

Helicopter White-out / Brown-out Landing System



Application Leaflet

Microflown Technologies
PO Box 300
6900 AH Zevenaar
The Netherlands
info@microflown.com

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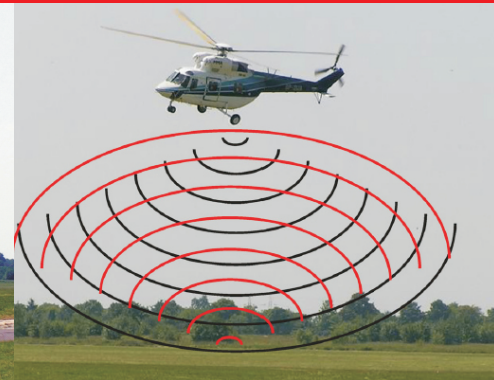
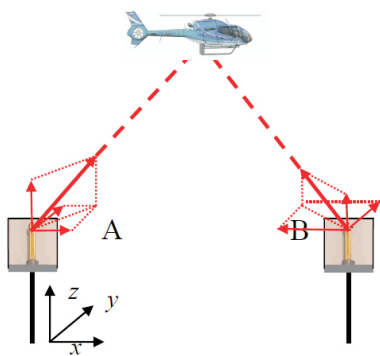
Microflown's Acoustic Vector Sensors (AVS) can be used to help helicopters land in environments with impaired visibility (e.g. brown-out desert landing, or white-out snow or fog landing) and with vertically moving landing areas (sea vessels). There are three ways in which AVS can assist landings:

- 1) Ground based acoustic detection to home in the helicopter;
- 2) Airborne AVS detecting acoustic ground beacon; and
- 3) Helicopter's own low frequency noise is used.

1) At a given landing area, AVS can be installed. Considering the helicopter as a single tonal sound source, the position of the helicopter (bearing, elevation and range) can be determined, and relayed to the pilot.

2) AVS can detect a beacon on the ground, despite the tonal background noise of the helicopter and the wind noise around the sensor.

3) If the helicopter is seen as a noise source, its reflection on the ground can be used to aid navigation. Approaching the ground acoustic reflection takes place, causing standing waves to occur. Exploiting this phenomenon, the helicopter can navigate in a similar fashion to a bat.



Application features

- ✓ Small footprint
- ✓ Easily mounted to various helicopters
- ✓ 360 degree field of view
- ✓ Not affected by rotor/gearbox noise
- ✓ Not affected by aerodynamic noise
- ✓ Modular system
- ✓ Minimal maintenance

