

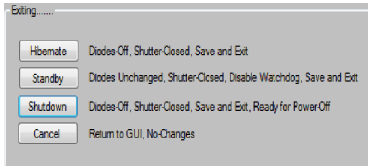






No.	Operation	Remark
1. Turning On the System		
1.1	<ul style="list-style-type: none"> • Verify that the chiller reservoir is full. If the chiller was turned off, turn it on and verify that it is set to 21°C. • Turn the power supply AC power switch to ON. Turn on the host computer and start the GUI control program. • Wait until the status line (seen at the bottom center of the screen) says Ready before turning on the laser. Then turn on the laser. Click and hold down the yellow on/off button 3 to 5 seconds until the emission light turns on (turns red). The white emission light on the laser also turns on. (Note: After these lights turn on, there is a 3-second safety delay before the laser diode is energized.) Although the emission light is on and the laser diode is on, no light is emitted until the shutter is opened. • Set the desired wavelength by moving the upper horizontal slider, then wait for the lower Actual Wavelength slider to move to that same position. • Open the shutter. Click and hold down the appropriate aperture icon until the icon opens (turns yellow, about 3 seconds). • When the shutter opens, laser emission is present. Output power should reach maximum output within 30 minutes 	 

2. Turning Off the System		
2.1	<ul style="list-style-type: none"> • To temporarily block laser output without turning off the laser, click the red and yellow tunable beam shutter or fixed IR beam shutter aperture icon. The shutter closes, emission is blocked, and the aperture icon closes (turns black). However, the emission lights remain on to warn of possible emission (the laser diode is still on). • When done using the laser, click the on/off button to turn off the laser. The laser turns off immediately, as does the emission indicator. • When you wish to turn off the computer for the day, click the close button (red X) to exit the control program, then select Hibernate, Standby, or Shutdown to set the off mode (refer to Figure 6-2 and the shutdown option descriptions below the figure). • Turn the laser head key switch to the off (horizontal) position and remove the key to prevent unauthorized use. <p>Warning! The chiller must always be on when the IPS-300 power supply is on, even if the diode laser is not switched on!</p> <p>*** We highly recommend that the power supply and chiller remain on 24/7 to keep the purge unit running and to keep the laser at a constant temperature.</p>	 <p>Hibernate—This is the default day-to-day operating mode. Shuts off the laser diode, closes the shutters, and saves the wavelength and motor positions. It also closes the GUI. Using Hibernate DOES NOT shut down the laser internal computer operations, so the laser can be restarted without the delay of the internal computers rebooting. Because Hibernate does not shut down the internal computers, the power supply MUST BE LEFT ON when using the Hibernate mode. DO NOT TURN OFF THE POWER!</p> <p>Standby—Does not shut off the laser diode. It closes the shutters and disables the watchdog timer so that the laser does not stop when the GUI is closed. It also saves the last set wavelength and motor positions, and it leaves all other components powered up and operating. Because the laser diode is operating, simply opening the shutter results in laser emission. DO NOT leave the laser unattended in this mode.</p> <p>Shutdown—Turns the laser off completely. This options shuts off the diode, closes any shutters, saves any changes to calibration tables, stores the last set wavelength and motor positions, and shuts down the laser internal computers. It then closes the GUI. This option must be used prior to turning off the power supply. Note: If “Shutdown” is selected, the power supply will need to be rebooted in order to turn the system on again. This option should only be chosen in certain circumstances, which are relatively rare.</p>

No.	Operation	Remark
3. Maintenance		
3.1	<p>Recommended Maintenance:</p> <ul style="list-style-type: none"> • Check the coolant level regularly and check immediately if the screen reads low water level • Change Nalco coolant in the ThermoRack 401 chiller every 6 months or as necessary • Clean the mesh filter from the chiller water filter every 6 months. • Clean the air foam filter on the front of the chiller every 6 months or as needed. Keep the blue cooling hoses out of the chiller’s fan path. <p>Warning: Use ONLY Nalco 460-PCCL104 liquid corrosion inhibitor as a coolant. Do not use deionized water.</p>	 <p>Part number: 1607-0546</p>
3.2	<p>Chiller Maintenance:</p> <ul style="list-style-type: none"> • Close the GUI and choose the shutdown option. Turn off the power supply. Turn off the chiller. • Disconnect the hose with the filter attached from the chiller and the laser head. • With the filter assembly over a bucket, unscrew the filter assembly bottom. • Rinse the mesh filter under water. If needed, wash the mesh in the ultrasonic cleaner. Replace the mesh filter into the filter assembly. Screw the filter assembly back together. • Fill the reservoir halfway and turn on the chiller, and check for leaks. If no leaks, then fill the reservoir all the way up to the fill line. • Turn on the power supply. <p>If you have any questions, please refer to the Chiller Maintenance video available through Spectra-Physics.</p>	 
3.3	<p>Purge unit replacement:</p> <ul style="list-style-type: none"> • Replace the 2200-HT purge unit in the IPS-300 power supply every 2 years or if the humidity level exceeds 10% as noted on the diagnostics tab of the InSight X3 GUI 	 <p>Part number: 90074765</p>
3.4	<ul style="list-style-type: none"> • If service for your laser is required, call your Spectra-Physics service representative via below link or scan the QR code. <p>Contact Us Form Service@spectra-physics.com</p>	