VST SYSTEM LINK

TIME BASE
VST SYSTEM SYNCHRONISER

The first professional synchronizer with VST System Link support

Nuendo Time Base is the first synchronizer supporting Steinberg's VST System Link technology. This makes

Nuendo Time Base the perfect solution for sample accurate cueing of tape-based audio and video machines from

Nuendo Audio Production Systems.

All functions can be controlled and edited from within the Nuendo software. The outstanding feature set of Nuendo

Time Base makes it the most versatile and precise synchronizer available today.

Nuendo Time Base can also be used as a standalone unit. Any Nuendo System can be used as a 9-pin Slave –

just hit "Start" and Nuendo will immediately follow every command with the Virtual Machine Option.

features

Synchronization of digital audio and video systems (hard disk recorders, mixers, etc.) via house sync (Blackburst), AES-EBU, LTC, VITC, with analog/digital audio and video tape machines, sequencers, etc. with separate inputs for video sync and VITC R/W

Read, generate and regenerate timecode (LTC, VITC, MTC and VST System Link)

Burn visible timecode readout into video picture (2 different sizes, 4 display styles, freely positionable)

Supports all sample rates from 16 to 192 kHz incl. NTSC Pull up/down

9-pin interface – integration of machine control e.g. for Betacam, Tascam DA88, DA98, MMR8, etc.

Ergonomic practical operation using 4 key pads and text display to show all functions and conditions plus software control, guarantees the user a full overview and intuitive usability

Optional: Virtual 9-pin Machine. Emulation of 4 different 9-pin machines, allows use of Nuendo as a slave machine on professional 9-pin editors and (console integrated) controllers

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`FRM=25  TCIN=LTC  NO CODE    SR=64.00U`
`CL:INTERNAL    TX=04:31:43:15 WAIT   P.1`

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PRACTICAL SETUPS:

1. House sync for all digital devices: with its 4 WordClock outputs, 1 AES/EBU output and one of the best clocks available it is the perfect clock master in any studio with sample rates up to 192 kHz.

2. The Time Base can lock to a Blackburst signal. WordClock, AES/EBU and the timecode generator are video locked.

3. System Link generator: any timecode source - LTC, VITC, 9-pin - will be converted to system link data. By connecting the Nuendo audio card to the AES/EBU connections on the Time Base, Nuendo systems will slave sample accurate to the incoming timecode and machine control. Time Base can be run as a Virtual Machine and outputs the necessary System Link information (+ LTC, VITC inserter) to the connected Nuendo system(s), by running the virtual machine. The whole system including the timecode generator is video locked as long as Blackburst is fed to the Time Base.

4. The 9-pin Machine or the Virtual Machine can be controlled via MMC in parallel to the controls from the Nuendo system.*

5. By using the optional Virtual 9-pin Machine option (VTB), Nuendo − using VST System Link − behaves like a 9-pin Machine to the controlling system. Four different 9-pin emulations are available. (BVW 75, DVW500, 3348, TM). Depending on the chosen emulation, up to 64 tracks (track ready) commands will be supported.*

6. Separate from the video sync loop thru connectors, the Time Base offers a video in-/output which is used to read VITC, insert a VITC signal from the internal VITC generator and a switchable burn-in window. The video signal can be fed to the Time Base for timecode insertion on video playback.

7. NTSC Pull up/down: the Time Base can provide slower or faster clock signals (approx. 0.1%) for NTSC pull up/downs. All devices will receive the changed clock speed.

8. Additionally, the GPI port assures that standard GPI devices used in the studio are controlled by Nuendo via the Time Base, like red-light …

*) Feature will be supported in a forthcoming Nuendo update

TECHNICAL SPECIFICATIONS:

- LTC Input: 1/4" balanced jack -10 to +16 dBu
  LTC Output: 1/4" balanced jack -10 bis +8 dBu

- VITC-Inserter In/Out PAL/NTSC Format,
  Composite / Component (BNC/SVHS) switchable
  VITC Read: 2 lines, lines 10 to 40 or Auto
  VITC Write: 2 lines, lines 10 to 40 or OFF
  TC Video-Inserter: 2 different sizes, 4 display styles, freely positionable
  TC-Standard: 24, 25, 29.97 drop-nondrop, 30 drop-nondrop Fps

- Video Sync In/Out: 2 BNC - high impedance - (Loop Through),
  PAL/NTSC Format - switchable

- AES-EBU Digital Audio Input up to 96kHz (AES Null)
  5V p-p 110 Ohm balanced female XLR

- AES/EBU Output, Sample Rate up to 96kHz with embedded VST System Link,
  Datastream switchable Professional / Consumer, 110 Ohm balanced male XLR

- 4 WordClock Outputs, Output 1 switchable to all common frequencies.
  16kHz ~ 192kHz
  Output 2,3 and 4 depending on "Base Frequency" of Main Output and
  independently switchable to 3 multiples. [i.e. Main Out @ 44.1 (or multiples/
  dividables), Out 2,3 and 4 switchable to 44.1, 88.2 or 176.4]
  4 BNC, TTL Level

- USB - Port, direct connection to all VST System Link capable programs, such
  as Nuendo and Cubase

- 1 GPI/O connector, incl. MIDI In/Out and Red Light Output.
  MTC Read/Write: MIDI-Standard, Fullframe switchable MMC in

- 9-pin female In/Out connector: RS422 machine control and emulation - 38.4KBit.
  Direction software controllable, no crossed cables needed

- Power Requirements: 100 - 240VAC 50/60 Hz auto-switching

- Dimensions: 1U external rack-mount device
  (W 483 mm x H 45 mm x D 265mm)

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