ChroTel Camera System Operation

This document tells the user how to operate the camera system for ChroTel. The camera system includes the Spectral Instruments 804 camera, the Helium I tunable Lyot Filter, and the computer that controls these. The camera system is just a portion of the ChroTel experiment, therefore refer to other system documents for the overall experiment control. This document assumes the Chrotel Camera System has been unpacked and connected.

Power

The Camera system camera and Lyot Filter should remain powered on except for safety or if the system is to be unused for a long time.
1. Connect the power strip to the mains.
2. Turn on the AlphaOmega Series 800 Temperature controller. The power switch is on the back. Check that the temperature shown is 35.0. If not use the up or down arrows to select the correct value. Many hours are required for the crystals to temperature stabilize so this power should remain on.
3. Turn on the PolyScience Recirculator. Set the temperature to +20C. Colder than this could cause condensation in the camera and could damage the camera. The recirculator should remain on.
4. Turn on the SI camera power supply. The switch is on the front of the rack-mounted chassis. This should remain on.
5. Turn on the LCD monitor. There is a power switch on the back of the LCD and a button on the bottom right on the front of the LCD. Make sure the LED is lit.
6. Turn on the computer. There is a power switch on the back near the power cord. With that switch on, swing open the right luvered cover on the front of the chassis. The hinge is on the outside. Toggle the power switch under that cover and then close it. This will start a computer boot.
7. As shipped the administrator password is 'oscar0' (oscar zero).

Initial Computer ID and network connections

1. If desired, change the computer's name from oscar to the new desired name. Select Start->Control Panel-> System. Select the Computer Name tab and change the name. The computer name is not the network id name so this does not need to be changed for the Camera System computer to work on the network.
2. If desired, set the administrator password. Select Start->Control Panel->User Accounts. Select administrator and follow the tabs to change the password. Make sure the password will time out never. Do you really want to change the password?
3. The network address must be set to a fixed address on the current network. DHCP will not work. Pick an available name and address. Select Start->Control Panel->Network Connections->Local Area Connection. Under the properties tab enter all the numbers needed to give this computer a new fixed address.
4. Data will be stored on the 'Z' drive. This needs to point to some directory on the local network. Right click the "My Network Places" icon and select "Map Network Drive…". Browse to find the computer and drive desired and map it to 'Z'. Check the "Reconnect at logon" box.
5. Set up nistime. This application is started when the computer boots. Select the icon on the desktop and change the settings so that it looks for time on the time server for your network.

Software

1. Start the camera application called *SI Image SGL*. There is a shortcut on the desktop. This machine is set up in single click mode. When the application starts it will ask for initialization. Initialize the camera by selecting the cooling 'On' button. All other values should be set automatically from configuration files. Close the initialization window. Select Operate->TCP/IP. This enables external commands via TCP/IP. You can change the size of the display. One mode of operation is to move all but the image display area off the screen. This application should never need to be touched and must continue to run for the camera to maintain operating temperature. *SI*

Image SGL allows the user to exercise all the capabilities of the SI camera. Refer to the *SI Image SGL Software Manual* for all the details.

2. Start up the camera application. Select the "C Shell" icon. This brings up a csh command window with the path set to the source directory for the camera application. Enter 'camera'. You should see the application identify itself. It is now ready for keyboard commands or network commands. End the camera application at the end of the day with a 'z' command. On a daily basis this is the only application that should start and stop.