



# Iridium communication

Datawell - Oceanographic Instruments

## Turn your Waverider into an internet server

The Iridium system expands your Waverider with an easy to use communication option that lets you

- receive up to 48 periodic data **updates** per day.
- **download** all logged files, including raw displacement data.
- have **two-way communication**, allowing remote reconfiguration.
- do all that from **anywhere on the earth**.

The ability to download logged data is ideal to “zoom-in” on certain time frames. If the periodically transmitted spectral data shows that something interesting happened during a certain period, the raw displacement data of that period can be downloaded from the logger for further analysis.

### How it works

The Iridium network is a satellite based cellular phone - network that is built upon a constellation of 66 low earth orbit (LEO) satellites. Iridium is the only truly global network that covers any region of the earth. The Datawell implementation uses the **full 2400bps data**

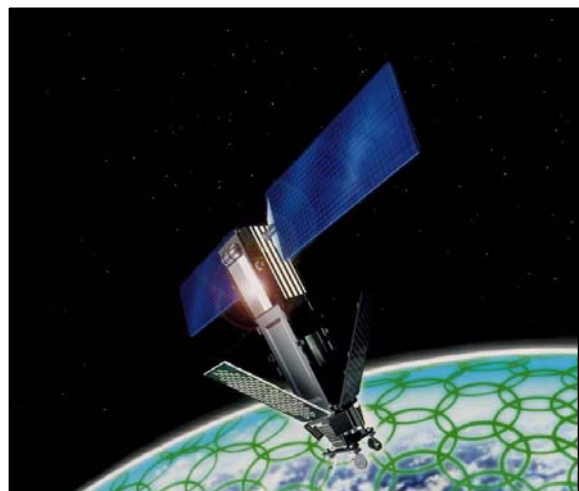
**service** of Iridium. In this mode, a direct internet connection is set up between the buoy and a (destination) computer. This allows data of any size and type to be transmitted.

To save battery power, data is transmitted at programmable transmission intervals. Transmission intervals are freely programmable at any value between once every half hour to once every day.

### iBuoy for seamless integration into W@ves21

To make operation of an Iridium equipped buoy as easy as possible, the iBuoy W@ves21 module has been developed. iBuoy **integrates seamlessly into the W@ves21** environment and has been especially designed to operate in conjunction with an Iridium equipped Waverider buoy. iBuoy gives the user complete control on what data the buoy will transmit. It also gives control over the transmission interval and buoy system settings.

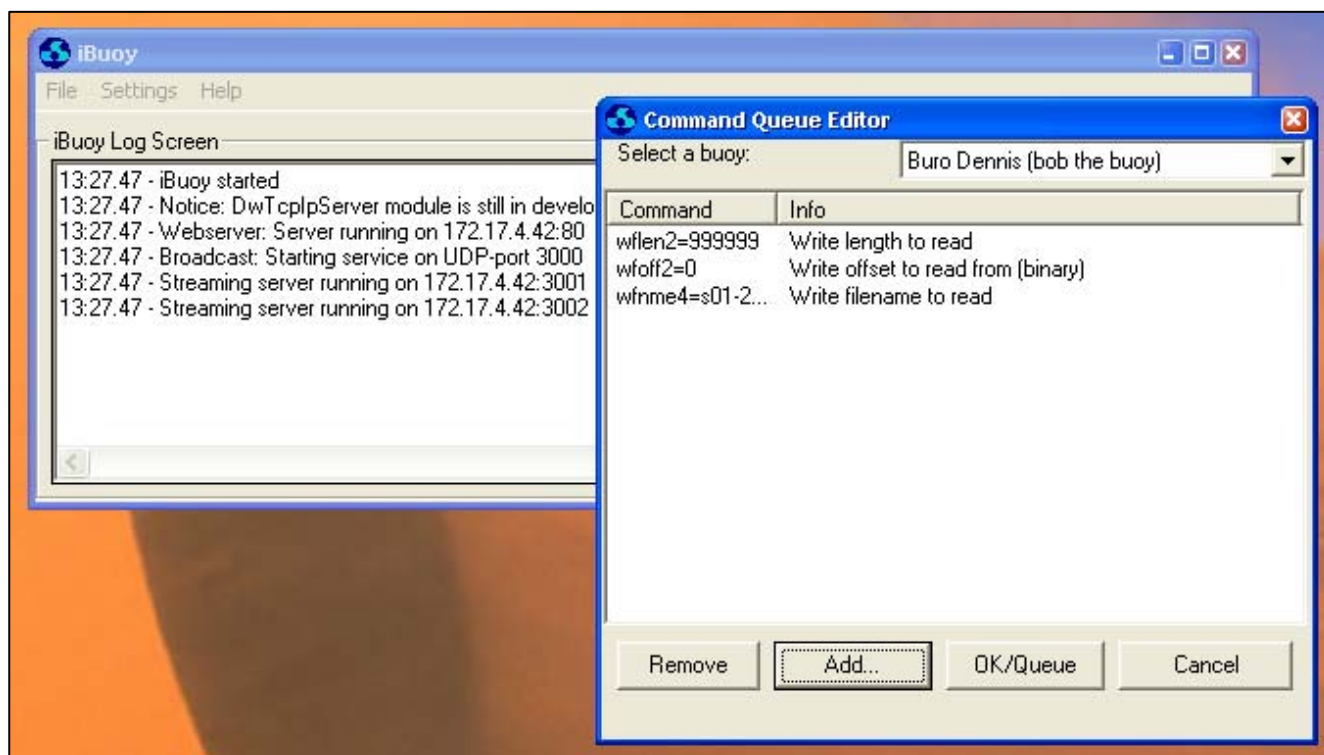
The Iridium satellite communication option is available for the DWR-7 and DWR-9.





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## Specifications

HF	Frequency band	1616 – 1626.5 MHz
	Transmit power	7 W max.
Power consumption	Minimum	6 mW (1 update / day) *
	Typical	16 mW (8 updates / day) *
	Maximum	74 mW (48 updates / day) *
Data	Spectral data	compressed or full directional wave spectra
	Parameters	spectral parameters and system status
	Logged data	system log files, raw displacement data and spectral data
Availability	Buoy types suited for Iridium communication	DWR-MKIII (0.7 m and 0.9 m)

(\*) Actual power consumption may vary and depend on sea conditions and user settings. For impact on operational life of buoy, please contact Datawell sales.