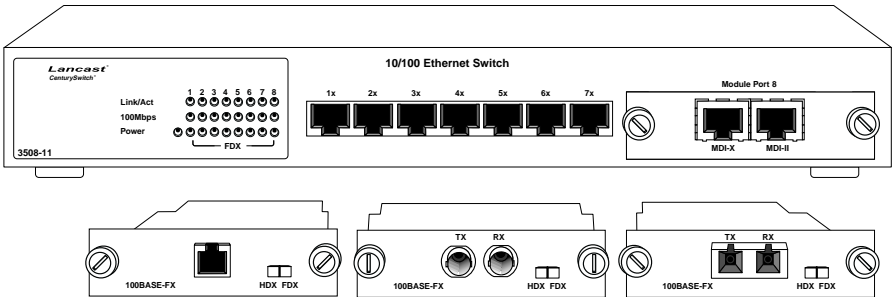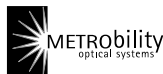# Lancast®

8-Port

CenturySwitch®

Installation & User Guide

Model: 3508-11

Lancast CenturySwitch

8-Port CenturySwitch:

3508-11 _____   8-port switch with 10/100 TX module

Fiber Optic Modules:

3508-03-F ____   100Base-FX multimode SC
3508-04-F ____   100Base-FX singlemode SC (15km)
3508-05-F ____   100Base-FX multimode ST
3508-07-F ____   100Base-FX singlemode SC (40km)
3508-0E-F ____   100Base-FX multimode MT-RJ

Table of Contents

8-Port CenturySwitch Installation & User Guide

Product Overview

Thank you for choosing the Lancast CenturySwitch.

Designed to meet the needs of today's growing networks, the Lancast 8-Port CenturySwitch is a compact, low-cost switch featuring a unique replaceable port module. The standard unit provides eight auto-negotiating 10/100 TX ports including one modular port with two connectors to support either a crossover or parallel connection.

The TX interface may be replaced by an optional 100Base-FX module. METRO-bility offers FX modules with SC, ST and MT-RJ multimode connectors in addition to SC singlemode connectors which support network segments up to 15 or 40km. For added versatility, all FX modules include two user-selectable controls to configure the port's duplex mode and to set the backpressure/flow control.

By breaking up the collision domain and multiplying network performance, the Lancast CenturySwitch delivers the ideal solution for easing network congestion problems on existing shared-hub networks. Use the CenturySwitch to increase overall network transmission speed and to improve efficiency to accommodate high-bandwidth applications such as imaging, multimedia and CAD/CAM.

The CenturySwitch includes an universal internal power supply and is perfect for stand-alone or rackmount use in any office environment.

Key Features
Designed for high-performance, versatility, and cost-effectiveness, the CenturySwitch offers the following key features:
- Eight 10/100Mbps auto-negotiating RJ-45 ports including one MDI-X/MDI-II modular port
- Optional multimode or singlemode 100Base-FX interface
- Full/half duplex switch on all FX modules
- Backpressure/flow control for half duplex on optional FX interfaces
- IEEE 802.3x compliant for flow control on all TX ports
- Diagnostic LED indicators
- Store-and-forward switching
- 148,800 packets/sec full-wire rate on 100Mbps mode forwarding and filtering; 14,880 packets/sec full-wire rate on 10Mbps mode forwarding and filtering
- Self-learning capability for up to 8K MAC addresses
- 512KB buffer memory
- Internal universal power supply
- Mountable in a standard 19-inch equipment rack

Installation Guide

Follow the steps outlined in this section to install and start using your Lancast CenturySwitch.

1 Unpack the Lancast CenturySwitch

Check that the following components have been included:
- 8-Port CenturySwitch 3508-11
- Rackmounting hardware: 2 mounting brackets, 4 screws
- Power cord

Your order has been provided with the safest possible packaging. Inspect it carefully. If you discover any shipping damage, notify the carrier and follow their instructions for damage and claims. Save the original shipping carton if return or storage of the unit is necessary.

2 Choose a Location

The CenturySwitch is intended for use in normal office environments and requires few restrictions on placement.
- Select a location that is within 6 feet of an AC power source and less than 100 meters from servers, workstations or other connected devices.
- Do not connect the unit to a power strip.
- Be sure the location allows for adequate ventilation with a clearance of at least 1/2" on the sides of the unit.
- Be sure the location is as far away as possible from electrical noise generating equipment such as copiers, electrostatic printers or other motorized devices.

The CenturySwitch is designed to be mounted in a standard 19-inch equipment rack. Use the rackmounting hardware included with the unit to secure the mounting brackets to the unit. Use the separate screws[*] provided with the equipment rack to mount the unit in the rack. Be sure that the mounting of the unit does not impose a hazardous condition due to uneven mechanical loading.

The CenturySwitch can also be installed on a tabletop. For tabletop installation, select a location with the power and ventilation requirements cited above.

---

[*] #10-32 screw size is recommended.

3

Connect to the Network

The Lancast CenturySwitch is compatible with both 10Base-T and 100Base-TX devices. Network connections are made by simply plugging the cables into the RJ-45 port connectors on the front panel as shown in the figure below. Each port supports a maximum segment length of 100 meters over Category 5 UTP cables for 100Base-TX segments and Category 3, 4 or 5 UTP cables for 10-Base-T segments. Once power is applied to the unit, use the individual Link/Act LEDs to verify correct segment connectivity.
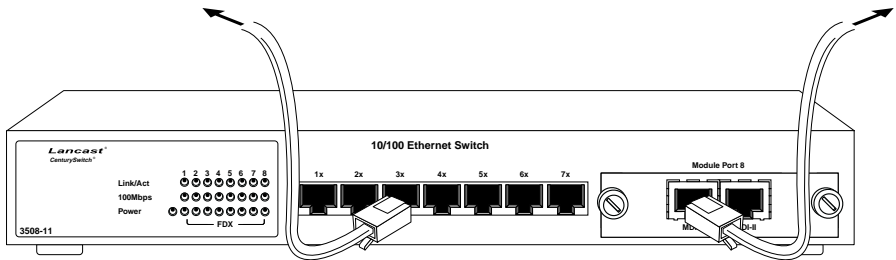
Fixed Ports

The CenturySwitch provides seven fixed RJ-45 ports with connectors for devices wired crossover. The ports are labeled 1x through 7x. These dual-speed ports are 10/100Mbps auto-sensing and will automatically detect and operate at the speed of the connected device.

Module Port

Port 8 provides two RJ-45 connectors which support a device wired either crossover (MDI-X) or parallel (MDI-II).

IMPORTANT: *Do **not** connect devices to both the MDI-X and MDI-II connectors at the same time. This can damage the unit and void its warranty.*

4 Install the Fiber Module (Optional)

Proceed to Step 5 if you are not using a fiber module.
The standard 10/100 TX module installed in the CenturySwitch may be replaced by a 100Base-FX module. Refer to the listing inside the front cover for all available options.

Set the Backpressure Jumper
Prior to installing the fiber module, you must set the flow control/backpressure jumper labeled "JP2" on the printed circuit board. See the diagram below for its location.
- Connect jumper pins 1 and 2 to enable backpressure.
- Connect jumper pins 2 and 3 to disable backpressure. *(default)*

Jumper JP2
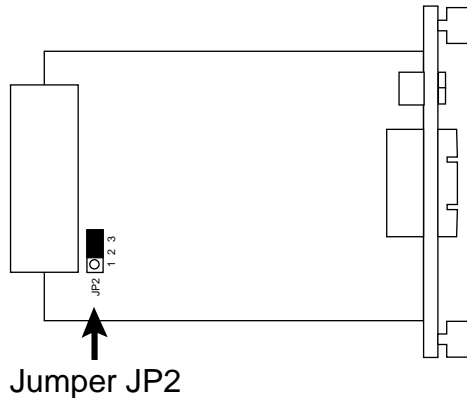
Set the Duplex Mode Switch
Each fiber module can be configured for half duplex (HDX) or full duplex (FDX) operation by means of the slide switch located on the front panel. This switch should be set before applying power. The default setting on the modules is FDX (full duplex).

Install the Module
To install your FX module, first remove the TX interface by turning the two thumb screws counterclockwise and withdrawing the card. Replace it with the new module. Tighten both screws firmly to attach the fiber module to the CenturySwitch.

Connect to the Network

The 3508-04-F and 3508-07-F modules provide a pair of singlemode SC connectors. The 3508-04-F supports a maximum segment length of 15km and the 3508-07-F supports a maximum segment length of 40km.
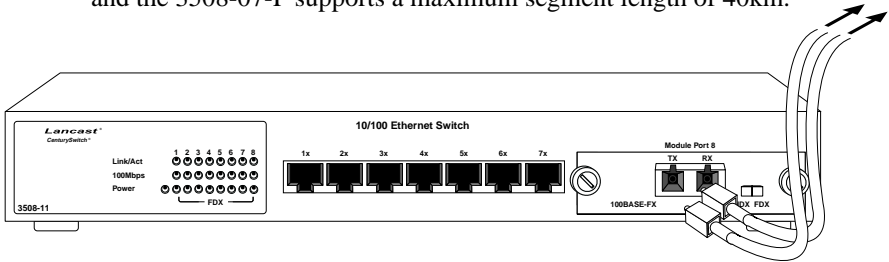
The 3508-03-F and 3508-05-F modules provide a pair of multimode SC and ST connectors, respectively. The 3508-0E-F provides a multimode MT-RJ connector. These modules support a maximum segment length of 2km.
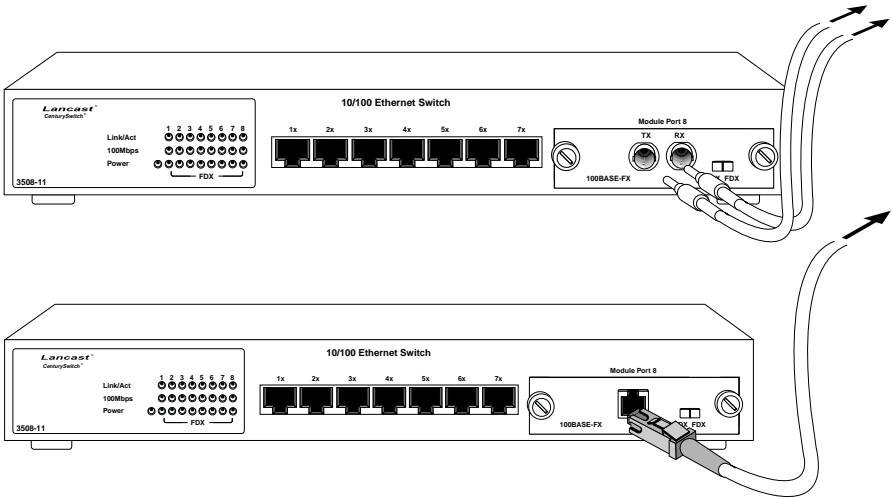
When making fiber optic connections with two cables, be sure that the transmit (TX) connector on the CenturySwitch connects to the receive (RX) connector of the device. Conversely, be sure that the transmit (TX) connector of the device connects to the receive (RX) connector on the CenturySwitch.

Once power is applied to the unit, use the Link/Act LED for Port 8 to verify correct segment connectivity. The LED illuminates if an active device is connected to the other end of the cable(s).

5 Apply Power

The CenturySwitch is equipped with an internal 100-240V, 50-60Hz, 25W power supply. When making power connections, connect the power cord to the input jack located on the back of the switch *before* making the AC connection to the outlet.

AC Power Socket
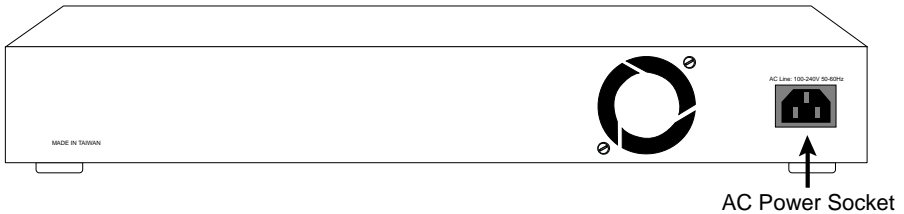
IMPORTANT: *If the CenturySwitch loses power, wait at least 10 seconds before applying power again.*

The CenturySwitch is shipped with a standard North American 3-pin power cord which is UL (USA), CSA or CUL (Canada) listed or approved. For installation in regions outside of North America, replace the power cord with a cord approved by the appropriate safety agencies. Any cord used must have a CEE-22 standard V female connector on one end and meet IEC 320-030 specifications. European power cords must be harmonized and designated with a HAR marking on the cord jacket to comply with the CENELEC Harmonized Document HD-21.

The CenturySwitch does not have a power switch. After connecting the unit to the AC receptacle, check that the PWR (power) LED is illuminated. A steady green light indicates the unit is receiving power.

Once power is applied to the unit, use the individual Link/Act LEDs on the front panel to verify correct segment connectivity.

User Guide

This section contains more detailed information regarding the operating features of the Lancast CenturySwitch.

LED Operation

The functional descriptions of the LED indicators are listed below. The port LEDs report the status of their corresponding ports labeled 1 through 8.

LED Name	Color	Status	Function
System LED			
Power	Green	ON	Unit is powered ON.
Per Port LEDs			
Link/Act	Green	ON	Connection with remote device is good.
		Blinking	TX traffic is present.
		OFF	No connection to remote device.
100Mbps	Green	ON	100Mbps speed is active.
		OFF	10Mbps speed is active.
FDX	Amber	ON	Full duplex mode is active.
		OFF	Half duplex mode is active.

Lancast ®
CenturySwitch ®

	1 2 3 4 5 6 7 8
Link/Act	⊙ ⊙ ⊙ ⊙ ⊙ ⊙ ⊙ ⊙
100Mbps	⊙ ⊙ ⊙ ⊙ ⊙ ⊙ ⊙ ⊙
Power	⊙ ⊙ ⊙ ⊙ ⊙ ⊙ ⊙ ⊙

3508-11

└──── **FDX** ────┘

Lancast 8-Port CenturySwitch   11
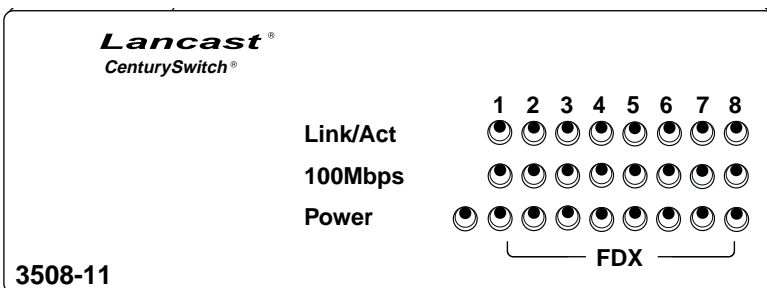
Troubleshooting
Cabling Problems
Improper cabling is the primary cause of most network problems, particularly for 100Base-TX and 100Base-FX networks. Use only the specified twisted-pair or fiber optic cables to avoid most cabling problems.

- Flat telephone extension cables, or Category 3 wires, are not the same as Category 5 twisted-pair cables and will not function on Fast Ethernet networks.

- There is a wiring problem if the Link/Act LED does not illuminate when the RJ-45 plug from a workstation is inserted into the port jack. Correct the break in the cable or replace the cable before proceeding.

- If a workstation (workstation A) does not function while workstations connected to other ports on the CenturySwitch operate normally, remove an RJ-45 plug from a functioning port with a functioning workstation (workstation B) and insert it into the suspect port. If workstation B still works, the problem may be in workstation A or in the wiring. However, if workstation B does not work, the CenturySwitch may have a defective port. Even if you suspect a defective port, continue testing. Improperly wired workstations may appear functional, especially if they are located near the switch. Sometimes a port connected to an improperly wired workstation functions marginally while another port does not work at all.

- Once you have established that the CenturySwitch is working properly, check all wiring between it and the malfunctioning workstation. Be sure that the transmit (TX) and receive (RX) cables are not crossed. The transmit cable from the workstation should connect to the receive connector of the switch and the transmit cable from the switch should connect to the receive connector of the workstation.

- Use a continuity checker to ensure that wires do not have any breaks. By shorting together the two wires at the end of a pair, you can use the continuity checker at the other end. Also check that there are no shorts between wires.

Workstation Problems
Most non-cabling problems result from improper configuration of the network interface card (NIC) and its corresponding driver. Observe the following points:

- Like other add-on cards in the workstation or server, the NIC must have a unique memory address, I/O address and interrupt. The settings on a particular card must not conflict with the settings on any other card in the same station. Refer to the user's manuals of your NIC, computer and network operating system to determine the proper configuration.

- The mode (half duplex or full duplex) and speed (10Mbps or 100Mbps) of the NIC setting must match the mode and speed setting of the corresponding port of the switch. For NWay Auto-Negotiation setting, both link partners will adjust to the highest allowable speed and mode operation.

Other Problems

Other specific problems may be diagnosed by using the LEDs as described below.

Power LED is OFF when CenturySwitch is connected to the AC source
- Defective fuse
- Incorrect AC voltage
- Defective switch

Link/Act LED is OFF at a port
- Faulty node or wiring connection (when RJ-45 plug is inserted, a clicking sound should be heard)
- No link signal is received from the remote device

CenturySwitch does not work

If the switch does not function or is experiencing interference (i.e., your site is located near a radio station, transmitter, etc.), try using shielded twisted-pair (STP) cables instead of UTP cables.

Self-diagnostic test
- The CenturySwitch performs a self-diagnostic test at power on; LED indicators go to their normal status if no problem occurred.
- To reset or restart the CenturySwitch, unplug it from the AC source and wait 10 seconds before applying power again.

CAUTION: *Circuit devices are sensitive to static electricity which can damage their delicate electronics. Dry weather conditions or walking across a carpeted floor may cause you to acquire a static electric charge.*

To protect your device, always:
- Touch the metal chassis of your computer to ground the static electrical charge before you pick up the device.
- Pick up the device by holding it on the left and right edges only.

Topology Solutions

CenturySwitch

CenturySwitch

CenturySwitch

Intelligent
7500 Chassis

100Mbps
Enterprise Switch

- - - - Copper
———— Fiber Optic
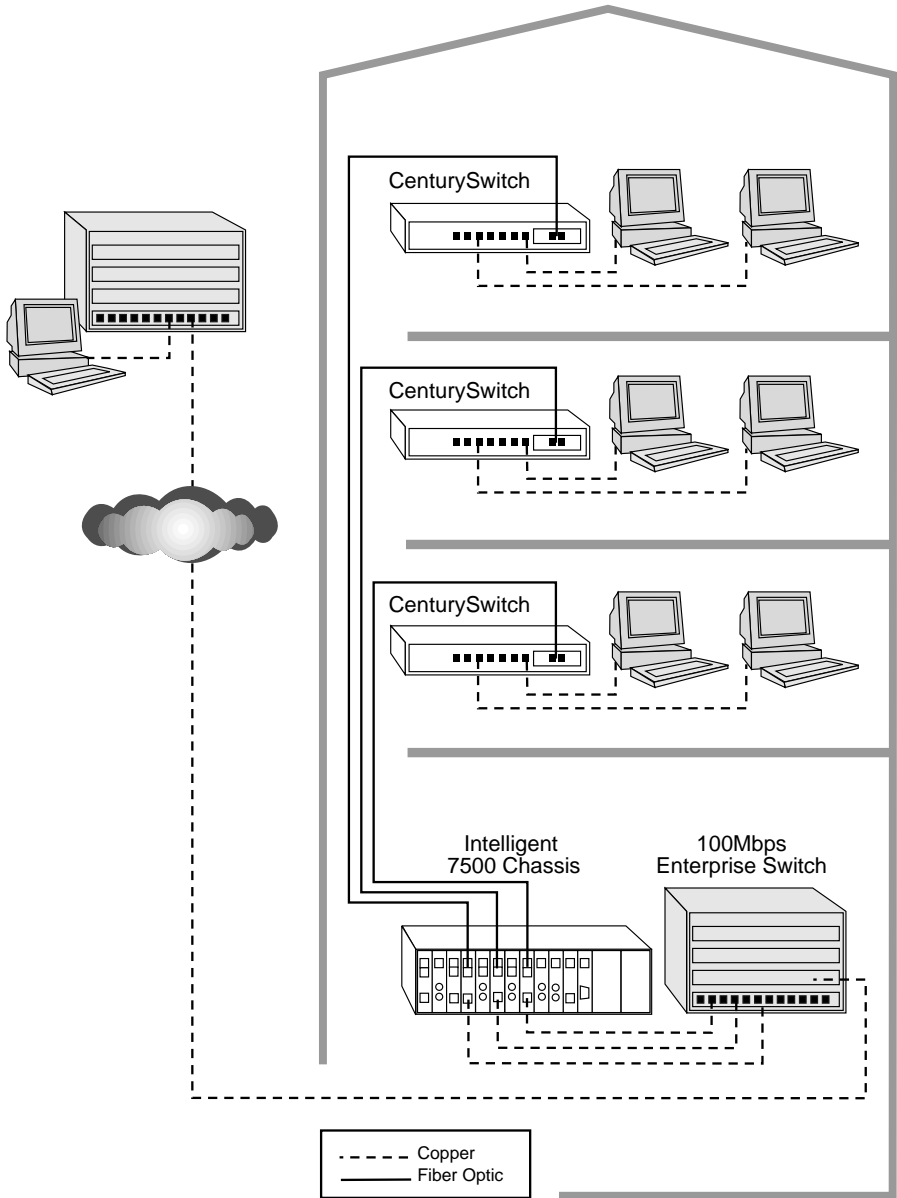
Technical Specifications

Data Rate
10Base-T ports _____ 10Mbps half duplex; 20Mbps full duplex
100Base-TX ports _____ 100Mbps half duplex; 200Mbps full duplex
100Base-FX ports _____ 100Mbps half duplex; 200Mbps full duplex

Switching Performance
Buffer memory _____ 512KB for 8 ports
Packet filtering/forwarding rate _____ 148,800 packets/sec @100Mbps
_____ 14,880 packets/sec @10Mbps
MAC addresses _____ 8K

Network Connections
Twisted-Pair Interface
Connector _____Shielded RJ-45, 8-pin
Supported link length _____ 100m
Cable type (10Mbps segments) _____ Category 3,4 or 5 UTP
(100Mbps segments) _____ Category 5 UTP

Multimode Fiber Optic Interface
Connector _____ SC, ST or MT-RJ
Supported link length _____ up to 2km full duplex
Cable type _____ 50/125, 62.5/125 or 100/140μm F/O

Singlemode Fiber Optic Interface
Connector _____SC
Supported link length _____ up to 15km full duplex (3508-04-F)
_____ up to 40km full duplex (3508-07-F)
Cable type _____ 8.3/125, 8.7/125, 9/125 or 10/125μm F/O

Power Requirements
Auto-sensing _____ 100 - 240V AC, 50/60 Hz, 25W

Environmental
Operating temperature _____0°C to 50° C
Storage temperature _____-25° C to 60° C
Operating humidity _____5% to 90% (non-condensing)

Physical

Dimensions _____ 13" W x 6.75" D x 1.75" H

Weight _____ 4 lb

Regulatory

Compliance _____ IEEE 802.3u and 802.3x, TUV

Safety _____ UL, CSA, EN60950

EMC _____ FCC Part 15, Class A; EN55022 Class A; EN50082-1

Product Safety, EMC and Compliance Statements

This equipment complies with the following requirements:

- UL
- CSA
- TUV
- EN60950 (safety)
- FCC Part 15, Class A
- EN55022 Class A (emissions)
- EN50082-1 (immunity)
- IEEE 802.3
- IEEE 802.3u
- IEEE 802.3x
- IEC 825-1 Classification
- Class 1 Laser Product

This product shall be handled, stored and disposed of in accordance with all governing and applicable safety and environmental regulatory agency requirements.

The following *FCC* and *Industry Canada* compliance information is applicable to North American customers only.

USA FCC Radio Frequency Interference Statement

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communication. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Caution: Changes or modifications to this equipment not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

### *Canadian Radio Frequency Interference Statement*

This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe A respecte toutes les exigences du Réglement sur le matériel brouilleur du Canada.

Warranty and Servicing

METRObility Optical Systems, Inc. warrants the Lancast CenturySwitch to be in good working order for a period of three years from the date of METRObility shipment. Should the unit fail anytime during said three-year period, METRObility will, at its option, replace or repair the product. This warranty is limited to defects in workmanship and materials and does not cover damage from accident, disaster, misuse, abuse or unauthorized modifications. Under no circumstances will METRObility be liable for any damages incurred by the use of this product including, but not limited to, lost profits, lost savings, and any incidental or consequential damages arising from the use of, or inability to use, this product.

If the product was purchased from an authorized METRObility dealer, limited warranty service may be obtained by returning the product to the dealer. Return the product in its original shipping container (or equivalent), pre-insured, and with proof of purchase.

METRObility
optical systems
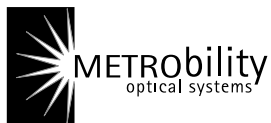
25 Manchester Street, Merrimack, NH 03054 USA
tel: 603-880-1833 • fax: 603-594-2887
www.metrobility.com

5660-350001-001 D
8/01

Free Manuals Download Website

http://myh66.com

http://usermanuals.us

http://www.somanuals.com

http://www.4manuals.cc

http://www.manual-lib.com

http://www.404manual.com

http://www.luxmanual.com

http://aubethermostatmanual.com

Golf course search by state

http://golfingnear.com

Email search by domain

http://emailbydomain.com

Auto manuals search

http://auto.somanuals.com

TV manuals search

http://tv.somanuals.com