PRODUCT MANUAL

The AGM Sentinel is an unmanned AGM with satellite reporting capabilities. It detects, records, and reports both magnetic and 22 Hz passages simultaneously.

The following information will help you use the AGM Sentinel effectively in most pipeline environments and with many different pig or tool configurations. For further guidance, or for unique tracking situations, contact us. Our contact information is found on our website: www.bestpigtracker.com

The AGM Explorer software needed to download AGM data is available free of charge. Contact us for a download link.

Pre-Deployment:

Install batteries or replace if low.

- Open the case and install fresh 4 C Cell batteries. Alkaline batteries are recommended for most situations. Very cold or very hot weather degrades the performance of alkaline batteries. For extreme temperatures or for long duration deployments, use Lithium C Cell batteries (3.6V cells).
- Check with the battery manufacturer for temperature range to ensure battery will be suitable.
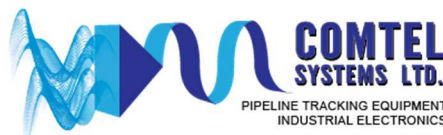
Arm box outside (sync to GPS) if previously stored for a time.

- To avoid a long wait for the unit to arm when deployed, power up the box outside and allow it to arm. This allows it to get GPS information that is out of date if the unit has been stored for a long time. Otherwise it could take up to 15 minutes to arm in the field.
- To do this, follow the instructions under the **Deployment** heading and leave the AGM Sentinel powered on until it arms. Then power down and clear (see below).

Clear AGM data before run.

Caution: This will erase all data stored on the unit. Make sure previous data has been downloaded or is no longer needed.

- Connect the powered off unit to your computer with a USB cable, and use the AGM Explorer software to clear the data. Refer to the AGM Explorer instructions for help on how to do this.

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Pre-Deployment (cont'd):

Adjust your Serial Number and Friendly Name as needed.

- While the unit is connected to the AGM Explorer software, you can adjust your company's serial number and add or change a friendly name for the unit. This will help you identify the data once it is downloaded.

Inspect seal and close case tightly.

- Check that the gasket and sealing edge is not damaged. Squeeze the box slightly before latching **both sides** of the latch to help keep a good seal.

Set up remote passage notifications on the Sentinel Tracking website.

- Make sure a Project and Contacts are set up for passage notifications. See the Sentinel Website or contact us for assistance and training.

Deployment:

Position the AGM Sentinel <u>directly above</u> and <u>parallel</u> to the pipeline.

- Refer to the arrows on the label to make sure that the unit is parallel to the pipeline, or 22 Hz detection will be limited.

Turn on and wait for the unit to arm.

- Press and hold the Power button until the Power and Status lights are on solid (1 to 2 seconds).
- If unit will not power on, check that batteries are seated well and contacting.

AGM Sentinel will obtain position and time from GPS.

- This could take up to 15 minutes if the unit has not been armed for a long period of time.

Once armed, check status light to determine if placement is good.

- If not in a noisy location, Status light will blink once every 3 seconds, indicating Armed and Not Logging. 3 blinks every 3 seconds indicates low battery voltage.
- If the Status light is blinking rapidly, this means the unit is logging.

Note: The AGM Sentinel is very sensitive, and will sometimes log noise sources, vibration and moving magnetic fields (i.e. vehicles, ATVs, or the unit itself being moved). This will not prevent it from logging an actual passage.

- If the unit is constantly logging (blinking rapidly), look for potential noise sources. If none are found, you should consider relocating the unit a few feet and re-arming to see if the noise improves.

Note: Making sure that the unit is not constantly logging noise is key to successful remote passage notification, and makes it easier to download and pick passages later.

Deployment (cont'd):

Test satellite communication, if desired.

- Pass a magnet or transmitter over the box and look for messages.

Unit will continue to log and transmit multiple passages over satellite.

- If the Status light is blinking rapidly, this means the unit is logging.
- The Status light will blink 2 times every 3 seconds to indicate it has seen what it determined to be at least one valid pig passage. 4 blinks every 3 seconds indicates the unit has seen a valid passage and has a low battery.

Retrieval:

Turn off AGM Sentinel before picking up.

- Hold down the Power button until the Status light goes out (1 to 2 seconds).

Download:

Download data from the AGM Sentinel using the AGM Explorer software.

- Connect the **powered off** unit to your computer with a USB cable, and use the AGM Explorer software to download and view the data. Refer to the AGM Explorer instructions for help on how to do this.
- The AGM Explorer software will allow you to select and export passages from multiple files from multiple AGMs in many formats.

Note: The data is stored in the unit even if batteries are low or removed, until cleared using the AGM Explorer software.

- For this reason, it is best to clear the data after you have downloaded and saved it. This will prevent the download from continually growing, making it easier to find passages and quicker to download.

Troubleshooting:

The AGM Sentinel will not turn on.

- Check that the batteries are seated well inside, and touching each other and the battery holder contacts. With use the battery holders loosen up and this problem generally disappears.

The unit is constantly logging after it is armed.

- Are there any nearby noise sources? Try moving the unit away from survey flags (or remove the flag), chain link fences, turn off your vehicle, etc.
- Does another unit work in this location? If so, there might be a problem with the unit.
- Download the data off the unit. Does it show one long log? If so, there could be a problem with the unit. Contact us for help.

Troubleshooting (cont'd):

The AGM Sentinel will not arm.

- Has it been stored for a long time, or without batteries? Wait up to 15 minutes for GPS signal to be acquired.
- Is only the Power light on, not the Status light? There could be a problem with the unit. Please contact us for help.

I can't connect to the AGM Sentinel using AGM Explorer.

- Are you using a charge only USB cable? Make sure your cable has both charge <u>and</u> sync (or data) lines. Some charger cables are missing data lines.