QUANTIFIEDAG®

SenseTag™ User Manual

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Safety and Regulatory Information

Read all of the instructions listed here and/or in the user manual before you operate this device. Give particular attention to all safety precautions. Retain the instructions for future reference.

This device must be installed and used in strict accordance with the manufacturer's instructions, as described in the user documentation that is included with the device.

Comply with all warning and caution statements in the instructions. Observe all warning and caution symbols that are affixed to this device.

Installation of this device must be in accordance with national wiring codes and conform to local regulations.

Do not overload outlets or extension cords, as this can lead to risk of fire or electric shock. Overloaded AC outlets, extension cords, frayed power cords, damaged or cracked wire insulation, and broken plugs are dangerous. They may result in a shock or fire hazard.

Do not open the device. Do not perform any servicing other than that contained in the installation and troubleshooting instructions. Refer all servicing to qualified service personnel.

This device should not be used in an environment that exceeds _____.

FCC Statements

FCC Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential environment. This equipment generates uses and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. Potential harmful interference to radio or television reception can be determined by turning the device off and on. If this equipment does cause such interference, the user is encouraged to make attempts to correct the interference by taking one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the device and receiver
- Consult the dealer or an experienced radio/TV technician for help

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC CAUTION: Any changes or modifications not expressly approved by Motorola for compliance could void the user's authority to operate the equipment.

FCC RADIATION EXPOSURE STATEMENT

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. To comply with the FCC RF exposure compliance requirements, the separation distance between the antenna and a person's body (including hands, wrists, feet and ankles) must be at least 20 cm (8 inches).

This transmitter must not be co-located, or operating in conjunction with, any other antenna or transmitter.

The availability of specific channels and/or operational frequency bands are country-dependent,and are firmware programmed at the factory to match the intended destinations. The firmware setting is not accessible by the end user.

RESTRICTIONS ON THE USE OF WIRELESS DEVICES

In some situations or environments, the use of wireless devices may be restricted by the proprietor of the building or responsible representatives of the organization. For example, using wireless equipment in any environment where the risk of interference with other devices or services is perceived or identified as harmful.

If you are uncertain as to the applicable policy for the use of wireless equipment in a specific organization or environment, you are encouraged to ask for authorization to use the device prior to turning on the equipment.

The manufacturer is not responsible for any radio or television interference caused by unauthorized modification of the devices included with this product, or the substitution or attachment of connecting cables and equipment, other than that specified by the manufacturer. Correction of the interference caused by such unauthorized modification, substitution, or attachment is the responsibility of the user.

The manufacturer and its authorized resellers or distributors are not liable for any damage or violation of government regulations that may arise from failing to comply with these guidelines.

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OVERVIEW

Operating Specifications

Frequency	902 - 928 MHz
Dimensions	3.765” x 1.271” x 0.925” (95.6 mm x 32.3 mm x 23.5 mm)
Weight	0.098 lb (44.45 grams)
Expected Battery Life	> 6 months
Operating Temperature	-40°C to +85°C
Relative Humidity	20% to 90% non-condensing

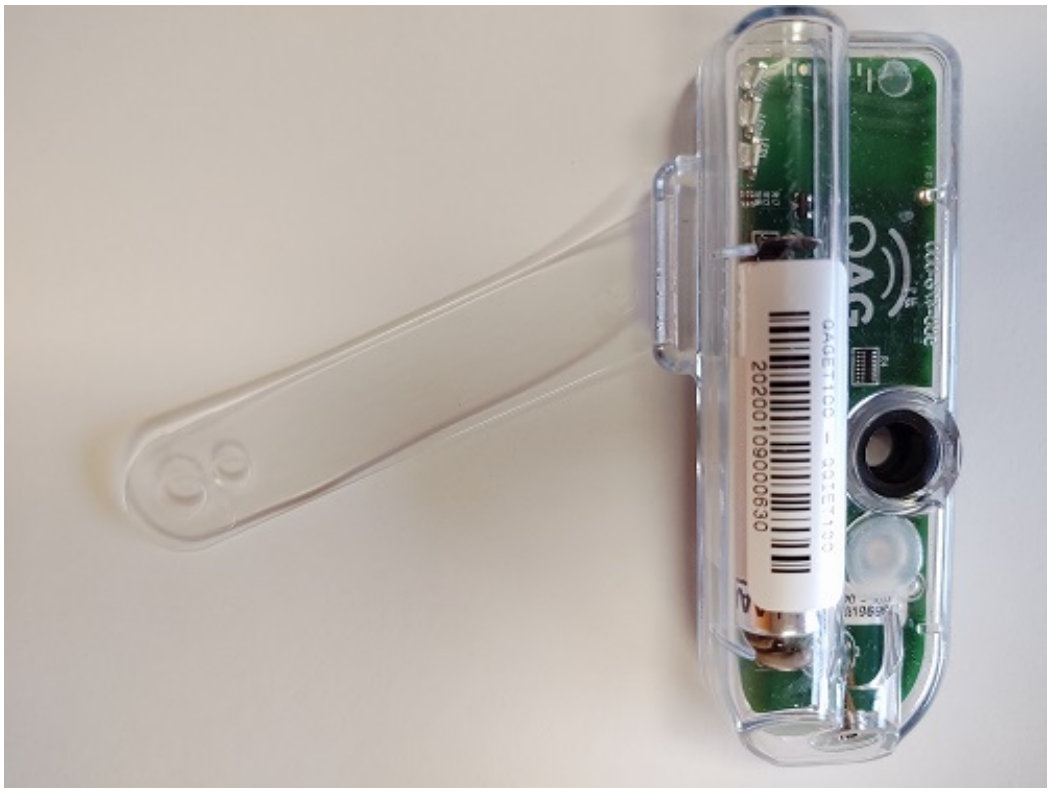

Figure 1 SenseTag Full Assembly

Note: The strap and bushing are inserted into the plastic during the manufacturing process. Figure 1 SenseTag Full Assembly is how the device is shipped to the field.

Figure 2 PCB Assembly Bottom Side

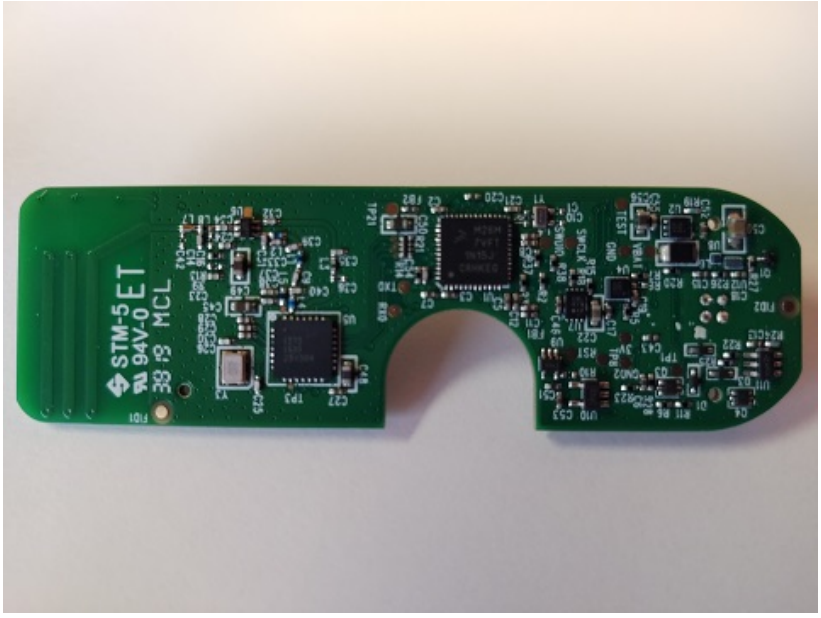

Figure 3 PCB Assembly Top Side

Activation

Button/LED behavior:

When tag is in SEARCH MODE:

Button Press	Description	LED Behavior
Quick Press (<3 seconds)	Do Nothing	N/A
Long Press (>3 seconds)	Activate the tag	10 blinks @2Hz

When tag is ACTIVATED:

Button Press	Description	LED Behavior
Quick Press (<3 seconds)	Status - Show tag is activated	10 blinks @2Hz
Long Press (>3 seconds)	Tag will enter search mode	5 seconds solid on

The tags will come from the factory (post-production) in Search Mode.

Tagging

1. QuantifiedAg SenseTag uses a standard ear tag pin and a modified hand tool used to apply the pin to the tag.

Figure 4 Hand Tagger and Standard Pin

2. The SenseTag is attached to the **LEFT** ear of the cow, with the strap wrapping from inside the ear out/up to the top of the ear.

Figure 5 SenseTag loaded in Hand Tool

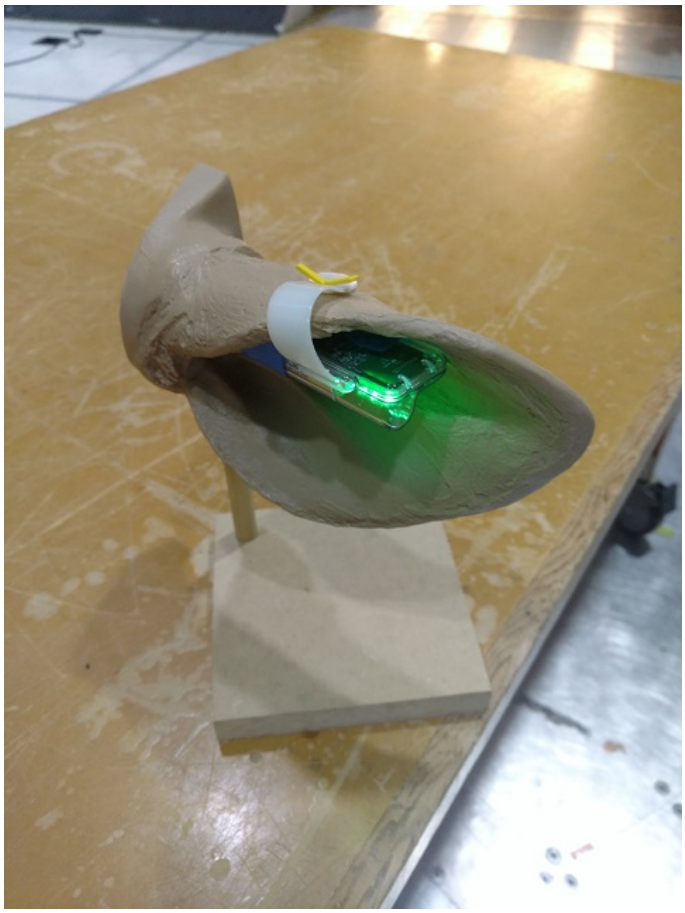

Figure 6 SenseTag During FCC Testing

3. Figure 6 SenseTag During FCC Testing show how the tag would be installed into the ear of the animal.