

Operation Manual

High Intensity UV-A Lighting Fixture

LT-400(F)(WS)(S)12

LT-400(F)(WS)(S)22

LT-400(F)(WS)(S)32



LONG-THROW™
LIGHTING SERIES

WildFire®
LIGHTING & VISUAL EFFECTS
Ignite Your Imagination™

Table of Contents

Introduction	3
Safety Statements	3
Specifications	4
Setup & Operation	5
Unpacking	5
Optional Accessories	5
Installation	5
Operation	5
DMX Address Mode	6
Lamp Timer Mode	6
DMX Data Mode	6
Dark Mode	6
Changing Reflectors	6
Maintenance & Troubleshooting	7
Lamp Replacement	7
Cleaning	7
Troubleshooting	7
Diagrams	8
Isometric & Line Views	8
Exploded View	9
Part List	10
Schematic	11
Spectral Transmission Graph	12
Photometrics Chart	12
Limited Warranty	13

Introduction

Congratulations on your purchase of a Wildfire Long-Throw 400 Series II UV-A Lighting Fixture. This advanced ultraviolet projector is the flagship of the Long-Throw Series line. Its powerful throw, quiet operation and smooth even light distribution, has made the Wildfire 400 Series the world's best selling UV lighting fixture. Features include advanced interchangeable reflectors, smart electronic ballasting and state-of-the-art digital DMX control with four user selectable modes for easy integration with intelligent lighting systems. Please take a moment to read this manual thoroughly before attempting to operate this fixture. Improper set-up, use or servicing may cause damage to the fixture and/or lamp and void the unit's warranty.

Safety Statements

CAUTION – RISK OF EXPOSURE TO ULTRAVIOLET (UV) RADIATION. DO NOT OPERATE WITHOUT COMPLETE LAMP ENCLOSURE IN PLACE, OR IF FILTER GLASS LENS IS DAMAGED

DANGER – INTENSE HEAT. AVOID CONTACT BY PERSONS AND MATERIAL.

CAUTION – RISK OF ELECTRICAL SHOCK AND FIRE. DISCONNECT FIXTURE BEFORE RELAMPING. USE WITH MAX 400W LAMP TYPE M59 (WILDFIRE IRONARC MODEL LMP-400D). DRY LOCATIONS ONLY. NOT FOR RESIDENTIAL USE.

WARNING – THIS FIXTURE CONTAINS A HIGH INTENSITY UV METAL HALIDE LAMP, WHICH IS SAFELY CONTAINED WITHIN AN INTERLOCKING HOUSING. WHEN THIS FIXTURE IS USED IN ACCORDANCE WITH THE MANUFACTURERS OPERATING INSTRUCTIONS, NO HAZARDS EXIST TO MOST PEOPLE STANDING WITHIN THE BEAM OF THE FIXTURE. HOWEVER, INDIVIDUALS SUFFERING FROM A RANGE OF SUNLIGHT EXPOSURE DISORDERS, APHAKIC AND PSEUDOAPHIKIC, OR THOSE INDIVIDUALS RECEIVING PHOTSENSITIVE MEDICATION MAY RECEIVE DISCOMFORT IF EXPOSED TO ULTRAVIOLET LIGHT.

HG – THE LAMP IN THIS FIXTURE CONTAINS MERCURY. MANAGE IN ACCORDANCE WITH DISPOSAL LAWS. SEE: WWW.LAMPRECYCLE.ORG OR CALL 1-800-937-8065

Specifications

Ballast:

Electronic Power Factor >97%

Rating:

100 or 120 VAC / 60Hz. / 4.5 Amps Max / 400W
200-240 VAC / 50-60Hz. / 2.0 Amps Max / 400W

Electronic Ballast Features:

Flicker & Noise Free
Automatic Lamp Failure Shutdown
Automatic High Temperature Shut Down
Automatic Hot Re-strike Prevention

Circuit Protection:

100 or 120V Models: 7 Amp Magnetic Over-current Breaker Switch
200-240V Models: 5 Amp Magnetic Over-current Breaker Switch

Lamp:

Wildfire IronArc[®] 400-Watt Metal Halide Model LMP-400D (1000 Hr. Rated)

Beam:

LT-400F	90°
LT-400WS	50°
LT-400S	20°

Reflector:

Spun Peened Aluminum, Alzak Coated

Lenses:

8" Round Tempered Borosilicate UV-A Filter Glass
8" Round Clear Boro Float Glass

Peak Spectral Transmission:

350-365nm

Optimum Operating Temperature:

+50°F to +120°F

Weight:

100 or 120V Models: 36.50Lbs. / 16.55Kg.
200-240V Models: 30.45Lbs. / 13.81Kg.

Dimensions:

10.37"/26.33cm High x 10.61"/26.94cm Wide x 20.37"/51.73cm Long

Accessory Bracket:

10" / 25.4cm Bracket Assembly

Standard Equipment:

Lamp (139-003)
Quick Trigger Truss Mounting Clamp (147-020)
Safety Cable (147-002)

Optional Accessories:

10: Barn Door: (146-002)
8" Dowser: (145-004)
8" Iris (145-002)
Floor Stand (147-008)

Specifications subject to change without notice

Made in the USA

Setup & Operation

Unpacking

Unpack the fixture and carefully inspect for any signs of physical damage. Report any damage to Wildfire or your local distributor immediately. Included with each unit should be the following items:

1. Pipe mounting clamp, designed to attach the fixture to a 1 1/2" to 2" pipe truss
2. Safety Cable, provided to secure the fixture when mounted on a pipe truss
3. Wildfire IronArc[®] Lamp, Model LMP-400D

Before mounting the fixture you will need to install the lamp. Refer to Lamp Replacement on page 6 for correct installation.

Optional Accessories

Floor Stand- This aluminum stand set enables you to mount your Long-Throw fixture on the floor for footlight applications. Contact Wildfire or your local distributor for pricing.

Installation

After installing the lamp place the fixture in desired location. The fixture is equipped with a yoke assembly for mounting. The yoke may be fitted with either a pipe clamp (included) for mounting on a pipe truss or a baby bail block or junior pin for mounting on a light stand.

If the fixture is mounted on a pipe truss, be sure to use the included safety cable, looping it through the yoke assembly and around the pipe truss. This will prevent the fixture from falling and causing possible injury in the event that the pipe clamp was not securely tightened.

To adjust the angle of the fixture, loosen the knobs on either side of the unit slightly, rotate to desired angle and tighten. Care should be taken to support the front of the fixture while loosening the knobs to prevent the fixture from rotating forward and causing possible injury.

The fixture comes standard with a 10" Bracket assembly for attaching dowsers and scrollers such as Wybron's Eclipse or Coloram Series, as well as barndoors and other accessories. When using accessories with this fixture, be sure to attach the safety cable provided by the accessory manufacturer to the fixtures yoke assembly.

Plug the fixture into the appropriate power source. If you are controlling the unit with a lighting control board, you will need to make sure it is plugged into a non-dim circuit. If the fixture is plugged into a dimmable circuit, it will not operate.

Operation

To strike the fixture push the power/breaker switch to the on position. After striking the lamp allow at least 2 minutes for the lamp to get to full brightness. Once the fixture has been powered up and the lamp has ignited if you shut it off you will need to wait approximately 5 minutes to allow the lamp to cool before the fixture can re-strike.

If the power/breaker switch is left in the on position during the cool down period, the hot re-strike prevention circuitry in the ballast will prevent the lamp from striking until it is completely cooled. Once it has cooled sufficiently, it will strike automatically. This fixture is also equipped with automatic lamp failure protection circuitry that shuts the fixture down if the lamp should fail for any reason, preventing any damage to the fixture. In addition there is high temperature protection circuitry that shuts the fixture down if the ballast case temperature exceeds 85° C. When the fixture cools it will strike again automatically.

DMX Address Mode

Select the DMX address mode by pressing the select button until the yellow DMX Address LED is lit. The display will read the last DMX address selected. Set the desired DMX address (001 to 512) by pressing the up or down buttons. Pressing either the up or down buttons for longer than 3 seconds will cause the display to move up or down rapidly. Once the fixture receives a DMX signal with a data value of 140 or above the lamp will strike. When the data value falls to 120 or below the lamp will extinguish. If power and or DMX signal to the fixture is lost, the last address selected will be retained when power and or DMX signal is regained. The DMX input/output connector pin configuration is: Common Pin 1, Data Minus Pin 2 and Data Plus Pin 3. Pins 4 and 5 are wired thru.

To operate the fixture without DMX, set the address to 702. This forces the fixture on regardless if DMX signal is present or not. This is the default address setting when the fixture ships from the factory

Lamp Timer Mode

Select this mode by pressing the select button until the red Lamp Timer LED is lit. The display will show the current hours on the lamp in the fixture. When it reaches 1000 the red LED will flash continuously to let you know it is time to change the lamp. If another mode is selected when the lamp timer is at 1000 hours or over the display will always default back to the lamp timer mode within 10 seconds until the lamp timer is reset or rolls over at 9999 hours. Pressing and holding the up & down buttons simultaneously for 5 seconds while in the lamp timer mode will reset the lamp timer. If the fixture is powered up and the lamp doesn't ignite, the display will flash "O F F" while in this mode until the lamp ignites. If another mode is selected at this time, the display will always default back to the Lamp Timer mode in 10 seconds until the lamp ignites. The lamp timer will retain the current hours on the lamp even when the fixture is unplugged

DMX Data Mode

To select this mode, press the select button until the green DMX Data LED is lit. The display will read the data value of the DMX signal being received. When a DMX data value of 140 or greater is received, the fixture will turn on. When a data value of 120 or less is received the fixture will turn off. If power is removed and DMX signal is still present, the current data value being sent to the fixture will be read as soon as power is reapplied. If no DMX signal is being received or DMX signal is lost, the DMX data LED will flash, the display will read "0 0 0" and the fixture will default to off unless the DMX address is set to 702 as indicated above. If another mode is selected at this time, the display will always default back to the DMX data mode in 10 seconds until the DMX signal is restored or the address is set to 702.

Dark Mode

Pressing and holding the select button for 5 seconds in any of the three modes will darken the display and LED while still retaining all information. To turn the display back on press the select button again

Changing Reflectors

There are three different interchangeable reflectors available for the LT-400 Series II, a 20° Spot (125-005-02), 50° Wide Spot (125-006-02) and 90° Flood (125-007-02). To change the reflector, unplug the fixture and remove any accessories from the front. Make sure the fixture is cool to the touch before opening the front lens assembly cover. Unhook the clasps on either side of the fixture allowing the front lens assembly cover to swing down. Remove the lamp by grasping the lamp in the center, pushing it gently to one side and sliding the other end forward.

Remove the 2 bracket screws on either side of the fixture. (See Diagram 1) Once the bracket screws have been removed grasp the reflector and slide the whole assembly (brackets, sockets and reflector) forward. Disconnect the two socket wire connections and slide the reflector assembly forward out of the fixture. You can now remove the reflector from the brackets. When attaching the new reflector to the brackets note that the brackets are stamped with S, WS and F indicating the proper set position for each reflector and associated socket mounting points. Once the reflector has been changed, you can reinstall the assembly by reversing the removal procedure.

Maintenance & Troubleshooting

Lamp Replacement

Unplug the fixture. Remove any accessories from the front. Make sure the fixture is cool to the touch before opening the front lens assembly cover. Unhook the clasps on either side of the fixture allowing the front lens assembly cover to swing down. Grasp the lamp in the center remove it by pushing it gently to one side sliding the other end forward. Reverse this procedure to install the new lamp. After installing gently rock the new lamp back and forth to insure the depressions on the ends of the lamp are firmly seated on the posts of the sockets. If the lamp is not firmly seated, arcing could occur melting both the socket and lamp. Care should be taken not to touch the new lamp directly. Use a cloth or glove when handling. If you have touched the lamp, it must be cleaned with alcohol to remove any oils and fingerprints prior to striking. For maximum UV-A output, always use Wildfire IronArc™ lamps, and change the lamp in your fixture every 1000 hours.

Cleaning

For best performance, the reflector, lamp and filter lens should be kept free of dirt and dust. At no time should any cleaning chemicals or abrasives be used to clean any part of the fixture. Do not spray or apply any liquid directly to any part of the fixture. Always unplug the unit before cleaning. For normal cleaning, a dry soft cloth should be used to wipe any surface free from dust and light dirt. Cleaning the reflector will require that the lamp be removed. Remove the lamp by following the instructions listed under lamp replacement above. Once the lamp has been removed, gently wipe off the reflector using a soft dry cloth. In the event the reflector is heavily soiled, lightly dampen the cloth with a mild window cleaning agent and wipe clean. The filter lens can be cleaned in the same manner. The lamp should be cleaned with alcohol only.

Troubleshooting

Red LED is flashing display reads 1000 to 9999: -- The lamp has reached the end of its life, reducing UV output considerably. Replace the lamp in the fixture

Red LED is on and the display is flashing “O F F”: -- The fixture is attempting to strike the lamp, however, the lamp has either not cooled enough to strike or the lamp is bad. Wait 5 minutes for the lamp to completely cool. If it still won't strike, replace the lamp.

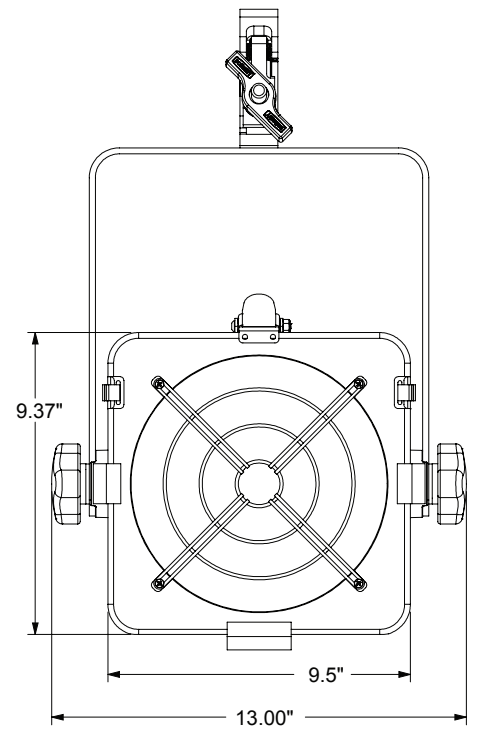
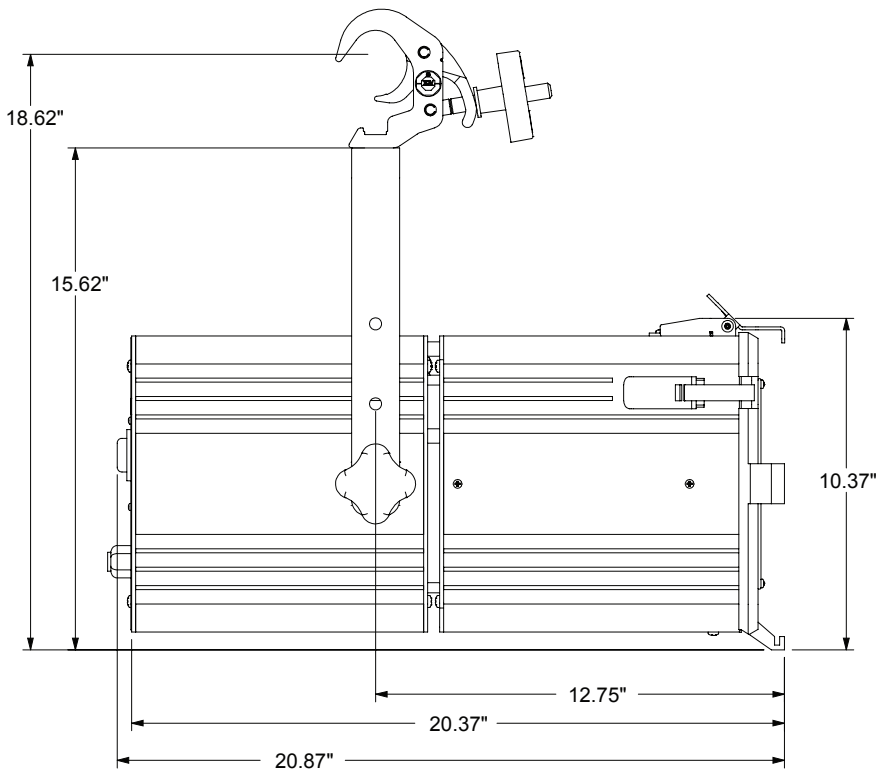
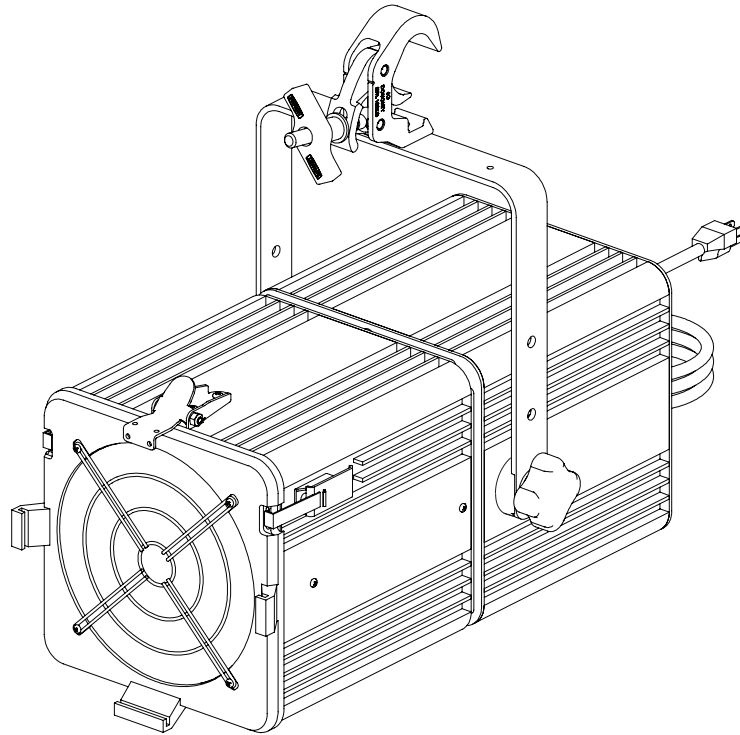
Green LED is flashing and the display reads “0 0 0”: -- The fixture is set for a valid DMX address and connected to a DMX output device such as a lighting control board however; DMX signal is not being received by the fixture. Check your DMX output device as well as the DMX input cabling connected to the fixture to insure that both are properly transmitting DMX data.

Display and LED's are not lit: -- Fixture is operating in dark mode. Press the select button to reactivate the display and LED's

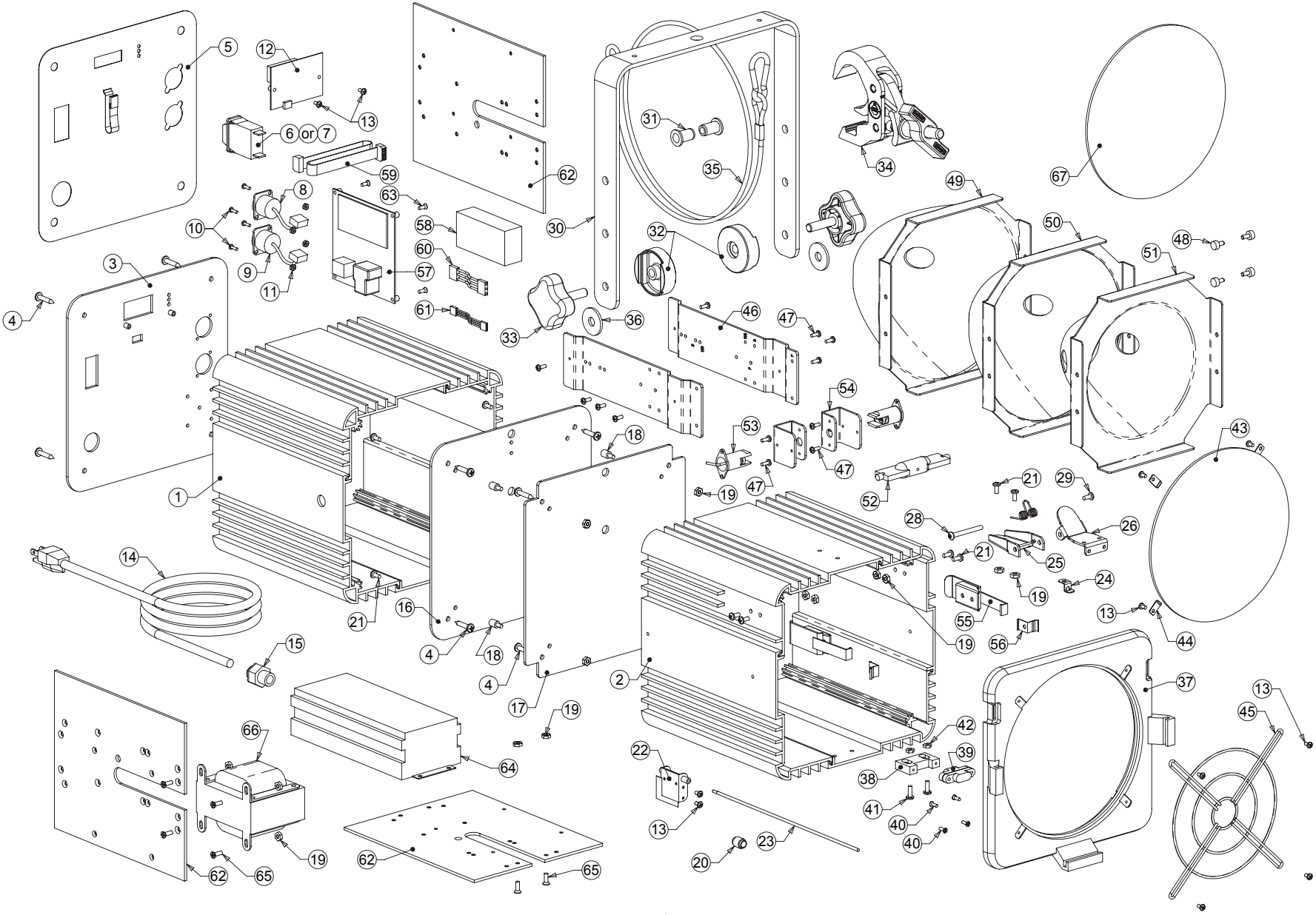
The fixture will not strike: – Check to make sure there is power to the fixture. Make sure the power/breaker switch on the back of the fixture has not been tripped. Unplug the unit. Check to see if it has a lamp installed and that it is seated properly in the sockets (see lamp replacement above). Check to see if the safety cutoff switch is making contact by closing the lens cover and listening for a clicking sound. If the fixture still is not striking, try replacing the lamp. If you have checked all of the above and the fixture still won't strike, contact Wildfire technical support at (310) 755-6780 or your local distributor.

The effect is not working anymore: – Try changing the lamp. The lamp in your Wildfire fixture is rated at 1000 hours. This does not necessarily mean that the lamp will “burn out” or not light after 1000 hours. It may continue to burn for much longer period of time; however, the amount of UV it produces will be reduced considerably causing the effect to appear as though it isn't working. For maximum effect Wildfire recommends changing the lamp every 1000 hours of operation.

Isometric & Line Views



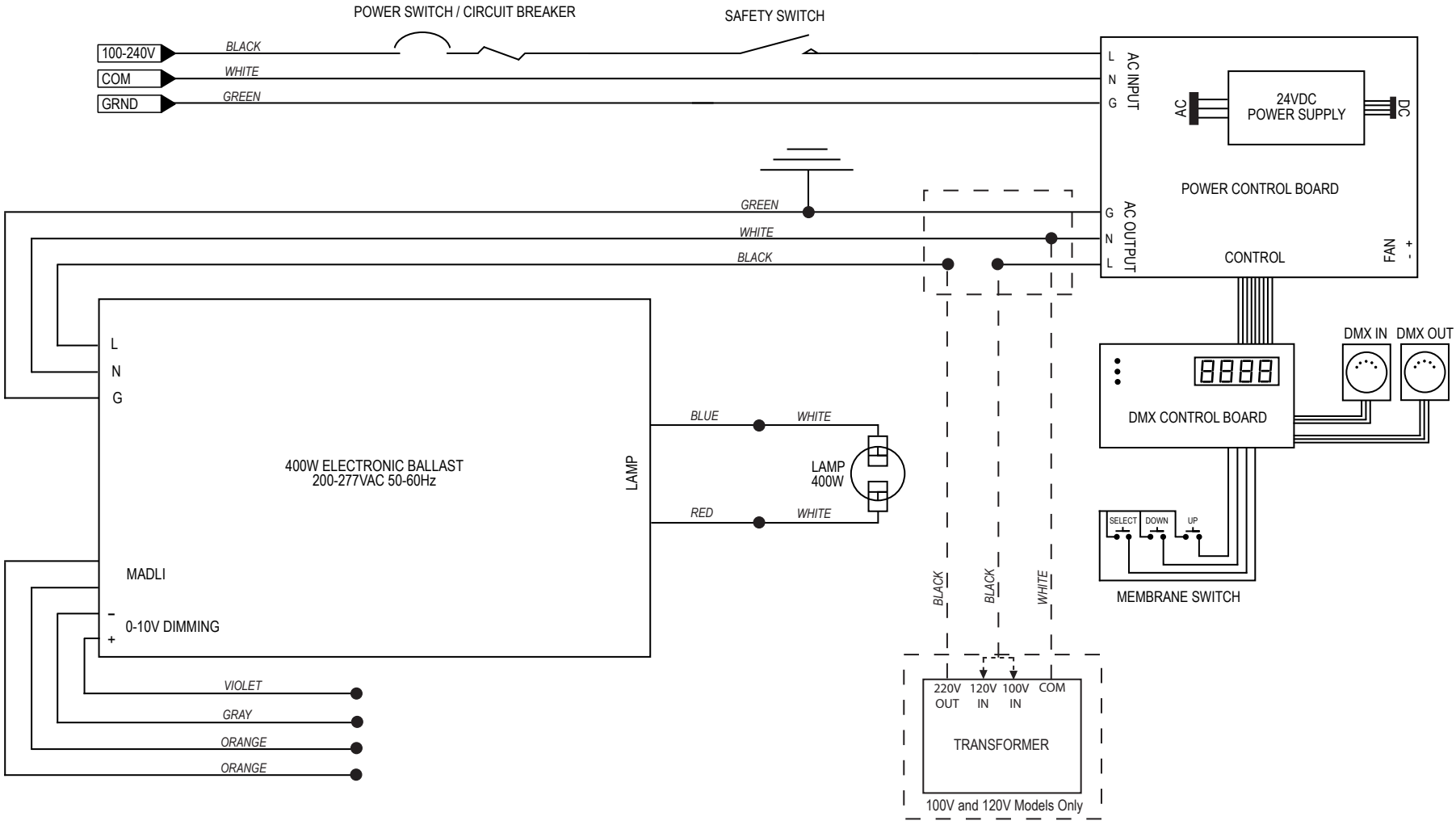
Exploded View



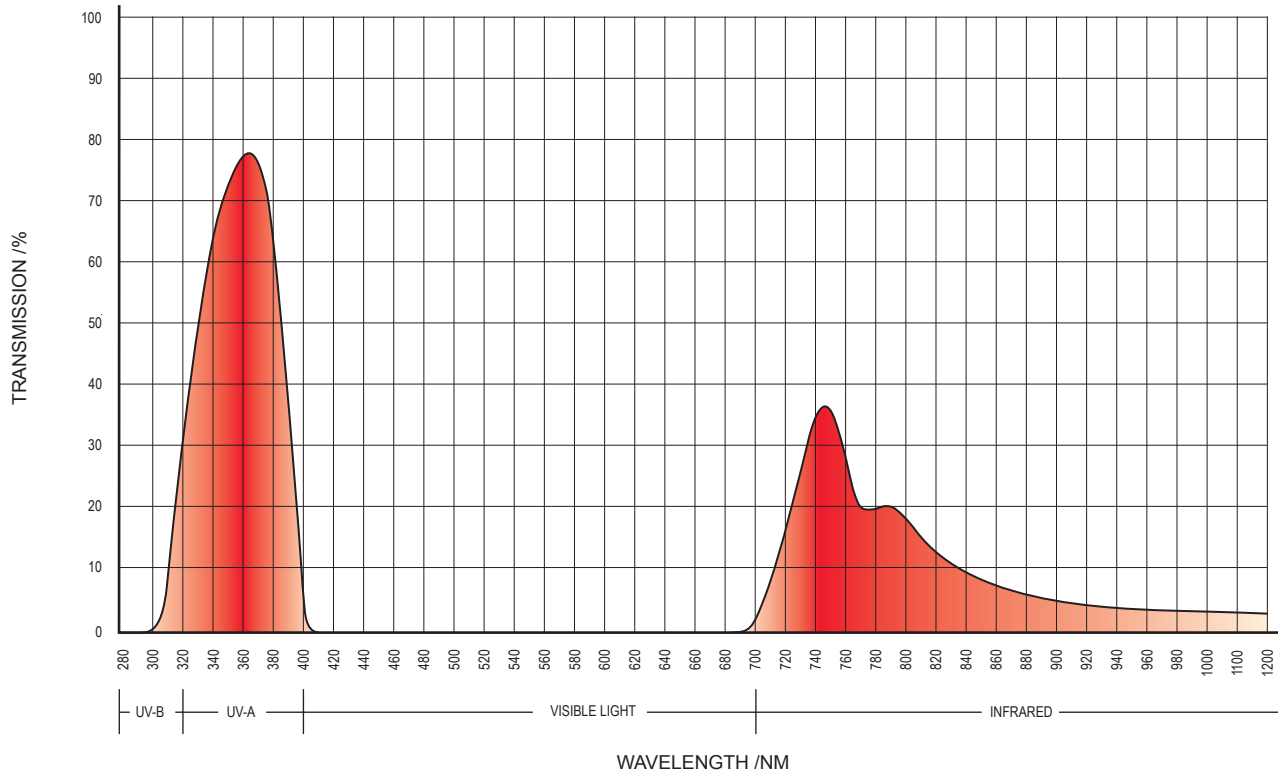
Part List

#	QTY.	PART #	PART NAME	#	QTY.	PART #	PART NAME
1	1	102-005-01	Housing, Ballast, LT-400F	35	1	147-002	Cable, Safety, 1/8"
2	1	102-006-05	Housing, Lamp, LT-400 Series 2	36	2	121-060	Washer, Flat, 1.25" OD, 13/32 ID, .13 Thk, 18-8 SS
3	1	104-044-03	Control Plate, Rear, LT-400	37	1	103-002-07	Lens Door, 8" Round, LT-400F
4	12	121-016	Screw, TD, SM, PHL, PH, #10 x 1" 18-8 SS	38	1	104-002-01	Bracket, Soss Hinge
5	1	128-002-03	Label, Control, LT-400F	39	1	118-001	Hinge, Soss, #101, Chrome
6	1	105-002	Circuit Breaker, Carling, 5 Amp	40	4	121-004	Screw, M, PHL, FH, 5-40 x 3/8"
7	1	105-003	Circuit Breaker, Carling, 7 Amp	41	2	121-013	Screw, M, PHL, PH, 8-32 x 1/2" 18-8 SS
8	1	106-030	Connector, 5 Pin XLR, Male, EM & SM	42	2	121-039	Nut, SP, 8-32 18-8 SS
9	1	106-031	Connector, 5 Pin XLR, Female, EM & SM	43	1	105-004	Lens, Clear, Boro Float, 8" Round
10	4	121-003	Screw, M, PHL, PH, 4-40 x 3/8" 18-8 SS	44	4	104-080-01	Clip, Filter Restraining
11	4	121-034	Nut, Nylock, 4-40, 18-8 SS	45	1	104-027-01	Safety Screen, LT-400F
12	1	115-001-04	PCB Board, Display, Rev. 4	46	2	104-094-01	Bracket, Reflector
13	12	121-005	Screw, M, PHL, PH, 6-32 x 1/4" 18-8 SS	47	12	121-005	Screw, M, PHL, PH, 6-32 x 1/4" 18-8 SS
14	1	107-001	Cord, Power, 14 AWG, 9', 120V	48	4	121-020	Screw, M, TMB, 8-32 x 3/8" 18-8 SS
15	1	122-003	Strain Relief, Power Cord	49	1	125-008-01	Reflector, LT-400S
16	1	104-052-03	Divider Plate, Ballast, LT-400F	50	1	125-009-01	Reflector, LT-400WS
17	1	104-053-03	Divider Plate, Lamp, LT-400F	51	1	125-010-01	Reflector, LT-400F
18	4	121-068	Standoff, M-F, 8/32 x 5/16" x 3/8"	52	1	139-003	Lamp, MH, IronArc, UV, 400W
19	18	121-037	Keplnut, 8-32, 18-8 SS	53	2	108-005	Socket, Lamp, Rx7 Base, LT Series CH
20	3	104-075-01	Bushing, Wire & Switch Routing	54	2	104-097-01	Bracket, Socket, CN
21	10	121-011	Screw, M, PHL, PH, 8-32 x 3/8", 18-8 SS	55	2	118-002	Draw Latch
22	1	105-010	Switch, Safety Interlock	56	2	118-003	Catch, Secondary, Draw Latch
23	1	104-022-03	Rod, Switch, LT-400 Series 2	57	1	116-003-05	Board, Power Relay, LT Series, Rev. 5
24	1	104-016-01	Bracket, Switch Rod, Retaining	58	1	110-030	Power Supply, 24 VDC, DMX Board
25	1	104-077-02	Base, Accessory Safety Catch	59	1	107-008	Cable, Ribbon, 11", PSM to DM
26	1	104-078-01	Latch, Accessory Safety Catch	60	1	107-014	Cable, AC Connection, Power Supply
27	1	104-098-01	Spring, Double Torsion	61	1	107-015	Cable, DC Connection, Power Supply
28	1	121-027	Bolt, Barrel, M, COM, PH, .25" x 1.5" 18-8 SS	62	3	104-039-09	Component Plate, LT-400
29	1	121-026	Screw, M, COM, PH, 10-32, .25" 18-8 SS	63	4	121-006	Screw, M, PHL, FH, 6-32 x 3/8" 18-8SS
30	1	104-033	Yoke, LT-400 Series	64	1	110-020	Ballast, MH, Elec., 120-277V/50-60/250W
31	2	121-032	Rivet Nut, Blind, 16 x 3/8"	65	8	121-012	Screw, M, PHL, FH, 8-32 x 1/2" 18-8 SS
32	2	103-006-01	Spacer, Yoke Assembly	66	1	110-041	Autotransformer, 400W, 100-120V to 220V
33	2	120-001	Knob, Yoke Adjustment, LT-Series	67	1	123-008	Lens, UV, 8" Round
34	1	147-020	Clamp, Quick Trigger Slimline, Black				

Schematic, LT-400(F)(WS)(S) Series II



Spectral Transmission Graph



Photometrics Chart

LT-400F Photometrics Chart

90° Flood

Distance in Feet/Meters

	5 / 1.52	10 / 3.05	20 / 6.10	30 / 9.14	40 / 12.19	50 / 15.24	60 / 18.29	70 / 21.33	80 / 24.38	90 / 27.43	100 / 30.48	110 / 33.53	120 / 36.57
Beam Diameter Feet	10	20	40	60	80	100	120	140	160	180	200	220	240
Beam Diameter Meters	3.05	6.10	12.19	18.29	24.38	30.48	36.57	42.67	48.77	54.86	60.96	67.05	73.15
Peak UV-A Intensity $\mu\text{W}/\text{cm}^2$	570.0	142.5	35.6	15.8	8.9	5.7	3.9	2.9	2.2	1.7	1.4	1.1	.99

Limited Warranty

Wildfire, Inc. warrants to the original owner or retail customer, that for a period of three years from the date of delivery of any Wildfire Fixture; whether used in a portable or permanent installation, such fixtures will be free from defects in material and workmanship under normal use and conditions.

Warranty does not cover any product or part of a product that has been subjected to accident, negligence, alteration, abuse or misuse and excludes any accessories or parts not supplied by Wildfire. Warranty does not cover expendable parts such as fuses, lamps, glass or any components warranted directly to the owner by the original manufacturer. This warranty does not extend to products not manufactured by Wildfire.

Wildfire's responsibility under this warranty shall be to repair or replace at Wildfire's discretion such parts as determined to be defective upon Wildfire's inspection. Wildfire will not assume any responsibility for any labor expended or materials used to repair any equipment without Wildfire's prior written authorization.

Wildfire, Inc. shall not be responsible for any incidental, general or consequential damages to property, damage for loss of use, time profits or income, or any other charges.

The owners' obligation during the warranty period is to notify Wildfire of any suspected defect, to obtain a return authorization number, and to return the product freight and insurance prepaid to the following address:

**Wildfire Service, 2908 Oregon Court Suite G1, Torrance, CA 90503
(800) 937-8065 (310) 755-6780**

Collect shipments for freight allowances or shipments without return authorization numbers will not be accepted.

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 ALL OTHER OBLIGATIONS AND LIABILITIES ON WILDFIRE'S PART. THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. THE OWNER ACKNOWLEDGES THAT NO OTHER REPRESENTATIONS WERE MADE TO 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 their agreement even though either party has knowledge of the performance and a chance to object.

This limited warranty gives you specific legal rights and you may also have other rights which vary from state to state. If any action or preceding results from this warranty, the prevailing party will be entitled to all costs and attorney fees incurred in defending or prosecuting such actions.



2908 Oregon Ct. Suite G1, Torrance, CA 90503
310-755-6780 800-937-8065 Fax: 310-755-6781
www.wildfirefx.com mail@wildfirefx.com

Wildfire and its symbol are registered trademarks of Wildfire, Inc. Torrance, CA
IronArc and its symbol are registered trademarks of Wildfire, Inc. Torrance, CA
Ignite Your Imagination is a registered trademark of Wildfire, Inc. Torrance, CA

© 2004 - 2009 Wildfire, Inc.