

Eclipse Shutter IT User Manual



89020 - 8 inch aperture dowser 811020–10 inch aperture dowser 817010 –16 inch Large Format Eclipse Shutter IT Manual issue date: February 27, 2012

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DECLARATION OF CONFORMITY

Manufacturers Name: Wybron, Inc. Manufacturers Address: 4830 List Dr., Colorado Springs, Colorado 80919 USA

Equipment Name: Eclipse II IT douser Equipment Model Number: 87230, 810040, 812010, 823010, 823011, 823012

This product is in conformity with the following standards:

Referenced Safety Standard(s)

Referenced EMC Standard(s)

EN60335-1

EN55022

following the provisions of the EU LV Directive 73/23/EEC and the EU EMC Directive 89/336/EEC.

I declare that the equipment specified above conforms to the above Directive(s) and Standard(s).

Signature: Kenneth Faren Printed Name: KEN FASEN

Title: <u>VP of ENG.</u> Date: <u>14 Sept.</u>, 2006

Safety Notice

SAVE THESE INSTRUCTIONS READ AND FOLLOW ALL INSTRUCTIONS

CAUTION: The Eclipse Shutter IT Dowser has been designed to withstand the rigors of entertainment lighting. However, the teflon coating on the iris blades can only withstand temperatures up to 600°F. When used with some excessively hot fixtures, degradation and possibly flaking of this coating may occur.

USE WITH EXCESSIVELY HOT FIXTURES – OVER 700°F AT THE IRIS BLADES – THAT RESULTS IN DEGRADATION OF THE HIGH TEMP POWDER COATING IS EXCLUDED FROM THE PRODUCT WARRANTY.

This manual gives step-by-step instructions for preparation, setup and operation of the Eclipse Shutter IT dowser.

There is a potential risk of fire, electric shock or injury to persons if the product is not used as instructed.

The Eclipse Shutter IT dowser is to be used in an indoor environment only and is not intended for residential use.

Introduction

The Coloram IT system includes mechanical dowsers (Eclipse Shutter IT and Eclipse II IT) and PS Power Supplies utilizing Remote Device Management (RDM) bi-directional communication protocol, in a range of models and offers an ease of setup and use. The Coloram IT system is part of the InfoTrace system that represents a new way of managing a lighting installation.

The lightweight dowser slides easily into the gel frame holder of the light fixture. The compact PS Power Supply attaches easily to the truss of the lighting rig or mount into a 19-inch rack.

The DMX512 control signal from the lighting console is connected to the PS Series power supply, and can continue on to additional PS Power Supplies or other DMX-controlled devices. The power supply sends power, DMX control signal and RDM information on a single cable, eliminating the need for a separate power cable for the dowser.

Eclipse Shutter IT dowsers are 100% compatible with all members of the Coloram IT family including Coloram IT and CXI IT color changers, PS Power Supplies and Eclipse Iris IT Dowser. You can also daisy chain Eclipse Shutter IT dowsers with other Coloram IT equipment.

This manual gives step-by-step instructions for preparation, setup and operation of the Eclipse Shutter IT



Caution:

The Coloram IT System, including Eclipse Shutter IT, is not compatible with Coloram II (RAM).

Do not connect Eclipse Shutter IT dowsers to Coloram II (RAM).

Do not connect Coloram II (RAM) to PS Power Supplies.

Damage from such action will not be covered by the product warranties.

Quick-Start

1. Connect the Equipment

- A. Attach the Eclipse Shutter IT Dowser to a powered light fixture.
- B. Connect the Eclipse Shutter IT Dowser to the PS Power Supply using the 4-pin Wybron Power/Data Cable.
- C. Connect the PS Power Supply to non-dimmed 100-240 VAC, 50/60Hz power and to a DMX source.
- D. Using InfoGate:
- E. Initiate "Perform Discovery"
- F. In the DMX Map, drag and drop the DMX address for the dowser to DMX address 1.
- G. Please refer to the InfoGate manual for details.

2. Send DMX Levels

A. On the lighting console, vary the level of the Eclipse Shutter IT Dowser DMX channel to open and close the dowser vanes.



Figure 1

Using The Eclipse Shutter IT Dowser

Operating Modes

The Eclipse Shutter IT dowser has several modes of operation. In all cases, the PS Power Supply is needed for control and power. Please refer to the Menu Details below for information on how to select DMX, Local and Snap mode.

DMX512 control

The level (0-100%) of the DMX channel to which the dowser is addressed determines the fin position. The fins are closed at 0% and are open at 100%.

Local wired pendant control

A hand held pendant can be attached via a 3-pin XLR cable to manually open and close the fins. Movement from fully open to fully closed or visa versa. it takes 2 seconds — this allows for precise fin positioning. Press the " + " button to open the fins and the " - " button to close them. Either the pendant buttons or the buttons on the dowser itself can be used in local mode. The wired pendant cable can be up to 1000 feet long. (**Wired pendanted cable pinout**)

XLR 3 Pin #	Wire Color	Function	Size
1	sliver	Ground	22 AWG
2	Red	Data -	22 AWG
3	Black	Data +	22 AWG

Local Menu Control

The dowser unit can be controlled by the menu buttons on the dowser unit. Please refer to the Menu Details below, under Self Test (Demo) for details

Signal and Power

The Eclipse Shutter IT Dowser uses a PS Power Supply with Coloram IT cables for DMX signal, RDM communication and 24VDC power. The dowser can be daisy chained with Coloram IT an CXI IT Color Changers, and Eclipse Iris IT Dowsers. fin position is determined by the DMX level (0-100%) of the control channel to which the dowser is addressed. The dowser uses one DMX channel.

Fan Speed Control

The fan in the Eclipse Shutter IT Dowser is small and cools the electronics enclosure. It always runs at full speed and CANNOT be slowed or stopped.

Installing the Eclipse Shutter IT

1. Attach the dowser to the fixture

Slide the dowser's mounting bracket into the gel frame holder of your fixture and lock the gel frame retention clip (if available).

The mounting plate allows you to position the dowser with the fins either horizontal or vertical. However, Eclipse Shutter IT operates most effectively with the fan, which is located in the top of the center panel, blowing air vertically (as hot air naturally rises).

2. Attach the safety cable

A safety cable is attached to the dowser. Run this cable around the pipe or truss from which you hang the light fixture and clip it to itself.



3. Mount the power supply

The power supply comes with a mounting bracket which hooks over the pipe or truss of your lighting rig and is then locked into place with a thumb screw. If you have selected this mounting method, connect the safety cable by running it around the pipe or truss to which the power supply is attached.

The power supply can also be mounted into a 19" rack using the optional PS Power Supply rack mount kit. The rack mount kit will accommodate two PS Power Supplies side by side.

4. Connect the dowsers to the power supply

Connect the dowsers to the power supply using Wybron 4 pin cable.

Refer to the HEAD-FEET RESTRICTIONS section of thi manual for details regarding the length of cable runs.

5. Connect the power supply to AC power

Plug the AC cord into a non-dimmed power circuit. The power supply automatically accommodates 100 - 240 VAC (50/60 Hz).

Power at the PS Power Supply is indicated by a red LED indicator.



Caution: Do not power the PS Power Supply from a dimmer. Severe damage will result and is not covered by product warranty.

6. Connect the DMX512 source

Connect the DMX512 signal source to the DMX input connector on the front of the power supply using standard DMX cable. Valid DMX signal will be indicated by a flashing green LED. The dowsers will now open and close their fins according to their respective DMX signal levels.





MENU DETAILS

1. Use the arrow buttons to scroll through selections on the Eclipse Shutter IT display.

2. Press **SELECT** to activate that selection or progress to the next level of displays.



The arrow buttons are also used to navigate to further levels within the display. For example, to select "Dowser Address":

- 1. Press SELECT .
- 2. Use the arrow buttons to move to the selection box to "DMX Address".
- 3. Press SELECT to select "DMX Address".
- 4. Use the arrow buttons to move to the "correct address".
- 5. Press SELECT to save the "Dowser Address".".

Alerts / Error Messages

The following is an explanation of alerts and error messages that are displayed locally on the dowser.

To read alert messages:

- 1. When "SENSOR ALERT" is displayed, press **SELECT.**
- 2. As an example: "VOLTAGE ALERT" indicates a voltage problem.
- 3. Press **SELECT** to access more information on the Voltage Alert.
- 4. For example: "WARNING VOLTAGE

DROPPED BELOW 15V"

VOLTAGE ALERTS

 "WARNING – VOLTAGE DROPPED BELOW 15V"

> Operating voltage has dropped below the minimum operating requirement of 15 volts. The cable between the Eclipse Shutter IT and the PS Power Supply may be too long.

"VOLTAGE DROPPED

BELOW 13V

UNIT SHUTDOWN"

Unit has automatically shut down because operating voltage has dropped below 13 volts for more than one second. Dowser cannot operate properly below 15VDC. The voltage typically drops this low if the Eclipse Shutter IT cable is too long — the head-feet limit has been exceeded. The Eclipse Shutter IT cable must be shortened to solve this problem.

MOTOR ALERT

1. "MOTOR IS OPERATING AT A HI CURRENT LEVEL"

High current level at the vane motors may indicate an ususually high level of friction at the motor. Please check dowser motor for possible maintenance or replacement.

FAN ALERT

1. "FAN IS NOT OPERATING PROPERLY" Check fan for possible maintenance.

RESET ALERT

Clears existing alert from display screen when you press **SELECT**, unless problem still currently exists

MULTIPLE ALERTS

- 1. Press **SELECT** to read the first alert.
- 2. Press **SELECT** to read the details of the first alert.
- 3. Press **BACK** to view the second alert.
- 4. Press **SELECT** to view details of the second alert.
- 5. Press **BACK** to check if there any additional alerts, repeat Steps 4 and 5 until all alerts have been read.
- 6. Once all alerts have been read, use the d key to move the selection box to the "RESET ALL ALERTS" command.
- 7. Press **SELECT** to clear all alerts, except for those that currently exist as problems.

DMX Address

- 1. Use the arrow buttons to select the desired DMX address.
- 2. Press **SELECT** to activate the displayed DMX address.

Settings

DMX ADDRESSES

Dowser Addr (Dowser Address)

- A. Use the arrow buttons to select the desired DMX address.
- B. Press **SELECT** to activate the desired DMX address.

MODES

DMX or Local

- A. Use the arrow buttons to select either DMX or Local mode.
- B. Press **SELECT** to activate the desired setting.

Snap Mode

- A. Use the arrow buttons to select either On or Off.
- B. Press **SELECT** to activate the desired setting.

Sensor Info

VOLTAGE

1. Displays present voltage, highest and lowest voltages measured, along with normal minimum and maximum acceptable voltages.

Reset Hi & Low:

- A. Use the arrow buttons to select Yes.
- B. Press **SELECT** to activate Reset Hi & Low.

PASS THRU CURRENT

- 1. Displays present pass through current, highest and lowest current measured, along with normal minimum and maximum acceptable pass through current.
 - A. Used in automatically sequencing through RDM enabled units on the lighting rig during InfoGate setup procedures.

Reset Hi & Low:

- A. Use the arrow buttons to select Yes.
- B. Press **SELECT** to activate Reset Hi & Low.

FAN RPM

Press **SELECT** to display answer to the question "IS FAN RPM OK?" (Yes or No).

Self Test (Demo)

MOVE / STOP

- 1. Use the arrow buttons to select "Move" or "Stop" fin commands.
- 2. Press **SELECT** to activate selected command.

History

OPERATING HOURS

Cleaning Info

- A. Lifetime operating hours is shown at the bottom of the first display, which is the total number of hours the dowser has been in use over its lifetime. This counter is never reset.
- B. Press **SELECT** to display the gauge that indicates how the dowser currently rates between "Like New" and "Needs Cleaning".



Figure 5

Cleaning means cleaning dust out of the vent slots, off the printed circuit board and off the internal components.

C. The display also shows the number of hours since the last cleaning of the dowser.

Reset Hours

- i. Press **SELECT** to select the Reset Hours function
- ii. Use the arrow buttons to select Yes on the "Reset Cleaning Hours Gauge?"
- iii. Press **SELECT** to activate Reset Cleaning Hours Gauge.

Maintenance Info

- A. Lifetime operating hours is shown at bottom of the first display, which is the total number of hours the dowser has been in use over its lifetime. This counter is never reset.
- B. Press **SELECT** to display the gauge that indicates how the dowser rates between "Like New" and "Needs Maintenance".



Figure 6 Maintenance means replacing a failed part on the dowser.

C. The display also shows the number of hours since the last maintenance on the dowser.

Reset Hours

- i. Press **SELECT** to select the Reset Hours function
- ii. Use the arrow buttons to select Yes on the "Reset Maintenance Hours Gauge?"
- iii. Press **SELECT** to activate Reset Maintenance Hours Gauge.

Host Light Lamp

A. Press **SELECT** to display the gauge that indicates the number of hours that the lighting fixture lamp has been on since its lamp was installed.



Figure 7

Reset Hours

- i. Press **SELECT** to select the Reset function.
- ii. Use the arrow buttons to select Yes on the "Reset Host Light Lamp Hours Gauge?"
- iii. Press **SELECT** to activate Reset Host Light Lamp Hours Gauge.

Reset Defaults

- 1. Press **SELECT** to select "Reset Defaults".
- 2. Use the arrow buttons to select Yes to Reset Defaults.
- 3. Press **SELECT** to activate Reset Defaults:

Dowser address is 1 DMX control

Head-Feet Restrictions

The HEAD-FEET parameter is a method of accounting for the voltage drop in the power/signal cable caused by the current drawn by each dowser.

To help understand this issue, think of it as water pressure (voltage) in a hose (cable) where you have multiple water sprinkler heads (dowsers). If the hose (cable) is too long or you have too many sprinkler heads (dowsers), the water pressure (voltage) will be too low.

HEAD-FEET is defined as "the sum of cable lengths from each dowser to a single power supply output".

Head-Feet Example

There are three Eclipse Shutter IT dowsers connected to a power supply. The Wybron Power/Data Cable between the power supply and the first Eclipse Shutter IT is 100 feet long. The cables between each of the other two Eclipse Shutter IT's is 20 feet long.

The amount of cable from the power supply to:

1st Eclipse Shutter IT	100 ft
2nd Eclipse Shutter IT	120 ft
3rd Eclipse Shutter IT	<u>140 ft</u>
Total: 360) "head-feet"

The maximum HEAD-FEET for all models of the Eclipse Shutter IT dowser is 1500 head-feet.

If a daisy chain consists of different models, use the model with the smallest amount of "head feet" for the calculation.

Equipment Compatibility

The following is a chart of compatibility and capacity of the various models of PS Power Supply and their companion IT devices.

Power Supply:	PS-150	PS -300	PS -600	PS 450i
				Wall mount
Model Number:	820150	820300	820600	20250
Output Power:	150 watts	300 watts	600 watts	300 watts
		1		

Quantity per Power Supply:

Description	Model	Max. Head-Feet				
Coloram IT – 4 & 7.5 inch	84520 87110	1500	6	12	24	12
Coloram IT – 10 inch	810100	1000	4	8	16	8
CXI IT – 7.5 inch	87200	1500	6	12	24	12
Eclipse Shutter IT 8in,10in,16in	89020 811020 817010	1500	8	16	32	16
Eclipse Iris IT 7.5in,10in,12in	87250 810060 812020	1500	6	12	24	12
Eclipse Iris IT 24in	823020	750	3	6	12	6

Cables

4-pin Power/Data cable

The Power/Data cable uses 4-pin XLR connectors on either end and consists of two 14 AWG conductors and a 22 AWG twisted, shielded pair. The shells of the two XLR connectors are not electrically connected -- this prevents high power currents from flowing from chassis to chassis of the Coloram IT equipment. The twisted pair shield is connected only at the male XLR connector end. This is the standard Wybron Power/Data Cable.

XLR Pin #	Wire Color	Function	Size
1	White	Ground	14 AWG
2	Green	Data -	22 AWG
3	Red	Data +	22 AWG
4	Black	24 Volts DC	14 AWG

Note: The cable used in the Eclipse Iris IT System is the same cable which is used in the Coloram IT, Coloram II and Forerunner System. The cable may be referred to as Wybron 4 pin cable.

DMX512 control cable

The DMX control cable from the lighting board to the InfoGate Gateway, dimmers and power supply is a five conductor cable with 5-pin XLR connectors on each end. The wiring pin out is specified by the USITT DMX512 / 1990 standard.

XLR Pin #	Function
1	Common
2	Data -
3	Data +
4	Talkback -
5	Talkback +

Non-RDM Equipment and InfoTrace

A lighting rig can use any combination of non-IT, non RDM, non-InfoChip equipment, along with IT equipment. The non-IT equipment will work the old-fashioned way (hand addressing, no status reporting or other features). The RDM protocol allows configuration, status monitoring and management of RDM devices in such a way that does not disturb the normal operation of the DMX devices that do not recognize the RDM protocol.

Coloram IT and Standard (Non-IT) Environments^T

The Coloram IT family of products (Coloram IT, CXI IT, Eclipse Shutter IT and Eclipse II IT, which all must be connected to PS Power Supplies) will work in any standard environment that does not use InfoGate.

Specifications

Vane speed (under DMX control):

Fast cut: 200 milliseconds (fully open to fully closed and visa versa) Strobe rate: 100 milliseconds (60% amplitude)

Operating modes:

- 1. DMX512
- 2. Local wired pendant control
- 3. Menu buttons on the dowser unit

Number of DMX channels used: One

Status Display: Backlit display

LED Indicators:

Red: Power

Green: DMX signal

Control Pendant 3-pin XLR connector pin functions:

- Pin 1: Connect to common to open the fins
- Pin 2: Connect to common to close the fins
- Pin 3: Common

Current Requirements:

0.6 amp @ 24VDC

Fuse:

1.5 amp Slo-Blo

Mounting Plates:

Various plates available to fit a wide variety of fixtures

(Please refer to Wybon's website at www.wybron.com for details)

Wired Pendant control cable:

3 conductor with 3-pin XLR connectors Up to 1000 feet long

Fan:

Small, low speed fan to cool the electronics enclosure

Safety Cable:

3.5 feet long cable included

Daisy Chaining:

Individual DMX addresses on one home run

Power Supply Compatibility:

PS 150 Power Supply, 150 watts

PS 300 Power Supply, 300 watts

PS 600 Power Supply, 600 watts

PS450i Power Supply, 300 watts

Signal Termination:

None required (Deppends on system confguation)

Weight:

89020 — 8-inch: 6.54 lbs./2.96 kg (without mounting plate)

810060 — 10-inch: 6.32 lbs./2.87 kg (without mounting plate)

812020 — 16-inch: 11.94 lbs./5.41 kg (without mounting plate)

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Aperture Diameter:

89020 - 8-inch model: diameter: 8 inches/203.2mm

810060 - 10-inch model: diameter: 10 inches/254mm

812020 - 16 inch model: diameter: 16 inches/406.4mm

Overall Dimensions:

1K/8 inch:

10.95"/278mm wide x 15.47"/393mm high x 3.12"/79mm deep

2K/10 inch:

12.95"/329mm wide x 17.47"/444mm high x 2.73"/69mm deep

5K/16 inch:

18.95"/481mm wide x 23.47"/596mm high x 2.18"/55mm deep
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Parts List

To order any of the following items, contact you authorized WYBRON dealer.

Eclipse Shutter IT Dowsers and Power Supplies

89020	8-inch Eclipse Dowser
810060	10-inch Eclipse Dowser
812020	16-inch Eclipse Dowser
20150	PS-150 Power Supply, 150 watts
20300	PS-300 Power Supply, 300 watts
20600	PS-600 Power Supply, 600 watts
20250	PS-450i Power Supply, 300 watts (Wall Mount)

Eclipse Shutter IT brackets and accessories

715-01-03P	PS 150-300-600 Power Supply hanger bracket
SCRWC252075	Wing screw for Power Supply hanger bracket to pipe
SCRSC2520037	Socket cap screw for hanger bracket to Power Supply
11010-1	Control Pendant

Wybron 4 pin cable – 4 pin

/042-3	3' power/signal cable
7042-5	.5' power/signal cable
7042-10	.10' power/signal cable
7042-15	.15' power/signal cable
7042-25	.25' power/signal cable
7042-50	.50' power/signal cable
7042-75	.75' power/signal cable
7042-100	.100' power/signal cable
	-

InfoTrace System Overview

Figure 1



The diagram above outlines the key components, which include:

InfoTrace	_	The entire system is referred to as the InfoTrace System
InfoGate	-	The software and hardware required to facilitate the transfer and display of information
InfoChip	-	A conversion chip that can be used with non-RDM equipment to allow communication with the InfoGate Software
InfoStore	-	An Internet based application that aggregates data captured by InfoGate and allows for the accumulation of historical information related to the equipment performance in the installation
IT Products	_	Coloram IT, CXI IT, Eclipse shutter IT, and Eclipse Iris IT all have updated electronics to support RDM communication plus additional product improvements, including sensors to detect a variety of conditions.

The heart of the InfoTrace (IT) system is InfoGate — specialized software and hardware that uses the bi-directional communications protocol, Remote Device Management (RDM), to facilitate remote addressing and diagnostics for potentially every piece of equipment mounted on a rig. InfoGate works with all IT products and all RDM-compatible equipment from any manufacturer.

In addition, any non-RDM equipment can be upgraded with the installation of an InfoChip. Because InfoGate can work with any equipment, the setup, unit testing, and troubleshooting for an entire rig can be coordinated from a single laptop.

Wybron's IT equipment (Coloram IT, CXI IT, Eclipse Shutter IT, and Eclipse Iris IT) is

equipped with a series of sensors that can relay a wealth of information to InfoGate. These sensors can detect everything from light, voltage, current, to fan speed and even gelstring frame color information.

So while RDM equipment will allow identification and remote addressing, IT equipment can give more specific status information and warn of potential problems, possibly averting failures in the middle of a show. If the status of a device indicates any problem, InfoGate displays an alert with the nature of the problem and the exact location. Troubleshooting is now done in a fraction of the time.

InfoTrace provides the ability to:

- Automate the setup of DMX addresses no more manual setting of DIP switches
- Proactively check the condition of equipment before, during and after a show
- Track lamp duty cycles to predict lamp failures before they happen
- Predict maintenance on equipment

Sensors

- Aperture Light Sensor: Detects if the fixture's lamp is on.
- Voltage Sensor: Reports the head voltage level.
- Timers: Tracks how many hours the unit has been in operation since its last maintenance cycle.
- Fan RPM Sensor: RPM sensor on fan.
- Self Test Mode: Moves the dowser fins without a DMX input command.
- Reverse Polarity Protection: Auto shutdown if dowser is plugged into a Coloram II
 power supply.

Alert Warnings include:

- Fan Stopped Warning
- High Motor Current Warning during initialization
- Init Fail
- Low Voltage Alert
- Low Voltage Unit Shutdown

Features

Self Test Mode: Moves the dowser fins without a DMX input command.

Reverse Polarity Protection: Auto shutdown if dowser is plugged into a Coloram II
 power supply.

Warranty information

WYBRON, INC. warrants to the original owner or retail customer that for a period of one year from date of delivery of a portable system or energization of a permanently installed system (up to a maximum of 18 months from delivery) its products will be free from defects in materials and workmanship under normal use and service.

..... Warranty does not cover any product or part of a product subject to accident, negligence, alteration, abuse, misuse or any accessories or parts not supplied by WYBRON, INC. Warranty does not cover "consumable" parts such as fuses, lamps, or color media. WYBRON, INC.'s warranty does not extend to items not manufactured by us. Freight terms on warranty repairs are FOB WYBRON, INC. factory or designated repair facility. Collect shipments or freight allowances will not be accepted.

WYBRON, INC.'s sole responsibility under this warranty shall be to repair or replace at WYBRON, INC.'s option such parts as shall be determined to be defected on WYBRON, INC.'s inspection. WYBRON, INC. will not assume any responsibility for any labor expended or materials used to repair any equipment without WYBRON, INC.'s prior written authorization. WYBRON, INC. shall not be responsible for any incidental, general or consequential damages to property, damages for loss of use, time, profits or income, or any other charges.

The owner's obligations during the warranty period under this warranty are to notify WYBRON, INC. at WYBRON, INC.'s address within one week of any suspected defect, and return the goods prepaid to WYBRON, INC. at their factory or authorized service center.

This warranty is contingent on the customer's full and timely compliance with the terms of payment set forth in said purchase order. This warranty is expressly in lieu of any and all other warranties expressed or implied including the warranties of merchantability and fitness for a particular purpose and of other obligations and liabilities on our part. The owner acknowledges that no other representations were made to him or relied upon him with respect to the quality and function of the goods sold.

This written warranty is intended as a complete and exclusive statement of the terms thereof. Prior dealings or trade usage shall not be relevant to modify, explain or vary this warranty. Acceptance of, or acquiescing in, a course of performance under this warranty shall not modify the meaning of this agreement even though either party has knowledge of the performance and a chance to object.



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Revision History

Author	Date	Description
John Tabor	2/10/09	Model numbers/ reformat
Susan DeLancey	2/27/2012	Revised warning on page 5