



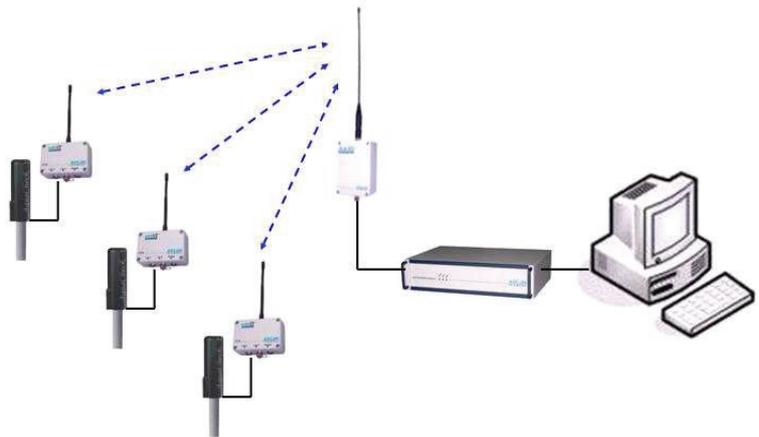
Telemetry Options

Adcon manufactures telemetry systems which can collect data via UHF radio or over the mobile phone network. Systems can use either method on their own, or a combination of the two. The data from the systems may be viewed on the customer's own software or they may take advantage of the data hosting services available through their local distributor and Aqualab Scientific.

UHF RADIO TELEMETRY

Adcon's radio telemetry units transmit data over UHF radio. The equipment operates on a licenseless radio frequency, ensuring privacy and protection from interference.

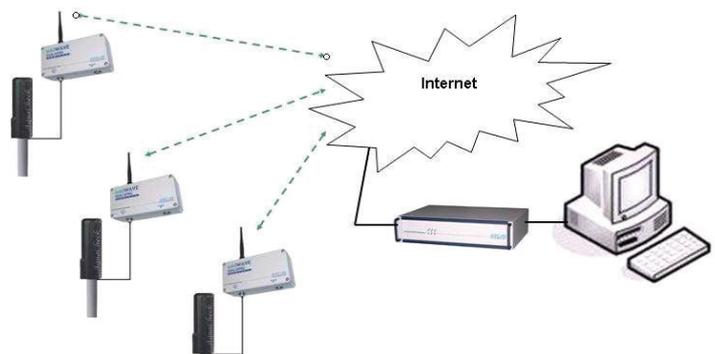
At each monitoring site, sensors are installed to monitor the required parameter: soil moisture, climate, flow, pressure etc. The sensors connect to a remote telemetry unit (RTU) which reads the sensors, saves the values in memory and then periodically transmits the readings back to a base station. The radios may communicate directly with the base station, or the signal may be passed through up to 5 repeater devices. Adcon manufactures both low and high power radios.



The low power units are used for monitoring (A723) and irrigation control (A724) and have a range of 1 to 2 km. The high power units (A751, A752, A753) are used where longer transmission distances (5 to 20km) or higher sensor counts are required. The high power devices may be used both to read sensors and as repeaters. The base station for a UHF radio system consists of an A850 Telemetry Gateway coupled to an A440 Radio Modem.

MOBILE PHONE TELEMETRY

Adcon's mobile phone RTUs transmit data via the mobile phone network, using the provider's GPRS cellular data service. The rate at which the sensors are read and the data values are transmitted back to a base station are configurable over wide range. If a base station is being used only with mobile phone RTUs, the A440 Radio Modem can be omitted. To receive the data, the base station must be installed in a location where a broadband Internet service is available. For customers who do not wish to purchase an A850 gateway, the RTU data may be hosted on a Gateway operated by Adcon or their local distributor.



HYBRID TELEMETRY

A telemetry system may also contain a mix of radio and mobile phone based loggers. To simplify the process of adding remote stations to an existing radio network, Adcon's RA440, which acts as a radio concentrator can be used. The RA440 can communicate with up to 50 radio RTUs and sends the data back via a GPRS connection to an A850 Gateway.

