



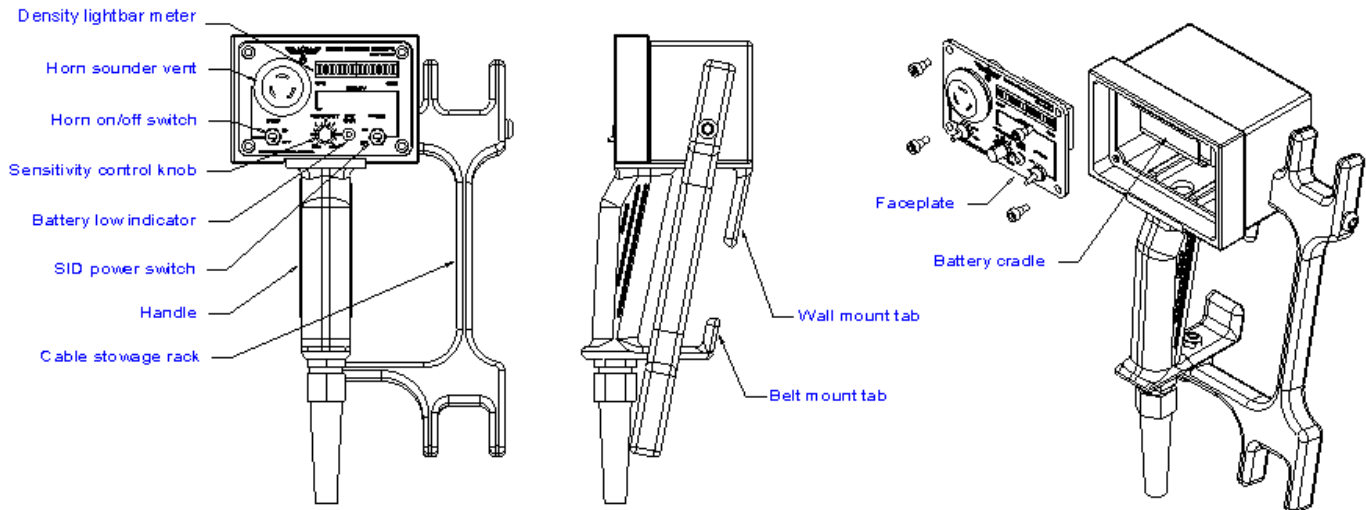
SLUDGE INTERFACE DETECTOR

Thank you for purchasing a Raven Environmental Products process control instrument. Please contact our Customer Service Department at 800-545-6953 for any service needed or visit us at RavenEP.com.

DESCRIPTION

OUT OF THE BOX

The Raven E-10200 Sludge Interface Detector (*SID*) is a rugged portable field instrument specifically designed to detect sludge density and measure sludge blanket elevation in sedimentation tanks and clarifiers. Precision electronics and the latest IRED technology enable accurate and repeatable measurements. Operator features like single-handed operation, belt clip and onboard cable storage make it easy to use.



SETUP – battery installation

OUT OF THE BOX

1. Switch power-off.
2. Remove 4 screws on faceplate, pull away faceplate to expose case chamber.
3. Open yellow Velcro strap and remove battery cradle from case.
4. Install the 6-AA alkaline batteries (provided) in the battery cradle.
5. Install battery cradle back in the case and fasten with Velcro strap.
6. Secure faceplate to the case with the 4 screws.

TOOL FAMILIARITY

OUT OF THE BOX

Before using the *SID* in water, take a minute to observe how it works.

- Power-on/off switch and a horn-on/off switch.
- A single lightbar segment lights up when the *SID* is powered-on
- Lightbar segments increase with horn as sludge density increases
- Horn may be muted by rotating the sounder vent or can be silenced by the switch
- The probe sensor emits an IRED beam that is invisible and harmless
- Low battery lamp will flash when battery replacement is due

Quick check

1. Switch-on the POWER and HORN.
2. Place your finger over one of the sensor eyes in the probe gap. All lightbars illuminate and the horn sounds off. The horn can be switched-off without affecting the operation of the unit.

SLUDGE INTERFACE DETECTION

IN THE FIELD

1. Rotate Sensitivity Knob to position [1] low sensitivity.
2. Lower the *SID* probe all the way to the bottom of the tank. NOTE: If needed, increase sensitivity just enough to light up all the lightbars. THIS IS THE SENSITIVITY BASELINE FOR THIS TANK
3. Slowly raise the *SID* probe out of the sludge blanket until most or all of the lightbars go out. At this level, you have detected the sludge blanket interface.
4. Using the top tank railing as a reference point, determine how much cable was pulled away from the railing. The amount of cable pulled away from the reference point represents the height of the blanket from the bottom of the tank. The number markers on the cable can also be used.

SENSITIVITY KNOB ADJUSTMENTS

IN THE FIELD

The Sensitivity Knob is used to compensate for varying types of sludge density.

Knob Setting	Probe Attitude	Sensitivity
1	Ignoring the smallest solids	Low
5	Detecting all solids	High

Note: Sensitivity range set at factory. Range modification instructions available upon request.

FINE TUNING

IN THE FIELD

- Now that you've established the baseline sensitivity for this tank, you can fine-tune the *SID* by increasing the sensitivity above the baseline.
- At the baseline sensitivity setting determined in the previous step, the probe is exhibiting an "all or nothing" reading. At sensitivities higher than your baseline, you can detect the ragged edge on top of the sludge blanket.
- By lowering and raising the *SID* probe in and out of the sludge blanket interface at various sensitivity settings above your baseline, you will get a feel for the *SID*'s "personality" and how it reacts to the particular influents at your plant.

MAINTENANCE

IN THE SHOP

- Replace all 6 batteries as a group with new AA alkaline batteries of the same type and brand
- Switch *SID* power switch-off when not in use to conserve batteries
- Store *SID* for long periods with the batteries removed
- Store *SID* in cool dry place and out of direct sunlight
- Clean probe sensor eyes with mild detergent

Replacement Parts

SID-10203-20 20-foot Cable Assembly with Sludge Sensor Probe
SID-10203-30 30-foot Cable Assembly with Sludge Sensor Probe

1 year limited warranty.

Other Raven Environmental Products process control instruments:

B-10104 CORETAKER® (16 ft. clear polycarbonate core sampler) LIFETIME GUARANTEE
F-10300 Bench top Centrifuge (includes six 19mm Centrifuge Tubes)
B-10101-19 19 mm Centrifuge Tubes (conical bottom with percentage markings)
B-10101-17 17 mm Centrifuge Tubes (conical bottom with percentage markings)
C-10102 Settleometer Kit (Measures sludge settling characteristics)

Visit our web site at www.ravenep.com for a complete line of products and information.

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