XPT-Line
XPT 800

SOUND LEVEL METER AND FREQUENCY ANALYSER

INTRODUCTION

XPT800 is a class 1 sound level meter-spectrum analyser, eldest son of the Expert Line handhelds family.
It is based on a scalable platform that can be adapted to the growing requirements of acoustic professionals. The needs for accuracy, high performance and ease of use have been satisfied thanks to the use of the latest technologies and a careful evaluation of the suggestions of experts in the sector. Top quality and performance to provide the acoustic specialist with a complete and reliable tool for all the main sector applications, from environmental noise and building acoustics, to risk assessment in the workplace, up to laboratory and industrial products analyses.

FEATURES

- Large 4,3" colour touch screen display
- Storage: internal from 4GB on eMMC and up to 64GB on µSD
- Ergonomic design for one-hand operation, rugged construction and case for harsh environments use.
- User interface: Intuitive user interaction through smartphone-like gestures; possibility to manage functionalities even with the use of 3 buttons keyboard
- Wireless connectivity: data transfer and (TBA) remote control of device
- Internal Wi-Fi, LAN, USB-C, RS232/485 interfaces
- Long life battery: the internal rechargeable battery allows more than 24hrs of measurement autonomy
- Noise Studio Web application for measurement upload, storage and sharing.
- Desktop application "Environmental Noise Studio": In-deep analysis of noise measurements; smart reporting tools for increased productivity

BENEFITS - HIGHLIGHTS

- No compromise IEC 61672 class 1 metrological performances thanks to internal laboratory testing and accurate electronic design
- Certain compliance with the most stringent technical standards
- Ease of use with smartphone-like touch or keyboard operation combined with high quality and robust construction.
- Avoid complex onsite settings using internal customizable or factory apps.
- Connectivity through integrated Wi-Fi
- Wide range of applications with both sound and triaxial vibration (TBA) measurement management.

ENVIRONMENTAL NOISE ASSESSMENT

- Wide single dynamic range to measure accurately both in quiet areas and in noisier environments.
- Internal high-capacity battery and power management allow long measurement campaigns.
- Events identification in unattended noise monitoring with automatic audio recordings.
- Advanced triggers and full logging capabilities

Precision Noise Measurements

- Interchangeable microphones with automatic Identification (Sensor Digital Interface)
- Accuracy: class 1 according to IEC61672:2013
- Single measurement range: 20-140
- Dynamic range: exceeding 125dB
- A, B, C, Z frequency weightings
- Linear, exponential, and moving averages.
- Fast, Slow, Impulse, Peak simultaneous time constants
- Audio recording: manual or automatic up to 32bit - 48KHz
- Spectral analysis: real time 1/1 - 1/3 oct.; range 6.3Hz-20KHz (IEC 61260)
- Statistical analysis: LN broad band and 1/3 oct. band levels
- Automatic detectors

Occupational Noise and Vibrations

- Robust body design and operation even via keyboard in harsh environments
- Triaxial Input for vibration sensors (TBA)

Product noise testing

- Exceedances (spectrum masks)
- Trigger logic
- Trigger I/O
- RS232 digital interface

INSTRUMENT		
Inputs	Microphone	MC800: Free field ½", 50 mV/Pa sensitivity; 0V; IEC 61094-4 WS2F, 3.15Hz-20KHz. MP800: preamplifier, automatic detection of model and calibration data. SDI (Sensor Digital Interface). CTC automatic electric calibration
	Accelerometer (TBA)	IEPE, 4-pin circular push-pull, tri-axial
Measuring ranges* *With standard MC800, 50mV/Pa microphone, MP800 preamplifier	Dynamic range Linear Operating Range	> 125dB A (1kHz) 20 dB – 140 dB_{Pk} C 22 dB – 140 dB_{Pk} Z 25 dB – 140 dB_{Pk}
Frequency weightings		A, C + B or Z (user selection). 3 simultaneous
Time constants		Fast, Slow, Impulse, Peak simultaneous
Averaging		Linear, exponential, moving, max, min
Parameters		Lp, Leq, Lleq, SEL, Leq^{mov} (Sliding), $L_{min/max}$, L_{peak}, Level differences (i.e. LCeq-LAeq), L^{U} (user) LAFT (TaktMax) , L_{PER}(day, evening, night..), Ln (0.1%-99.9%) *For more details about parameters see specific documentation
Spectral Analysis	Octave	Real time, 1/1 octave, 8Hz to 16kHz, IEC 61260-1:2014 Real time, 1/3 octave 6.3Hz to 20kHz, IEC 61260-1:2014
	FFT	TBA
Noise Criteria		NC, NR, RNC, RC, (TBA)
Intelligibility		STI/STIPA (TBA)
Statistical Analysis		Broad band and Spectral: 7x Ln selectable percentile levels (0.1%-99.9%). Probability/Cumulative distribution
Audio	recording	Mode: continuous or event. Resolution 16, 24, 32-bit. Audio-band: 5, 10, 20 KHz. Format: Wave or compressed ADPCM
	playback	Embedded codec for signal generation. Filtered Audio playback of microphone input
Measurement Control		Start, stop, pause, reset, back-erase, continue, event marking, audio Recording. Measure timer from 1s to 23:59:59 hrs
Calibration	Acoustic	Manual or automatic (tone detection). Calibrations history
Views	SLM	6 user selectable parameters; Levels difference (selectable); bar graph of 3 broadband levels. Alarms display on exceedances.
	Numerical Tables	All broad-band parameters, weightings & time const. in parallel: Inst., Average, Max-Min 7 x Ln percentiles broad-band, Ln moving, 7 x Ln of 1/1 or 1/3 octave frequency bands. Spectrum: Inst, Min, Max, Avg, Mov, Ln Exceedances: ongoing exceedances; n° of occurrences (SLM, Markers, audio.)
	Frequency Spectrum	Histograms: up to 4 selectable. Values @cursor position. Overall A, C, Z, User 1/1 or 1/3 octave; Spectrum ponderation: A, C, or Z; Time constants: Lin, Fast or Slow Type: Inst, Mov, Avg, Max, Min, Rep-Avg, Rep-Max, Rep-Min, Evn-Avg, Evn-Max, Evn-Min
	Time history	Time profile of up to 4 selectable parameters. Audio and event markers as coloured bars.
	Statistics	Broad-band: Spectral: 1/n oct. Ln levels (histogram); probability/cumulative distribution (TBA).
Triggers		Single or multiple triggers (OR/AND) on broad-band, spectra, Ln, Lmov
Detectors	Tonality	Automatic identification according to DM 16/03/1998 and ISO1996-2 (TBA)
	Impulsivity	Automatic identification according to DM 16/03/1998
Storage		Embedded 4GB eMMC and up to 64GB µSD; USB memory stick
		Upload to cloud storage service. Manual or (TBA) automatic
Datalogging		Time history, independent Short, Standard, Report steps: Short 10ms. Standard 100/200/500ms/1s. Reports: 10/20/30s,1/2/5/10/20/30/60m
Display		4.3" touch, 480x800px, colour TFT, high brightness, sunlight readability
Keyboard		ON/OFF/MENU key with RGB backlight; Function keys (2x); Multi-colour Status Indicator.

Battery	Type	Rechargeable battery pack, Li-Ion polymer, 9000mAh. PCM circuit for battery protection
	Operating time	> 24h
Wireless	Wi-Fi	Embedded WiFi module (IEEE 802.11 b/g/n)
	GSM	Embedded 4G-LTE modem module (TBA)
Hardware interface	USB-C	USB-C, OTG 2.0. MS (Mass Storage) and CD (Communication Device)
	Ethernet	RJ45 10/100 Ethernet
	Aux	RJ12: auxiliary connector for external devices
	Audio I/O	3.5mm 4-pin audio jack: audio I/O and trigger I/O
Localization	GPS	(TBA)
Physical		304x86x38 mm; weight 505 g (batteries included). Sealing dust and water resistant (IP grade pending).
Acoustic Standards	IEC	Sound Level Meter IEC 61672-1 (2013) class 1 IEC 60651 (1979) plus Amendment 1 (1993-02) and Amendment 2 (2000-10), type 1 IEC 60804 (2000-10) type 1 Octave and fractional octave band filters IEC 61260-1 (2014)
	ANSI	Sound Level Meter ANSI S1.4-1983 plus ANSI S1.4A-1985 Amendment type 1 (sound level meter) ANSI/ASA S1.4-2014 class 1 ANSI S1.43-1997 type 1 Octave and fractional octave band filters ANSI/ASA S1.11-2014 Part 1
Analysis Software		Environmental Noise Studio
Web application		Noise Studio Web (data cloud storage)

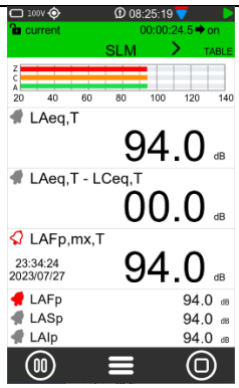
Note (for more information contact sales department):

- some hardware and firmware features may be subject to the purchase of specific options
- some features may be under development (planned) and available later (TBA)
- specifications may be subject to change without notice.

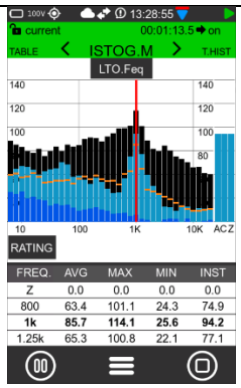
IMAGES XP 800

CONNECTORS:
GSM EXTERNAL ANTENNA, RJ45 ETHERNET, USB-C, AUDIO JACK, RJ12 AUX, IEPE PUSH-PULL TRIAXIAL

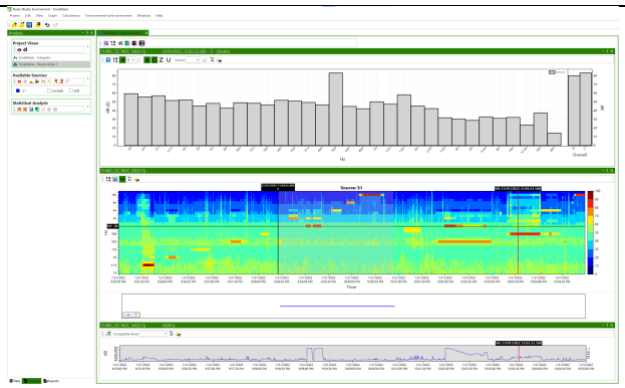
NOISE STUDIO WEB APPLICATION



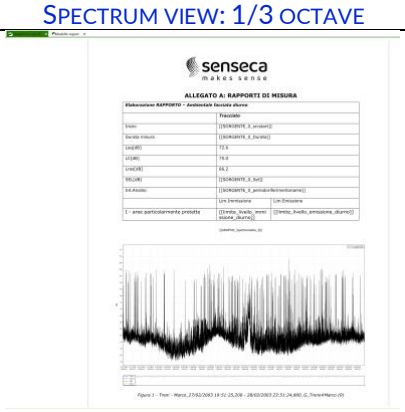
SLM VIEW



SPECTRUM VIEW: 1/3 OCTAVE



ENVIRONMENTAL NOISE STUDIO



REPORTING