THE INDUSTRY LEADER IN ALCOHOL BREATH TESTING SINCE 1945

INTOX EC/IR II

Intoximeters Inc.

TECHNICAL CHARACTERISTICS

THE UNIT

The EC/IR II is a transportable, bench-top instrument featuring patented fuel cell integration analysis, combined with real time analytical advantages of infrared technology.

UNIQUE FEATURES

- Sampling system utilizes known advantages of both an electrochemical (EC) sensor and infrared (IR) detector.
- Advanced Radio Frequency Interference (RFI) immunity.
- Infrared system is capable of simultaneously analyzing carbon dioxide concentrations and alcohol concentrations in the breath.
- This capability provides both superior mouth alcohol detection, and allows the instrument to determine a deep lung breath sample on both alcohol rich and alcohol free samples.
- The instrument's software, settings and test database are continuously monitored to insure their integrity.
- Easy to read 256 x 32 pixel graphic vacuum fluorescent display.
- Advanced self-diagnostic capabilities.
- Automatic accuracy checks and calibration using internal gas tank or external simulator.
- Capable of remote diagnostic operation using optional IntoxNet software.

ANALYTICAL

Sensor

The fuel cell sensor generates a response that is proportional to the Breath Alcohol Concentration. The fuel cell sensor's response to alcohol is linear, requiring one point calibration.

Infrared Sensors

Dual-wavelength, multi-filter detection of alcohol and carbon dioxide offers real time analysis of breath samples.

Accuracy & Precision

US DOT approved for evidential use. Meets and/or exceeds the federal model specification for traffic enforcement and Omnibus Breath Alcohol Testing. OIML compliant.

Specificity

The fuel cell sensor is highly specific for alcohol. It does not respond to other substances found in the human breath after a fifteen-minute deprivation period.

Measurement Limits

Range .000 - .400 BrAC on the standard EC/IR II.

Calibration

Accuracy checks and calibrations can be performed with either Intoximeters and National Highway Traffic Safety Administration (NHTSA) approved wet bath simulators or dry gas standards.

Environmental

The standard instrument is designed to operate in ambient temperatures between 0°C and 40°C.

SAMPLING REQUIREMENTS

The instrument has software controlled automatic sampling based on volume and flow analysis, and/or plateau of CO2 levels in the breath and/or ethanol plateau levels in breath.

Sampling Errors

Instrument detects insufficient volume, early blows, inconsistent blows, mouth alcohol AND will automatically abort invalid samples.

Mouthpiece

Mouthpiece specifically designed and manufactured by Intoximeters for use with this instrument. The mouthpiece design is critical to obtain reliable results. These mouthpieces are individually wrapped, one-way, fast seating, check-valve mouthpieces.

Breath Tube

18" heated, flexible Breath Tube.

ELECTRICAL REQUIREMENTS

Power Supply

90-270 VAC, 50/60 Hz. Approx. 70 Watts 11 to 16 Volts, DC Input Voltage to Inverter (Inverter optional)

PHYSICAL CHARACTERISTICS

Size/Weight

Height: 7.125" (180 mm) Width: 18.75" (476 mm)
Depth: 14.5" (368 mm) Weight: 15.5 lbs. (7.0 kg)

Case Construction

Aluminum; machined and welded sheet.

MEMORY/COMMUNICATIONS

Data Storage

896 Kbytes 128 Kbytes RAM
128 Kbytes non-volatile test storage

Communications

Error-correcting communications capable of initiating/receiving calls to/from a host computer system running IntoxNet.

SOFTWARE/DATA SECURITY

Digital Signatures

The instrument's embedded code, system settings, calibration settings and test data are tagged with CRC based digital signatures and constantly monitored for integrity. This feature provides the EC/IR II with the highest level of software and data security available.

INPUT/OUTPUT DEVICES

Keyboard

Standard PC AT-compatible. Optional one button operation.

Display

The Intox EC/IR II display is a 256 x 32 pixel graphic vacuum fluorescent display. The display is:

- highly reliable - rated for a lifetime of 50,000 hours.
- very bright - 685 cd/m2 (or 200 fL)
- low power
- supports most international character sets and fonts

Thermal Printer

The Intox EC/IR II incorporates a high performance thermal printer.

- Silent operation
- Fast - 7.5 lines per second
- 150 dots/inch resolution
- Simple to use - integrated paper handling system requires no threading.
- Multiple text modes included
- No ink ribbons to change.
- Available with heat and UV resistant paper for long-lasting printouts.

External Printer

The Intox EC/IR II prints to most IBM PC-compatible Centronix (parallel) printers via the 25-pin rear connector.

Audio

Built-in speaker

Bar Code and Magnetic Stripe

The Intox EC/IR II supports a variety of PC-compatible devices.

Internal Modem

Hayes compatible

Other I/O

2 RS-232 serial communications ports
1 parallel port

STANDARDS

- Designed and manufactured in an ISO 9001 registered facility.
- Meets CE Mark requirements, covering:
  - Safety and Marking – IEC 60950
  - Radiated and Conducted Emissions
  - Radiated Electromagnetic, Conducted, Surge, and Magnetic Field Immunity
  - Electrostatic Discharge
  - Voltage Dips, Interruptions, and Variations
  - Fast Transients
  - Voltage Fluctuation and Flicker
  - Harmonic Current Emissions
- Meets FCC Part 15
- Meets FCC Part 68 (modem.)

PATENT

U. S. 5,376,555, and other patents pending.

OPTION

The EC/IR II can be configured as a portable instrument complete with the same patented integration analysis of the bench-top unit.

Note: The above specifications reflect the operating characteristics for our standard production EC/IR II. The EC/IR II can be configured to meet other specifications.

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