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JRichEcControl GUI

This is the main DAQ control GUI and is part of the RichEcKit package.

Installation

General installation instructions can be found in the RichEcKit topic.

After installing RichEcKit, change directory to the installation area and run the GUI as follows:

```
PATH=$PATH:./ java -Djava.library.path=&equals;./ -jar JRichEcControl.jar
```

Expert DAQ

The Expert DAQ panel is opened from `Settings->Expert DAQ`. The MAC address and IP address that are shown in the panel should correspond to the ethernet port on the DAQ PC. These addresses can be set in the JRichEcConfigurator through the `Settings->PC network...` panel, and should not need to be changed once the system is configured.

During beamtests, the number of MEP events per ethernet packet was increased to reduce the network packet loss. The optimal setting is probably the maximum number of events that will fit in a single Ethernet fragment. In this firmware the fragment buffer is around 1kb so up to about 16 events per MEP is optimal.

DB pulser

The settings for the internal pulser on the digital boards are controlled via the `Settings->DB pulser...` panel. The textfield `Pulse count` sets the total number of pulses generated on the DB. The `Pulse delay` is in units of DB clock ticks. Generally, for setups using the trigger board to distribute triggers, it is better to use the trigger board to generate pulser triggers rather than the internal DB pulser.

Threshold/Testpulse(DAC) scan

Threshold/Testpulse(DAC) scans can be launched from the `Settings->Threshold/Testpulse(DAC) scan` panel, which asks for the number of events per threshold setting, as well as the range of thresholds and increment size (which can be negative). The threshold or testpulse scan is started from the corresponding `Threshold scan` or `Testpulse scan` button. To record the scan, the `Recording` checkbox in the JRichEcControl panel should be ticked, but the `Start` and `Stop` buttons on the JRichEcControl panel should not be used to control the scan.

In case the scan gets stuck, use `Interrupt` to clean up before you can continue with a new scan or other new run.

CLARO or MAROC?

JRichEcConfigurator allows you to manage settings for both CLARO-based or MAROC-based systems. How these are used depends on the run control program. Typically you can ignore the settings for the MAROC if you are working with the standard CLARO-based EC. The FEB system can be selected in the JRichEcControl panel using `Settings->FEB type->CLARO/MAROC3`.

Chimaera2 DB hardware

For more details on how to set up the hardware and software please read the Chimaera2 reference manual [↗](#).

See the RichChimaera2 topic for more (including how to update firmware).

-- FlorisKeizer - 2015-07-24

This topic: LHCb > JRichEcControl

Topic revision: r11 - 2017-03-16 - StephenWotton



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