

# Testing the FEE64 using a PB-5 with remote control

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1. Select a PB-5 and connect a USB to serial cable with a 9 pin cannon connector to the remote input on the back. Check the PB-5 is set for internal trigger, tail pulse, 100Hz and 1mS fall time.
2. Connect the USB end to the computer being used. Check /dev for the ttyUSB# which is now connected to the PB-5. Note the number ( instead of the # ).
3. Set the PB-5 into Remote control mode using the front-panel menu #6
4. Connect the PB-5 output to the test input of the mezzanine input test card.
5. Power up the FEE64 , Reset/Setup/Enable Histograms/Go/start asic readout
6. Open the ASIC4 window and check for Positive setting with 8uS shaping time.
7. Open the ASIC Control window and Check Load for all ASICs twice.
8. Open and cmdtool on the computer and cd /disc/fcc/C-files
9. Run the PB-5\_Comms program with the command =>

```
./PB-5_Comms.o <ttyUSB number> Positive 3.5
```

10. Follow the Instructions.
11. Use the Spectrum Browser to check the PB-5 is producing the correct spectra. Use the Rate spectrum to see that all channels are working. Select a couple of .L spectra to see the steps are working ok. ( Add examples )
12. Use the Spectrum Browser to check all the waveform channels are operating.
13. When the PB-5 program completes. Open the ASIC4 window and select Negative.
14. Open the ASIC Control window and select Check all from the Experts only menu.
15. Run the PB-5\_Comms program with the command =>

```
./PB-5_Comms.o <ttyUSB number> Negative 3.2
```

16. Follow the Instructions.
17. Use the Spectrum Browser to check the PB-5 is producing the correct spectra. Use the Rate spectrum to see that all channels are working. Select a couple of .L spectra to see the steps are working ok. ( Add examples )
18. When the PB-5 program completes. Open the Histogram Save window and save the .L histograms.
19. Open the "Quality" browser window and "Update the directory list". Select the directory where the spectra have just been saved.
20. Enter 1 into the "Linearity Report Level"
21. "Check all .L Peaks for Linearity" and expect to see just the line 'All spectra tested for Time ...' In the report window.