



BODY WORN ANTENNA SYSTEM

Electronic war fare equipment has traditionally employed large vertical omnidirectional antennas, however, they present operational challenges their users as they are low gain, highly visible, and can limit manoeuvrability in operational environments. Moonraker's new body worn antenna system overcomes these limitations and increases performance.

Conventional omnidirectional antennas have finite gain levels which constrain the whole system's RF performance. This in turn negatively impacts the system level design of portable systems.

MORE EFFICIENT, HIGHER GAIN

The body worn antenna system developed by CBG Systems comprises multiple directional antennas and represents a step change in the performance of body worn antenna technology. The gains of more than one directional antenna are combined to deliver higher gain and more consistent omnidirectional coverage as compared to large vertical omnidirectional antennas.

This configuration maximises radiation efficiency which enables a higher power on target, greater range, and / or longer battery endurance / lower weight depending on the system drivers.

BENEFITS

- Higher and more consistent gain
- Higher power on target and greater range / longer battery life
- Greater robustness and less prone to snagging
- Low manufacturing costs owing to simple design
- Discreet antenna reduces visual signature

APPLICATIONS

- Defence and security
- Search and rescue
- Specialist civilian applications



SPECIFICATIONS ▼

| | |
|---------------------------|---|
| Colour | Standard is Drab Olive Other colours to order |
| Frequency Range | 800MHz – 2.5GHz 2.5GHz – 6GHz |
| Radiation Pattern | Omnidirectional |
| VSWR | <2:1 |
| Power Capability | 30W max |
| Antenna Dimensions | BWA-825 800MHz - 2.5GHz : 40 x 100mm per radiator BWA-256 2.5GHz - 6.0GHz : 20 x 36mm per radiator |

Intellectual Property

Patent granted in UK (GB 2539327) and Australia and pending for in USA, Europe and Canada.

ABOUT THE BODY WORN ANTENNA

The body worn antenna system uses multiple distributed higher-gain directional antennas to reduce the Size, Weight and Power (SWaP) requirements while increasing the total system performance.

Due to their small size the antennas could be integrated in various ways such as into a vest, or on the straps of a backpack or radio.

PERFORMANCE

Indoor and outdoor testing of prototypes from just 50mm in length have shown excellent performance.

Multiple systems have been designed and tested which cover frequencies from 800 MHz to 6 GHz, with development continuing towards extending frequency ranges.

CBG Systems

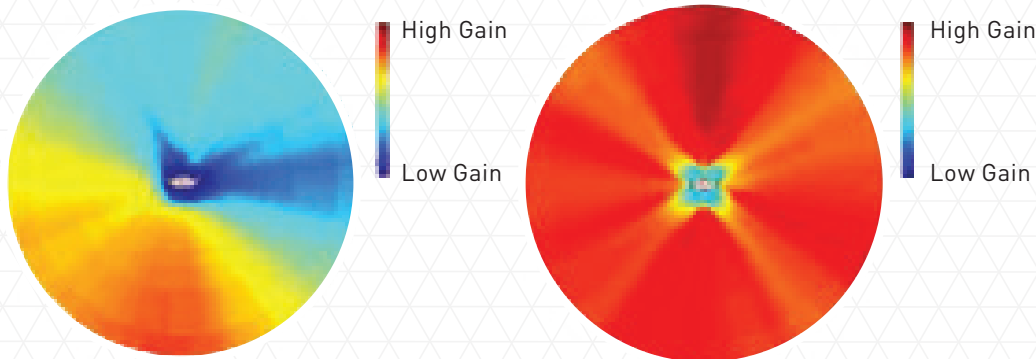
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A comparison of the gain map of a conventional omni-directional antenna (left) and the new body worn antenna (right).

Moonraker products represent the pinnacle of antenna design. With over 45 years' experience supplying Defence, Commercial and Recreational industries. Moonraker antennas are individually tuned and manufactured to our stringent extreme marine quality standards that ensure maximum performance and service life.

