# BPI Office Diamond Dye™ System

**For use only by qualified personnel in a laboratory environment.**

**Due to high operating temperature, access should be restricted.**

**BPI® does not warrant the use of non-BPI® products in this instrument.**

**Turn off the unit when you have finished tinting for the day. Never allow the tanks to run dry. Do not leave unattended.**

| TANKS | HEIGHT | WIDTH | LENGTH | VOLTAGE | WEIGHT | FUSE | AMPERAGE | TRANSFER FLUID |
|---|---|---|---|---|---|---|---|---|
| 1.25 quart & 0.5 gallon | 9.75 in. | 15 in. | 9.75 in. | 110 or 220v. | 24 lbs. | 20 amps. 250v. | 20 amps. | 3 quarts |
| 1 x 1.18 L & 1 x 1.89 L | 24.76 cm | 38.10 cm | 24.76 cm | | 10.88 kg | | | 2839 ml |

**THE SET-UP KIT INCLUDES THE FOLLOWING PRODUCTS:**

- BPI Lens Prep II™
- BPI Heat Transfer Fluid
- BPI UV Lens Holder II ™ (Two)
- HTF siphon pump
- Manual & instructions
- Tanks & thermal tank lids
- Adapter plate
- Precision thermometer

**SYSTEM LAYOUT**

**ONE 0.5 GALLON TANK AND ONE 1.25 QUART TANK (1 x 1.89 LITERS & 1 x 1.18 LITERS)**

## Specifications

The Office Diamond Dye™ System is a two-tank dye system ( BPI#8102) geared for modest volume requirements of treating lenses with BPI UV Diamond Dye™ 400nm. The chassis and liner pan are all stainless steel. The system requires 115 volt (220 volt, BPI#208102), 50/60 Hz and is fuse protected by a 20 amp, 250 volt ceramic fuse. Components are UL and C SA recognized.

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

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## Unpacking

When unpacking your tint 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. Please verify that you have received all the items listed below.

## 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 20 amp fuse is in the fuse-holder located at the rear of the machine by the power cord. Pour three quarts of heat transfer fluid over the heating elements into the base unit BEFORE turning ON any switches. If heat is turned on before the heat transfer fluid is added, (With the dye tanks in place so that the elements are submerged), element failure may result due to excessive temperatures of the element.

Fill the smaller tank about two-thirds full of Lens Prep II™ (diluted to 1 part to 32 parts water). Fill the larger (half gallon) tank about a third full with DISTILLED water.

Mixing of the UV Diamond Dye™ 400 nm into this tank is to be done with the unit warm so it is important to read the following section before proceeding. Heat to approximately 140º F. THOROUGHLY SHAKE pint bottle of Diamond Dye™ and add the entire contents to the distilled water. Stir well after adding. Bring the temperature of the Diamond Dye™ solution up to 180º F. After 10 minutes at this temperature, increase to the working temperature of 200ºF. DO NOT EXCEED this temperature as a boil-over may occur.

During the first few days of use, foaming may occur and can be controlled by adding cold distilled water and skimming the foam from the surface. Save the foam in a separate clean container so that it may be re-added as the level drops due to evaporation.

The system has an ON/OFF switch, a temperature control dial, and an indicator lamp. The light in the switch comes on when the switch is turned ON and is merely an indicator that power is reaching the unit. The lamp above the temperature control dial indicates when power is being applied to the heating element.

## Heating Up

Plug the unit into a properly grounded 120 volt electrical receptacle (The 220 volt model is shipped without a plug and requires a qualified technician for installation). Turn the switch ON. Set the temperature control dial to position 1.. When the thermostat lamp goes out, the unit has reached this low idle temperature. It is recommended that a quality lab thermometer be used to monitor the tank temperature since it will DIFFER from the thermostat setting which is controlling the temperature of the heating element area.

## Treating Lenses

Lenses to be treated with UV dye should be clear; if they have been previously tinted or edge coated, first remove the color with Neutralizer II™ to prevent the color from leaching out into the UV dye solution. Tinting and edge coating is to be done after UV treatment.

Clean lenses thoroughly and place in a clean UV Lens Holder II™, stainless steel lens holder, or a 4-Pair Lens Rack™ (BPI#66100) which holds 8 lenses of differing sizes. It is important that the lens holder be clean to prevent contamination of the UV dye with other dyes.

Immerse lenses in heated Lens Prep II ™for 10 or more seconds. Immerse lenses in Diamond Dye™ solution and agitate for about 10 seconds. The total immersion time for most normal lenses will be 30 to 60 minutes. Time will vary according to the previous usage of the solution and the hardness of the lenses. Soft lenses may take as little as 30 minutes. The times may be somewhat reduced by periodically stirring the Diamond Dye™ solution. Do NOT leave lenses in the dye bath longer than 3 hours because Diamond Dye™ is capable of penetrating through the entire lens and causing lens damage. Remove lens holder with lenses from the UV solution, rinse in clean Lens Prep II™ solution, and then rinse in cool water. Dry with a soft lint-free cloth such as a Kaydry™.


CHECK RESULTS using a meter that tests for transmission in the spectral range known as UVA.

Since standards for UV transmission are in a state of change (including the definition of UVA), BPI cannot specifically state what is an acceptable UVA transmission reading. We believe that a reading of 1% or less on any of the variety of BPI UV meters will meet existing and currently proposed standards. If lenses are placed in Neutralizer II™ during the course of tinting, check lenses again for UV transmission. After removing lenses from the oven, allow them to air cool to room temperature. Do NOT place lenses in cool water because thermal shock may damage the lenses.

## Neutralizer

**BPI Neutralizer II™ is for removing color from CR-39™ lenses ONLY. Read precautions below.**

1. Heat Neutralizer II™ in an approved tint unit. Do not exceed 210° F.

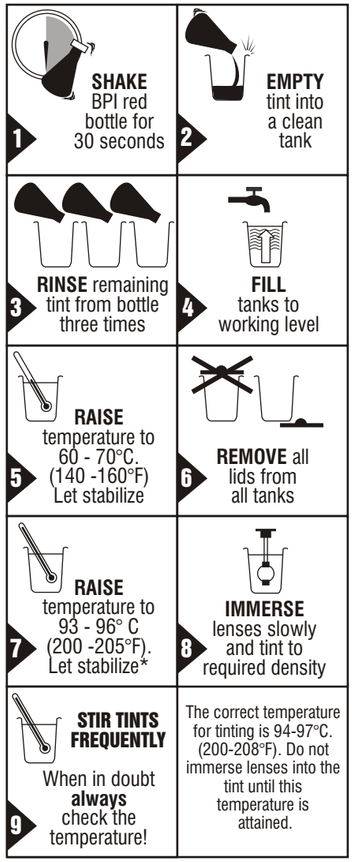
2. Dip lens to be neutralized into the heated solution until the desired amount of color has been removed.

3. Remove lens and rinse in cool water.

4. Lens may now be immersed in BPI Lens Prep II™ and re-tinted.

## Precautions

Use Neutralizer II™ in a well ventilated area or with a vent hood. NEVER USE ON OPEN FLAME OR ELECTRIC BURNERS! If fluid contacts eyes, immediately wash with water. If irritation persists, contact physician. Harmful or fatal if swallowed. Product is combustible and may become flammable if directions and precautions are not followed.




## Lens Tinting Tips

*1. 93 - 96° C (200 - 205°F) is critical. This is the optimum temperature for tinting lenses and allows the correct migration of the different size pigments that make up a typical BPI tint. The lens material will not accept the tints correctly unless this temperature level is maintained.*

*2. Some evaporation is typical and will not harm the tints. Just add more water and wait for the tint temperature to stabilize.*

*3. Lower temperature to 82° C (180°F) and cover tanks when not actively tinting. (Remember to raise temperature when you resume tinting).*

*4. Lens materials vary slightly. (Manufacturer, composition, age, and or coatings). Tinting can be affected. This can be minimized or eliminated by using correct temperatures. If variances occur, refer to the BPI Color Correction Chart.*

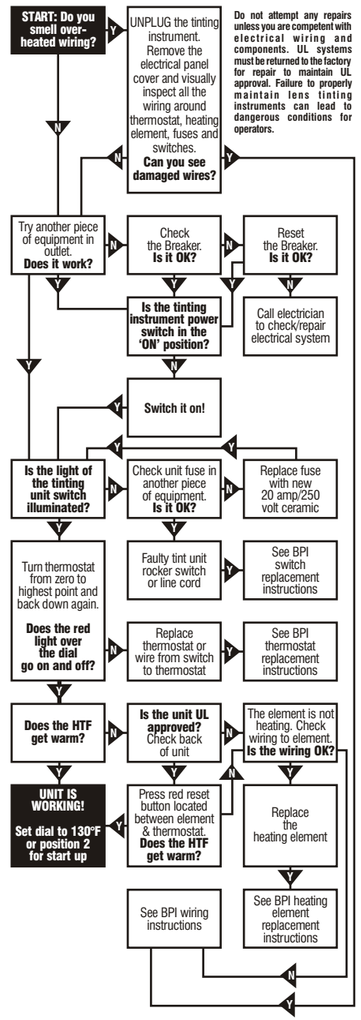
***Use a lab thermometer to verify temperature. Water boils at 100°C (212°F). Tints will not boil if the temperature is verified correctly. Do not rely solely on the tint unit thermostat.***

## Questions? Ordering....

If you have any questions about the use of your lens coloring 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.


MANUAL FILE# M2041

## Trouble Shooting Guide




BPI# 8102 (115v)
BPI# 218102 (220v)

BPI Office Diamond Dye™