

## OVERVIEW

The TankScan product family includes: field instruments, telemetry, and a PC-based host software package. TankScan level monitors combine Micropower Impulse Radar (MIR) sensing technology with battery-powered RF telemetry.

Data from one or more TankScan Level Monitors is collected at the TankScan Controller and relayed to a central processing site via telephone link or other means.

## FEATURES

- **Wireless (RF) Level Output**
- **Battery Powered**
- **Advanced Technology Sensor (Micropower Impulse Radar)**
- **No Moving Parts**
- **Pre-calibrated**
- **Telephone Modem Data Exchange**

## BENEFITS

- **Simplicity**
- **Low Cost of Deployment**
- **Low Cost of Ownership**
- **High Accuracy Measurement**
- **Effective System Layout**
- **Data Integrity**
- **Centralized Data Management**

## TankScan™

### Distributed Measurement System

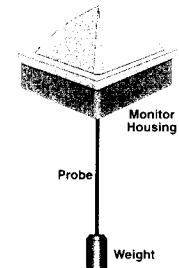
TS-Series and DataScan® PC

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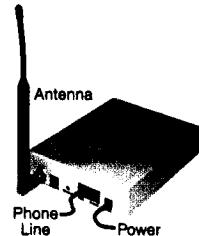
## TS-Series Components

**TankScan MONITOR Assembly** — consists of a hermetically-sealed plastic enclosure that houses the impulse generating sensor and RF telemetry circuitry, a battery compartment, and a flexible impulse waveguide (probe). The level data is transmitted to the TankScan controller on demand via the wireless link.



**TankScan CONTROLLER** - a general purpose device housed in a plastic (indoor) enclosure. The unit's primary function is to control the communications interface with one or more monitors at user specified intervals.

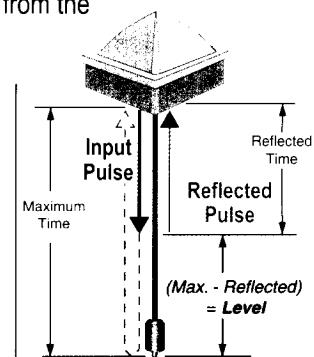
The controller stores received datapoint as a datalog. This datalog is transferred via the built-in modem to a host computer on a preset call-out schedule, an emergency call-out (alarm condition) or in response to a call-in from the host.



Configuration information for the controller and monitors, as well as program updates, can be sent to the Controller via the modem link.

## Principle of Operation

The principle behind the monitor's Sensor is based on a novel form of radar known as Ultra Wide Band (UWB) Impulse Radar. In operation, a very short, very low energy electromagnetic impulse is propagated from the top mounted sensor down along a thin waveguide (probe) that is immersed in the measured fluid.



The sudden change in the dielectric at the fluid surface causes some of the impulse energy to be reflected back up the waveguide. The time difference between pulse reflections and the maximum calibrated time delay is proportional to the level of the fluid.