3D Thermal Electrical Powered Beacon.™

Pictured Right – 3D development unit.
Pictured Left – Production rendition with fitted weather cover

Originally developed in 1995, Cejay Engineering's 3D Beacon is primarily used for thermal marking of vehicles where NVG applications are not appropriate. Designed as an anti-fratricide and covert position marker for vehicles working air support, the beacon utilizes an electrically controlled rotating thermal source to provide a signature that can be seen with thermal imaging equipped aircraft and ground forces.

The beacons rotating head unit includes a compact thermal source that is used to create an alternating black and near white flashing image when viewed with thermal equipment. This flashing increases the visual performance at the thermal imager and increases the user's visual recognition of the beacon. Providing a recognizable flashing beacon signature dramatically reduces the probability of misidentification during operations. Additionally with a selective wave band filter can be placed in front of the thermal source to customize the frequency output so that only permitted wave lengths can be emitted.

The beacon is activated / deactivated with a manual switch that controls both the heat source and the head unit rotation. The unit can be powered remotely by a wide range of DC sources from 10 to 32 volts including a 5593 lithium battery. It is recommended that the unit be either vehicle mounted or deployed near vehicle and utilize the VAPS (Vehicle Auxiliary Power Supply) to provide continuous power to the beacon.

The electric thermal beacon has been engineered to provide a significant thermal signature for vehicle mounted or remote marking. The current trial unit is engineered for 360 degree visibility. The unit can be modified to provide a 90-150 degree unidirectional output. Tested to 5,000 meters

Projected Weight	14 ounces
Size	8x2 Inches or less
Operation Time	6 hours when powered with a 5593 lithium battery / VAPS unlimited
Proven Range	5,500 + meters with commercial thermal viewing equipment *(operating range is notably dependent on sophistication of the equipment and operator as well as environmental conditions)*
Emission Frequency	3k-12k nm. Alternate frequencies are available
Observable Image	Dark and near white alternate flashes.
Viewing angle	360 degree horizontal / 0-90 degree vertical

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