

# Nano-Band™ Explorer II Trace Metals Analyzer

with TriTrode™ Technology

**Now, metals testing onsite, under your control, and ready to grab-and-go!**

Offering the same great versatility and accuracy as our original Nano-Band Explorer Benchtop system, the Explorer II offers simplified measurements and comes in a lightweight, sturdy briefcase perfect for the lab or field. In just minutes, the Explorer II measures trace metals in aqueous solutions, at sub-ppb detection levels.

Our advanced TriTrode™ electrode technology is forging new territory for our Nano-Band Explorer II system. The new all-in-one TriTrode electrode unites all three system electrodes into one convenient piece. Combining the Nano-Band working electrode, reference electrode, and auxiliary electrode into one, the TriTrode offers easier setup, higher reliability, and simple maintenance.

**The Nano-Band Explorer II is the perfect tool for research & manufacturing applications:**

Manual operation allows ultimate flexibility when measuring unique samples

Laboratory benchtop measurements are quick & easy

Perform measurements on the plant floor or at remediation sites with the Explorer II in its lightweight, field-portable briefcase

## Explorer II Features

- Rapid & accurate results
- Excellent correlation with ICP-MS (+/- 10% typical)
- TriTrode electrode technology
  - Reduces electrode cabling to a single cable connection for quick setup & easy operation
  - Single connection provides higher reliability
  - Simple electrode cleaning and maintenance
- Multiple measurement techniques are supported: stripping voltammetry (ASV & CSV), cyclic voltammetry, amperometric measurements, pH, ORP, and ISE.
- Powerful, user-friendly, Windows-based analytical software
- Report generation capability



180 North Canal Street Seattle, WA 98103  
206.523.2009 [www.tracedetect.com](http://www.tracedetect.com)

# Nano-Band™ Explorer II Specifications

Power source	108 – 132 VAC 60 Hz to wall transformer. Transformer has NEMA 5-15 plug and supplies +5V, ±12V. Combined regulation ± 5%. Typical power consumption: ~ 1 W	
Controller	PC/Laptop (note: computer is not included with system, but is optional)	
Host-instrument interface	Serial port, max baud rate: ~120 kbaud Supported baud rates are: 2.4 kbaud, 4.8 kbaud, 9.6 kbaud, 19.2 kbaud, 38.4 kbaud, 57.6 kbaud, and 115.2 kbaud.	
Analysis capabilities	Anodic Stripping Voltammetry (ASV) Cathodic Stripping Voltammetry (CSV) Cyclic Voltammetry (CV) Square Wave Voltammetry (SqWV) Potentiometric Stripping Analysis (PSA)	Amperometry Chronocoulometry Transient Response Temperature Voltage (for pH, ORP and ISE electrodes)
Measurement capabilities	Reference electrode voltage: –2.047 V to +2.048 V (12 bits), 25 µsec settling time Auxiliary electrode V-range: ± 7.5 V Current-Source ranges: – 20.47 µA to +20.48 µA and – 204.7 nA to +204.8 nA (12 bits) Measured voltages: ± 2.5 V (16 bits), 5 µsec acquisition time Measured current ranges: ± 125 µA, ± 12.5 µA, ± 1.25 µA, ± 125 nA (all 16 bit) High scan rates: 0.05V/100 µsec Minimum current resolution: 3.8 pA Temperature: 0 to 100°C, with accuracy of ±1°C at 25°C, ±2°C full temperature range Max. data rate: 25 kHz (ASV, PSA, Amperometric, CV)	
Optional capabilities	2 high-Z analog channels $R_{in} > 10^{11} \Omega$ 2 high-speed analog channels $R_{in} > 10^9 \Omega$ , 25 kHz max data rate External current measurement capability External outputs to drive oscilloscope ( $V_{Ref}$ , $V_{Meas}$ , and $V_{Trig}$ )	
Dimensions	8.1" x 10.0" x 2.7"	
Weight	Instrument weight: 3.5 lbs.	
Operating ranges	Intended temperature range of operation: 0°C to 40°C Intended humidity range of operation: 20% to 90% relative humidity	
Operating system requirements	Windows 95/98/2000, Windows XP	
Data file format	Export to Excel, Matlab	
Briefcase Dimensions	20"H x 14"W x 5"D	

## TriTrode Specifications

Single body electrode includes	NanoBand Carbon Electrode Reference Auxiliary
Dimensions	3/4" X 4.5"
Measurement Capabilities:	As, Pb, Cu, Cd, Hg, Zn



180 North Canal Street Seattle, WA 98103  
206.523.2009 www.tracedetect.com