*ingest*LINE™

NOARecord

N7000c Audio Ingest Frontend

N7000c perfectly meets the high quality criteria of archival audio transfers and adds a set of unique features which makes it extremely cost-effective.

Whenever excellent intermodulation distortion performance, outstanding dynamic range as well as excellent sonic behaviour are required, NOA's N7000c is the solution of your choice.
With an extended input sensitivity range and the support of digital de-emphasis filters it makes the purchase of phono pre-amplifiers obsolete, when used with audio discs.
Different interface options for replayers are available via RS232 or 9pin protocol.
N7000c - whereas c stands for "compact" - is both suitable for high fidelity archival transfers as well as to serve you as excellent high fidelity ADDA interface to your host.

N7000c AT A GLANCE:

- 8ch balanced analog inputs
- 2x balanced analog outputs
- 4x AES/EBU inputs with Sample Rate Converter (SRC)
- 2-ch. Digital AUX monitoring input (TOSLINK with SRC)
- Word Clock in / out
- Dynamic Range 122dB (A-weighted), typ.
- DANTE™ interface (8 in / 8 out)
- Monitoring matrix / mixing (5 in 1)
- Lowest jitter VCXO-based re-clocking
- BitProof™ Support: end-to-end data protection from the audio interface to the recorded file
- 24 bit anti-parallel double A/D conversion
- Sample Rates: 44.1 / 48 / 88.2 / 96 / 176.4 / 192 kHz
- Switchable input sensitivity: 18|12|6|0|-6|-12|-18|-24 dB (nominal input level relative to 0dBfs)
- Direct MM Phono connectivity
- Real-time de-emphasis (RIAA, Columbia LP, Decca78, EMI LP, FFRR LP, custom filter)
- Differential de-emphasis (e.g. convert RIAA to Blumlein)
- 4x N6035A optical tape sensor connectors
- 4x RS232 remote
- 4x RS422 remote
- USB peripheral connector
- IASA TC04 compliance
- Cascadeable for parallel ingest

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The AD Conversion - The New Era in Archives

Nowadays archival transfers with a typical dynamic range of 65dB can be easily put into a dynamic range of 122dB without the need of readjusting gains, leaving enough foot- and headroom also for later restorations.

NOA's N7000c gives you the ease to leave dynamic adjustments to simple server side normalisation which can be done without raising the noise floor in the analog domain, thus saving valuable time in transfer workflows.

N7000c COMES WITH:

BitProof™ SUPPORT CONTROL
Interstitial errors and inconsistent samples are now past - a DSP in the AD converter creates a checksum which is passed over to the ingest system and counterchecked against the written wavefile in the recording application NOARecord™.

8CH SYMMETRICAL ANALOG INPUTS
- Electronically balanced XLR
- Allow to connect up to four stero replayers of different kind with completely different needs of amplification and equalisation
- Input Sensitivity is switchable in a range of 18|12|6|0|-6|-12|-18|-24 for 0dBfs sensitivity

122dB DYNAMIC RANGE
Two AD chips are constantly compared via a DSP in an antiparallel design and give highly linear signals with respectable low noise level.

DANTE™ INTERFACE & AES
Simply connect your laptop to the network and access 8 uncompressed 192kHz linear streams without requiring additional PCI soundcards. NOA BitProof™ gives additional security on sample and bit accuracy.

IASA TC04 COMPLIANCE
Personalized data sheet to prove IASA TC04 compliance on request.

CASCADEABLE FOR UP TO 16 CHANNELS
Two N7000c hardwares can be cascaded sharing the same clockmaster for 16 channels recording.

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N7000c FEATURES

DIGITAL INTERFACE

Highest flexibility in connecting various different analog and digital sources due to 4 AESin connections with onboard Sampling Rate Converters.

- AES in-connections 4x SRC
- WordClock In / Out
- Sampling Rate Support: 32/44.1/48/88.2/96/176.4/192 kHz
- De-emphasis Support for 32/44.1/48

CONFIDENCE MONITORING AND D/A CONVERSION

The D/A section of the N7000c allows routing selected signals to their analog symmetrical output. An auxiliary TOS-LINK input allows additional sources to be merged in order to get only one signal to the connected speakers.

- 15dBu symmetrical OUT analog
- 114 dB Dynamic Range
- S/PDIF (TOSLINK) Optical In

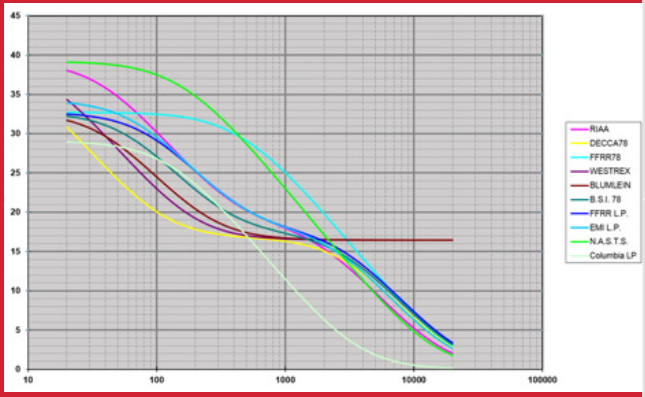
LOWEST JITTER VCXO-BASED-RECLOCKING

Addresses clock degradation aspects of modern layer-3 audio-networking in the most elaborate way to maintain perfect jitter-free audio clocking.
Sample Rates: 44.1/48/88.2/96/176.4/192 kHz
Bit Rate: 24 bit

PHONO SUPPORT:

Connect your different phono re-players to the N7000c, applying inverse RIAA curve and re-applying a historical equalization curve to your recording with built in 48bit algorithms.

- Selectable Phono Preamp Curves (RIAA, Westrex, Decca, Blumlein, Columbia, HMV...)
- Decurve the standard RIAA (i.e. EMT) output to apply selected historical phono presets
- Create filter coefficients from your own research (Rolloff, Turnover)



ARCHIVE REPLAYER SUPPORT

- 4x RS232 (Studer configuration: Studer A807MKI, A807MKII, A810, A812, A816, A820)
- 4x interface to Tape Light Barrier (N6035A)
- 4x Sony 9-Pin: attach your analog vintage replayers via 3rd party 9pin adapter or connect any replayer with 9-Pin support

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N7000c TECHNICAL SPECS

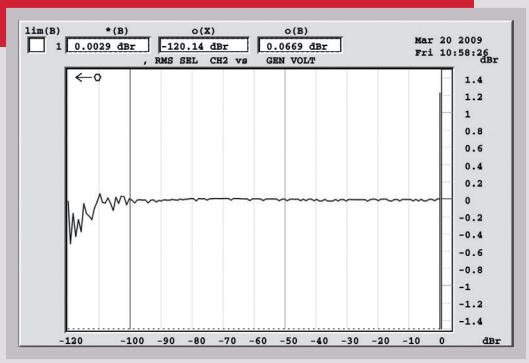
- → **Input Sensitivity:**
  @0dBFs: 18l12l6l0l-6l-12l-18l-24 dB
- → **Input Impedance:**
  Symmetrical: 56 kOhm
  Asymmetrical Phono (auto-detect): 47 kOhm
- → **Frequency Response:**
  @fs48kHz, Bandwidth 20Hz-20kHz: 0.05dB
  @fs96kHz, Bandwidth 20Hz-40kHz: 0.05dB
  @fs192kHz, Bandwidth 20Hz-40kHz: 0.05dB
- → **Amplitude gain linearity:**
  @997 Hz, range -120 dBfs to 0dBfs: 0,4 dB
- → **Intermodulation Distortion:**
  @12kHz and 14kHz, -1dBfs: -110dB
- → **Dynamic Performance:**
  THD+N (-1dBfs)
  @fs=96kHzl997HzlAnalogGain=0dB: **-110dB (min.) l -111dB (typ.)l -112dB(max)**
  @fs=44.1kHzl997HzlAnalogGain=0dB: **-109dB (min.) l -110dB (typ.) l -111dB(max)**
  THD+N (-20dBfs)
  @fs=96kHzl -20 dBfsl997HzlAnalogGain=0dB: **-99dB (min.) l -99.5dB (typ.) l -99,8 dB(max)**
  @fs=44.1kHzl -20 dBfsl997HzlAnalogGain=0dB: **-98dB (min.) l -98.5dB (typ.) l -99dB(max)**
- → **Dynamic Range:**
  @fs=96kHz Bandwidth 20Hz-20kHz, -60dBfs
  A-weighted: **121.5dB (min.) l 122dB (typ.) l 122.5dB(max)**
  @fs=44.1kHz Bandwidth 20Hz-20kHz, -60dBfs
  A-weighted: **122dB (min.) l 122.5dB (typ.) l 122.8dB(max)**
  @fs=96kHz Bandwidth 20Hz-20kHz, -60dBfs
  unweighted: **119dB (min.) l 119.5dB (typ.) l 119.8dB(max)**
  @fs=44.1kHz Bandwidth 20Hz-20kHz, -60dBfs
  unweighted: **118.5dB (min.) l 118.8dB (typ.) l 119dB(max)**

- → **Spurious Aharmonic Signals:**
  @997Hz, -1dBfs: **-130dB**
- → **Interface Jitter:**
  @fs=96kHz, 997Hz, -1dBfs: **1,8ns**
- → **Synchronisation/SampleRate:**
  internal oscillator 44.1/48/88.2/96/176.4/192 kHz
- → **Resolution:** 24 bit
- → **Power Connection:** 110/220V (switching)
- → **Dimensions:** 1U, 19", 483x44x201 (BxHxW)
- → **Power Consumption:** 10W

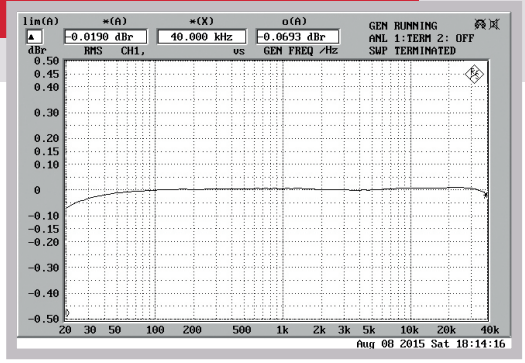
MINIMUM REQUIREMENTS PC

- Windows 7 OS
- CPU: equivalent to Intel Core i-3220, or better
- 4GB RAM
- Separate hard drives for system and data, or large SSD
- Gigabit Ethernet, separate interface for DANTE recommended

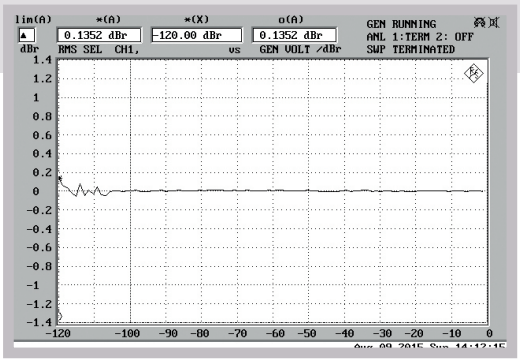
Target storage unit; size depending on project:
Stereo 24 bit @ 48 kHz will amount to app. 990 MB (or 0,96 GB) per hour



THD+N @ 96kHz (-1dBfs)



Frequency Response @ 96kHz



Amplitude Linearity @96kHz

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