

Introduction

The Telecast DiamondBack™ system consists of a single or dual optical output fiber optic transmitter/multiplexer (TX) and a mating receiver/demultiplexer (RX). The TX unit multiplexes and launches simultaneously on the fiber up to eight channels consisting of video inputs or data signals, plus a ninth auxiliary port for compatible data use only. The compatible devices include the Telecast Adder™ 161, which multiplexes audio and data/switch information onto a single signal ported by coax to a BNC input on the DiamondBack TX. An auxiliary port on the DiamondBack TX rear panel carries the DiamondBack internal clock to the Adder 161 (or other appropriate Telecast device), supplying audio and digital data information for re-transmission by the DiamondBack.

Within a DiamondBack TX, the video signals are first digitized at 147 MHz and then multiplexed at a data clock rate of 1.47 Gb/s. This digital data is converted to an optical signal and launched into the fiber. The DiamondBack RX receives the optical transmission and restores the video and data signals to the corresponding outputs.

The DiamondBack TX is optionally equipped with two parallel laser outputs for redundancy or split feeds. In redundant operation, the DiamondBack RX accepts two optical inputs, with automatic switchover protection.

DiamondBack electrical signal I/O channels are individually configured for video or data use by a toggle switch on the rear panel adjacent to the input BNC on the TX and its corresponding BNC output on the RX. The TX and RX units have similar appearances; front and rear views are shown in Figures 3 and 4. Front panel indicators for channel and system status are very similar, and the locations of the electrical I/O connections on the rear panels are identical.

A rotary switch and BNC output on both TX and RX front panels enables the selection of one of the eight video signal channels for display on a local monitor.

An internal Ni-Cad battery provides backup in the event of line power loss. DiamondBacks are housed in a standard 19 inch electronics rack.

Setup

Packing List

The DiamondBack system consists of:

- One DiamondBack TX Transmitter
- One DiamondBack RX Receiver
- Two external power supplies (AC/DC adapters)
- Rack mount adapter kits

After unpacking, inspect the units for mechanical damage, and all electrical connectors for bent or damaged pins and latches. Report any damage to the carrier and to Telecast Fiber Systems, Inc. Leave the protective caps on the optical connectors until it is time to attach the fiber. Replace the caps whenever the fiber is disconnected.