TEAC

32ch model

64ch model

48ch model

16ch model

In Pursuit of Data Recording
Further challenges to recording, and evolution

PA Amplifier Module   *ST Amplifier Module*   *CAN Module*   *AO Amplifier Module*

LX-1000 comes with fulfilling functions

Basic design

Compact and lightweight design with excellent portability

Flexible power supply specification from DV 8V to 36V

Options

Various options for more convenient use

Color display remote control unit

Battery unit

Carrying case

Standard equipment

Pulse — **Pulse Input**

GPS — **GPS Input**
GARMIN GPS18x-5Hz (Option)

Dynamic range improvement
The realization of 120 dB (FFT based) wide dynamic range enables more accurate recording and reproduction even with dynamic signals with large fluctuations.

Synchronization with video
Supporting synchronization with the TEAC Video NV Recorder VR-24, which makes it easy to completely synchronize video and data. Scheduled to support video synchronization using a PC.

Multi-channel support
Support for up to 64ch in one unit. Up to 4 units (up to 256ch) can be synchronized. Also available to verify complex events.

Input / Output amplifier modules

Available in 4 selectable amplifier modules.
Amplifier modules can be replaced or expanded freely;
which enables you to choose the configuration that suits your needs.
Also, you can narrow down the configuration to the minimum necessary,
share with other departments, and expand the range of utilization.

Diversification of amplifier modules
Lineup of various amplifier modules, such as analog input amplifier for TEDS compatible voltage output sensors, analog output amplifier for input signal voltage conversion, CAN data acquisition module, and amplifier for strain gauge converter.

Analog — Analog signal input amplifier AR-LXPA1000

accelerometers

Number of input channels	4 ch/module DC/AC/IEPE Selectable
Input connector	BNC (Z=50Ω Type)
Input format	Unbalanced
Input impedance	1MΩ
Input range	±0.1/0.2/0.5/1/2/5/10/50V
Analog-digital conversion method	ΔΣ conversion method
HPF	OFF / 5Hz (−18dB/oct Butterworth filter)
Weighting	FLAT, A, C (IEC TYPE 1 compliant)
Signal quantization bit depth	16/24-bit
Input renage precision	±2%
Dynamic range	125dB or more (24-bit, 5V input range, FFT-based)
IEPE sensor power supply	DC 24V/4mA
IEPE sensor disconnection detection	Detection function included for each channel
TEDS	Supports TEDS Ver. 1.0

Strain — strain input amplifier AR-LXST1000 [*1]

		Strain mode	
Number of input ports	4	Input range	±500/1000/2000/5000/10000/20000/50000/100000 µst
Input signal type	Strain[*2] / DC		
Input connector	7-pin Lemo, Ø10 (EGG0B type)	Gauge ratio	2
Input format	Unbalanced, DC coupled	Bridge voltage	2/10V (DC bridge format)
Input impedance	1MΩ	Bridge connection	Full bridge
Absolute maximum input voltage	±25V	Balance adjustment method	Electronic automatic balancing
Signal quantization bit depth	16/24-bit	Balance adjustment range	±10000 µst (when 2V bridge voltage)
Linearity	±0.1%	**DC mode**	
Analog-digital conversion method	ΔΣ conversion method	Input range	±1/2/5/10V
		Dynamic range	110dB or more
LPF cutoff frequencies [Hz]	10/30/100/300/1k/3k/10k/30k/Pass (−48dB/oct Butterworth response)	Crosstalk	−90dB or lower

[*1] A cooling fan is necessary if even one AR-LXST1000 is installed.
[*2] A bridge box (sold separately) is required when measuring with a strain gauge.

and has field use specifications.

General-purpose media adoption realizes improved media availability and increased capacity

Highly versatile SD memory card adopted for recording media (SDXC: up to 128GB) Easy to use due to significant capacity increase compared with conventional models.

Fanless (up to 32ch configuration)

Less limited equipment arrangement. Realization of clear sound and vibration measurement without worrying about the effects of fans.

Flexibility and simplification of the channel increases and decreases

Channel configuration of 1 amplifier : 4ch (2 ports for CAN)
Easy-to-understand structure assuming replacement. Necessary amplifier can be set instantly according to the measurement object.
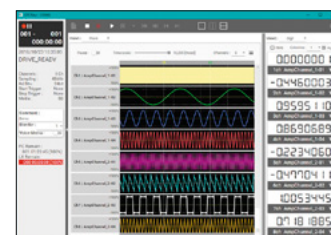
PC control enhancement

Full control from a PC and direct recording to a PC are possible. The control app has also been updated to be easier to use and improve the convenience of using data.

CAN module
AR-LXCAN1000

Supporting the nextgeneration car network, CAN FD.

Number of input ports	2
Input connector	9-pin D-sub
Supported protocol	ISO 11898-1:2015 2.0A (11-bit ID) / 2.0B (29-bit ID)
Baud rate	125 / 200 / 250 / 500 / 1000 / 1250 / 2000 / 2500 / 4000 / 5000 kbps
Recording mode	Full acquisition / Signal acquisition
Bus mode	Normal / Listen Only
ID filtering	32 / port (in full acquisition)
Signal registrations	32 / port (in signal acquisition)
Bus mode	Normal / Listen Only
Thinning-out mode	10 / 20 / 50 / 100 / 200 / 500 ms, 1 / 2 / 5 s
Termination resistance	Switchable
Isolation	Isolation between ports
Configration restrictions	Up to 4 modules for CAN

Analog signal output amplifier
AR-LXAO1000

Number of output channels	4
Output connector	BNC (Z=50Ω Type)
Output format	Unbalanced
Output impedance	50Ω
Output range	±1 to 5V (adjustable in 0.1V steps)
Maximum output current	10mA
Signal quantization bit depth	16 /24-bit
Extended range	±127% (of rated range)
Digital-analog conversion method	ΔΣ conversion method
Phase difference between output channels	1 degree or less
Output range precision	±1% (5V output range)
S/N ratio	100dB or more (within band, 5V output range)

Well-designed Interface

The remote control unit employs a jog-dial and graphical screen for easy operation.

		64ch model	**48ch model**	**32ch model**	**16ch model**
External dimensions (W x H x D)		approx. 300 x 197 x 200mm	approx. 300 x 153 x 200mm	approx. 300 x 109 x 200mm	approx. 300 x 65 x 200mm
Weight (excluding AC adapters, media and optional boards)		approx. 10kg	approx. 7.7kg	approx. 5.4kg	approx. 3.1kg
Power consumption	AR-LXPA1000 (Analog) x 4	approx. 81W	approx. 64W	approx. 47W	approx. 30W
	AR-LXST1000 (Strain) x 4	approx. 133W	approx. 103W	approx. 73W	approx. 43W

Specifications

Product configuration	Main unit LX-1000	Up to 4 amplifiers can be incorporated.
	Expansion unit AU-LX1000EPIO	Up to 4 amplifiers can be incorporated.
Power supply	AC100V–240V (from included AC adaptor), DC 8V–36V	
Maximum number of channels	Analog recording: up to 64 ch / pulse recording: 2 ch *A cooling fan is necessary if even one AR-LXST1000 is installed.	
Cooling	No external cooling required (Fanless: up to 32 ch)	
Sampling frequencies	102.4kHz series	102.4k / 51.2k / 25.6k / 12.8k / 5.12k / 2.56k / 1.28kHz
	100kHz series	100k / 50k / 20k / 10k / 5k / 1kHz
	96kHz series	96k / 48k / 24k / 12k / 6k / 3k / 1.5kHz
	65.54kHz series	65.536k / 32.768k / 16.384k / 8.192k / 4.096k / 2.048k / 1.024kHz
	Low speed sampling	500 / 200 / 100 / 50 / 10 / 5 / 1Hz
Quantization bit depth	16bit / 24bit	
Interface for PC	Gigabit Ethernet (1000BASE-T) x 1 port	
Recording media	SDHC / SDXC card (8GB–128GB, CLASS 10 or more) / PC direct recordable	
Maximum recording rate	3.2Mbyte/s	40kHz band (102.4kHz sampling) x 16-bit x 16ch
Synchronized operation	LX-1000 Synchronization	Up to 4 units
	VR-24 synchronization	1 unit
Pulse input (standard equipment)	Number of input channels	2
	Input connector type	BNC
	Input format	Unbalanced
	Input impedance	100kΩ
	Input voltage	±50V maximum (threshold ±20V)
	Input frequency	450kHz maximum
	Threshold	±0.5V / ±1V / ±2.5V / ±5V / ±10V / ±20V (switchable)
	Division ratio setting	1–255
	Moving average	1, 2, 4, 8, 16
GPS input (standard equipment)	Number of input channels	1ch
	Input connectors	DX10A-20S (50)
	Recommended GPS module	GARMIN GPS18x-5Hz
Voice memo input and output	Sampling frequency	8kHz
	Quantization bit depth	8bit
	File format	WAV
Operating conditions	Operating temperature / humidity range	0 to 40°C / 10 to 80% (no condensation)
	Storage temperature / humidity range	−20 to 60°C / 5 to 90% (no condensation)
	Operating air pressure range	860 – 1060hPa
	Vibration resistance	MIL-STD-810E Figure 514.4-1, 2, 3

Accessories

● CD-ROM ×1
  Contents: Instructions for Use, LXK Navi software*, LXK Navi Operation Manual
● AC adapter
  LX-1000 only ×1
  System with LX-1000 and one AU-LX1000EPIO unit ×1
  System with LX-1000 and two AU-LX1000EPIO units ×2
  System with LX-1000 and three AU-LX1000EPIO units ×2
● AC adapter power cords   same as number of AC adapters
● Microphone for voice memos ×1
● Earphone ×1
● Front handle (TZ-LXFH1000) ×1

Options

● **BU-LX1000**   Battery Box
● **ER-LXRC1000**   Remote control unit
● **TZ-LXFAN1000**   Cooling fan unit
● **NP-7LS**   Battery pack
● **JL-2PLUS**   Battery Charger
● **LXGPS18X (5Hz)** GPS receiver
● **CS-LX1016**   Carrying Case (for up to 16ch)
● **CS-LX1032**   Carrying Case (for up to 32ch)
● **TZ-LXVMK series** Vehicle Mount Adapter
● **CL-DRDC**   DC power cable

BU-LX1000
Mounting image with 16CH model
* Batteries and battery charger are sold separately.
  Continuous operation time on battery unit: approx. 7 hours

TEAC America Inc.