EM-J4-E3501 Sensors

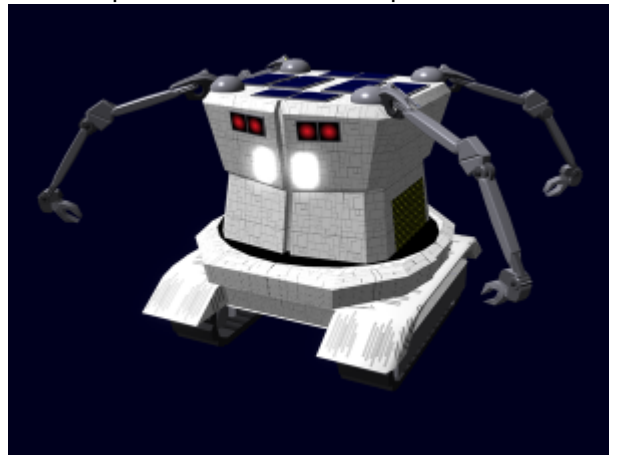![Emrys Industries - A Tamahagane Company]

The EM-J4-E3501 Sensors system was developed for the *EM-J4 MARI Series Drone*, it became available in YE 35.

About the E3501

The E3501 consists of several components which allow the drone to perform its duties. It provides multiple spectrum visual capability, and detection systems.

Details

Manufacturer: Emrys Industries Nomenclature: EM-J4-E3501 Type: Sensor Class: Electronics Designer: Tamahagane Corporation R&D

Systems

The J4-E3501 provides the following sensor capabilities.

Vision

- Normal vision
    - Zoom x20
    - x100 milliscopic vision for detail work
- UV vision

- IR vision

Audio

- Auditory
  - Normal mode - sounds in the 20 Hz (cycles per second) to 20 kHz (20,000 Hz) (Basic human range)
  - Expanded mode - expands range up to 60,000 Hz
  - +20 db boost
  - Location: The audio pickups are located on the front and back facing below the optical sensors
- Sonar
  - The drone has the ability to detect objects moving towards it outside of the normal field of vision. The range of the sonar is 30 meters, but optimum range is 10 meters or less.
  - Location: The sensors are mounted in pairs on each of the vertical facing and the top.
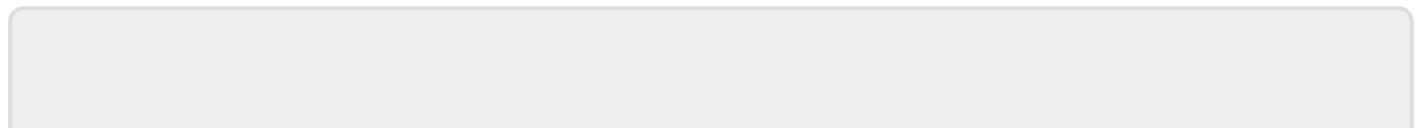
Thermal

- Thermal imaging
- Ambient temperature

Emissions

- Electromagnetic - this sensor can detect and identify EM signals, providing, the wavelength, frequency, and signal strength. It can also locate the source of the emission.

- Ionizing Radiation - this sensor can detect and identify the following particles: alpha particles, beta particles, and neutrons. It can also detect radiation on the short wavelength end of the electromagnetic spectrum namely ultraviolet, x-rays, and gamma rays. In addition to identifying the type of radiation it can determine the level present.
- Light Spectrum - this sensor can detect and identify light ranging from infrared through the visible spectrum and ultraviolet. It can be set to scan for a particular band of light, or to identify what bands of light are present, and how strong.

Chemical

- Gaseous - this sensor performs an analysis of gases. It can analyze the atmosphere. It identifies the chemical composition, and pressure. It can also be used to selectively analyze a gas that is being vented.

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