of any Arbiter GPS clock, connect the Model 10888A to the desired TTL output and connect the ST connector to the fiber link.
- Existing GPS clock installations with no available space in the GPS clock for the Option 20 (Model 1084A/B/C only) or Option 20A. Connect the Model 10888A to any available TTL/CMOS output.

## General Description

The Model 10888A uses an Agilent Model HFBR-1414T fiber-optic transmitter to drive the fiber-optic cable and is capable of link distances of 2.7 km. Internal drive circuitry compensates for over temperature drift. A common BNC connector is used for the electrical input connection and Type ST connector used for the fiber-optic connection. High impedance input allows connection to any TTL/CMOS GPS clock-timing output.

## Operation

Connect the CMOS timing output from the clock to the BNC connector of the Model 10888A, and connect the fiber cable to the Type ST connector. Connect mini plug from the power supply to the connector on the Model 10888A. The green Power LED should light up immediately when the mini plug is connected. The signal logic level is HI whenever the optical signal is ON. Whenever optical data is transmitted, the green data LED illuminates (flashes).

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<sup>1</sup>Refer to Application Note 101 at [www.arbiter.com](http://www.arbiter.com), check under Resources, Documentation; download app-note101.pdf

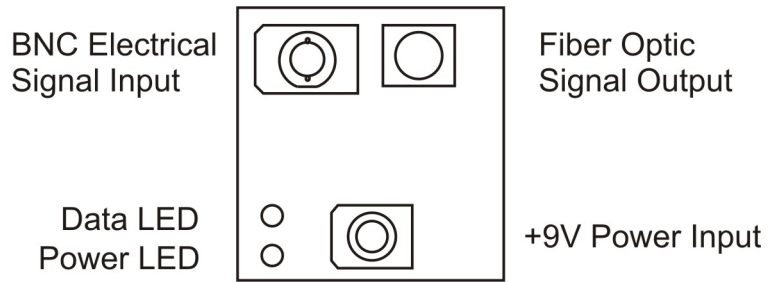


Figure 1: Outline of Model 10888A Fiber-Optic Transmitter

## Specifications

Input Signal Type:	+5V CMOS signal via standard BNC Connector; maximum input current is less than 0.1 A.
Connector:	one type BNC connector
Output Signal Type:	Fiber-optic signal via 62.5/125 $\mu\text{m}$ fiber
Connector:	one type ST fiber optic connector
Power Input:	+9.0 to +13.5 Vdc, 1 mA
Power Connector:	3.5-mm, male mini plug – tip positive
Size:	50 x 38 x 50 mm (2.0 x 1.5 x 2.0 in.), overall dimensions
Weight:	94 g (3.3 oz.)
Temperature:	
Operating:	-10 to +50 °C
Non-operating:	-40 to +75 °C

## Indicator Lights

- Power LED: indicates that power is applied to the 10888A
- Data LED: indicates that data is being transmitted