PRIORITY FiberLoop®

Users Manual

Rev B

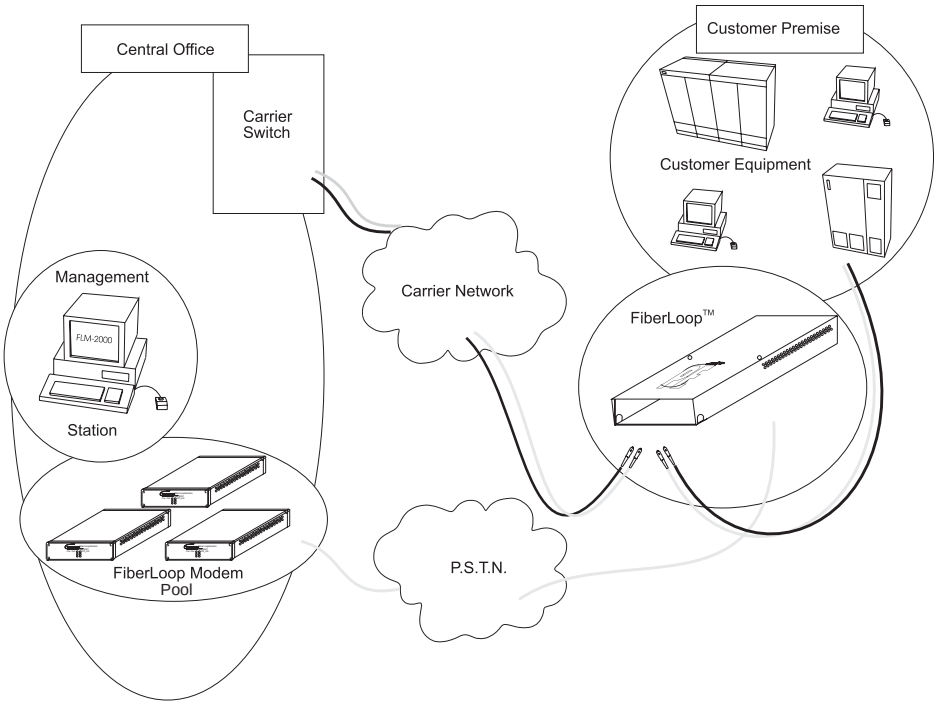
Introduction / Overview

The function of the FiberLoop Device is to regenerate fiber optic signals originating from a central office and traveling to a customer site. The FiberLoop Device has remote loopback capability which allows for testing of the fiber optic cable running between the central office and the customer site. Testing is possible without requiring a service person to be present at the customer site. The FiberLoop Device converts singlemode fiber optic signals to multimode signals and can act as the final demarcation point. The FiberLoop Device operates at speeds up to 155 Mbps (OC3).

The FiberLoop Device is accessed through the PSTN. There are three levels of security against unauthorized access to the FiberLoop Device. The first level of security is Caller line I.D. recognition. The second is proprietery modem signalling. This elliminates remote access via modems that may be purchased commercially. The third security feature is password protection.

The FiberLoop Device is capable of monitoring and reporting failure of four conditions. The four conditions are:

1) PWR1 - Power present at the PWR1 input jack on the back of the FiberLoop Device.
2) PWR2 - Power present at the PWR2 input jack on the back of the FiberLoop Device.
3) Net Rx - Loss of fiber optic carrier from the network fiber cable.
4) Cus Rx - Loss of fiber optic carrier from the customer fiber cable.



These 4 conditions are continuously monitored for error conditions. In the event any of these conditions comes into an error situation, the FiberLoop Device can be configured to notify the Message Management Station (FLM-2000). In order for this to occur the FiberLoop Device must be configured with the appropriate mask. These masks can be set up either via a direct RS232 connection to the FiberLoop from a PC or through the FLM-2000 software. The mask must be SET to allow the FiberLoop Unit to call the FLM-2000 and report the error condition.

All functions for the FiberLoop Device, except changing the password, maybe configured via the FLM-2000 software **or** via a direct RS232 connection from a PC. The purpose of this guide is to assist in the proper setup of the FiberLoop Device and to help guide the user through the correct steps necessary to configure the FiberLoop Device when using the direct RS232 connection. All other features are explained in the FLM-2000 operating guide or the FiberLoop Modem Guide.

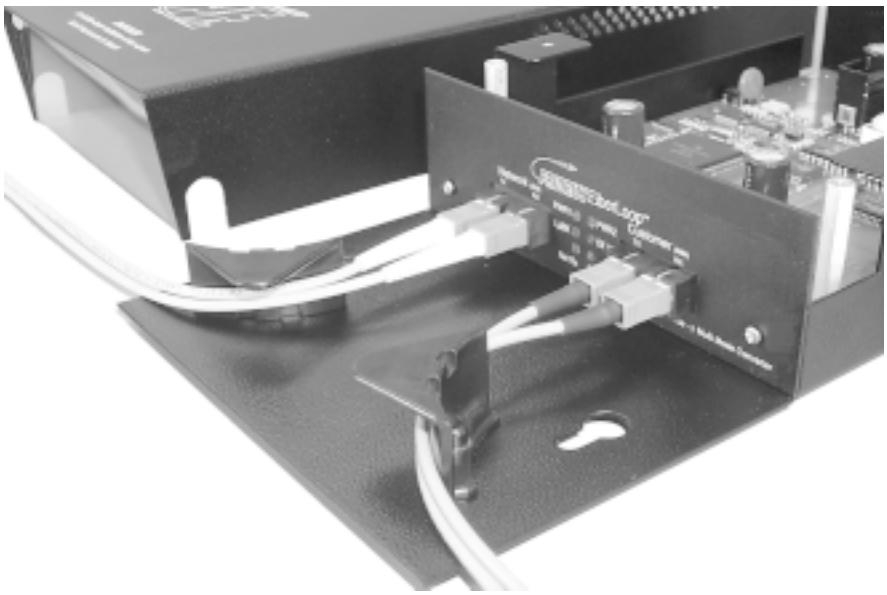
Included with the FiberLoop

1 RJ11 Phone cord 6 feet
1 FiberLoop Device Guide
1 FiberLoop Device
1 Security Screw Driver

Installation

Installation is very simple. For setup at a remote location, simply connect the phone port to a POTS line, plug in at least one of the power cables and the device is ready for operation. Clean and install the fiber optic cables on the frontplate inside the unit. The Telco and Customer sides are clearly identified. Removal of the top cover is accomplished by removing the two security screws on the top (driver supplied) and gently remove the cover. You may gently tie wrap fiber cables to the available routing arcs. Take care not to incorporate any microbends!

The FiberLoop Device may be wall mounted by using the key hole cutouts on the bottom portion of the cabinet. To prevent rotation after mounting, drive a screw into the central hole located between the two routing arcs. Carefully mount the device prior to connecting power cords or fiber cables!



Changing the Password

The FiberLoop Device can be directly accessed through the RS232 port on the back of the Device. This is the only type of connection that allows changing the user password. This has been designed in this manner to prevent unauthorized remote system changes. The connection is 9600 bps with N-8-1 parity protocol. The password must be entered in order to gain access to the control functions of the Device. Simply connect a PC via a RS232 cable to the RJ45 connector on the back of the device. The TTY commands may be passed to the FiberLoop Device using a terminal emulation software package (see the TTY command set in the appendix).

The factory default password is 87654321.

Appendix

Function List For Fiber Loop Device

Function 'Q' - Resets FiberLoop Device and forces an On Hook condition. Resets password

Function 'A' - Recognized Caller Line ID Number 1
Format: "AXXXXXXXXXX" where - 'A' is the function letter
- 'XX…XX' is 7 to 10 digit entered phone #
Fiber Loop Response:
"OLD PHONE2>YYYYYYY XXXXXXX NEW>ZZZZZZZ
>OK"
'YYYYYYY' is the old stored phone number and 'ZZZZZZZ' is the newly stored phone number.

Function 'B' - Recognized Caller Line ID Number 2
Format: "BXXXXXXXXXX" where - 'B' is the function letter
- 'XX…XX' is 7 to 10 digit entered phone #
Fiber Loop Response:
"OLD PHONE2>YYYYYYY XXXXXXX NEW>ZZZZZZZ
>OK"
'YYYYYYY' is the old stored phone number and 'ZZZZZZZ' is the newly stored phone number.

Function 'C' - Call Back Phone Number to Management Station
Format: "CXXXXXXXXXX" where - 'C' is the function letter
- 'XX…XX' is 7 to 11 digit entered phone #
Fiber Loop Response:
"OLD PHONE3>YYYYYYY XXXXXXX NEW>ZZZZZZZ
>OK"
'YYYYYYY' is the old stored phone number and 'ZZZZZZZ' is the newly stored phone number.

Function 'L' - Loopback Activation ON and OFF Toggle
Format: "L" where - 'L' is the function letter
Fiber Loop Response: - "Loopback-ON or "Loopback-OFF
OK" OK"

Function ‘K’ - Change Alarm Contact Mask – Allows Each of the monitored functions to cause a contact alarm if that function goes into alarm. If bit is set it will cause its associated contact to go into an alarm condition. Bit assignments are below.

MAJOR ALARM b7->PWR2 b6->PWR1 b5->Cust_RX b4->Cust_TX
MINOR ALARM b3->PWR2 b2->PWR1 b1->Cust_RX b0->Cust_TX

Format: “KXX” where - ‘K’ is the function letter
- ‘XX’ is byte mask for callout.
Fiber Loop Response: - “OLD MASK>YY XX NEW>ZZ OK”

‘YY’ is the old mask that had been previously stored and ‘ZZ’ is the new stored mask.

Function ‘M’ - Change Dialout MaskCall - Call Management Station if Masked flags are set in normal operation of fiber loop. Bit assignments are below.

b6->Bypass_CLID b5->PWR2 b4->PWR1
b3->Cust_RX b0->Telco_RX

Format: “MXX” where - ‘M’ is the function letter
- ‘XX’ is byte mask for callout.
Fiber Loop Response: - “OLD MASK>YY XX NEW>ZZ OK”

‘YY’ is the old mask that had been previously stored and ‘ZZ’ is the new stored mask.

Function ‘P’ - Change Fiber Loop Unit Password . Password can not be changed during a dialup session. It can only be changed during a direct connect to the RS-232.

Format: “PXXXXXXXX” where - ‘P’ is the function letter
- ‘XXXXXXXX’ is entered password.
Fiber Loop Response: “OLD PSWD>YYYYYYYY XXXXXXXX NEW>ZZZZZZZZ >OK”

‘YYYYYYYY’ is the old password and ‘ZZZZZZZZ’ is the new stored password. If only “P” is entered or function is called in a dialup mode the response is “YYYYYYYY” which is the present password.

Function ‘S’ - Fiber Loop Unit Status.

Format: “S” where - ‘S’ is the function letter

Fiber Loop Response:

- “SSMMVV#AXXXXXXXXXX#BYYYYYYYYYY#CZZZZZZZZZZZ
>OK”

where:
‘SS’ -Alarm Status bits and Loopback Status.

b7->LoopBack b6->Bypass_CLID b5->PWR2 b4->PWR1
b3->Cust_RX b0->Telco_RX

‘MM’ - Alarm Callout Mask for ‘SS’, Only b5-b0 Mask Bits are Valid
‘VV’ - Verification Mask, When Bit set, Management Station has set this bit, to not send again until alarm for device has been cleared.
‘XX…XX’ - Recognized Caller Line ID Number 1
‘YY…YY’ - Recognized Caller Line ID Number 2
‘ZZ…ZZ’ - Call Back Phone Number to Management Station

Function ‘V’ - Change Management Station Verification Mask – If this a bit is set the Management Station Already has been notified of this alarm. Bit assignments are below.

b5->PWR2 b4->PWR1
b3->Cust_RX b0->Telco_RX

Format: “VXX” where - ‘V’ is the function letter
- ‘XX’ is byte mask for Management Station.

Fiber Loop Response: - “OLD MASK>YY XX NEW>ZZ
OK”

‘YY’ is the old mask that had been previously stored and ‘ZZ’ is the new stored mask.

Specifications

Fiber Optic Connections (Network):	Singlemode SC (dual)@1310nm
-Average Optical Power Output	Min:-15dBm Max:-8dBm
-Maximum Average Power Input	-8dBm
-Receiver Sensitivity	-31dBm
Fiber Optic Connecions (Customer)	Multimode SC (dual)@1310nm
-Average Optical Power Output	Min:-19dBm Max:-14dBm
-Maximum Average Power Input	-14dBm
-Receiver Sensitivity	-31dBm
Communications Interface	
-RS-232 Jack:	RJ45 at 9600 Baud N-8-1
-Proprietary Modem Signaling	
-8 Bit No-Parity RS232 Data Input	
-Phone Jack:	RJ11
-Phone Line Input:	2 wire POTS
Power Supply	
-Power Input :	
-Voltage Input:	6Vdc to 9Vdc
-Current Consumption:	800 mAdc
Mechanical	
-Dimensions:	12”Lx5.856”Wx1.988”H (30.5cm x 14.9cm x 5.1cm)
-Weight:	5.2 lbs (2.4 kg)

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