



super - bright

DICHROIC 3

COLOR HEAD

MODEL 400 D

Operating Instructions

Manufactured By



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GENERAL

The Mornick "super-bright" Dichroic Color Head converts most popular black and white enlargers to 300W stepless color filtration systems (200 yellow, 150 magenta and 60 cyan) with infinite linear calibration settings, lighted filtration calibration scales, warm air discharge either inside or outside the darkroom, standard line operation on voltage without need for a step down transformer and infra-red and ultraviolet filtering from the light beam.

ADAPTERS

Adapters are currently available for the Beseler 23C, Omega B-7, B-8, B-22, Vivitar E-74 and Bogan Super-Pro. They all attach identically to the bottom plate of the unit with either two or three screws. The "super-bright" with adapters replaces the black and white light bulb housing and uses the same locking screws provided on the original equipment.

COOLING SYSTEM

The cooling system pulls the warm air out of the head and the discharge can be directed outside the darkroom by mounting the fan flange directly over a 2 inch hole cut in an outside wall.

Damage can occur inside the unit if the cooling system is not operated during the entire time the "super-bright" is being used. Also it is advisable to allow the fan to run a minute or so after the unit is turned off to discharge the heat inside the unit.

CHANGING THE LAMP

The "super-bright" uses a single G. E. (ELH) 300W Quartzline lamp rated at 35 hours with a built-in-infrared absorbing reflector. The lamp socket and power cable are both attached to the back plate. To change the lamp, remove the four corner screws on the back plate and gently tilt the bottom of the plate out, pulling down at the same time. To remove the lamp from the socket raise the two-inch wire release attached to the socket and the lamp will slide out. The new lamp should be pressed back as far as possible to properly align the light beam.

INFRARED LIGHT

Most color printing papers are extremely sensitive to infrared light. Infrared light will cause the color to shift either to cyan or red and the shift will not be reflected on the analyzer before printing. To eliminate this problem the "super-bright" uses a lamp with an infrared absorption reflector and includes an infrared reflectance filter in the light beam.

CYAN FILTRATION

Since Cyan filtration is seldom used in color printing, its use has been simplified in the color head. Cyan filtration is needed only when the needle cannot be zeroed with magenta and yellow, even after all magenta or yellow filtration has been taken out of the beam. The Cyan-colored knob on the bottom plate has three positions:

- A. Extreme left: Zero cyan filtration.
- B. Center: 30 points of cyan filtration (approx.)
- C. Extreme right: 60 points of cyan filtration (approx.)

The following procedure is suggested for Cyan use:

1. Move the cyan knob to the extreme left (zero position).
2. Using magenta, see if the needle can be zeroed.
3. Likewise, using yellow, see if the needle can be zeroed.
4. If both can be zeroed, proceed without cyan to properly color balance (see step 7 below).
5. If they cannot be zeroed, move cyan to the center position. Both magenta and yellow should register past the zero point and you can proceed with proper color balancing (see step 7 below).
6. If they still cannot be zeroed move cyan to the extreme right position. Both magenta and yellow will register past the zero point. Proceed with step 7.
7. Color Balancing
 - a. Adjust the enlarger lens aperture to zero (for red/cyan).
 - b. Adjust the magenta and yellow for needle register to the same zero color balance point as for red/cyan.

SPECIFICATIONS

Power: 115-120 V, 60 HZ.

Bulb: G. E. Quartzline Lamp - ELH - 300W.

Cooling System: Must operate during entire time lamp is turned on.

Dichroic Filtration: 200 points yellow, 150 points magenta, 60 points cyan.

Voltage Regulation: For best performance lamp should be operated on a standard 300W voltage regulator.

Ultraviolet Filter: Kodak CP2B.

Infrared Filter: Infrared reflectance coated glass filter.

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