# Tactical Gloves for Accurately Tracking Munitions Use

**Material tracking during military missions**

A major issue posing military forces currently is the ability to accurately track the number of rounds available for a given mission in real-time. Accurate material tracking requires knowing what is supplied, on-hand, used, and ultimately re-supply needs. Current operator-worn gloves that can track such information in real-time do so with poor reliability and do not support operator safety, dexterity, or comfort.

**Tactical gloves for tracking material use**

To increase the accuracy and improve operator functionality, Georgia Tech researchers have developed tactical gloves with Tactical Passive RFID Transponder and Morphological Actuation. These gloves include an antenna that is woven into the palm of the glove, which is constructed of comfortable, flexible materials that can operate at a range of frequencies, allowing for the use of multiple gloves in one area at the same time. The gloves themselves are constructed of resistive fabric, allowing for the quantification of deformation and glove morphology with an inlaid force sensor. In doing so, the RFID can transmit to an external receiver where a software program can determine if a load is being handled, improving accuracy. To resolve operation ambiguities and improve safety, the gloves include a fingerprint scanner. These gloves can not only be utilized in a military setting but can also improve the general safety of civilian firearm users and improve inventory management.

**Summary Bullets**

- The gloves include an antenna that is woven into the palm of the glove, which is constructed of comfortable, flexible materials that can operate at a range of frequencies.
- Morphological actuation in the gloves supports safe use.
- To resolve operation ambiguities and improve safety, the gloves include a fingerprint scanner.

Solution Advantages

- **Comfortable**: The in-woven antenna is made of flexible materials to support comfort and dexterity.

- **Safe to use**: Morphological actuation supports safe use.
- **Identity detection**: Fingerprint scanner supports the ability to identify the user.

Potential Commercial Applications

- Military gloves for counting loaded rounds.
- Worker gloves for warehouse inventory management.
- Gloves for personal actuation to promote firearms safety.

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**IP Status**

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**Publications**

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**Images**

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