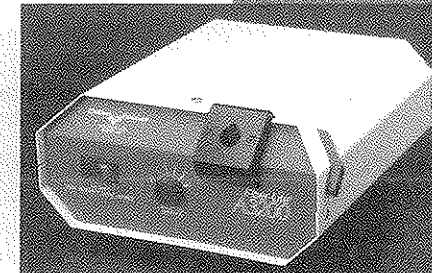


Fiber-Lite
A3000



Fiber-Lite
A3200

**OPERATION MANUAL for the
FIBER-LITE A3000 & A3200
FIBER OPTIC ILLUMINATORS**

Intended Use

For laboratory or industrial usage as a light source for:

- *Microscopy*
- *Machine Vision*
- *Semi-Color*
- *Photography*

Introduction

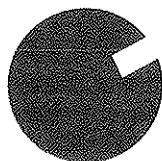
Your purchase of the Dolan-Jenner Fiber-Lite A3000/A3200 fiber optic illuminator will provide you with many years of reliable service. Please read the instruction manual carefully to ensure satisfactory performance from your illuminator and accessories.

Intensity Controls



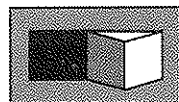
A3000

The Fiber-Lite A3000 is equipped with a unique solid state electronic intensity control. Intensity is adjusted from 0 to 100%. An internal feedback loop provides output stability and also functions as a surge protector in case of line voltage spikes. (Important: Life of the DDL lamp is a function of operating voltage, i.e. lower operating voltage=longer lamp life, higher operating voltage=shorter life.)



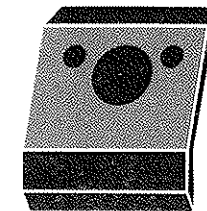
A3200

The A3200 incorporates a precise aperture intensity control which provides uniform light while maintaining constant color temperature. This feature is critical for photographic work, or for any imaging application which uses a color camera. An internal feedback loop maintains constant color temperature even with line voltage fluctuations.



Power-Switch

The A3000/A3200 incorporates a special soft start feature which slowly brings the lamp to full output to protect against premature lamp failure.



Fiber Receptacle

The nosepiece on the A3000/A3200 will accept self-supporting gooseneck fiber optics EEG2823B, EEG3922B and the ringlight fiber optic A3739B without the need for adapters. The following adapters are required for standard smaller diameter fiber optics:

<i>Bundle Diameter</i>	<i>Adapter</i>
1/16", 1/8"	SX-5B
1/4"	SX-6B

Operating Procedures

Insert the fiber optic tip into the illuminator nosepiece. Flip the power switch on and adjust intensity to the desired light level.

A WORD ABOUT FIBER OPTIC LIGHT GUIDES...

Each fiber optic contains a bundle of individual glass fibers about the size of a human hair. Each fiber consists of a central optic glass core and a cladding glass of a different refractive index, which allows for the transmission of light through total internal reflection, a phenomenon in which light rays are reflected at the core/clad interface and travel to the distal end of the fiber by a zig zag path of successive reflections. To assure maximum light input/output, each fiber bundle has an optical polish at each termination.

These bundles are then constructed in a protective sheathing to limit the bend radius, which if exceeded, could cause the fibers to fracture. The fiber optic light pipe should be treated as a laboratory instrument; considerate, common sense usage will assure an unlimited lifetime. Avoid sudden forceful pressures on bends and excessive configurations that strain the flexibility of the fiber optic.

Periodically, the ends of the fiber optic lenses should be cleaned with a lens cleaner and lens tissue.

Filter Usage A3200

The A3200 comes equipped with a filter drawer for quick removal and insertion of color filters. The FSA-3200 Filter set may be purchased separately as a set, or as individual filters. The FSA-3200 filter set contains the following components:

Qty	Description	Order Code Individual Filter
1	Green	FG32-533
1	Red	FR32-60
1	Blue	FB32-370
1	Yellow	FY32-52
1	Daylight Correction	FLB32-165
1	IR Hot Mirror	IR1-1

Filter Insertion/Removal

1. Turn power off.
2. Remove black filter holder from side of unit. Allow sufficient time for filters already in use to cool before handling (approximately 3-5 minutes).
3. Holding filter carefully by edges only, place the IR1-1 Hot Mirror with deposition side toward the lamp first then place the desired color filter over the IR1-1.
4. Reverse procedure for filter removal.

Important - Make certain that tab on filter holder is facing downward when installing into unit.

Cleaning Filters

CAUTION: To avoid filter damage, please allow filters to cool down before attempting to clean.

The best advice on cleaning IR1-1 filters is DON'T unless a "Dirty Surface" has an appreciable effect on performance. (Any cleaning operation has some associated risk of damage of the deposition surface.

Excess dust can often be removed by blowing with compressed air. Such products are available through optical supply firms. Care must be taken to prevent liquid from being released from cans under pressure. If cleaning of the colored filters is required, the following materials are recommended:

- Cleans lens tissue
- Cotton pads
- Good quality soft cloth
- Finger cots or clean gloves
- Lens cleaning solutions

- Alcohol - 95% pure distilled ethyl
- (Alcohol available from laboratory supply houses)
- Dispensers for alcohol to prevent alcohol from returning to the main reservoir with contaminates

Recommended Preliminary Filter Cleaning Procedure

1. Clean surface of a table to remove dust and grease, then place a cloth or several sheets of lens tissue on top of table. (Precaution in case filter accidentally drops.)
2. With a cleaning cloth, pick up filter with surface to be cleaned facing you.
3. Fold a cotton pad in half and then in half again to form a square.
4. Dampen the folded edge with alcohol. Beginning at the top edge of the filter, slowly and gently pull the pad down in one motion. Repeat if necessary. If streaks occur, change to clean pad with alcohol.

Final Cleaning

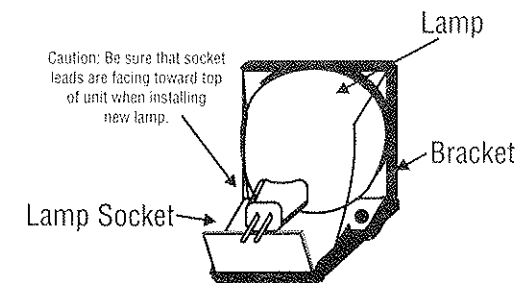
1. If streaks remain, repeat steps 2 through 4.
2. Repeat if necessary.

Filter Warning

Use only filters specified by DJI with the A3200 illuminator. Use of other filters may result in breakage or damage. Read filter use instruction carefully.

Care should be taken when using DJI specified filters to prevent damage or breakage due to improper handling. DJI is not liable for filters determined by the factory to be damaged or broken as a result of improper handling.

Lamp Replacement



Caution: To avoid electrical shock, disconnect line cord before opening cover of unit. To avoid burning hands, wait until unit has cooled.

1. Wait several minutes for lamp to cool.
2. Unplug illuminator line cord from wall socket.

3. Turn Phillips head screw on top of illuminator 1/4 turn counter clockwise.
4. Lift up cover. Slide lamp up from lamp holder to free it from spring clips.
5. Remove lamp and reflector from socket.
6. Install new DDL lamp into socket. *Important: do not touch inner quartz envelope of lamp or lamp pins when installing, since handling will result in significant shortening of lamp life.* Handle lamp by its dichroic reflector when inserting replacement unit into lamp socket. CAUTION: use DDL lamp only!
7. Install reflector/socket assembly in spring clips and push down until fully seated.
8. Close cover, insert line cord plug into wall socket.

Replacing Fuse

A power fuse is located in a holder in the back panel of the illuminator, below the line cord connector.

Procedure: Turn unit off, remove line cord from back panel of unit. Pull out fuse drawer from rear of unit, a spare fuse is housed in this assembly for your convenience. To prevent fire and electrical hazards use same or an equivalent fuse as follows:

Models A3000/A3200 (110-120V)

4 Amp 125V Time Delay
PN: 68600902463

Models A3000/A3200 (220-240V)

2 Amp 250V Time Delay
PN: 68600902465

Illuminator Replacement Parts

Models A3000/A3200

<i>Part No.</i>	<i>Description</i>
68600902495	Lamp Socket
68600902440	DDL Lamp, 150 Watt, 20V
68600902463	Fuse 115V 4 Amp, 125V
68600902465	Fuse 230V 2 Amp, 250V

Performance Statement

Dolan-Jenner Industries, Inc. (DJI) recognize that its illuminator products may be used under an almost unlimited variety of conditions. As such, we are prepared to assist the customer in the selection and application of any of these products. This includes application engineering, sample testing and other means as determined by DJI.

Where DJI has made a specific recommendation for its products, systems, or detection techniques (based on complete and detailed information furnished by customer) we will extend every effort to assure that the customer is satisfied with the performance of our products. Continual development and improvement of DJI products may require changes in details that do not coincide with descriptions or illustrations shown. All fiber optic bundle diameters are nominal.

Lifetime Warranty on Light Sources

Dolan-Jenner Industries, Inc. (DJI) warrants its products to be free from defective material and workmanship. Any light source or parts thereof which are determined by DJI to be defective within ten years (average product life cycle) from date of shipment will be replaced or repaired at our option. This policy is effective Nov. 1, 1993 and is not retroactive. All fiber optics are warranted for one year. This warranty specifically excludes both incandescent and quartz-halogen lamps, and optical filters.

Any products which in our opinion have been subject to misuse, neglect, incorrect wiring, or where installation procedures are not in accordance with the instruction manual, are excluded from this warranty. Nor does this warranty extend to products on which repairs or alterations have been made outside the factory, or on which the identification or serial number has been altered or to accessories not of our manufacture.

Our obligation with respect to products or parts covered by this warranty shall be limited to repair or replacement, F.O.B., Lawrence, Massachusetts. In no event shall DJI be held liable for consequential or special damages, or for transportation, installation, adjustment, or other expenses which may arise in connection with such products or parts. This warranty is in lieu of all other statements or warranties or guarantees, written or implied, by DJI or its authorized representatives.

Specifications

Fiber-Lite A3000

Lamp	150W Quartz Halogen, 20V, DDL
Voltage	115V/or 230 V AC Factory Set
Lamp Life	500 hrs. at full intensity
Fuse	115V Version: 4 amp, 125V, time-delay 230V Version: 2 amp, 230V, time-delay
Color Temperature	3150 degrees K
Intensity Control	Solid State 0% to 100%
Noise Level	21 db(A)
Safety Approvals	UL, CSA, TUV
Dimensions	H x W x D inches (cm) 4.2x8.6x9.8 (10.7x21.8x24.9)
Weight	13 lbs. (5.9kg)
Maximum Housing Temperature	15 degrees F above ambient
Feedback Loop	Internal Feedback Loop maintains constant output
Fiber Optic Receptacle	Position lock on gooseneck and ringlight fibers without adapters

Fiber-Lite A3200

Lamp	150W Quartz Halogen, 20V, DDL
Voltage	115V/or 23V AC Factory Set
Lamp Life	500 hrs. at full intensity
Fuse	115 V Version: 4 amp, 125V, time-delay 230 V Version: 2 amp, 250V, time-delay
Color Temperature	3150 degrees K
Intensity Control	Unique aperture design maintains light uniformity contrast color temperature
Noise Level	21 db(A)
Safety Approvals	UL, CSA, TUV
Dimensions	H x W x D inches (cm) 4.2x8.6x9.8 (10.7x21.8x24.9)
Weight	13 lbs (5.9kg)
Maximum Housing Temperature	15 degrees F above ambient
Feedback Loop	Internal Feedback Loop maintains constant output
Fiber Optic Receptacle	Positive lock on gooseneck and ring light fibers

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