Seismic Acquisition Test
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Prior to conducting a seismic survey, follow this procedure to ensure that the acquisition system is working correctly. This is also a good way to practice using the system and get the timing down. The Streamer Test box will simulate a signal from the streamer that can be used to test many parts of the system. The following systems will be used, Streamer Test box, Ross (Sun) with a2d, WinFrog, filters, amplifier, and EPCs with U/W Watch application.

Streamer Test box

The Test box is designed to output a signal pattern that has a delay of 6 seconds then a signal of 4 seconds, a total of 10 seconds. An internal or external trigger can be used to start the output pattern. If you select Internal Trigger, use the black knob to control the interval from 10 sec. to 0 sec. It is best to just use 10 sec. since the signal pattern is 10 sec. long. If you select External Trigger then you will be triggering from WinFrog. In this case it is also best just to use a 10 sec. trigger interval.

Hardware Setup

Follow the procedures outlined in the Seismic Hardware Setup guide for the filters and amplifier. The signal from the Streamer Test box is stronger than an actual seismic signal so turn the amps. way down and disconnect the Sun. Use the Oscilloscope to first see if a signal is coming through then adjusts the amp. settings to control the signal strength. Remember, no more than 5 V peak to peak for the Sun and 15 V peak to peak for the EPCs. Use the internal trigger on the Streamer Test box for this exercise.

Data Acquisition

Sun

Follow the procedure for setting up a2d on the Sun. Switch the Streamer Test box to External tripper. You should use a 10 sec. trigger interval from WinFrog so in a2d the combined time of delay and scan should be no more than 9 seconds. Remember you need to allow at least one second for the Sun to process. Start with a 5 second Delay and 4 second Record. When a2d is ready, start it then start the trigger from WinFrog.

Now that a2d is collecting data you can practice changing any of the parameters including the display. Check to see if data is accumulating. Start and stop a2d if necessary to change parameters.

EPC Recorders

With a2d working away you can also test the EPC Recorders Analog 1 & 2. Follow the procedure outlined in the Seismic Hardware Setup guide for the EPCs. For Analog 1, set the Delay to 4 seconds, Scan to 6 seconds, and R. Lines to 1. For Analog 2 set the Delay to 5 seconds, Scan to 3 seconds, and R. Lines to 5. Use these settings to start with the go from there, try other things.

Note: If you are collecting position data for a site or transit, don't forget to stop the 10 second Event collection and go back to 60 seconds and resume collecting data.

Data Processing

Once you've collected some data it's time to see what you have. Follow the procedure for pulling the data off the tape then displaying it using "disp". Once you have confirmed that you have data then you know the system is working!