The FTR is a small adaptor plug which provides bi-directional conversion between standard RS-232C serial ports and fiber optic cables. The device has a standard 25-way D connector which can be connected to any standard RS-232C receptacle, and it accepts Hewlett-Packard snap-in connectors with plastic cored fiber optic cables up to 40 meters in length.

The device is ideal for establishing noise-free data transmission between computers and peripherals, avoiding ground loops and errors caused by pick-up of transients and interference radiated from industrial equipment. The device also allows data transmission through the voltage gradients often found in ion beam equipment.

Specifications

RS-232C signals
- input: ±3 volts minimum, ±30 volts maximum
- output: ±9 volts nominal

RS-232C connector
- 25-way D type, male plug

RS-232C pin assignments
- pins 2 and 3 used for transmit and receive signals as selected by pin jumpers inside the device.
- pins 4, 5, 6, 8, and 20 may be pulled high by installing jumpers to assert auxiliary signals as required by RS-232C equipment.
- pins 11, 12, and 13 can power the device (see below).
  Pin 1 is case ground, pin 7 is signal ground.

Fiber optic ports
- individual send and receive ports to accept H-P HFBR-4501 and HFBR–4511 connectors, with plastic fiber optic cables up to 40 meters in length.

Baud rates
- 50 baud to 40k baud

Power source
- 9 to 12Vac/dc 100mA max. input from plugpack, or 5Vdc regulated or 8 to 15Vdc unregulated from RS-232C device, jumpered from pins 11, 12, or 13 to FTR circuitry – may require internal wiring change to RS-232C device.

Dimensions
- 80 x 58 x 19 mm overall

Typical applications
- a) two FTRs and two fiber optic cables replace wired bi-directional link for reduced error rate and/or security of confidential data, or for traversing a voltage gradient.
- b) Two FTR units used as a two-way fiber optic repeater.
- c) allow fiber optic Group3 instruments to be used with RS-232C equipment.