# GENERAL ACOUSTICS

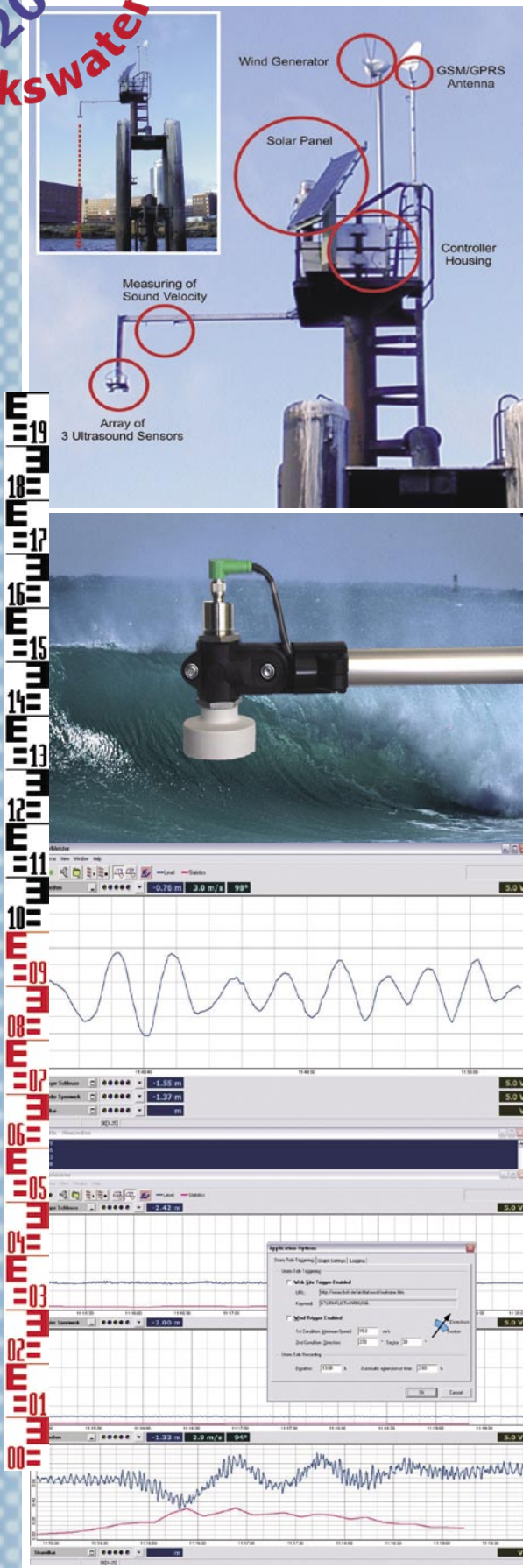# LOG_aLevel®

## Calibration Free Remote Sensing of Water Level and Waves

Test Winner
RIZA 2005
Rijkswaterstaat

LOG_aLevel®

Wind Generator
GSM/GPRS Antenna
Solar Panel
Controller Housing
Measuring of Sound Velocity
Array of 3 Ultrasound Sensors

**LOG_aLevel®** is a cost-effective, complete, remote sensing and stand-alone water level gauge on the basis of ultrasonic sensors. The system works automatically and is (optional) independent of any external connections. It is free of calibration and needs no maintenance.

High performance ultrasonic sensors guarantee reliable, fast and precise measurements of all kinds of water level and its dynamics.

## Advantages:

- Maintenance-Free
- Quick assembly and initiation
- Precise, robust and economical
- Always reliable under extreme conditions: flood, ice, storms, debris, etc.
- Calibration Free due to Outstanding Sound Velocity Compensation
- High Resolution Wave Measurement possible
- Remote data transmission, control and alerting
- Network integrity and multi event triggering
- World-wide proved and tested
- Easy to use Windows-Software

## Applications:

- Storm Tide, Flood and Tsunami Measuring Networks
- Wave Monitoring and Analysis
- Hydrography
- Operating Level Gauge for Dredging and Surveying
- Event Alerting System
- Water Reservoir Management
- Monitoring Discharger of e.g. Power Stations
- Environmental monitoring

# LOG_aLevel®

**Autonomous Remote Sensing of Water Level and Waves**

## Standard Equipment:

- Stainless steel housing, IP 66, lockable, size: 300x300x200 mm (or 500x500x200 mm)
- Ultrasound sensor ULL6080; IP 68, measuring range 6 m (higher ranges see options below)
- Reference sensor for sound velocity determination to guarantee a precise distance measurement
- Controller module for signal processing and sensor control/data acquisition incl. RTC
- Digital data transfer via interface RS232/RS485
- Power supply 12 V DC
- LOG_aLevel® Software for online-analysis of measuring networks, system set-up, managing and storing of the data on a Windows PC

## Available Options:

- Ultrasound Sensor ULL8080: measuring range up to 8 m
- Ultrasound Sensor ULL10080: for extreme weather conditions or measuring ranges up to 10 m
- Data Logger incl. 1 GB Industrial Grade CF Card in PCMCIA-Card (up to 2 GB available)
- LOG_aLevel® Radio Data Transmission: bi-directional radio transceiver, RS 232 output
- GSM: GPRS transmission to dynamic DNS or fixed IP-Address
- Modem or Ethernet-Module to connect to LAN-Network
- Digital display for direct level reading
- Wind generator, 25 W up to 150 W and/or Solar panel, 41 Wp up to 180 Wp
- Buffer battery, 12 V; 7,5 Ah up to 200 Ah
- Power supply 230/110 V AC
- Time module LOG_aLevel® high accuracy GPS-date and time, pps, 1ms accuracy
- Additional environmental sensors, e.g. wind gauge, ombrometer, pressure, etc. on request
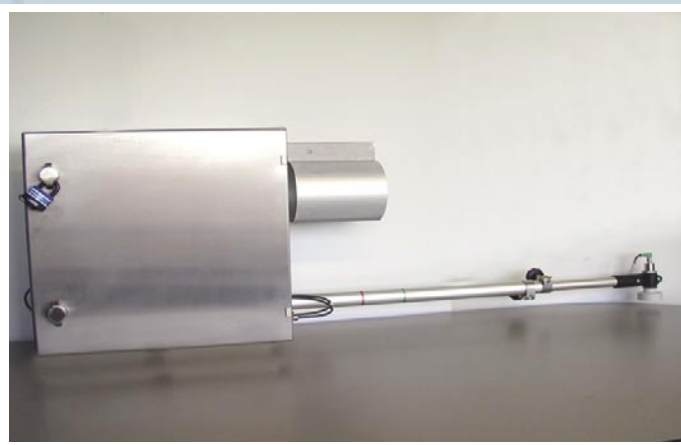
Mobile version of **LOG_aLevel®** with 6 m sensor fixed at extendable telescope arm and reference sensor for sound velocity determination (back of housing)

**Above:** Data transmission to PCMCIA-Data Logger or via Radio Module

## Specifications:

| | |
|---|---|
| Measuring range: | up to 10 m (higher on req.) |
| Resolution: | 1 mm |
| Field accuracy: | 1 cm |
| Sample rate: | up to 5 Hz (dep. on setting) |
| Frequency: | 80 kHz |
| Working temp: | -20 °C up to +70 °C |
| Storage temp: | -40 °C up to +80 °C |

**Some References:**

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