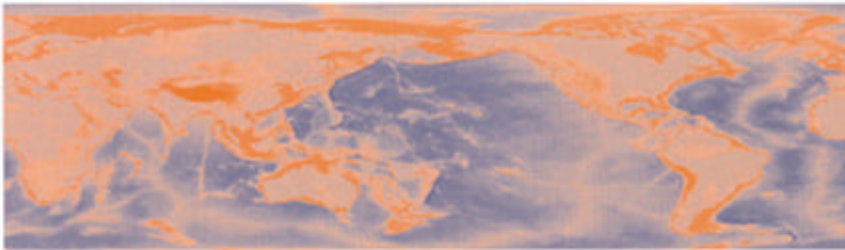


## NRB3 & NLA/1



### NDB MONITOR ALARM RECEIVER

#### Features

Local audio monitoring  
(optional remote audio output)

Calibrated carrier level meter

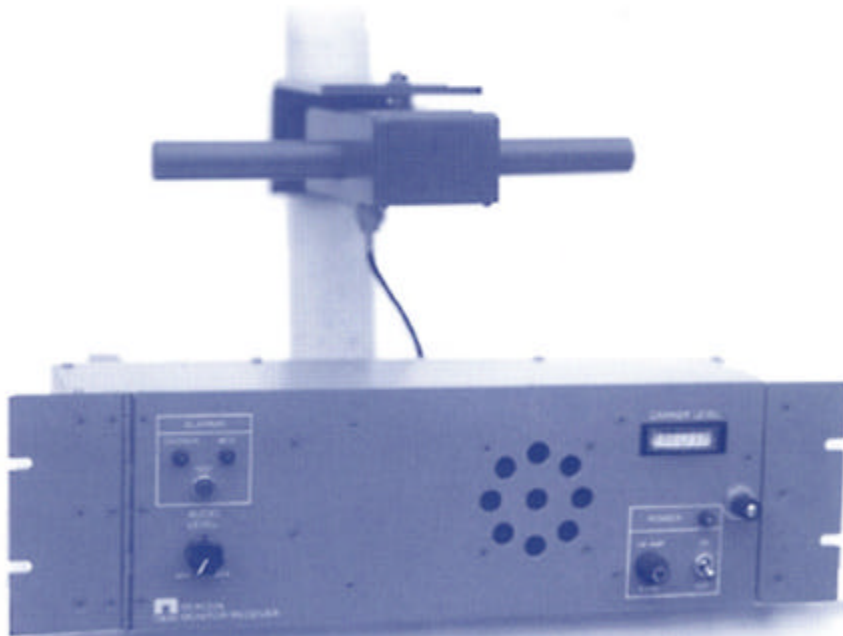
High Stability

Crystal filter selectivity  
providing superior unwanted  
signal rejection

MTBF25, 157 hours to  
MIL-STD-217

MTTR 4 minutes 32 seconds  
to MIL-STD-471

A2A or H2A Reception



NRB3 Single Channel Receiver with  
NLA/1 Active Ferrite Loop Antenna



Simply the best engineered transmitters

## NDB MONITOR ALARM RECEIVER

The NRB3 is a single channel receiver developed to monitor the performance of NDB's operating in the 190 to 535 kHz band. It meets the monitoring requirements of the International Civil Aviation Organization (ICAO), the US Federal Aviation Administration (FAA) and Transport Canada.

Visual alarms are activated in the event of and NDB malfunction, external connections provide for remote alarms. An internal speaker and calibrated carrier level meter provide additional means for monitoring NDB performance.

Installation, alignment and checkout procedures may be conducted without additional test equipment.

An optional Active Ferrite Loop Antenna, Model NLA/1, a Remote Audio Output, and a Remote Audible Alarm Panel are available to complement the NRB3 providing a complete monitoring system.

### Specifications – NRB3

**Frequency Range:** 190-535 kHz  
**Frequency Control:** CR18A/U crystal  
**Frequency Stability:**  $\pm 0.005\%$  or better over the full environmental range  
**Intermediate Frequency:** 4.4 MHz  
**Type of Reception:** A2A: Amplitude Modulated Double Sideband or H2A: Amplitude Modulated Single Sideband  
**Input Impedance:** 50 ohms (type "N" connector)  
**Sensitivity:** Better than 10dB minimum signal to noise ratio for a 5.0  $\mu\text{V}$  30% modulated signal  
**Useable Signal Range:** 5 microvolts to 100 millivolts  
**RF Bandwidth:** 20 kHz  
**Selectivity:** Crystal Filter Controlled: A2A: Bandwidth  $\pm 2\text{kHz}$  minimum at 3dB Attenuation at 6 kHz, 50dB minimum. H2A: Bandwidth 1.5kHz minimum at 1.5dB Attenuation at 6kHz, 60dB minimum  
**Spurious Responses:** Not exceeding -60dB for any 5 mV out of band input signal  
**Image Rejection:** Not less than 70dB  
**Intermodulation:** Not exceeding -60dB for two 5 mV signals within RF passband  
**Audio Output:** 0.5W into a panel mounted speaker. Optional 10mW into a balanced 600 ohm line.  
**Carrier Alarm Threshold/Delay:** 3dB or greater reduction in carrier signal level for more than 15 seconds  $\pm 5$   
**Modulation Alarm Threshold/Delay:** A2A: 3dB or greater reduction in modulation level adjustable delay of 0.6 to 60.0 seconds. H2A: 3dB or greater reduction in modulation level after adjustable delay of 0.2 to 3.0 seconds  
**Environmental Limits:** 0°C to 55°C, 0 to 95% relative humidity  
**Power Requirements:** 102 to 132 or 204 to 264 Vac, 48.7 to 61.5 Hz, 30 VA maximum  
**Weight & Dimensions:** 48 x 13 x 20 cm; 3.6 kg

19 x 5 x 8 in; 8 lbs.

### Specifications – NLA/1

**Tuning:** Adjustable links  
**Frequency Range:** 190 to 535 kHz  
**Effective Height:** 0.2 meters  
**Useable Signal Range:** 50 $\mu\text{V}$ /meter to 2.5V/meter (in conjunction with NRB)  
**Output Impedance:** 50 ohms (type "N" connector)  
**Pattern:** Figure-of eight (allows notching out of high level interfering signals)  
**Power Requirements:** + 12V DC at 50mA phantom fed on RF cable from NRB  
**Environmental Limits:** -50°C to +55°C, 0 to 100% relative humidity  
**Mounting, Bracket:** provided for mounting on a flat vertical surface or a vertical 2.5 inch diameter pipe  
**Dimension (with bracket):** 30 x 9 x 25 cm  
12 x 3.5 x 10 in



NLA/1 Active Ferrite Loop Antenna

For further details, please contact:

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May 05, 1995

Specifications subject to change without notice.