



ii. DFOS STREAMER CONTROL SYSTEM

The DFOS-480 streamer control system is composed of several major functional blocks. They are the streamer interface, data I/O interface, signal processing, reproduce data, status processing and control functions.

The streamer interface allows the streamer control system to receive data from a conventional analog streamer or from a digital streamer. The streamer interface may also receive test data from a streamer test unit via optical fibre and simulated data patterns from a streamer simulator. The streamer interface sorts and distributes the input data onto two 8-bit input data buses.

The seismic data I/O interface (SIDIOP) receives raw data from the streamer interface via the input data bus, imbeds a timing signal into the data and pipelines serial data to the signal processing function. It receives the serial, filtered, data back from the signal processing function, converts it to parallel data, and passes it to one of the two data buses.

The signal processing function receives raw SEM data from the data I/O interface, prepares the data for the digital filters, applies digital high-cut and DC offset filters, converts the data back to serial form and transmits the data simultaneously to the recording system and data I/O function.

The reproduce data function allows the user to select input data received as raw, unfiltered data from the streamer interface and filtered data from the data I/O interface. It provides optional reproduce processing of selected input data and outputs to four display devices. Two multiplexed displays, each with 132 channel capacity, are provided to a dual channel oscilloscope for real time quality control of the entire streamer. The observer may select raw data from a portion of the streamer to be displayed with the same data channels of filtered data. Reproduce data is transmitted to a digital camera for a paper display of up to 128 data channels. Two user selectable, single trace display outputs are sent to a single-trace profiler. User configurable, high cut and low cut filters, specifically for single trace displays, may be selected. Seismic data or streamer noise data is output to a spectrum analyzer for real-time frequency domain analysis.