SLUDGE GUN®
PORTABLE SLUDGE BLANKET LEVEL DETECTOR

THE MARKLAND ADVANTAGE:

Simplify an operator's day-to-day tasks

- Make regulatory compliance monitoring and prevention of carryover easier.

Help eliminate unnecessary pumping or dredging

- Know the depth of the settled sludge bed and the overlying cloudy layer. Easily determine the optimal time for dredging your pond, lagoon or septic tank.

Quickly determine sludge blanket levels

- Get sludge depth readings easily by reading from numbered markers on the cable.

Convenient thumbwheel provides sensitivity control of optical sensor

- Detect silt, sludge and biosolids in densities ranging from light flocs to the thick blankets of murky lagoons. Also able to detect clear surfaces.

Ensure low maintenance costs

- The Sludge Gun® portable Sludge Blanket Level Detector has a proven track record of reliability for over forty years.

FEATURES

- Compact & handheld. Ideal for use on catwalks and boats
- Convenient storage for cable on Sludge Gun® spool
- Rugged and weatherproof
- Uses standard AA batteries, which are easy to replace and last approximately one year
- Spring-loaded trigger prevents accidental drain on batteries
- Convenient thumbwheel to adjust sensitivity for detecting thin or thick blankets or even light flocs
- Audible tone varies according to sludge density
- No calibration required

ES France - Département Bio-Tests & Industries - 127 rue de Buzenval BP 26 - 92380 Garches
Tél. 01 47 95 99 90 - Fax. 01 47 01 16 22 - e-mail: bio@es-france.com - Site Web: www.es-france.com

HIT YOUR TARGET!

APPLICATIONS

The Markland Sludge Gun® is used to measure and help monitor liquid-solids interface levels in a variety of applications:

- Drinking water and sewage at municipal treatment plants
- Raw influent, effluent and process slurries at industrial plants

Installations include

- primary and secondary clarifiers (gravity settlers)
- septic tanks
- dissolved air flotation (DAF) tanks/thickeners (floating bed)
- sedimentation basins
- lagoons
- ponds

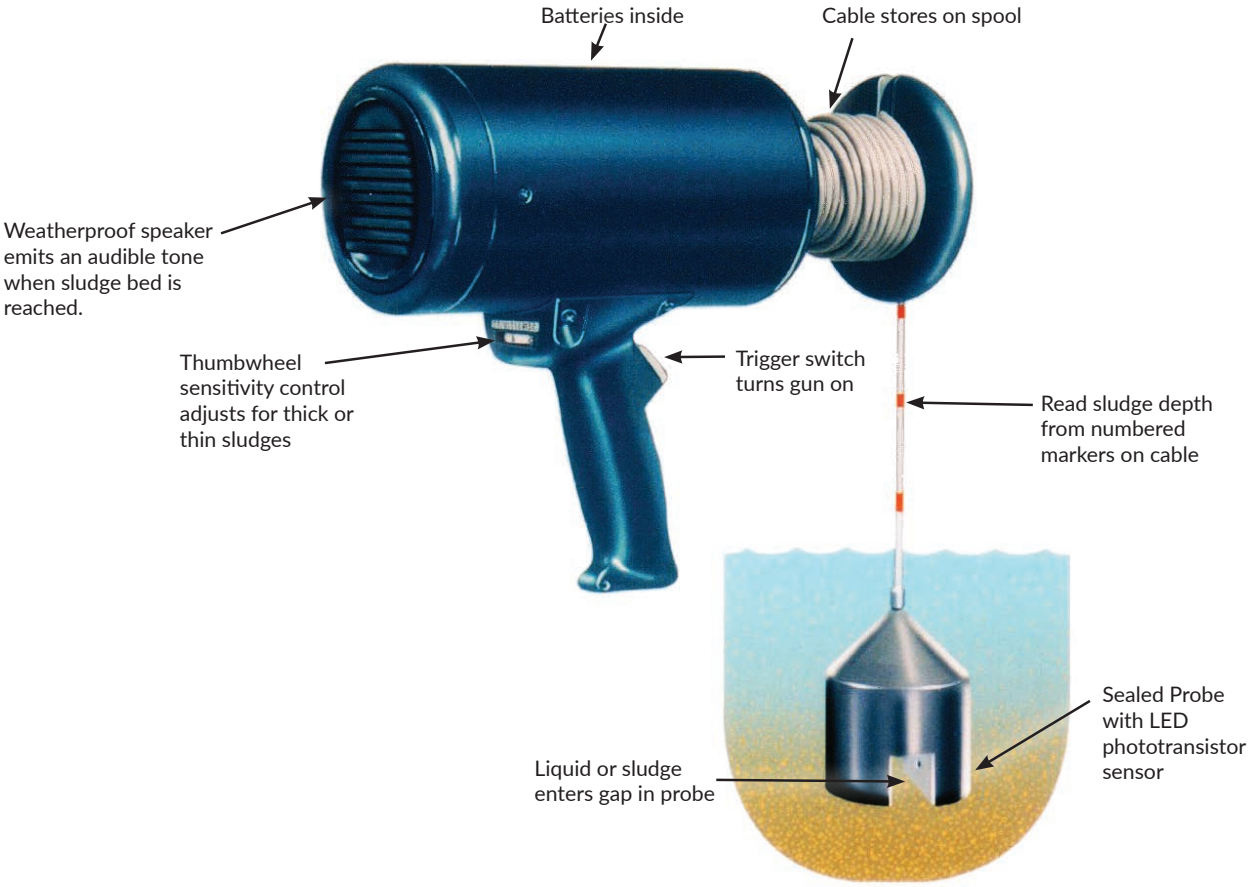
TECH SPECS

Weight	2.2 kg (5 lb)
Batteries	Six Alkaline AA
Battery Life	One Year (Normal Service)
Materials	Probe: PVC & Epoxy Cable: PVC or Polyethylene or Silicone (cable can vary based on the outdoor temperatures) Body: PVC & Aluminum
Operating Temperature	Minus 20°C (0°F) to 50°C (120°F)
Loudspeaker	3 Watts, Weatherproof Type
Printed Circuit Board	Epoxy-Glass, Moisture Sealed, Plug-in Style
Sensitivity Control	Trip point can be adjusted from barely cloudy water, right up to the thickest sludge
Cable Length	10 meters (33 ft.)
Cable Markers	Self-adhesive Vinyl (Numbers 1 to 33) Shipped loose for customer installation at either foot or meter readings)

The Sludge Gun® is used wherever solids are separated from liquids.

Markland's popular Sludge Gun® Portable Sludge Blanket Level Detector makes everyone an expert at sludge level interface detection.

ES France - Département Bio-Tests & Industries - 127 rue de Buzenval BP 26 - 92380 Garches
Tél. 01 47 95 99 90 - Fax. 01 47 01 16 22 - e-mail: bio@es-france.com - Site Web: www.es-france.com



HOW IT WORKS

When the trigger on The Sludge Gun® is depressed, a LED transmits a pulse of infrared light across a gap in the probe. The beam is received by a phototransistor on the other side of the gap. If the gap contains air or clear liquid, nothing happens. However, when suspended solids are encountered in the gap, some beam energy is absorbed and the rear-facing speaker on the back end of the gun emits an audible tone. As the suspended solids concentration increases, both the pitch and volume of the tone increase, which gives the operator a clear indication of the location of the thickest sludge.

By holding the trigger and listening to the note, while slowly moving the probe up and down, the operator can observe the depth markers on the cable and establish the location of both the sludge blanket and the overlying unsettled layer or cloud.

A spool on the front of the gun allows convenient storage for the cable. The Sludge Gun® Portable Sludge Blanket Level Detector is easy for an operator to carry from tank to tank. This rugged tool is a valuable addition to any plant.

Markland also offers **fixed installation sludge blanket level detectors** that provide single point monitoring or more comprehensive tracking of the liquid-solids interface and automate sludge removal. To learn more, visit **sludgecontrols.com**.

ES France - Département Bio-Tests & Industries - 127 rue de Buzenval BP 26 - 92380 Garches
Tél. 01 47 95 99 90 - Fax. 01 47 01 16 22 - e-mail: bio@es-france.com - Site Web: www.es-france.com

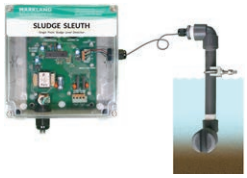
MARKLAND'S FAMILY OF PROCESS CONTROL INSTRUMENTATION

Markland Specialty Engineering has been designing and manufacturing ultrasonic and optical instrumentation that helps measure, monitor, and automate control in the water, wastewater and process industries since 1967. Orders are followed by quick delivery, and prompt product support is always available.

Sludge Gun® Portable Sludge Blanket Level Detector

Measure liquid-solids interface levels in clarifiers, septic tanks, ponds, and even murky lagoons. Facilitate monitoring for regulatory compliance and determining optimal times for pumping/dredging. Convenient thumbwheel adjusts the optical sensitivity. Compact and weatherproof.

Sludge Sleuth™ Single Point Sludge Level Detector



Single point monitoring & automatic control of settled bed depth in gravity settlers, decanting tanks, DAF units, SBRs, sumps, pits - even inclined plate clarifiers. Adjustable solids concentration set-point helps optimize equipment performance & reduce energy/haulage costs.

Suspended Solids Density Meter

Know real-time silt, sludge & slurry concentrations in clarifiers, tanks & pipes. Automate pumps to maintain preferred density. Help fine-tune dosing & thickener variables. Ultrasonic sensor needs no permits/ no approvals, measuring %S.S. even in thick concentrations. Readings are unaffected by color. Choose non-intrusive spool piece or throw-in probe.

Automatic Sludge Blanket Level Detector

Track liquid-solids interface levels in water, wastewater & process slurries, even in constricted areas. Program pumps to operate only when necessary. Help prevent process upsets. Maximize water removal. Optical sensitivity automatically adjusts for thick/thin concentrations.

Duckbill™ Automatic Composite Sampling System

Collect influent/effluent samples from sewers, lift stations, tanks, non-pressurized pipes, sumps, open channels. Explosion-proof sampler uses compressed air (no pumps, no vacuum system) to move samples, even up high lifts (80+ ft), over long runs (90+ ft), in freezing temperatures, from multiple sites simultaneously.

905-873-7791 • **1-855-873-7791** in North America
markland@sludgecontrols.com
305 Armstrong Ave. Unit 9
Georgetown, ON Canada L7G 4X6

rev.6—05/2022

MARKLAND

Serving the water, wastewater and process industries since 1967