COPPER COAT COUNTER-ISR DETECTION SYSTEM

Lightweight **counter-ISR system providing real-time situational awareness and detection** of ground surveillance radars

The low cost and low-power consumption of ground surveillance radars (GSRs) have led to a proliferation of GSR systems across the battlefield, presenting a unique challenge for the warfighter. SRC, leveraging more than 60 years of research and development expertise, has introduced the Copper Coat counterintelligence, surveillance, and reconnaissance (ISR) system – the first system of its kind – enabling dismounted warfighters to detect GSRs in a spectrum congested environment.
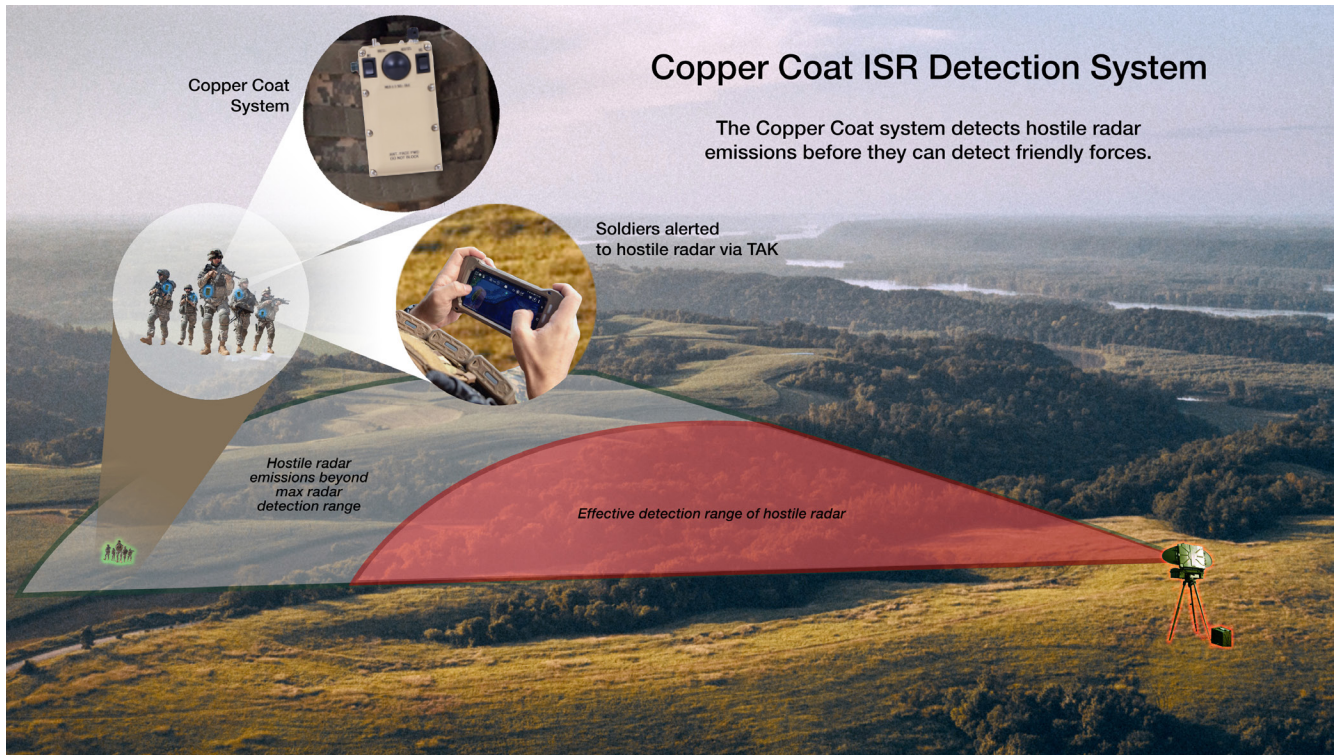
The Copper Coat counter-ISR system is a first-in-class, passive radar detection and alert system that gives warfighters early warning of hostile GSR emissions beyond their effective range. The system has easy-to-access settings – day, night and standalone – that reduce the interaction time of the user so they can stay engaged with their mission, thus improving survivability and situational awareness.

With its embedded antenna, the Copper Coat system observes a threat, detects and classifies the RF signal and generates a notification. An extremely low-size, weight and power (SWaP) system worn by soldiers, the Copper Coat unit discretely alerts the operator via notification on their Tactical Assault Kit (TAK) or an audio signal through their headset, delivering critical intel to help warfighters avoid detection and disrupt the enemy's command.

THE COPPER COAT SYSTEM DISCRETELY WARNS AGAINST GSR AND ENHANCES SITUATIONAL AWARENESS AND SOLDIER SURVIVABILITY

Copper Coat System

Copper Coat ISR Detection System

The Copper Coat system detects hostile radar emissions before they can detect friendly forces.

Soldiers alerted to hostile radar via TAK

Hostile radar emissions beyond max radar detection range

Effective detection range of hostile radar

SRC

COPPER COAT COUNTER-ISR DETECTION SYSTEM

SIMPLE DEPLOYMENT AND OPERATION

The Copper Coat system is lightweight and easily attaches to a soldier's MOLLE/PALS load bearing system.

The system's intuitive user interface and clear alerts make it easy for any operator to use without specialized training.

APPLICATIONS

The Copper Coat system is ideal for force protection missions of forward-deployed teams, detecting, classifying and alerting ground forces to hostile GSR. Common applications include:

- Counter-ISR
- Counter-GSR
- Force protection
- Soldier survivability

BENEFITS

- Detects GSR emissions before GSRs can detect soldiers
- Operates passively with no RF emissions, making it undetectable by adversaries

- Small and lightweight design integrates easily into the soldier's kit via MOLLE straps
- Easy-to-access day, night and standalone modes reduce user interaction time by controlling the brightness and volume of system alerts
- Helps protect warfighters by increasing situational awareness and providing early warning of GSR surveillance
- Offers inexpensive solution to an emerging problem for the military

SPECIFICATIONS

- Detection frequencies: Ku Band (12 to 18 GHz)
- System size: 5.5 in (L) x 3.2 in (W) x 2 in (D)
- System weight: 2.0 lbs
- Temperature range: -40 °C to +65 °C
- Power requirements:
  - +5.0V, +1.8V, VBAT
  - Capable of being run from an external 5 VDC at 2 Amp max power source
- Interfaces:
  - USB 2.0 Full/Hi-Speed
  - 10/100 Mbps Ethernet

FEATURES

- ➢ Operates passively with zero probability of detection
- ➢ Is extremely small and lightweight with no moving parts
- ➢ Minimizes user's heads-down time, improving situational awareness
- ➢ Operates via battery for a minimum of 72 hours
- ➢ Integrates with ATAK (Android Tactical Assault Kit)
- ➢ Enables easy-to-access day, night and standalone modes
- ➢ Identifies and classifies radars using pre-loaded EW data and communication systems/headsets
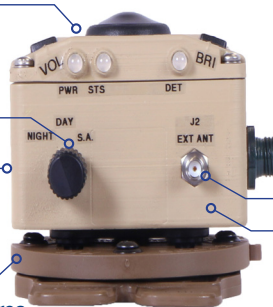- ➢ Stores every generated summary and raw log entry for further analysis

BELOW: Copper Coat counter-ISR detection system preliminary design, top view

Dashboard with Multi-Color Situational Awareness LED Indicators

Rotary Knob Mode Selector

External Speaker

MOLLE Mounting Features

External RF Connector for Alternate Antenna (to support additional use cases)

Embedded GPS

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