

Input Amp Type	DC Input Amp (AR-LXDC100)						PA Input Amp (AR-LXPA100)						Strain Input Amp (AR-LXST100)					
	Input		Input and Output		Input and Output		Input		Input and Output		Input		Input and Output		Input and Output			
Channels	8ch	16ch	32ch	8ch	16ch	32ch	8ch	16ch	32ch	8ch	16ch	32ch	8ch	16ch	32ch	8ch	16ch	
Weight	3.6/7.9	3.9/8.6	6.1/13.4	3.9/8.6	6.1/13.4	3.9/8.6	3.6/7.9	3.9/8.6	6.1/13.4	3.6/7.9	3.9/8.6	6.1/13.4	3.6/7.9	3.9/8.6	6.1/13.4	3.9/8.6	6.1/13.4	
Approx (kg/lb)	LX-110	LX-120	LX-110	LX-120	LX-110	LX-120	LX-110	LX-120	LX-110	LX-120	LX-110	LX-120	LX-110	LX-120	LX-110	LX-120	LX-110	
Power Consumption(W)	30	36	48	36	48	66	41	52	76	46	66	92	46	62	92	62	92	

Sampling Frequencies	96 / 48 / 24 / 12 / 6 / 3 / 1.5 kHz (Common to each Channel)		
LX-110 LX-120	Low speed sampling	Cutoff Frequency	Attenuation
	1kHz	400Hz	-80dB (at 500Hz)
	500Hz	200Hz	-80dB (at 250Hz)
	200Hz	80Hz	-80dB (at 100Hz)
	100Hz	40Hz	-80dB (at 50Hz)
	50Hz	20Hz	-80dB (at 25Hz)
	20Hz	8Hz	-80dB (at 10Hz)
	10/5/2/1Hz	4Hz	-80dB (at 5Hz)
	2/5/10/30/60s (cycle)	4Hz	-80dB (at 5Hz)
	(Aliasing may occur at and under 5Hz sampling)		

Input Format	Unbalanced	Balanced and Unbalanced	Balanced and Unbalanced
Input Coupling	DC	Balanced DC, Balanced AC, Unbalanced DC	DC
Input Impedance	1 M ohm	1 M ohm	1 M ohm
Input Range (over-range to +/-127%)	+/- 0.5/1/2/5/10/20/50 V	+/- 0.01/0.0316/0.1/0.316/1/3.16/10/50 V	DC mode: +/- 1/2/5/10 V, ST mode: 500/1000/2000/5000/10000/20000/50000/100000 microST, Precision(range value) +/-1% or less
Absolute Max. Input Voltage	+/- 100 V	+/- 50 V, but +/-100 V in the +/-50V range	+/- 25V

Anti aliasing filter	Joint use of both a digital filter(*) and an analog filter(2nd Order Butterworth)	Joint use of both a digital filter(*) and an analog filter(2nd Order Butterworth)	Joint use of both a digital filter(*) and an analog filter(2nd Order Butterworth)
LPF	---	---	10,30,100,300,1k,3k,10k,30kHz,Pass-48dB OCT Butterworth filter (Switched Capacitor Filter = SCF) for 8 channels independent,At LPF to Pass Joint use of both a digital filter(*) and an analog filter (2nd Order Butterworth)
Frequency Bandwidths	DC to the sampling frequency (listed above)/2.4	DC Coupling: DC to the sampling frequency (listed above)/2.4, AC Coupling: 1Hz to the sampling frequency (listed above)/2.4, +/-0.5 dB	DC Method: DC to the sampling frequency (listed above)/2.4, +/-0.5/-3 dB ST Method: DC to 30 kHz, +/-0.5/-3 dB

Conversion Method	128 times over sampling delta sigma method : however 64 times over sampling at 40kHz	128 times over sampling delta sigma method : however 64 times over sampling at 40kHz	128 times over sampling delta sigma method : however 64 times over sampling at 40kHz
Linearity	+/-0.1% or less	+/-0.1% or less	+/-0.1% or less
Distortion Factor	Sampling Frequencies: 96kHz, Measurement Frequency: 20kHz, Distortion factor: +/-0.1% or less	Sampling Frequencies: 48k, 96kHz, Input Range: 0.316V or over, Distortion factor: +/-0.1% or less	DC mode: same as DC100 ST mode: (SCF: 10kHz, 30kHz, Sampling Frequencies 24kHz, 96kHz, 1000microST 0.1% or less

Signal to Noise ratio (16bits/24bits) (25 deg C)	Input Range	band (dB)	20kHz	40kHz
S/N is a difference of noise level for 100% of each input range. Dynamic range is the greatest input level and a difference of noise level of each input. Dynamic range = S/N +2dB The overall accuracy specified here is the accuracy of the analog output when using an input amp and an analog output amp, and may differ depending on the frequency characteristics and the input range of the input amp.	Other of 20V	84 / 96 (in band)	64 / 67	60 / 63
	20V	84 / 94 (in band)	74 / 77	69 / 72
	0.1V	83 / 86	77 / 80	75 / 75
	0.316 / 1 V	87 / 93	77 / 80	75 / 75

Inter-channel phase difference	1 deg or less (At 20 kHz or less), 3 deg or less (At 400 kHz or less)	1 deg or less (At 20 kHz or less), 3 deg or less (At 400 kHz or less)	1 deg or less (At 20 kHz or less), 3 deg or less (At 400 kHz or less)
Output Connector Type	BNC	BNC	Lemo 7-pin, 10s (ECGO Type)

Output Format	Unbalanced	Unbalanced	Unbalanced
Output Coupling	DC	DC	DC
Output Impedance	75 ohm	75 ohm	75 ohm
Output Range	+/-1 to 5 V, 0.1 V Step	+/-1 to 5 V, 0.1 V Step	+/-1 to 5 V, 0.1 V Step
Smoothing Filter	Combination of Analog filter + Digital filter	Combination of Analog filter + Digital filter	Combination of Analog filter + Digital filter

Linearity	+/-0.1% or less	+/-0.1% or less	+/-0.1% or less
Distortion Factor	+/-0.2% or less	+/-0.2% or less	+/-0.2% or less
Range Accuracy	+/-0.1% or less	+/-0.1% or less	+/-0.1% or less
Signal to Noise ratio (16bits/24bits)(25 deg C)	87 / 93 dB (in band) (1V input)	87 / 93 dB (in band) (1V input)	87 / 93 dB (in band) (1V input)

Output Connector Type	BNC	BNC	BNC
Crosstalk	-78 dB (At 20 kHz or less) -75 dB (At 40 kHz or less)	-78 dB (At 20 kHz or less) -75 dB (At 40 kHz or less)	-78 dB (At 20 kHz or less) -75 dB (At 40 kHz or less)

Accessories	DC Cable	AC Adapter	LX Navi software
* Specify one when you order			

TEAC

<http://www.roga-instruments.com>

LX-100 Series

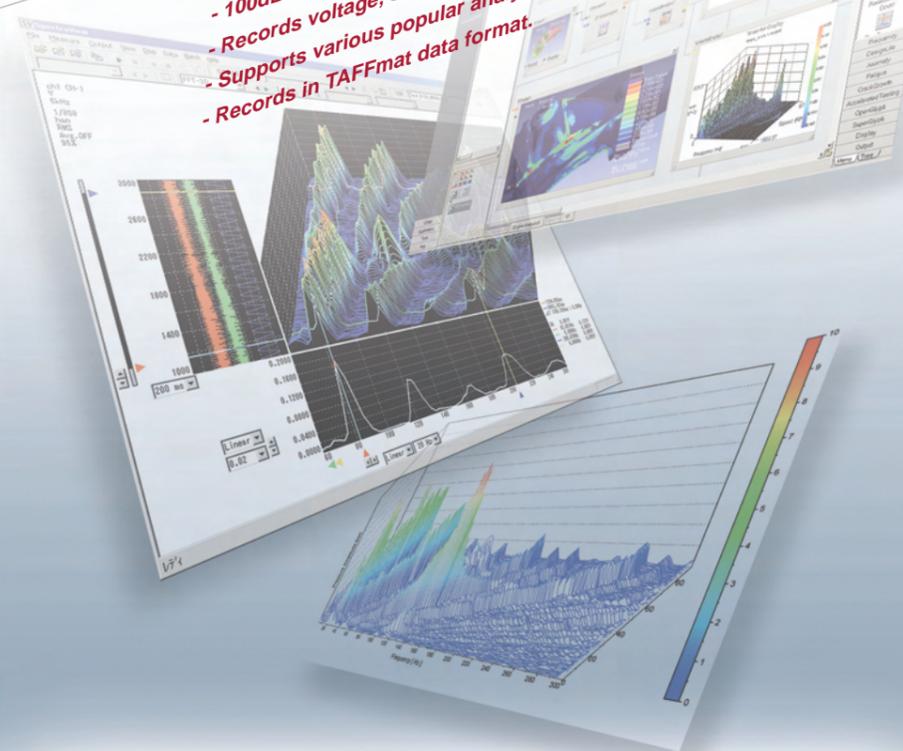
LX-110 / LX-120



Data Recording and Acquisition Unit

Pursuit of "Usability" and "Speed".
 Endless evolution of data recording
 LX-100 Series data acquisition and recording system pursues the usability and reliability in the field.
 LX-100 Series supports FAT32, 24bits AD conversion and RoHS (Restriction of Hazardous Substances).

- FAT32 file system for large capacity card
 - 100dB dynamic range by 24 bits AD
 - Records voltage, sound, vibration and strain from DC to 40kHz
 - Supports various popular analysis software and strain from DC to 40kHz
 - Records in TAFFmat data format.



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LX-100 series accepts the needs of customers.

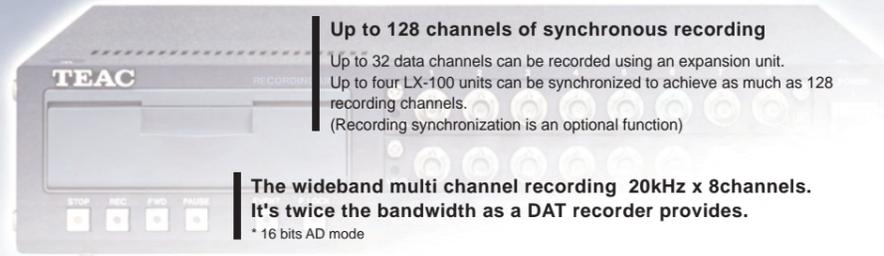
LX-100 Series data acquisition and recording system was designed for reliable use in the lab and the field, and quick data processing. Following the convenience of TEAC DAT technology, the LX-100 Series enables a wider recording bandwidth. The connectivity to a transducer and PC are enhanced to meet the customer needs and offer cost-efficient data acquisition.

- Select 1** Choice of Main Body
LX-110 / LX-120
- Select 2** Choice of Number of Channels *
8 / 16 / 32
- Select 3** Choice of Amplifier *
DC / PA / Strain / Output
- Select 4** Choice of Recording Devices *
Internal Memory / PC card
- Select 5** Choice of Interface *
Ethernet / Firewire (IEEE1394)
- Select 6** Choice of Control Unit
Remote Control Unit / PC

*Specify number of channels when you order

Records voltage, sound, vibration and strain from DC to 40kHz bandwidth

It achieves 100dB dynamic range by 24 bits AD
*PA amp 3.16V range.



Up to 128 channels of synchronous recording
Up to 32 data channels can be recorded using an expansion unit.
Up to four LX-100 units can be synchronized to achieve as much as 128 recording channels.
(Recording synchronization is an optional function)

The wideband multi channel recording 20kHz x 8channels. It's twice the bandwidth as a DAT recorder provides.
* 16 bits AD mode

Up to 8GB recording
FAT32 file system for large capacity card
Up to 8GB card can be used at the moment.

The analog monitor output is available during recording.
Time base conversion is possible in playback.

Recording format is TAFFmat, which is supported by many popular analysis software applications.

Through a remote control unit (stand-alone) or PC (LX Navi software), the LX-100 Series can be fully controlled



Recording Devices
Choice of Memory and Memory + PC card drive

◀ CF card & Adapter

Acquired data also can be transmitted to the PC while media recording.

OPTION :
Wave data display software LX View (PL-S1001)

Trigger recording Voice Memo recording

A voice memo can be recorded, which simplifies the future data searches. Trigger recording offers the pre-trigger, level-trigger, the repeat and interval recording.

DC power supply and AC adapter
OPTION : Battery Unit

Select 1 Choice of Main Body

LX-110 *Standard Model*

The LX-110 provides superior recording and playback performance with selectable recording media and input/output configurations.

LX-120 *High Specification Model*

In addition to all recording and playback features of the LX-110, LX-120 provides the selection of additional sampling rate and Tachometer pulse inputs.

Various sampling frequencies from high speed to low speed for extended time recording are available as selection.

96kHz, 102.4kHz, 65.536kHz, 100kHz and lower sampling are (from 1kHz to 1/60Hz).

LX-110 96kHz, lower sampling

LX-120 96, 102.4, 65.536, 100kHz, lower sampling

Select 4 Choice of Recording Devices

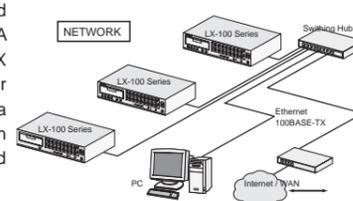
Internal Memory & PC card

Memory - From standard 64MB to 576MB of internal memory achieving the maximum recording rate.
PC card - Supports up to 8GB PCMCIA Type II or Compact Flash enabling the recording in harsh environments.

Select 5 Choice of Interface

Ethernet / Firewire (IEEE1394)

Simultaneous recording to media and PC with a selection of interfaces. A Firewire (IEEE1394) or 100BASE-TX Ethernet interface are available for the connection to the PC. The data can be transferred to a PC in real-time and displayed, processed and stored in the PC HDD.



Frequency Bandwidth vs. Recording Time

Internal memory recording An example) Nom. of 8 Channels, 576MB Memory

Frequency Bandwidth (Sampling Frequencies)	Recording Time	
	16bit	24bit
DC to 40 kHz (96 kHz)	Approx 6 minute	-
DC to 20 kHz (48 kHz)	Approx 12 minute	Approx 6 minute
DC to 10 kHz (24 kHz)	Approx 24 minute	Approx 12 minute
DC to 5 kHz (12 kHz)	Approx 48 minute	Approx 24 minute
DC to 2.5 kHz (6 kHz)	Approx 1 h 36 min	Approx 48 minute
DC to 1.25 kHz (3 kHz)	Approx 3 h 12 min	Approx 1 h 36 min
DC to 675 Hz (1.5 kHz)	Approx 6 h 24 min	Approx 3 h 12 min
DC to 400 Hz (1 kHz)	Approx 9 h 36 min	Approx 4 h 48 min
DC to 80 Hz (200 Hz)	Approx 48 hour	Approx 24 hour

Note : Recording rate is approx 1.6MB/sec (DC to 40 kHz bandwidth x 8ch)

PC card recording An example) Nom. of 8 Channels, 4GB PC card

Frequency Bandwidth (Sampling Frequencies)	Recording Time	
	16bit	24bit
DC to 20 kHz (48 kHz)	Approx 1 h 20 min	-
DC to 10 kHz (24 kHz)	Approx 2 h 40 min	Approx 1 h 20 min
DC to 5 kHz (12 kHz)	Approx 5 h 20 min	Approx 2 h 40 min
DC to 2.5 kHz (6 kHz)	Approx 10 h 40 min	Approx 5 h 20 min
DC to 1.25 kHz (3 kHz)	Approx 21 h 20 min	Approx 10 h 40 min
DC to 675 Hz (1.5 kHz)	Approx 42 h 40 min	Approx 21 h 20 min
DC to 400 Hz (1 kHz)	Approx 84 hour	Approx 42 hour
DC to 80 Hz (200 Hz)	Approx 320 hour	Approx 160 hour

Note : Recording rate is approx 0.8MB/sec (DC to 20 kHz bandwidth x 8ch)

Synchronous video and data recording

AQ-VU is a visual data recorder with which 4-channels of video and analog signals can be synchronously recorded and played back. By synchronizing LX-100 series data recorder with AQ-VU, a variety of data measurements are possible.



Visual data recorder AQ-VU

Select 2 Choice of Number of Channels

Up to 32 channels

8 or 16 recording channels with a main unit or 32 channels using an expansion unit.

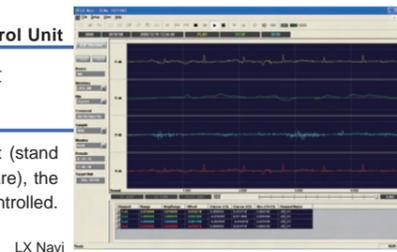


▲ expansion unit

Select 6 Choice of Control Unit

Remote Control Unit or PC

Through a remote control unit (stand-alone) or PC (LX Navi software), the LX-100 Series can be fully controlled.



LX Navi

An example Amplifier board & number of channels

DC Input Type	PA Input Type	Strain Input Type
8ch Input/Output	8ch Input/Output	8ch Input/Output
16ch Input	16ch Input	16ch Input
16ch Input/Output	16ch Input/Output	16ch Input/Output
32ch Input	32ch Input	32ch Input

Three types of input amplifier cards are available :
A DC input amp card with lower sampling (from 1kHz to 1/60Hz), a selectable DC/IEPE(*) accelerometer input amp card, and a selectable DC/IEPE(*) accelerometer input amp card. The output amplifier card outputs the analog voltage during recording and plays-back the analog voltage.

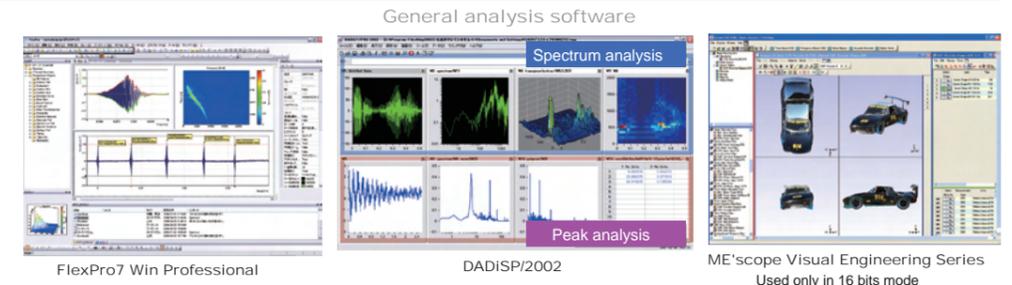
* IEPE : Integrated Electronics Piezoelectric.

DC	DC input amplifier	[AR-LXDC100]
PA	PA input amplifier	[AR-LXPA100] With TEDS
Strain	Strain amplifier	[AR-LXST100] Common use DC input
Output	Output amplifier	[AR-LXAO100] lower sampling will be available in the near future.

Connecting to Data Analysis Software

The recording format is TAFFmat which is compatible with Windows file system and it is commonly used by TEAC Digital Data Recorders. The TAFFmat data file can be read by LX View software and by many other popular analytical software applications.

A real-time front-end software (Windows DLL) is also available for a system integrator for direct control of LX Series recorders. Contact TEAC for detail.



FlexPro7 Win Professional

DADISPI/2002

ME'scope Visual Engineering Series
Used only in 16 bits mode

Options

Remote Control Unit (ER-LXRC100)

Display : Color LCD 320x240 pixels

Functions :

- Bar meter display
- Main-unit control (setting recording reproducing)
- Microphone input

External Dimension (W x H x D) :
Approx 170 x 30 x 100 mm (excluding protruding Parts)

Weight :
Approx 0.65 kg (excluding cables)

Battery Unit (BU-81)

Internal Battery Pack : HP-30L from Paco Electronics Industry Inc.

Num. of Internal Battery Packs : 3 (battery packs described below)

External Dimension (W x H x D) :
Approx 300 x 27.5 x 200 mm 11 13/16" x 1 1/16" x 7 7/8" (excluding protruding Parts)

Weight :
Approx 1.5 kg/3 lb (excluding the battery pack and mounting brackets)

Battery Pack (HP-30L)

(Paco Electronics Industry Inc.)

Supply voltage :13.2V

Capacity : 3.3 Ah

Weight : Approx 700 g /1.5lb

Size : NP1type

Battery charger for Battery Pack

(KH-2S from Paco Electronics Industry Inc.)

Power Supply : 100V AC

(200V AC Automatic reshuffling)

Slot for Battery Pack : 4

Battery Unit (BU-81)



Battery Pack (HP-30L)

Vehicle Mount Adapter

