**Laser Quantum VI files readme v1.0**

These VI files should allow control of these power supplies by labview:

* FPU
* SMD12
* MPC6000
* MPC3000

**Usage**

Before the power supply can be communicated with the LQCommOpen VI needs to be used to create a communication object which can then be passed into the other VIs to allow them to communicate with the PSU.

The LQCommOpen VI requires some inputs to configure the communication object. For the power supply that you are running you will need to wire a ring control to the PSUType input. This will then allow you to select the Power supply type. An input is also required for the communication port that is connected to the power supply.

Once this VI is configured then the output can be used with the other VIs.

Each VI controls/reads one parameter of the power supply. There is an input for the configured communication object and an output of the same object. It’s required to wire the VIs such that the output of the communication object of one VI is the input of the next VI. This will force the VIs to access the communication port serially, therefore preventing communication errors.

Where the VI represents a numeric parameter a string version of the value is output as well as a numeric value for extra processing if required.

Where a VI sets a new value of a parameter (prefix of the VI will read “Set…”) the VI will read the value once the new value has been sent in order to verify that the parameter has set correctly, the output of these VIs is therefore the latest read value of the parameter from the power supply.

Once the program is complete it’s best to use the LQCommClose VI to safely close the connection to the PSU.

**Example**

Amongst the VIs I’ve created an example front end that can be used to control the power supplies specified above. The VI is named “Example PSU Control.vi”.

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