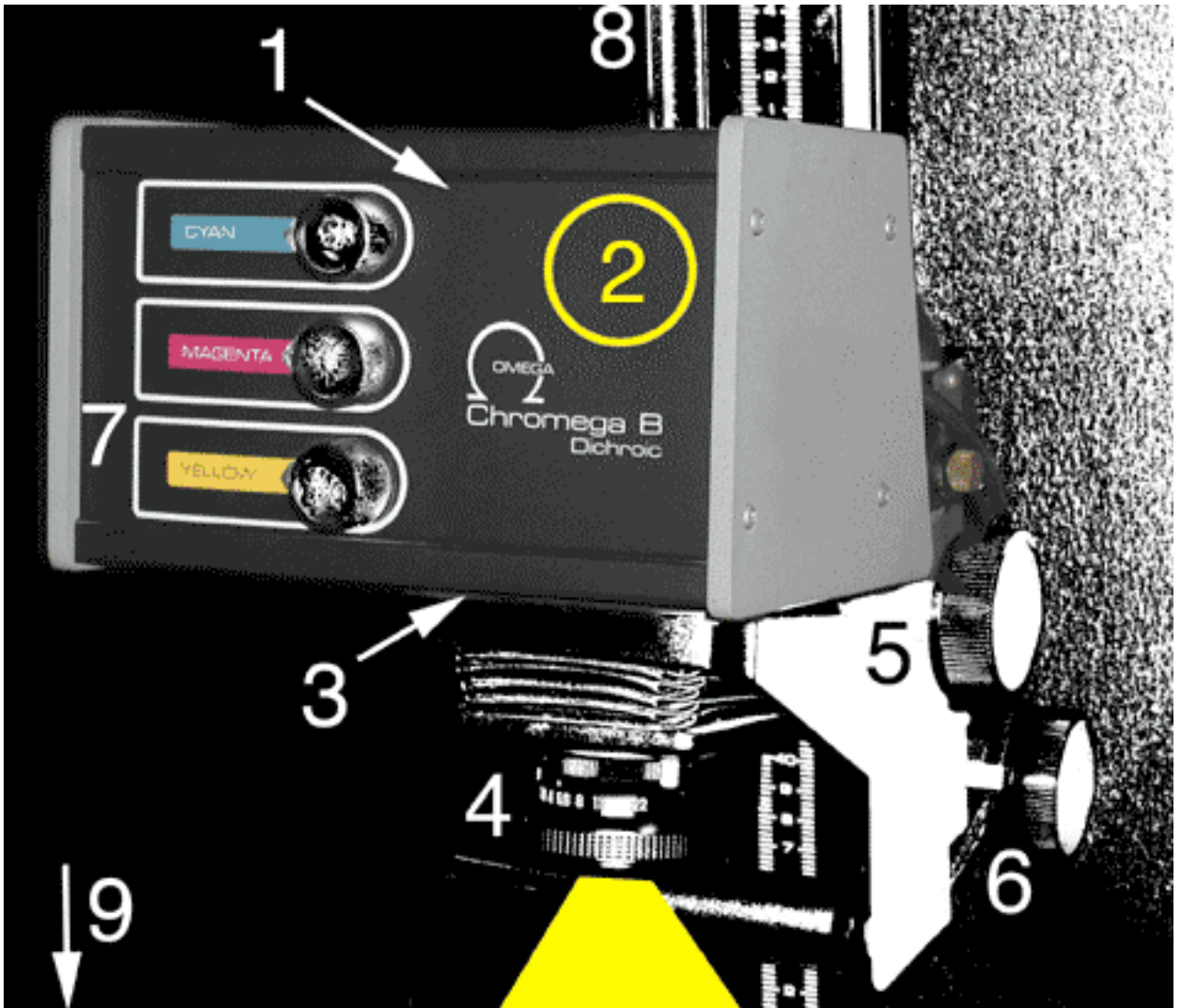


PARTS OF THE ENLARGER 08/07



THE ENLARGER HEAD (1) houses the major parts--light source, lenses, negative carriers. Raising it up or down determines the size of the image.

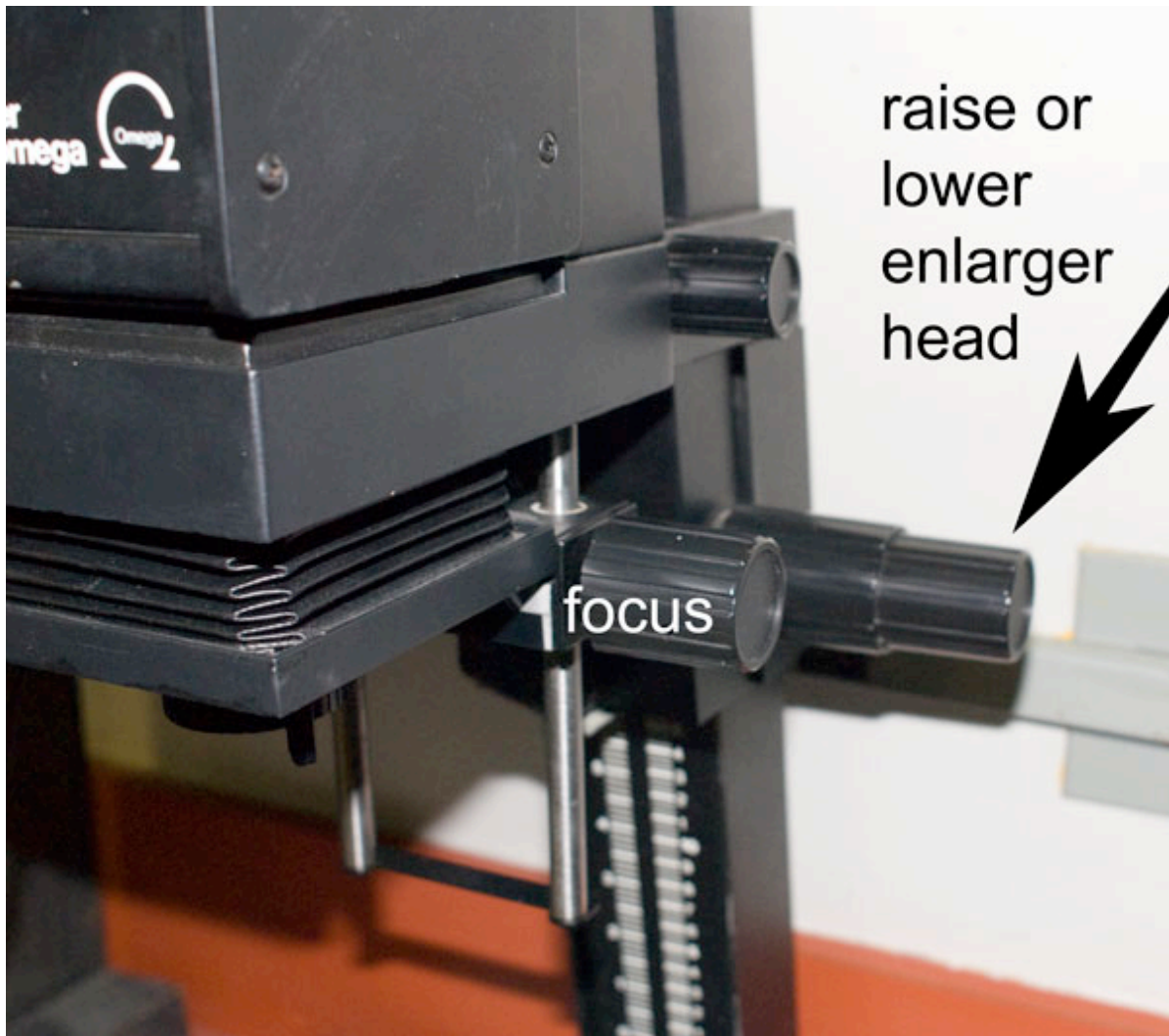
THE LAMP (2) is a tungsten bulb, producing light to expose the paper. A **DIFFUSION** enlarger (without the condenser lens) has a white plastic or glass diffuser to scatter light rays from the bulb in different directions. The negative will be uniformly illuminated by rays that overlap, softening contrast and detail on the print. (All of the UTD photography lab enlargers are diffusion enlargers). The **CONDENSER LENS** in a condensor enlarger is comprised of two convex elements, directing light uniformly over the area of the negative. Rays will go straight through the negative for crisp contrast and added detail.

THE NEGATIVE CARRIER (3) supports the negative, sliding into a slot between the condenser and the main lens.

THE LENS (4) bends the rays so that they enlarge after passing through the negative and onto the paper.

A FOCUSING CONTROL(5) moves the lens up and down to bring the projected image into focus.

THE HEIGHT ADJUSTMENT(6) controls the height of the entire head and determines the general image size. Some enlargers also have a **LOCKING MECHANISM (6)** that locks the enlarger head into place, reducing the possibility of vibration during the exposure of the paper.



FILTRATION SETTINGS FOR CYAN, MAGENTA, AND YELLOW (7) permit the dialing in of filtration for either color photographic paper or multigrade black and white paper.



A COUNTERBALANCE (8) in the supporting column eases the pressure needed to raise the heavy head

THE BASEBOARD (9) is the support and foundation for the enlarger and paper easel.

Many enlargers have a lever, designed to raise the enlarger head, so that the negative carrier can be inserted into the enlarger. For other enlargers, simply slide the negative carrier into place.

The focal length of the enlarging lens must be at least that of the diagonal of the negative, which it is to enlarge. The enlarger head is comprised of the whole enlarger system, which is suspended on a rail or track. The higher the enlarger head is from the baseboard, the larger is the image projected on the baseboard. After the desired image size is obtained, the focusing knob is used to sharply focus the image. Fine focusing is done with the enlarging lens at its maximum aperture. A focusing magnifier or grain focuser is often used to focus the image. The lens is then "stopped down" to the desired aperture. The enlarger is plugged into a timer, which regulates the

amount of time that the image is projected. The paper is held flat by being placed in an easel on the baseboard. The enlarging lens utilizes the same system of F-stops as a camera lens.

Negative Size	Focal Length of Enlarging Lens
35mm	50 - 63mm
2 1/4 inches x 2 1/4 inches (or 6cm x 6 cm)	75 - 80mm
2 1/4 inches x 2 3/4 inches (or 6cm x 9cm)	90 - 105mm
4 x 5 inches	135 -160mm

BURNING IN TOOL:

An 8" x 10" sheet of cardboard with a dime-size hole slightly off center works best. Sand both sides of the cardboard around the hole to make it smooth.

Burning-in is done AFTER the initial exposure. It may be necessary to "burn-in" many times to achieve the correct tonality; 2 to 4 times more than the initial exposure is a frequent timeframe used for burning-in highlights.

DODGING TOOL:

For the dodging tool, a 12" length of stiff wire, slightly flexible, should have two cardboard circles, one on each end. One should be about the size of a quarter, the other a dime. Dodging is done DURING the initial exposure to pull out shadow details in the image. It is not uncommon to make as many as 4 or 5 prints until the correct amount of "dodging" and "burning" produces a good print. Seldom, if ever, can you make one good print in less than 4 sheets of paper.