

CEREX HOUND Analyzer Series Specifications

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Parameter	Micro Hound-FR	Mini Hound-FR	Hound-FR
Input Voltage (Charger)	100VAC to 240VAC , Single Phase 47-63Hz	100VAC to 240VAC , Single Phase 47-63Hz	100VAC to 240VAC , Single Phase 47-63Hz
Input Current	4A Max	4A Max	4A Max
Operating Ambient Temperature	0 to +45°C	0 to +45°C	0 to +45°C
Storage Temperature	-10 to 60 °C	-10 to 60 °C	-10 to 60 °C
Operating and Storage Humidity	Below 80% (Non-condensing)	Below 80% (Non-condensing)	Below 80% (Non-condensing)
Dimensions	21.75" x 16.75" x 4.875" (55.25 x 42.55 x 12.4 cm)	24.75" x 19.375" x 8.75" (61.6 x 49.22 x 22.23)	35.75" x 13.50" x 5.25" (90.8 x 34.3 x 13.3 cm)
Weight	27.5 Lbs. (12.48 Kg)	33.5 Lbs. (17 Kg)	37.5 Lbs. (19.6 Kg)
Charger Dimensions	10.62" x 9.68" x 4.875" (26.97 x 24.59 x 12.38 cm)	10.62" x 9.68" x 4.875" (26.97 x 24.59 x 12.38 cm)	10.62" x 9.68" x 4.875" (26.97 x 24.59 x 12.38 cm)
Charger Weight	9 Lbs (4.08 Kg)	9 Lbs (4.08 Kg)	9 Lbs (4.08 Kg)
Battery Life	3.5 Hours	3.5 Hours	3.5 Hours
Path Length	2 Meters	8.5 Meters	17 Meters
Spectral Range	185nm to 340nm	185nm to 340nm	185nm to 340nm
Spectral Resolution	0.05nm or 0.20nm	0.05nm or 0.20nm	0.05nm or 0.20nm
UV Source Lamp	35 W Super Quiet Deuterium	35 W Super Quiet Deuterium	35 W Super Quiet Deuterium
Source Lamp Life ¹	4000 Hours Minimum	4000 Hours Minimum	4000 Hours Minimum
Intake Particulate Filter	5 Micron	5 Micron	5 Micron
Sample Intake Rate	15 CFM	15 CFM	15 CFM

¹Lamp is manufacturer warranted for 4000 hours. Typical life exceeds 5000 hours.



CEREX HOUND Analyzer Series Detection Capabilities

Currently there are a number of definitions of “detection limits” used to characterize the performance of air monitoring systems. A common definition of is the magnitude of the absorbance spectra that is twice the system noise. The U.S. Environmental Protection Agency’s [“Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air - Second Edition Compendium Method TO-16 Long-Path Open-Path Fourier Transform Infrared Monitoring Of Atmospheric Gases”](#) defines detection limits as the following:

The detection limit of the UV Hound systems is a dynamic quantity that will change as the atmospheric conditions change. The variability of the target gas, and all of the other interfering species concentrations contributes to the variability of this measurement. The detection limit as determined in this procedure is the result of a calculation using a set of 15 individual absorption spectra. The 16 individual single beam spectra used for this determination are acquired in 5-min intervals and no time is allowed to elapse between them. The absorption spectra are then created by using the first and the second single beam spectra, the second and the third, and the third and the fourth, and so on until the 15 absorption spectra are obtained. These absorption spectra are analyzed in exactly the same way that all field spectra are to be analyzed and over the same wave number region. The analysis should result in a set of numbers that are very close to zero because most of the effects of the gas variability have been removed. The numerical results should be both positive and negative and for a very large set of data should average to zero. Three times the standard deviation of this calculated set of concentrations is defined to be the detection limit.

Although Method TO-16 was written for open path FTIR, the Cerex UV Hound system is unique among UV systems in that the raw data is essentially identical to an FTIR “Single beam” file. Hence the direct correlation drawn to TO-16. Using the detection limit definition described in TO-16, CEREX developed the detection limits that are listed here, however it should be noted that the actual detection limits achieved in the field will vary. This is primarily due to the fact that variations in interfering species will result in variability in detection limits. Cerex considers the detection limits listed to be a very conservative estimate. The end-user of the equipment will likely achieve much better results in the field. Cerex believes it is a good policy to not oversell a capability to our potential customers.

CEREX Hound Series Single Gas Minimum Detection Limits

Note that many gases can be detected in complex mixtures however some must be measured individually. Under optimum conditions, the following LDL's can be achieved for single gases. More compounds are available at no extra cost. Please see the full CEREX UV compound list for details.

Compound	HOUND-FR	MINI HOUND-FR	MICRO HOUND	Units
Ammonia (NH ₃) MDL	12	24	100	ppb
1,3 Butadiene MDL	12	24	100	ppb
Benzene MDL	16	31	134	ppb
Carbon Disulfide MDL	12	24	100	ppb
Chlorine (Cl ₂) MDL	294	588	2500	ppb
Ethyl Benzene MDL	18	35	150	ppb
Formaldehyde MDL	188	376	1600	ppb
Hydrogen Sulfide (H ₂ S) MDL	29	59	250	ppb
Mercury (Hg) MDL	6	12	50	ppb
Naphthalene MDL	12	24	100	ppb
Nitrogen Oxide (NO) MDL	17	34	146	ppb
Nitrogen Dioxide (NO ₂) MDL	238	475	2020	ppb
Ozone (O ₃) MDL	118	235	1000	ppb
o-xylene MDL	222	444	1885	ppb
m-xylene MDL	21	41	175	ppb
p-xylene MDL	14	28	119	ppb
Sulfur Dioxide (SO ₂) MDL	19	38	160	ppb
Toluene MDL	49	99	419	ppb
Typical Accuracy	±3% FS	±3% FS	±3% FS	%
Path Length	17.00	8.50	2.0	Meters



CEREX HOUND Analyzer Series Features



Hound-FR: Our largest and most sensitive model. This analyzer is equipped with sealed external LAN (1), WAN (1) and USB (1) ports as well as two internal USB ports for simple installation of USB peripheral devices such as cellular modem, GPS or streaming web camera. This unit offers excellent detection limits with a 17 meter sample path. It is equipped with wheels for rolling transport.



Mini Hound-FR: Our mid-size model balances low detection limits with excellent portability. This analyzer is equipped with sealed external LAN (1), WAN (1) and USB (1) ports as well as two internal USB ports. This unit has an 8.5 meter sample path and weighs less than 35 lbs.



Micro Hound-FR: Our smallest and most portable Hound model. This analyzer is equipped with a sealed external USB (1) Port as well as two internal USB ports. Despite the small size, the Micro Hound's 2 meter sample path allows PPB level detections of many gases. It is extremely portable at 27.5 pounds.

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ALL Cerex Hound Models Feature:

- Multi-Gas capability
- Touchscreen interface
- Integrated WiFi
- Integrated computer with Windows 7™ operating system
- CMS Analytical Software
- User configurable audible and visual alarms
- Full access to the Cerex UV compound reference library
- Plug and Play USB peripheral capability

Available Options:

- 14.5 Hour External Battery
- Internal QA / Calibration Cell
- Integrated Meteorological Station
- Integrated GPS
- Analog / Control Outputs
- Custom Transit Case
- Integrated Sensors : CO, CO₂, CH₄, O₂, AsH₃, LEL, H₂S, HCN

