

2 channels
 24-bit, up to 192 kHz
 2 colour displays
 USB 2.0 communication
 Ethernet/Bluetooth
 Pre-recording buffer
 PCM linear or MPEG compressed (BWF files)
 Internal flash and removable Compact Flash
 Internal speaker
 Built-in audio editor



technical specifications

Recording

Internal storage 2 GB NAND flash memory
 Removable media Compact Flash type II/III (hot swappable)
 Disk format FAT 32
 Recording method Linear digital PCM, MPEG 1 layer 2 or MP-3
 File type 16/24-bit Broadcast Wave File BWF (WAV)
 A/D & D/A conversion 24-bit Sigma-Delta
 Tracks 2 individual
 Sampling rate 44.1, 48, 88.2, 96 and 192 kHz
 Recording capacity 1 hour per GB of disk/memory @ 24-bit 48 kHz
 Pre-recording buffer Programmable (maximum 3 seconds)
 Display Colour TFT
 Level meters On colour display and by LED
 Bit rate From 32 to 384 kbits/sec

Inputs

Digital inputs XLR 3-pole
 Analogue inputs 2 XLR microphone (dynamic, +48V phantom)/line
 Microphone input sensitivity 2 and 15 mV/Pa selectable
 Limiters On microphone inputs
 Line input sensitivity Adjustable from -6 up to +24 dBu for 0 dBFS recording
 THD at 1 kHz Microphone <0.1%, line <0.01% (measured on AES out)
 Frequency response Microphone 10Hz - 48 kHz ± 0.5 dB, line ± 0.2 dB (measured on AES out)
 Signal-to-noise ratio >100 dB
 Input level adjustment range Microphone -130 to -86 dBu, line from -6 to +24 dBu
 Input filters LFA (with vortex filtering)
 Internal microphone Electret on the front panel

Outputs

Analogue line output 2 XLR 4.4 V max (up to +15 dBu selectable)
 Digital output XLR AES-3 (16 or 24-bit)
 Headphones Stereo 6.3 mm (1/4") jack 50 Ω
 Internal speaker 0.2 W

Other

USB host USB 2.0 connector type "A"
 USB device USB 2.0 connector type "B"
 M/S decoder Switchable
 Ethernet RJ 45
 Audio editing On-board with graphic display

General

Dimensions 175 x 65 x 185 mm (W x H x D), including battery box
 Weight 1.45 kg (3 lbs), including battery box
 Power supply External 9-15V or 8x "AA" batteries
 Power consumption Approximately 2 W (160 mA from 12V)
 Charge time Approximately 3 hours (with NiMH cells)
 Battery life Approximately 7 hours (with alkaline cells)
 Relative humidity From 10 to 99% (non condensing)

Nagra is continually improving its products and technologies; as a result, the above specifications may be modified without notice. / Deterochens Communication / PRINTED IN SWITZERLAND 11.2008, P/N 2619004141

NAGRA LB Two-track dual display digital audio recorder



Compact, light, sturdy, versatile

The highly competent recorder with on-board editing



Nagra is one of the most recognised brands in the world with, among other awards, three Oscars and one Emmy

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|---------------------------------|---|---|--|---|
| 1 Main selector | 5 Menu navigation button | 9 6.3 mm (¼") headphone jack | 13 Reference signal generator switch | 16 Jog Wheel |
| 2 Rewind/forward switch | 6 Screen backlight/battery check switch | 10 Headphone level control | 14 Internal microphone on/off switch | 17 Function "shift" key |
| 3 Skip back/forward switch | 7 Main 2½" colour display | 11 Electret microphone | 15 Marker switch
Adds a mark in the file during recording | 18 Multifunction and navigation keys |
| 4 Potentiometers linking switch | 8 Mono/stereo switch | 12 Input potentiometers with 3 LED monitoring | | 19 Editing display with 5 function keys |

- | | | | | | |
|---|---------------------------------|---|--|---------------------------------|----------------------------|
| 20 Speaker | 23 +48 V phantom power switches | 26 External supply connector | 29 USB output connector
PC or MAC recognised | 32 Digital output XLR connector | 35 Output connection panel |
| 21 Compact flash memory slot with hot swapping button | 24 Analog inputs XLR connectors | 27 XLR analogue output connectors | 30 Ethernet connector | 33 Audio motherboard | 36 Detachable battery box |
| 22 Input sensitivity selectors | 25 Digital Input XLR connector | 28 USB host
For Bluetooth key, memory stick and external drive | 31 Extension connector
Remote control and RS232 communication | 34 Compact flash interface | |



A resourceful tool

The Nagra LB is part of the latest generation of digital recorders. Initially aimed at the broadcast industry, it also fulfils many recording applications from sound effects gathering, music production and nature recording. Musicians will find that features offered make it ideal for high quality, on-location production work.

This battery-operated 2-channel 16/24-bit portable recorder offers on-board editing and communication features via Bluetooth, USB and Ethernet.

Measuring only 17,5 x 6,5 x 18,5 cm, it is marginally larger than its predecessor, the ARES-BB+, and runs from 8 "AA" cells giving in excess of 7 hours recording time.

High quality inputs

The Nagra LB offers two analogue microphone/line audio inputs derived from the NAGRA VI and a single stereo digital AES input on standard XLR connectors. These inputs are equipped with traditional NAGRA microphone pre-amplifiers

for dynamic and phantom +48 V microphones and fitted with a special integrated vortex filter to virtually eliminate wind noise. They are also equipped with linkable audio limiters. The LINE input will accept up to +24 dBu.

Recording medium and format

The Nagra LB records on an extractable Compact Flash card or to its internal 2 GB NAND flash memory or even an USB device. Files are recorded in Broadcast Wave format in either PCM linear, MPEG-1 layer II or MP-3 compressed audio formats. These files are compatible with both Mac and PC based systems. The internal flash memory serves two important roles. Firstly as a back-up media should the extractable compact flash card be full or unavailable or as a spontaneous memory for recording while the extractable card is changed.

The recorder accepts a wide range of commercially available CF cards, which can be verified internally before use thanks to the card test programme in the software. Simply pressing the "Hot swap" button next to the slot will allow the card to be replaced even while the unit is actually recording.

Easy to use in-the-field

The metering and menu displays are accomplished through a pair of back-lit colour displays on the front and upper faces of the recorder. In addition, there are three LEDs located above each input control as on the NAGRA VI and other ARES recorders, to indicate the presence of signal and overload of each input.

The front panel of the unit, machined from a solid aluminium block, is laid out in a very simple and easy-to-use manner and the following principal areas merit a mention.

First of all, the operation of the NAGRA LB is controlled through a traditional rotary main function selection switch with the following positions: RECORD, TEST, OFF, STOP and PLAY, as with other previous Nagra models. The FF and REW as well as SKIP functions are accomplished using easily accessible snap switches next to the function selector. A navigation and execute button, in the centre of the front panel, allows easy access and modification of the menu system that is used to select and set the parameters of the recorder. An internal

microphone, that records to both channels simultaneously, and adjustable headphone output completes the standard features on the front panel.

Integrated editing functions

The top panel of the Nagra LB is equipped with a full audio editing system with its own dedicated colour display. This allows in-the-field editing and gives a graphic waveform display. Once the editing of the audio material is complete, the file can be transmitted to the studio either over IP (through the Ethernet connection) or via a GSM phone through the Bluetooth option. Naturally, the USB port also serves as a generic drive when connected to a computer.

The file transfer can also be done this way. Removal of the Compact Flash card is a final possibility for removing the audio from the recorder.

The HOST USB port can also be used for file transfer to a memory stick or external hard disk if desired.

Multiple powering possibilities

The NAGRA LB has a detachable battery compartment into which 8 "AA" cells can be fitted. Rechargeable Ni-MH batteries may also be used if desired, as the charging circuit is built-in to the battery box.

External 9 to 15 V can be supplied via a standard DC connector mounted on the left side of the removable battery compartment.

Product evolution

The NAGRA LB has been designed to fit various market requirements. A full SMPTE/EBU time coded model is being prepared.

A simplified version with no editing features, and no time code will also be available. The Ethernet features are also being extended to allow the recorder to stream audio over IP.

Environment

All NAGRA recorders meet the stringent RoHS (anti lead) requirements as well as the CE norms. Certification of both is available upon request.



The NAGRA LB is supplied with a robust weather resistant carrying case featuring an adjustable shoulder strap. Also included: external AC power supply, Bluetooth communication dongle, USB cable and comprehensive operating manual