

NAGRA VI

Eight-track digital recorder



MAGENTA VI

02:36:25 RECORD 057 0:02:11

/55

02:36:25:07
00/30/20/80 [25]
14/400 800 8000

CH1 ON CH2 ON CH3 ON CH4 ON

REC TEST STOP PLAY

0 1 2 3 4 5 6 OFF ON SOLO



MAGENTA VI

02:48:16 RECORD 045 0:02:12

/45

10:48:16:07
00/30/20/80 [25]
14/400 800 8000

CH1 ON CH2 ON CH3 ON CH4 ON

REC TEST STOP PLAY

0 1 2 3 4 5 6 OFF ON SOLO



MAGENTA VI

02:36:25 RECORD 057 0:02:14

/57

02:36:25:07
00/30/20/80 [25]
14/400 800 8000

CH1 ON CH2 ON CH3 ON CH4 ON

REC TEST STOP PLAY

0 1 2 3 4 5 6 OFF ON SOLO



Nagra next generation technology

The best specs ever for pure audio quality

Reliable technology

The NAGRA VI has been designed for professional use as an affordable multi-track recorder of exceptional quality, not only in terms of the build quality but especially in terms of pure audio transparency. The use of high quality Neutrik XLR, Lemo and Hirose connectors, a large colour 3½" TFT screen married with a battery duration of over 12 hours continuous operation from a single charge (13.8 Ah optional pack) make it a tool that in-the-field recording engineers can rely upon.

The standard NAGRA VI package includes a protective carrying case and shoulder strap, stand-up supporting legs, carrying handles as well as a 4.6 Ah Lithium-ion power pack and mains power supply, and is equipped with a 120 GB hard disk that can be replaced by a Solid State Drive if desired.

The VHDL concept of the NAGRA VI allows even hardware to be adapted through software, and the machine software is downloadable from our web site, and will update automatically in less than 20 seconds.

Six analogue inputs

The NAGRA VI offers six independent analogue audio inputs. Inputs 1 to 4 are equipped with traditional NAGRA microphone pre-amplifiers for dynamic and phantom +48 V microphones. These totally new concept input circuits and pre-amplifiers are a combination of those developed for the NAGRA V and NAGRA D and, without doubt, offer the highest specifications and purest audio quality NAGRA has ever developed. An audio limiter can be selected for each of the microphone inputs, and they can be ganged in pairs if desired. The four in-house wound transformers offer fully floating inputs for the

dynamic microphones, giving a greatly improved signal-to-noise ratio. The remaining two analogue inputs are LINE level inputs for connection to other equipment supplying a line level signal, such as radio receivers. When set to the LINE position, all 6 analogue inputs will accept up to +24 dBu. The two input connections (channels 5 + 6) double up as 2 AES inputs (A and B) when selected to digital input mode, making a total of 8 possible tracks.

Multiple powering possibilities

The Nagra VI power supply accepts 100 - 240 V, 50 - 60 Hz, mains powering. The standard 4.6 Ah Lithium-ion battery pack can be recharged in approximately 3 hours offering around 5 hours operation.

External DC from 9-16 V can also be connected to the 4 pole XLR. Two Hirose connectors can supply up to 1 A to power external accessories from the machine supply. This enables external devices such as radio microphone receivers or external hard drives to be used in-the-field without their individual powering.



Nagra is one of the most recognised brands in the world with, among other awards, three Oscars and one Emmy. Winner of TEC award for Outstanding Technical Achievement



Main display screen: shows status, levels and menus of the recorder



Mixer with pan



Directory



Potentiometers assignment



Input choice



Media speed test

A powerful software driven machine

Offering the finest in ergonomics

Easy use on-the-run

Layout of the NAGRA VI is both logical and accessible. All machine controls are located on the front panel and can be easily accessed on-the-run. The powerful menu system is grouped in a practical manner and any position can be instantly located via the programmable user keys. Menus give access to additional user adapted features such as the built-in mixer with pan controls, the recording media testing programme, potentiometer assignment menu or time code and iXML metadata screens. All parameters of the machine can be stored in the six available user-editable templates.

A fool-proof copy manager allows not only back-up of current recordings but also the copying of files and folders transparently, even while recording. All copy functions occur in the background and will also take into account modifications to the metadata, which can be changed while recording or even after the event. An external USB keyboard can be connected to the recorder giving easy data entry and transport control features. An optional second USB port can be installed if the primary host port is already used for an external USB device.

Ambisonic monitoring

A built-in Ambisonic monitoring menu allows for correct audio monitoring of A and B format Ambisonic recordings, including ceiling-hung microphones.

Programmable digital filters

The NAGRA VI offers programmable digital filters where the frequency and slope can be set by the user.

The most accurate crystal for drift-free time code

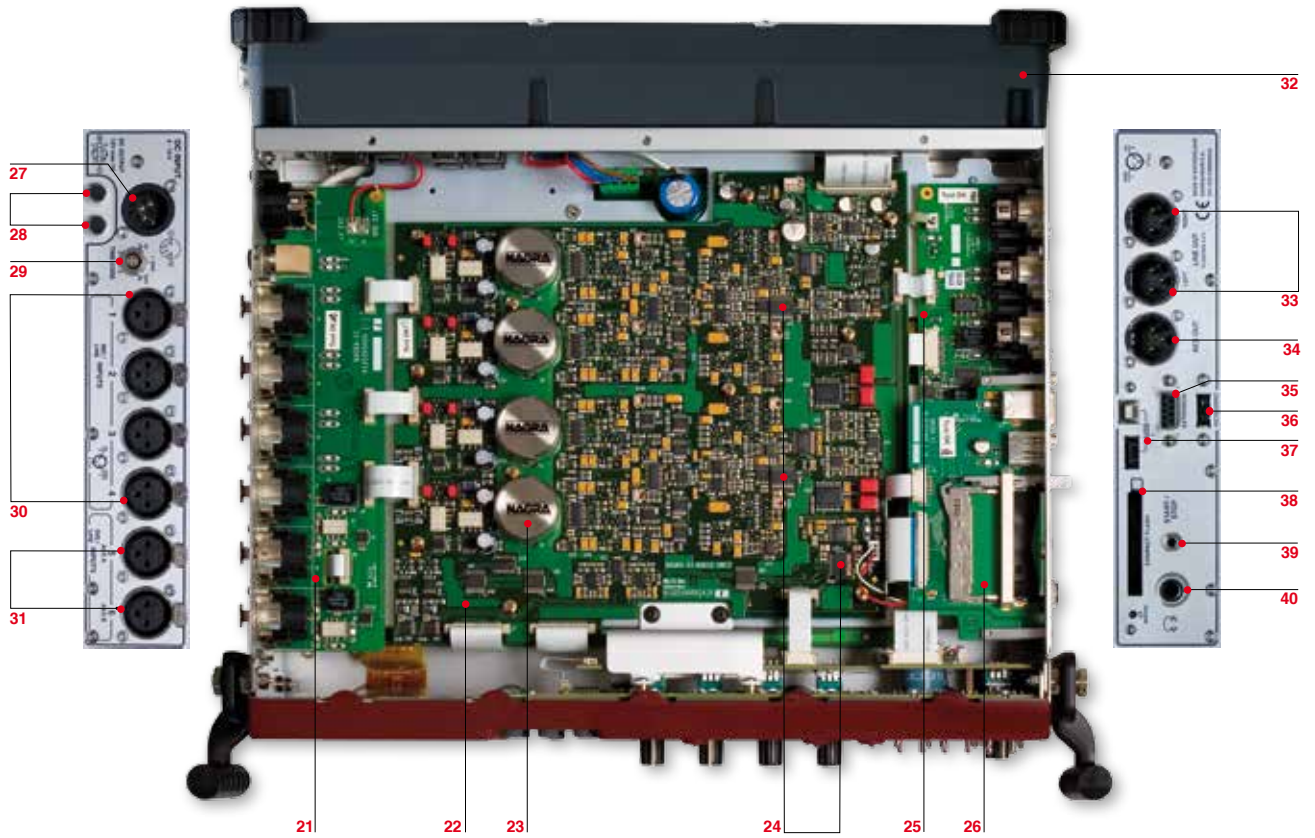
The internal time code system and all the internal digital electronics of the NAGRA VI are clocked by a Stratum III TCXO crystal, which has been artificially aged in an oven to maintain stability. This crystal gives a guaranteed overall stability better than ± 4.6 ppm over a period of 15 years throughout a temperature range from -20°C to $+70^{\circ}\text{C}$. The drift due to temperature changes is less than 0.28 ppm. This is the most accurate crystal ever used in an NAGRA recorder. The NAGRA VI will handle all the standard SMPTE/EBU frame rates as well as the 23.976 fps rate for the HD format. All the frame rates can be pulled up/down for the NTSC markets.

Environment friendly

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

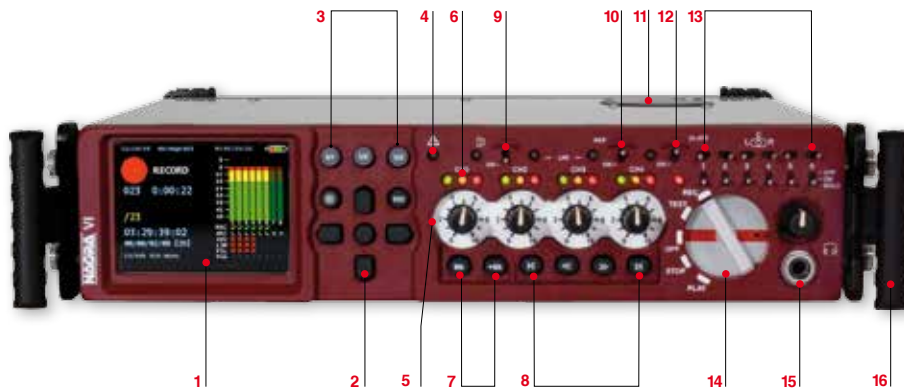


Supplied with the Nagra VI: robust weather resistant carrying case, battery pack, power supply, carrying handles and easily attached supporting legs



A superbly-built recorder with extended features

A tool that in-the-field engineers can rely upon



- | | | | | | |
|--|---|---|---|--|--|
| <p>1 Display screen
3½" TFT screen.
Wide viewing angle, sunlight readable, usable under a wide temperature range.</p> | <p>5 Programmable potentiometers
Each potentiometer can be assigned to one or more microphone or line inputs or fader controls</p> | <p>10 Reference generator switch
Activates the menu programmable reference generator</p> | <p>17 Power converter board
Generates 15 different voltages for the recorder via ultra-low noise converters and regulators</p> | <p>24 High performance low power consumption A/D converters</p> | <p>32 Li-Ion detachable battery compartment</p> |
| <p>2 Menu navigation keys
Access, navigation and execution of the menus</p> | <p>6 LED level indicators
Menu programmable thresholds</p> | <p>11 Built-in loudspeaker</p> | <p>18 Special screening
Separates the sensitive audio circuitry and the power & digital circuits</p> | <p>25 Output connection panel</p> | <p>33 Analogue line output XLR connectors</p> |
| <p>3 User programmable keys
Give rapid access to different menu positions</p> | <p>7 Marker keys
To add a marker during playback or record</p> | <p>12 Slate microphone switch</p> | <p>19 Shielded hard disk</p> | <p>26 Compact flash interface</p> | <p>34 AES output XLR connector</p> |
| <p>4 Warning LED
Indicates different errors by various blanking combinations</p> | <p>8 Transport keys
The same functions as a CD player: forward, rewind, skip</p> | <p>13 Monitoring matrix</p> | <p>20 Digital board</p> | <p>27 External DC input 4-pole XLR 9-16 V, 3.3 A</p> | <p>35 9-pole "D-type" extension connector
For AES out, word clock and video reference</p> |
| | <p>9 Built-in loudspeaker switch</p> | <p>14 Main function selector</p> | <p>21 Analogue and digital input connection panel</p> | <p>28 Hirose DC output connectors 2x 12 Vdc, 500 mA DC</p> | <p>36 USB keyboard connector</p> |
| | | <p>15 Headphone jack and level adjustment</p> | <p>22 Audio circuit</p> | <p>29 Time code IN/OUT 5-pin Lemo</p> | <p>37 USB host/device connectors</p> |
| | | <p>16 Supplied carrying and protecting handles</p> | <p>23 In-house wound dynamic transformers</p> | <p>30 Microphone / Line Input XLR connectors</p> | <p>38 Compact flash slot</p> |
| | | | | <p>31 Line/Digital input XLR connectors</p> | <p>39 Remote start/stop connection</p> |
| | | | | | <p>40 Second headphone jack</p> |

technical specifications

Recording

Data storage medium	120 GB internal hard disk
Removable media	Compact Flash type I/II (hot swappable)
Disk format	FAT 16/32
Recording method	Linear digital PCM
File type	16/24-bit Broadcast Wave File BWF (WAV) with iXML, AES 31 compatible
A/D & D/A conversion	24-bit Sigma-Delta
Tracks	8 - individual
Sampling rate	44.1, 48, 88.2, 96, 176.4 and 192 kHz (with 0.1% pull up/down)
Recording capacity	20 min of 6 track per GB of disk/memory @ 24-bit 48 kHz
Mono/polyphonic	Selectable
Pre-recording buffer	Up to 20 seconds @ 48 kHz 24-bit on 8 tracks
Display	3½" colour LCD TFT anti reflection/sunlight-readable
Level meters	On colour display and by LED for microphone inputs

Inputs

Inputs	Digital inputs 2 XLR AES-3 shared with analogue inputs 5+6
Analogue inputs	4 symmetrical XLR microphone (dynamic, +48 V phantom)/line
Microphone input sensitivity	2.8, 10 and 30 mV/Pa selectable
Limiters	Selectable on microphone inputs, individual or in pairs. Active at -8 dBFS, max +36 dB for -2 dBFS
Line input sensitivity	Adjustable from -6 up to +24 dBu for 0 dBFS recording
THD at 1 kHz	<0.1% microphone, <0.01% line (measured on AES out)
Frequency response	Microphone 20Hz - 21.8 kHz @ 48 kHz, 20 Hz - 43.5 kHz @ 96 kHz, 20 Hz - 87 kHz @ 192 kHz, +0.5/-1 dB, line ±0.2 dB (AES out)
Input noise (condenser mic)	0.9 µV (-119 dBu)
Input noise (dynamic mic)	4 dB measured ASA «A» loaded 200 Ω
Signal-to-noise ratio	>114 dB
Input level adj. range	Microphone 45 dB, line 30 dB (-6 to +24 dBu)
Input filters	LFA (with vortex filtering) and digital software filters
Slate microphone	Electret behind the front panel

Outputs

Analogue line output	2 XLR 4.4 V max (+15 dBu)
Digital output	XLR AES-3 (24-bit or 16-bit dithered)
Headphones	2 stereo 6.3 mm (¼"), jack 50 Ω
Internal speaker	1W

Other

USB host	USB 2.0 connector type "A"
USB device	USB 2.0 connector type "B"
Time code IN/OUT	5 pin LEMO (SMPTE/EBU)
M/S decoder	Three menu selectable
Ambisonic monitoring	A/B formats
Word clock	IN/OUT on 9-pole "D" type connector
Dither	Menu selectable 24/16-bits on inputs and/or outputs

General

Dimensions	320 x 74 x 285 mm (W x H x D), including battery box
Weight	3 kg (6.6 lbs), without battery box
Power supply	Main supply 100-240 V, 50-60 Hz or 4.6 Ah Lithium-Ion battery box or external 9-16V (XLR 4 pole)
Power consumption	Approximately 10W
Charge time	3 hours (with supplied Lithium-Ion pack)
External power out	2 Hirose 12V (max 1A)
Relative humidity	From 10 to 99% (non condensing)