NRB4 Beacon Monitor Receiver and NLA/2 Active Loop Antenna

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NRB4 Beacon Monitor Receiver and NLA/2 Active Loop Antenna

Nautel's NRB4 Beacon Monitor Receiver is a precision receiver for the off-air monitoring of the transmitted NDB signal. It is compliant with applicable FAA and ICAO requirements for the monitoring of low frequency NDBs.

Nautel's NLA/2 Active Ferrite Loop Antenna is used in conjunction with the NRB4. A versatile mounting bracket makes it easy to install on flat surfaces or on a 2.5 inch diameter, vertical pipe. Tuning is accomplished with easily adjustable links.

Highlights include:

- Highly stable DDS carrier frequency reference.
- Stable IF crystal filter.
- Local and remote carrier level, modulation level/loss and keying loss alarm indications.
- Optional audible alarm.
- Internal speaker.
- Calibrated carrier level reference meter.
- NLA/2 is easily field tuned using adjustable links.

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Land-Based Vector NDB

Non-Directional Radiobeacon System

NDB System Configuration

1

The Nautel Vector Series VR125 & VR250 are field proven, highly reliable, state of the art, solid-state non-directional radio beacon (NDB) transmitters.

Highlights include:

- 125 watts (VR125) or 250 watts (VR250), field adjustable continuous carrier power.
- Sophisticated graphical user interface (GUI) for easy maintenance and troubleshooting.
- Available in single or dual (main/ standby with automatic changeover) configurations.
- Synthesized exciter uses advanced DDS technology to produce highly stable RF drive at the desired operating frequency.
- Extensive remote command/control and monitoring for fewer site visits.
- Remote control and monitoring of the ATU to limit worker exposure to strong RF fields, in keeping with Safety Code 6 / IEEE C95.1-1999.
- Compliant with the specifications and recommendations of ICAO Annex 10, Vol. 1, Part 1, Section 3.4.
- CE certified.
- High overall efficiency (70% or better) results in low power consumption and reduced operating costs.
- DC (battery) back-up options available.
- 500 watt, 1000 watt and 2000 watt models also available.

2

The ATU-LP is an automatic antenna tuning unit designed to match the impedance of the antenna to the 50 ohm output impedance of the VR125 or VR250 NDB transmitter.

Highlights include:

- Constant field strength output for higher system availability.
- Automatic antenna capacitance tuning using dual astatically wound loading coils.
- Automatic resistive matching for higher system availability.
- Optional adjustable series resistance optimizes the tradeoff between antenna efficiency and bandwidth.
- Remote control and monitoring of the ATU to limit worker exposure to strong RF fields, in keeping with Safety Code 6 / IEEE C95.1-1999.
- Compliant with the specifications and recommendations of ICAO Annex 10, Vol. 1, Part 1, Section 3.4.
- Cabinet enclosure designed to meet IP66 standard.
- ATU-HP (2 kW) also available.

3

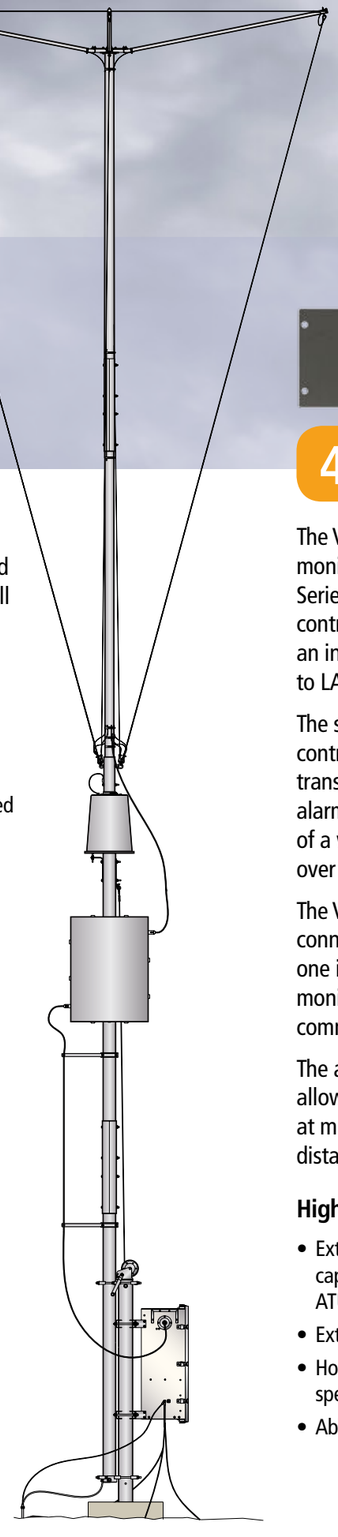
The CL-40 is a 40 foot, self-supporting NDB antenna designed for optimal performance in a small footprint. It is particularly suited for use at sites where maximum antenna height or area occupied may be restricted .

Highlights include:

- Capacitive top loading for increased efficiency.
- Self-supporting.
- Small footprint.
- Ease of installation and maintenance.
- Ground plane options available.

Nautel offers other antenna solutions, including:

- Symmetrical 'T' style.
- Base-insulated lattice tower (with or without top loading guys).



4

The VR-Link2 is a remote control and monitoring unit that interfaces a Vector Series NDB transmitter to web based control and monitoring capabilities via an internal serial to LAN adapter.

The serial to LAN adapter provides control and monitoring of the transmitter and ATU through audible alarms and status indicators in the form of a web page, which can be accessed over an Ethernet connection.

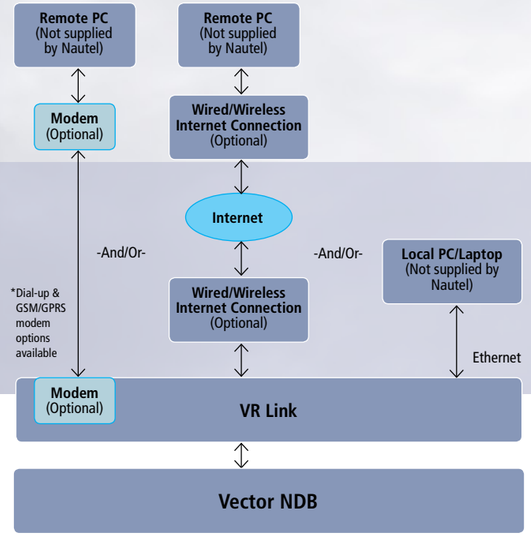
The VR-Link2 also allows for the connection of up to three external and one internal ECMP3 extended control/ monitoring panels via RS-485 serial communication.

The available interconnection options allow for control/monitoring capabilities at multiple locations and virtually any distance from the transmitter.

Highlights include:

- Extensive control and monitoring capabilities with Vector transmitters and ATU's.
- Extensive remote connectivity options.
- Hosted web page eliminates the need for special applications software.
- Ability to interface up to four ECMP3's.

VR-Link Co-located with Vector NDB



VR-Link Installed at Remote Location