

## UV Ozone Reactor Operation

### Overview

UV+O (atomic oxygen) cleaning method is a photosensitized oxidation process in which the contaminant molecules of photo-resists, resins, human skin oils, cleaning solvent residues, silicone oils, and flux are excited and/or dissociated by the absorption of short-wavelength UV radiation. Atomic oxygen is simultaneously generated when molecular oxygen is dissociated by 184.9nm and ozone by 253.7nm.

### Restrictions & Precautions

The distance from the face of your sample to the lamps is critical. It should be 5mm or less. The height is set to the maximum so the stage will only have to be adjusted (lowered) for samples thicker than 5mm. You will not break the lamps if your sample is too thick and the stage is not adjusted correctly but you will not be able to close the sample drawer.

### Notes

Model 144AX-220 utilizes a timer with two timing cycles:

- Program 1 controls the exhaust time (ET).
- Program 2 controls the total time for cleaning and exhaust (TT). This program duration must always be longer than program 1. If it is not, the UV will not shut off. In this case just cycle the power switch on the front panel.

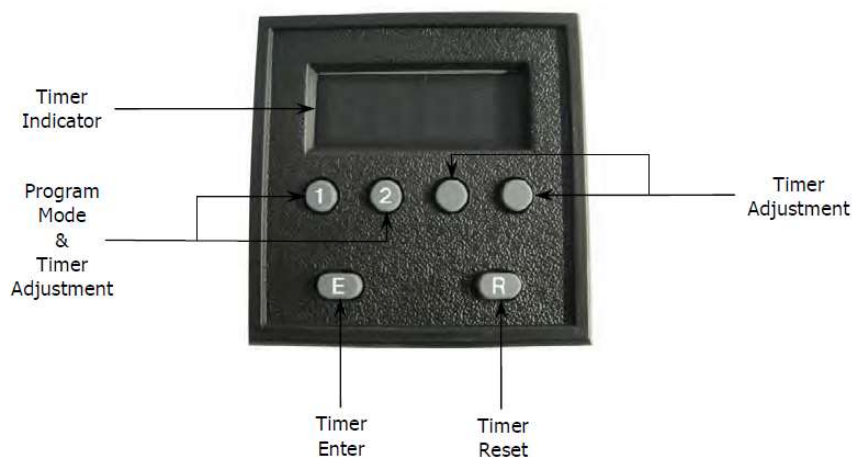
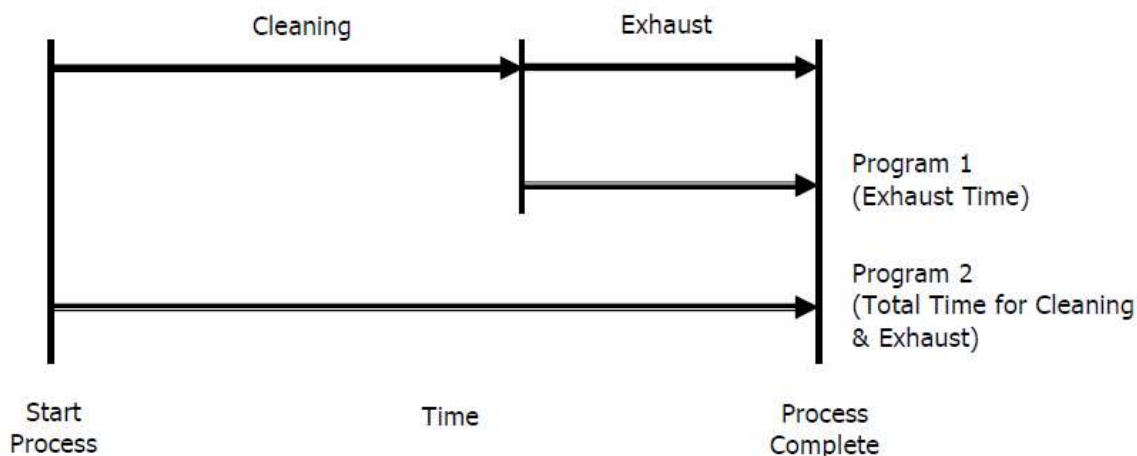


FIG. 5

Button Function	Designation	Operation
Program Mode & Timer Adjustment	1	Press once to display the set value for Program 1. The current value will display for about 10 seconds. When the set value is displayed, each subsequent press will advance the value of the time digit directly above button 1.
Program Mode & Timer Adjustment	2	Press once to display the set value for Program 2. The current value will display for about 10 seconds. When the set value is displayed, each subsequent press will advance the value of the time digit directly above button 2.
Timer Adjustment (two buttons)	Blank	In Program mode, press these buttons to advance the value of the time digit directly above the button.
Timer Enter	E	This button is used to enter Program values into memory.
Timer Reset	R	This function is disabled.

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**Note:** Do not adjust timer programs while using this equipment for process.

1. Set Exhaust Time (ET):
  - a. Press Program Mode button 1. The current value will display for about 10 seconds.
  - b. When the set value is displayed, use the four Timer Adjustment buttons to advance each time digit to the desired setting.
  - c. Press the Timer Enter button E. At this time, the new setting may not be shown on the digital display.
  - d. Continue to Set Cleaning Time Program Mode 2 or to the Power Off/On section below.
2. Set Total Time for Cleaning & Exhaust (TT) (:)
  - a. Press Program Mode button 2. The current value will display for about 10 seconds.
  - b. When the set value is displayed, use the four Timer Adjustment buttons to advance each time digit to the desired setting. **This program duration must always be longer than program 1. If it is not, the UV will not shut off. In this case just cycle the power switch on the front panel.**
  - c. Press the Timer Enter button E. At this time, the new setting may not be shown on the digital display.
3. Power Off/On:
  - a. Switch the UVO Cleaner Off.
  - b. Wait 3 seconds.
  - c. Switch the UVO Cleaner On. The new time settings are now be stored in the Timer and the set value for Program 2 will be displayed.
4. Press the green START button. The display will indicate the remaining process time and count down to zero.