
Power up the instrument

Rotate telescope **UP**

Remove cover and stow

Check all breakers **in**

Check archiver computer power **on**

Laser red switch **ON**

Laser key **ON**

Wait for Q-SW power

Click Shutter **ON**

Click LDD **ON**

Click **Menu**

Click **Enter** twice, to unlock power setting

Rotate wheel clockwise to set power to:

28.5 A

Click **Enter** once to lock power setting

Start all processes on hsrl

From terminal on hcr archiver, type

```
hsrl
```

or

```
ssh -XY hsrl@hsrl
```

Or from spider:

```
ssh -XY hsrl@192.168.2.201
```

Log in as:

```
user hsrl
```

```
passwd: %Lidar1543
```

Start system:

```
start_all
```

Check status:

```
hsrl_status
```

All processes should be running

Sometimes

```
hsrlcontrol
```

will not start

If problems, rerun:

```
start_all
```

until all processes are running.

Start GUI

On HCR archiver, bring up GUI in chrome:

`hsrl:8083`

or use HsrlControl bookmark

Or from spider, in browser open url:

`http://192.168.2.201:8083`

If you cannot connect via the browser, rerun

`start_all`

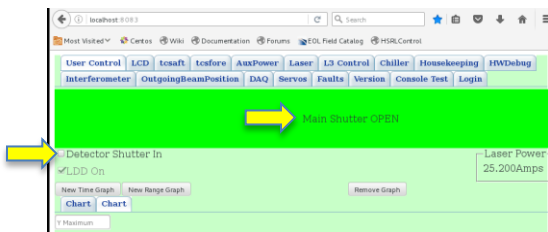
on hsrl

Click on

Detector Shutter In

twice to open shutter– no check mark

Click Main Shutter twice – OPEN - green



Check LIDAR is up using graph

Click on

New Range Graph

On graph, select Y1 for

Raw-CombHi

Raw-Mol

Raw-Xpol

Click on

Force Update

You should see echoes on the graph

Start all on hsrl-archiver

Log in to HSRL archiver:

From HCR archiver:

```
ahsrl
```

From spider:

```
ssh -XY 192.168.2.200
```

```
user: hsrl
```

```
passwd: %Lidar1543
```

From a terminal:

```
start_all
```

```
pcheck
```

`pcheck` should report 0 processes down

Start HawkEye:

```
start_HawkEye.ops
```

HawkEye window should pop up, and show reasonable data

Check data is flowing:

```
pdm
```

PrintDataMap should show data updating

Stow while waiting for takeoff

On GUI, close main shutter (**red**)

Point telescope **DOWN**

After take-off

On GUI, open main shutter (**green**)

Point telescope as required

Before landing

On GUI, close main shutter (**red**)

Point telescope **DOWN**

Shutdown after landing

On hsrl-archiver computer:

```
stop_all  
sudo poweroff
```

On hsrl computer:

```
stop_all  
sudo poweroff
```

On laser unit:

Click **Enter** to unlock power setting
Using wheel, reduce power to **0 A**
Click Enter to lock power at **0 A**
Laser key **OFF**
Laser red switch **OFF**

Pull all breakers:

- Thermal ctrl power
- Computer power
- Laser power
- etc

Point telescope **UP**, install cover

Point telescope **DOWN**

Using the spider for maintenance

Addresses are:

hsrl

192.168.2.201

GUI:

http://192.168.2.201:8083

archiver

192.168.2.200

spider

http://192.168.2.204

login: sysadmin

password: password

Set laptop IP address to:

192.168.2.220

Logging in to hsrl:

ssh -XY hsrl@192.168.2.201

Logging in to archiver:

ssh -XY hsrl@192.168.2.200

Copying data from archiver to USB

Insert USB stick or attach disk to USB3 port

Log in to hsrl-archiver, either from the hcr-archiver or spider (see above)

Mount stick or drive:

```
cd ~/projDir/system/scripts  
sudo ./mount_usb
```

Passwd: %Lidar1543

Drive will mount as /data/usb

Rsync data to the drive:

```
cd ~/projDir/system/scripts  
./rsync_to_usb
```

Data will appear on the drive in dir:

archive

at the top level

Unmount the drive:

```
cd ~/projDir/system/scripts  
sudo ./unmount_usb
```

Passwd: %Lidar1543

Running HawkEye remotely

hcr-router is

192.168.84.175

SSH to the ports below on the router to get to the listed machines:

22 -> HCR archiver

23 -> HCR rds (pod)

122 -> HSRL instrument

123 -> HSRL archiver

HawkEye for HSRL

Log in to HSRL archiver:

```
ssh -XY -p 123 hsrl@192.168.84.175
```

```
user: hsrl, passwd: %Lidar1543
```

start HawkEye for HSRL:

```
start_HawkEye.ops
```

HawkEye for HCR

Log in to HCR archiver:

```
ssh -XY hcr@192.168.84.175
```

```
user: hcr, passwd: sun-dog
```

start HawkEye for HCR:

```
start_HawkEye.10hz
```



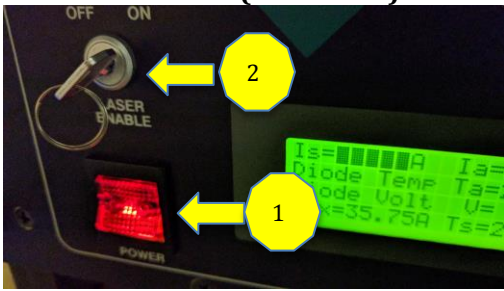
HSRL Breakers

All breakers in to startup

Arrow breakers off on shutdown



Archiver power
Power ON (LED white)



Laser power:

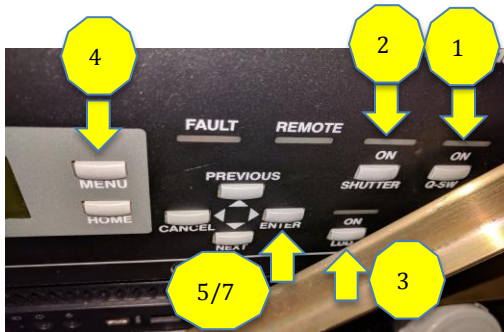
- Red switch ON
- Key ON



Power setting locked – flashing shaded



Power setting unlocked – no shading



1. Wait for Q-SW ON
2. Click shutter ON
3. Click LDD ON
4. Hit Menu
5. Hit Enter twice to unlock power setting.
Check shading is off
6. Set current to 28.5 A on wheel
7. Hit Enter again to lock

Setting the laser current:



Rotate wheel to set Is current to:

28.5 A (ON)

0.00 A (OFF)