

EMERGENCY RESPONSE REPEATER KIT

SkySite® Voice Repeater Payload

Background

Space Data's SkySite® network is based on the simple concept of lifting wireless transceivers into the stratosphere (between 65,000 and 100,000 ft) using industrial weather balloons.

Space Data Corporation's initial endeavors were in the commercial data sector supporting the oil and gas industries. The heart of the network is the SkySite Platform. This free-floating platform provides the functionality of a standard wireless base station.

Today Space Data operates a low data rate commercial network over Texas and Oklahoma servicing an area with some 330,000 wells or 60% of the entire US market. This operational network supports machine to machine applications such as alarms, asset tracking and messaging.

Military Demonstrations/ Proof of Concept

Space Data, in conjunction with the Air Force Space Battlelab, has demonstrated the ability of a balloon-borne repeater to extend voice communications several hundred miles beyond line of sight. Scenarios demonstrated are directly applicable to emergency response and post-disaster needs.

Emergency Response

The SkySite Emergency Response Repeater Kit has been developed based on successful voice trials with military and homeland security users. The Kit has been specifically designed to provide a quickresponse, broad area coverage footprint to support first-responders when traditional means of communications such as cell phones and public safety repeater networks are inoperable due to disaster effects. The platform design is adaptable to public safety interoperability needs.

SkySite Emergency Response Repeater Kit

Kit Kit includes:

- Transportable Ground Station & omnidirectional antenna
- 2 SkySite Repeater Payloads in a fly-away case
- 4 balloons
- Launch System, including launch bag, regulator, Helium tank connecting hose, tools
- 12 Motorola 900 MHz radios
- On-site training

Optional equipment:

- Steerable antenna system
- Additional SkySite Platforms in fly-away cases or on pallets
- Additional 12-radio kits or larger quantities

Launch Support

- Designed to be launched by a two-person team in 30 minutes
- Kit is easily transportable
- Launch from any field location
- Lifting gas used in the system is readily-available helium
- Can launch in 40+knot winds

Command & Control

- Payload controlled via a portable ground station
- Operators can enable/disable repeater operations and change parameters during flight
- Altitude controlled through vent and ballast technologies
- Payload is easily tracked through GPS technologies
- Operates well above terrestrial weather



SkySite Repeater Specs

Maximum Transmit Power:
2 watts

Payload Weight:
6 lbs

Frequency Range:
901 - 941

MHz Battery Life:
12 - 18 hours

Ascent Rate:
1,000 feet per minute

Operational Altitude:
65,000 -100,000 feet

Repeater Coverage:
over 400 mile diameter

Other Advantages

- Low cost
- Long shelf-life
- Minimal logistic support
- Supports interoperability
- Uses commercial off-the-shelf technology
- Design is adaptable to other frequency ranges