MEC Department Procedure

Document Approval (signature/date)

Name / Title	Signature	Date
Glass Laser Full Power Shutdown Procedure		

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1   Purpose

The purpose of this document is to provide relevant information to cover the scope of work necessary to power off the Glass Laser in MEC.

2   Scope

To proceduarlize the shutting down of equipment before a planned power outage and to proceduarlize brining the Glass Laser back up after a planned or unplanned power outage.

3   Responsibilities

Kayla Pflueger	Controls the content of this document.

4   Procedure

Planned Power Outge:
In the event of a planned power outage the following procedure will provide guidance in shutting down the MEC Glass Laser.

4.1 The following steps are for when a Python terminal is available:

1) To start shut down tasks first start Python from a terminal on a hutch computer and type the following commands in order:
    a. Ssh mec-laser
    b. mecpython
    c. from mecps import*

2) Once the Python terminal type YPEoff() to shut down the following:
    a. eDrives (eDrives will have AC power, but drive current is ramped down to zero)
    b. Vacuum Scroll Pump (AC power off)
    c. Pockets Cell Driver YFE Out (AC power off)
    d. Pockets Cell Driver YFE PS1 HV (AC power off)

3) Next pull up the MEC Home Main Page on EPICS
    a. Select User Devices
    b. Select AC PDU
    c. Select MEC:64B:PWR

MEC AC Power Distrbution Screen

MEC:64B:PWR Pop Out Page

4) At MEC:64B:PWR Pop Out Page
    a. Turn off "B1" Highland
    b. Turn off "B7" LeCroy A
    c. Turn off "B8" MBC Bias Controller

The following steps are for when a Python terminal is NOT available:

1) At each of the 6 eDrives:
   a. Press the "Emission" button of each eDrive (Once pressed the button should not be illuminated)
   b. Turn the keyswitch to the off position

eDrive example

2) At each of the 4 TDK Power Supplies:
   a. Press the "Out" button so it is not illuminated
   b. Toggle the power switch (on the top left corner) to the off position

TDK Power Supplies

TDK Power Supplies

TDK Power Supplies "Out" Button

3) At each of the 4 PolyScience water chillers:
   a. Press the Power Button on the front panel on the right side to power off

PolyScience Water Chillers

4) At Rack B999-S60 unlplug the following PDU components:
   a. "Vacuum Scroll Pump" Outlet 7
   b. YFE Pockels Driver Outlet 1
   c. Pockels Cell YFE Out Outlet 6
5) At Rack B999-64B:
   a. Toggle the back panel power switch of "Highland"
   b. Toggle front panel power switch of "Lecroy A"
   c. Toggle front panel power switch of "Lecroy B"
   d. Unplug MBC bias controller at PDU outlet #8
   e. Toggle front panel "pump" switch of NP Photonics "Rock" seed laser and turn the key swich to off position

"Highland" Back Panel Power Switch   **"Lecroy A" Fron Panel Power Switch**


"Lecroy B" Front Panel Power Switch   **NP Photonics Front Panel Switch**

6) Miscellaneous Items:
   a. Under the Optical table turn off "Mobile LeCroy Scope" (toggle switch bottom left)
   b. Under the Optical table turn off BK Precision DC Power Supply (toggle green power switch)
   c. Power of all 5 DG654 units at the S60 rack
   d. Power off the 2 DG645 uits at the eDrive rack
   e. Power off the MFroce Chassiss and Newport controller at Rack B999-PR62
   f. Power off Newport controller MCN-MEC-LAS3 (under optical table Northwest aisle)
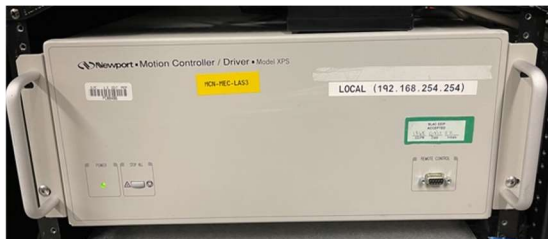
BK Precison Power Supply
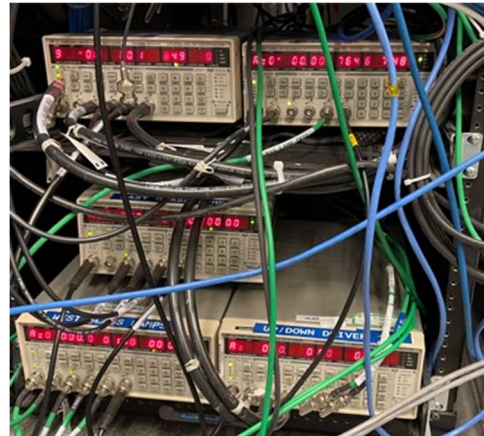
DG645 at Rack S60

DG645 at eDrive Rack

B999-PR62 Rack

Newport Controller (Northwest Isle)

5   Revision History

Revision	Date Released	Description of Change
R002		
R001		
R000	09/25/2021	Original Release.