HARRIER ADLS COMMS

Aircraft Detection Lighting System for Communication and Cellular Towers

Many stakeholders recognize the environmental and social impacts of aviation obstruction lights at communications and cellular tower sites.

In response, DeTect developed the HARRIER Aircraft Detection Lighting System (ADLS), an advanced FAA-tested, radar-based ADLS using high-resolution solid-state radar with automated activation of obstruction lights when aircraft are detected within the defined regulatory perimeter.

The HARRIER ADLS is the most widely used ADLS in the world with over 150 installations since 2008 in the US, Canada and Europe. HARRIER provides reliable detection of cooperative and non-cooperative aircraft out to 18+ miles (long range version). Aircraft entering the pre-set regulatory buffer zone around the tower will trigger activation of the obstruction light(s).

DeTect's ADLS has been evaluated by the US FAA and meets or exceeds the requirements of Advisory Circular 70/7460-1M as Chapter 14, "Aircraft Detection Lighting Systems".

The system is fully networkable and remotely controllable with real-time data display, diagnostics, Health & Status Monitoring.

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Model: X80 COMMS ADLS

Application: Aircraft Detection Lighting System. High resolution, airspace surveillance radar system for aviation obstruction light activation onshore and offshore.

Configuration: Fully self-contained compact, lightweight system for obstruction light activation for small wind farms, power transmission lines, communication tower and other projects that require automated aviation obstruction lights.

Sensors: Solid state X-band radar with Doppler processing; and Automatic Dependent Surveillance - Broadcast (ADS-B) secondary surveillance receiver for cooperative aircraft detection.

Operation: Medium-range detection of cooperative (transponder equipped) and non-cooperative aircraft with automatic activation of obstruction warning lights at user-defined perimeters.

Operating Range: Full 360 degree range up to 4 nm (7.4 km).

Power: 120/220 VAC, 60/50 Hz (DC option available) with UPS back-up and power conditioning with optional autostart propane or diesel generator.

Network: TCP/IP connection supports multi-user web remote real-time system display, control & data access via fiber optic, wireless or mobile broadband.

Offices in: Panama City, Florida • Grand Forks, North Dakota • San Diego, California
Honolulu, Hawaii • Calgary, Alberta • London, England • Goleniow, Poland

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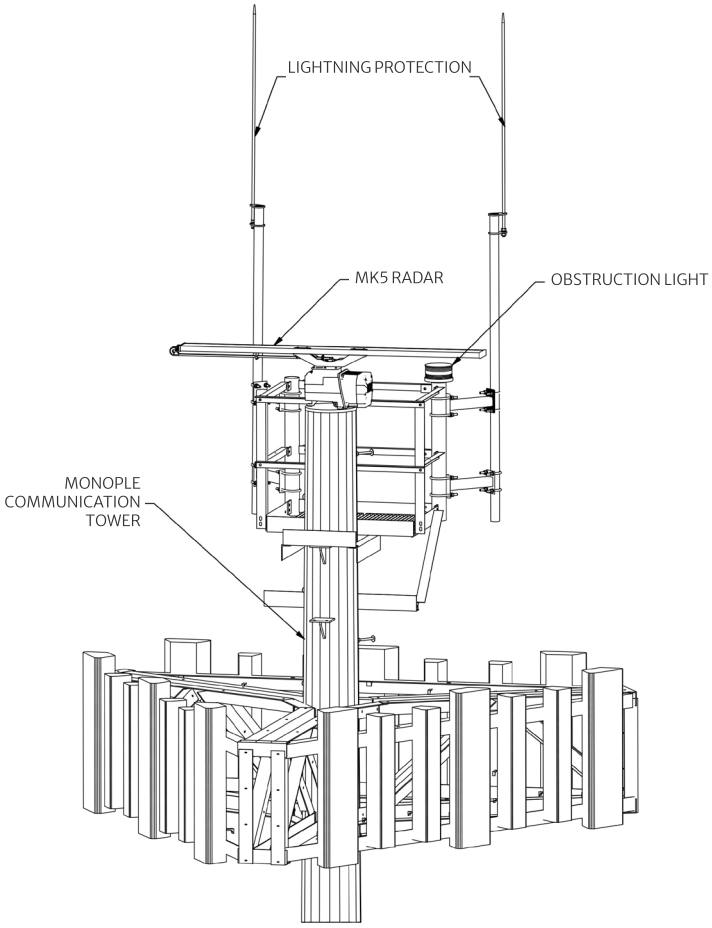

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Advantages of the X80 COMMS ADLS

Lightweight (80 lbs/36 kg), compact solid-state radar with 50,000 hour MTBF

'Down-tower' processing electronics (can be remotely located up to 50 miles away)

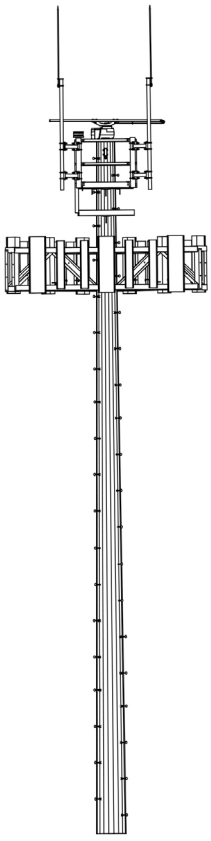
ADS-B integration minimizes obstruction light activation from high altitude aircraft and provides secondary aircraft detection

FAA tested, commercially available technology

Meets or exceeds US FAA, Transport Canada, European and Australian requirements

Integrates with all ADLS compatible obstruction lights.

DeTect's ADLS uses Operational Risk Management (ORM) algorithms and operates in a failsafe manner where the lights are held in an 'ON' state by the system unless no aircraft are detected within the defined risk zone. When the sensors detect an aircraft, the obstruction lights are activated. A "heartbeat" indicator provides constant system status reading of the ADLS and its network. Should the ADLS go offline, or heartbeat indicator lost, the lights will automatically activate and remain illuminated until the system returns online and confirms no aircraft in the risk zone.



HARRIER uses an advanced solid-state X-Band Doppler surveillance radar that has the ability to operate in moderate rain events. The HARRIER ADLS logic is designed to err on the side of caution. If precipitation is detected, which may mask aircraft, the system will automatically activate the lights. The HARRIER ADLS also incorporates secondary surveillance using an ADS-B receiver. The system electronics can be co-located with the radars at the base of the tower or can be remotely located at a central facility up to 50 miles (80 km) away for ease of O&M and for security (requires dedicated fiber network).

DeTect's HARRIER radar processing software is user customizable and software definable to 'tune' the system to detect, track, and display only targets within the user desired target class based on a variety of parameters that include size, speed, and track characteristics.

Additionally, the HARRIER ADLS has user selectable channels to operate that allows multiple radars to work in conjunction with one another as a wide area network without interfering with each other and/or other nearby radar systems such as air traffic control, weather, and communications networks.

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