

# BPI Advanced Computer Gradient 6™

For use only by qualified  
personnel in a  
laboratory environment.

| HEIGHT  | WIDTH               | LENGTH  | VOLTAGE             |
|---|---------------------|---|---------------------|
| 15 in. (Computer)   | 9.5 in. (Computer)  | 6 in. (Computer)  | 110v<br>or<br>220v. |
| 38.1 in. (Computer)   | 24.1 in. (Computer) | 15.4 in. (Computer)   |                     |
| THE SET-UP KIT INCLUDES THE FOLLOWING PRODUCTS:   |                     |   |                     |
| <ul style="list-style-type: none"> <li>• Master Control Box</li> <li>• Gradient heads*</li> <li>• Thumbscrews*</li> <li>• BPI Lens Holder II™*</li> </ul> |                     | <ul style="list-style-type: none"> <li>• L-Rods*</li> <li>• Gradient Tips*</li> <li>• Instruction Manual</li> <li>* Quantity depends on the number of heads ordered.</li> </ul> |                     |

## Specifications

The BPI Advanced Computer Gradient 6™ System (BPI# 12603 - 110v. with two heads. BPI# 212603 - 220v. with two heads) consists of one computer gradient with up to six gradient heads controlled by one master microprocessor.

The 110v. system requires 110 volt, 50/60 Hz and is fuse protected by a 2 amp, 250 volt ceramic fuse. Components are UL and CSA recognized.

**NOTE:** Be sure always to use the ground wire on the power cord for safe operation; never bypass it.

## Unpacking

When unpacking your system, please check to ensure that no concealed damage occurred in transit. If such is noted, save the shipping carton and immediately notify the shipping company's damage control inspector in your area so a claim may be processed. Failure to do this may void any future claim and replacement. Also, call BPI Customer Service so arrangements for a replacement may be made.

## Setting Up

Place your system on a LEVEL work surface convenient to an electrical receptacle. Make certain all switches are OFF. Check to be sure that the 2 amp fuse is in the fuse-holder located at the rear of the machine by the power cord.

## Gradient System

The Advanced Computer Gradient 6™ System has up to 6 independently controlled gradient heads. The gradient ON/OFF switch on the back of the unit controls power to all 6 gradients.

This gradient machine is a computer-controlled system which produces gradient tinted or uniformly tinted lenses with accurate control over timing and uniformity of dimension. When used for solid tinted lenses, it keeps the dye bath in constant agitation for the quickest possible tinting. The unit consists of six motor heads and a control panel. The motor heads are positioned to go over the tank of the tinting system.

## Operation

Turn on electrical power to the gradient controller.

Rotate the arms extending from the motors so that they hang over the tinting tank. Mount the lens holder on the slots on the arm, and after selecting tank #1 using the key pad, use the "1" key to lower the rack, so that the bottom of the lenses in the holder are just above the surface of the tint. The lens carrier position may be raised using the "2" key. Note that small adjustments to height may be made on individual motor heads using the knob on the bottom of the motor unit.

Program the gradient controller for tank 1. The process of programming the gradient controller for a tank consists of 4 steps: (a) select tank 1; (b) choose the gradient style; (c) enter the size of the lens; and (d) enter the time for which the lens is to be tinted.



**SELECTING THE TANK:** Press the TANK key. The display will flash just under the word TANK. Enter the number of the tank being programmed. The display will stop flashing and will show the information currently in effect for this tank.

**CHOOSING THE GRADIENT STYLE:** Press the PROG key. The display will flash under the word PROG as it waits for you to enter a number from 0 to 4 indicating the choice of gradient.

Programs 0 and 4 are for solid tinted lenses. When this program is started, the lenses will be lowered into the dye bath and then waved up and down continuously to promote agitation of the tint. When the allotted time has expired, the lenses will be removed from the bath.

Programs 1, 2, and 3 produce gradient tinted lenses. In each case, the lenses are slowly dipped into the dye bath in such a way that the bottom of the lens is immersed for the entire selected time and the top of the lens is only briefly dipped. The three programs differ in the rate at which the lenses are dipped, allowing progressively less tinting time to the top of the lenses and hence greater contrast between top and bottom.

**ENTERING THE SIZE OF THE LENS:** Press the SIZE key. The display will flash under the word SIZE as it waits for you to enter the two-digit size of the lenses to be dyed. Size is measured in millimeters from the top of the lens to the bottom. The largest lens which can be accommodated is 99mm. When both digits have been entered, the display will stop flashing.

**ENTERING THE TINTING TIME:** Press the Time key. The display will flash under the word TIME as it waits for you to enter the time, in minutes and seconds, for which the lens is to be tinted. All four digits must be entered. Each gradient program, except for the solid program, has a certain minimum time to run which depends on the size of the lenses.

For 50 mm lenses, the minimum time is about 1 minute. If a time less than the minimum is selected, minimum will be substituted automatically. Press the START key. The lenses will begin slowly entering the dye bath (the motion may be too slow to see) and the display will show the time remaining for this tank.

Whenever the tank is already running a program, the letter "R" will be displayed to the left of the tank number. Any attempt to change the size, time or program number of an active tank will result in an error message ("TANK n RUNNING") and no change of the parameters. An active program may be cancelled at any time by selecting the tank number and pressing the Cancel key. When this happens, the lenses will immediately be withdrawn from the tank, possibly beyond the original starting point, and the program will stop.

When a program stops running, its time remaining is erased from the bottom half of the display, and if it happens to be the tank currently displayed, the letter "R" is erased from the tank number. A typical lens gradation will extend from the top of a lens to the middle.

Remember that for tinting purposes the lens is placed upside down in the lens holder. Tinting times are rapidly learned with experience. For a first estimate set the timer on approximately 8 minutes for dark shades and 3 minutes for light tints.

The tints used for lenses are water-based and are heated to near the boiling point. Therefore, you will find, especially after long tinting times, that the liquid level has gone down noticeably between the start and finish of a dyeing program. This will require you to continually adjust the starting position of the lens rack, and when it gets too low, to add water to the tint bath.

## Questions? Ordering....

If you have any questions about the use of your instrument, please refer to our pamphlet, "The Practical Guide to Lens Tinting" for general information. To place orders or to receive technical support, please call your local BPI office.

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