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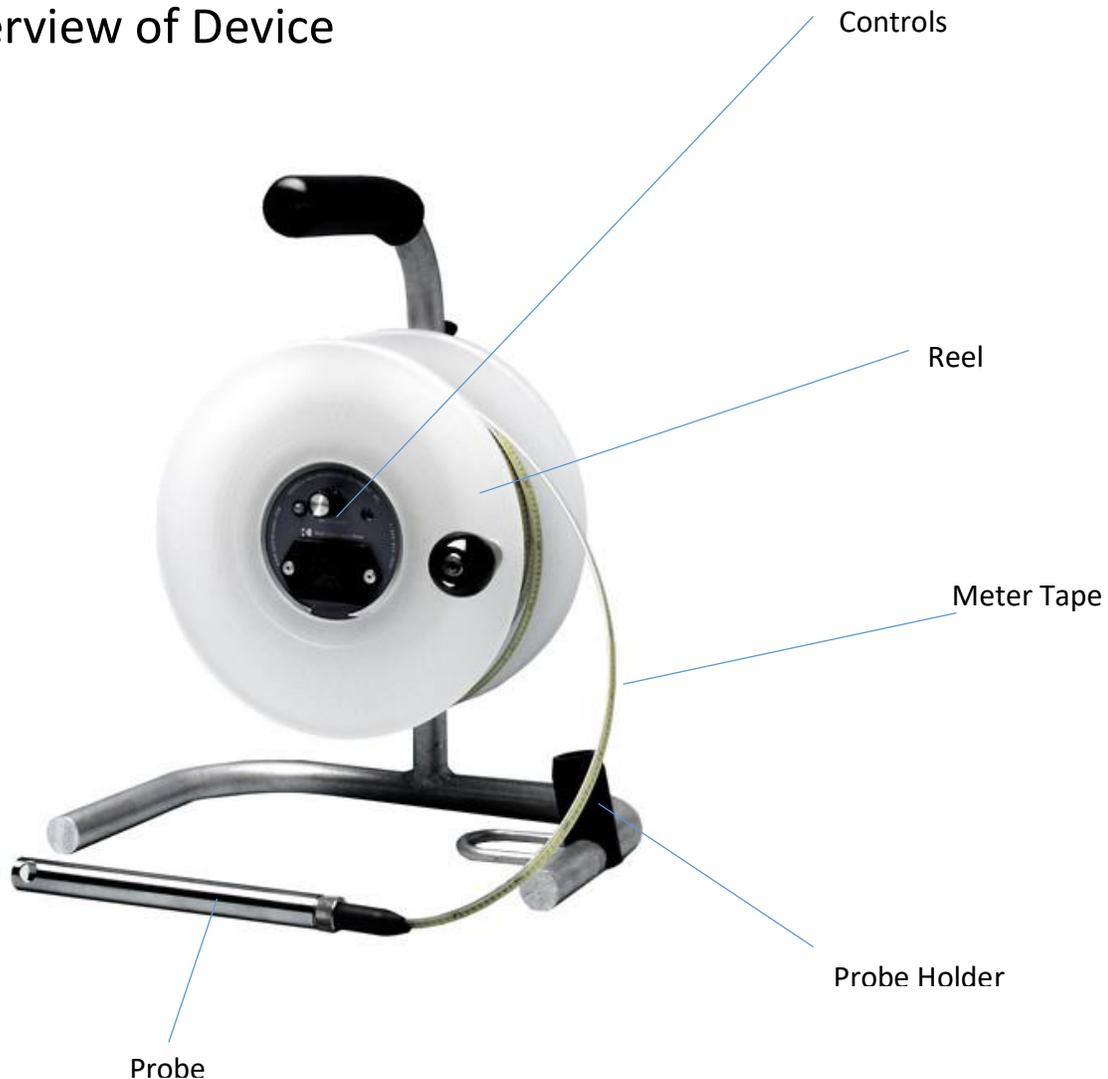
Summary



The Geotech ET is a user-friendly device used to measure the depth of groundwater from the surface. Its use in doing so is particularly relevant to the Danda Ecological Monitoring Program because it allows the collection of groundwater level data over time. This data can be used and analyzed to understand how changing water levels affect the environment and ecology of the Danda River as well as the economies of surrounding villages, towns, and municipalities.

The Geotech ET was selected for its small size and ease of use. Because of the close proximity of the groundwater well to the river, it was only necessary to have a measuring tape length of 60 M as the water level will always be relatively high. The simple controls, mechanisms, and small size allow anyone regardless of experience to begin using the Geotech ET immediately.

Overview of Device



Probe: The metal probe contains a wire within it that senses the depth of the water. This information is transferred via wire in the meter tape to the display and controls to produce an audible beep. The probe is delicate and must be used with care.

Probe Holder: Used to store Probe when the Geotech ET is not in use.

Meter Tape: 60-meter tape used to measure the depth of the water in meters. The Meter Tape contains an internally threaded wire that transfers information to the Display and Controls. Tape must be used with care to avoid damaging internal wire.

Reel: Used to deploy Meter Tape and Probe and store Meter Tape when not in use.

Using the Meter

To use the Geotech ET meter, first ensure there is a charged 9-volt battery in the battery compartment. Unlock the battery compartment by sliding the plastic panel in the direction of the arrow until it unlocks. Once unlocked, slide the battery compartment out and insert or replace a 9-volt battery, then insert the battery compartment back into place until it clicks.

Once you have ensured there is a battery providing power, you may turn on the device. This is done by turning the power-on-switch clockwise until you hear a loud signal. Once this signal or “beep” has sounded, you may begin lowering the device into a water source. First, unlock the reel by unscrewing the locking mechanism on the back of the handle, then remove the probe from the probe holder and lower the probe and tape into the water source protecting the tip and tape from any scraping or damage. The best way to do this is to lower the tape slowly while grasping the edge of the pipe or well and allowing the tape to run against the skin of your hand. Be sure to track how many meters of tape have been lowered into the pipe so that you will not lose track of your measurement. Keep lowering the tape until an audible signal or “beep” is heard, then, to ensure an accurate measurement pull the tape out ten centimeters and lower it back in noting every single centimeter that passes on the edge of the water source or pipe. Once the beep sounds again, write down the exact measurement in centimeters from the edge of the pipe.

After you have acquired this measurement, measure (in centimeters) from the ground to the mouth of the water source or pipe and subtract this measurement from your original measurement within the water source or pipe. Doing this allows you to obtain an accurate measurement from ground level and not the level of the pipe.

Now that you have obtained your main measurement of the water depth, slowly reel in the meter tape making sure to cover the mouth of the water source with

your hand and letting the tape run against your skin. Reel the tape all the way in, making sure the tape is facing one way and not tangled. Then, place the probe in the probe holder and lock the reel with the small turning screw on the back of the handle. After you have secured the probe and reel, make sure the device has been turned off to avoid draining the battery.