ALPHA Controls

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ALPHA Controls

• Where are we today?
• User screens
• Reporting and triggering
• Security
• Summary
ALPHA User Connectivity

- IU public network
- ALPHA controls network

Rad Safety
- ALPHA safety network

ALPHA controls servers

Firewall
- Ethernet (optional)

DAQ

Users

Serial (optional)

Triggering

IU public network
Commissioning GUIs For Power Supplies

Supply channels broken out by signal name. DAC/ADC values are in engineering units. Temperature and water flow interlock read backs are present.
### Power Supply Slider Controls

The image shows a user interface for adjusting various parameters. Each parameter is represented by a slider with indicators for setting values. The sliders are labeled with names such as `H2_STEER_02_AJ (SP)`, `H2_STEER_02_AJ (RB)`, `LINAC Steerer (SP)`, `LINAC Steerer (RB)`, `VT_STEER_01_AJ (SP)`, `VT_STEER_01_AJ (RB)`, `VT_STEER_02_AJ (SP)`, `VT_STEER_02_AJ (RB)`, `H2_STEER_03_AJ (SP)`, `H2_STEER_03_AJ (RB)`, and `H2_STEER_04_AJ (SP)`. The values for each parameter are displayed next to the sliders, indicating the current settings.

The interface includes buttons for selecting different settings, such as `Steer`, `Quad`, and `BM`. The buttons are labeled `AIJ`, `RDY`, `LK`, `Alpha23`, `RDY`, `PEI`, `RDY`, `EMI`, and `RDY`.

The sliders are used to adjust the parameters to the desired settings. The values displayed next to the sliders show the current positions and the range of values that can be adjusted. The interface is designed to allow for precise control over the parameters, ensuring that the settings are accurately maintained.

This interface is typically used in industrial or laboratory settings where precise control over parameters is essential. The sliders and buttons provide a user-friendly way to manage the settings, making it easier for operators to make adjustments as needed.
Vacuum
Valve, pump, and gauge control.
Rad Safety
User Interaction
Setup, trigger, and reporting.

Energy, current, duration, beam size, DUT table position, more?

Shot

User trigger

Dose data, Shot ID
Shot setup and reporting

User Setup
• What parameters for setup? Energy, current, duration, beam size, table position?
• Ethernet or serial
• Manual (GUI)

Reporting
• What parameters to be reported? Shot ID, Dose delivered. More?
• Ethernet or serial
• Manual (GUI)
• Hardcopy
  – Print
  – CD/DVD
Security

Security vs. integration.

Plans for LabView interface for Ethernet or serial shot setup and a GUI for manual setup for independent DAQ.

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Ethernet or serial connectivity
Less secure
Allows for scripting

Little or no connectivity between DAQ and control system
More secure
Summary

- Commissioning GUIs are well established and continue to be refined. These screens will be available to ALPHA users.
- User setup and reporting cycle plans. What parameters are desired?
- User security needs discussion.