Cube-Tec International

QUADRIGA

QUADRIGA – The Leading Solution for Archive Sound Ingest

QUADRIGA is the solution for the digitization of a variety of media types, transferring single carrier sound archives into digital mass storage systems, with a strong emphasis on audio quality and metadata accuracy.

QUADRIGA utilizes sophisticated technology, providing real-time monitoring and logging of audio streams, in order to automatically generate technical parameters of archival significance. Thus, in addition to capturing the audio data, QUADRIGA provides collateral metadata information regarding the original source medium, the capturing signal chain, the audio content and the quality of the recording, among others, offering many valuable assets to the archivist.

QUADRIGA is open to any Content Management System and can easily be integrated into existing network and database structures.

Key Features

- Simultaneous capturing from up to eight devices on a single workstation
- Modular combination of Tape, Turntable, Cassette, R-DAT and 9-Pin devices
- Multi-Channel & Multi-Speed support
- Real-time Audio Analysis & Error Report: AnalogObserver / DigitalObserver
- Multiple output formats: BWF, WAVE, MBWF and RF64
- Comprehensive XML Metadata Import & Export
- Multi-language Unicode support (UTF-16/UCS-2)
- Simple network and database integration
- Comfortable UserManager with different layers of user permissions
- World wide industry standard (most major archives use Quadriga)

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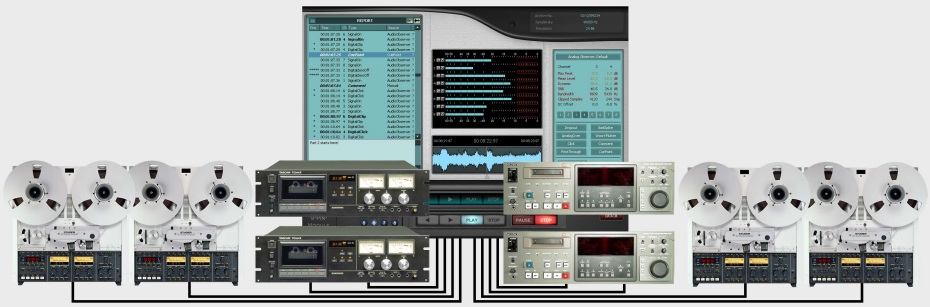
QUADRIGA 3.0 Features

Multi-Machine support

Synchronized capturing from up to eight audio source devices, in parallel, on a single QUADRIGA system. Work with eight Import-Modules simultaneously, regardless of the type of devices that are connected. For example use eight tape machines, or alternatively four 9-Pin devices, two turntables and two cassette recorders. There are no limitations.



Multi-Channel support

Ingest from any kind of source machine, be it mono, stereo or multi-channel devices (up to eight recording channels are available per Import-Module). Connect mono phonographs, stereo tapes, 4-track cassettes or digital 8-track recorders.

Multi-Speed support

Record 78's shellac discs at 45 rpm speed, or analog tapes at half- or double-speed. Anything up to 4x speed is possible, all including accurate playback equalization and pitch-correction.

Dual-Direction support

Media such as half-track mono tapes or compact cassettes, which have two different audio streams running in opposite / reverse directions, can be ingested in one single step without having to flip the tape, using QUADRIGA's Dual-Direction mode (e.g. playing back half-track mono tapes on a stereo tape machine, or standard compact cassettes on a 4-track cassette deck). Apart from correcting the reverse-recorded channels in the resulting audio files, this also allows listening to a reverse-corrected monitoring signal – on the fly, in real-time during the capturing process!

Automatic Error Detection

The audio analysis and real-time error detection locates events originated in both, the analog and digital domains of the audio stream. The DigitalObserver provides information on digital zero, clicks or clipping samples, among others, while the AnalogObserver detects modulation and breaks, signal-to-noise ratio, hum, distortion or azimuth/phase problems, plus much more.

Multiple Output File Formats

Audio data can be captured at sample rates up to 192 kHz (with bit resolutions of 16, 24 or 32 bit float) and either be stored as regular WAVE and RF64 files, or in the EBU standardized Broadcast Wave (BWF) and MBWF file formats. Both RF64 and MBWF override the 2GB / 4GB file size limitation. Depending on the resulting file size, QUADRIGA is able to switch 'dynamically' from BWF or WAVE to the MBWF / RF64 format, in order to obtain the best possible compatibility with standard media players.

Metadata Exchange with Databases

Carefully laid-out XML Import & Export capabilities let QUADRIGA workstations easily become integrated with media asset management systems and other databases. Existing information from a database can be imported before, during or after the recording process, and the collateral metadata automatically generated by the Import-Modules and Audio Observers can be exported back to the database thereafter.

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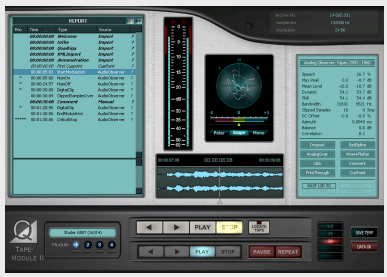
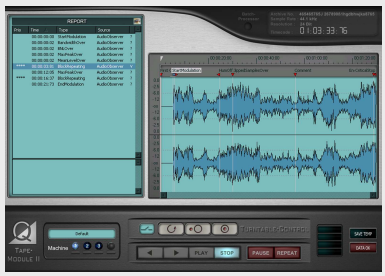
The QUADRIGA Modules

Tape-Module



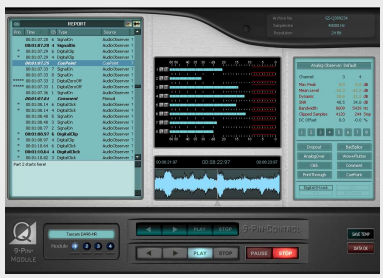
The Tape-Module is designed for ingest from analog tape recorders. Using Cube-Tec's Advanced Opto-Sensor Option, the physical condition of the tape itself is also monitored and logged (bad splices, torn tape, separation tape).
Optimized support for: Studer A-807, -810, -812, -816 and -820.

Turntable-Module



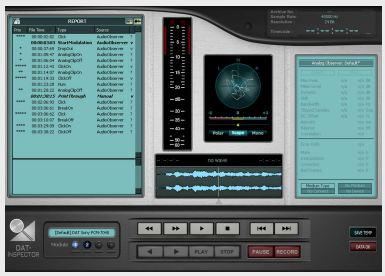
The Turntable-Module is designed for capturing from analog turntables. Like all other QUADRIGA Import Modules, when used in conjunction with AnalogObserver, the Turntable-Module supports automated monitoring and logging of audio streams for technical parameters of archival significance. Variations in the turntable speed are also detected automatically.
Optimized support for: EMT 948 and 950.

9-Pin-Module



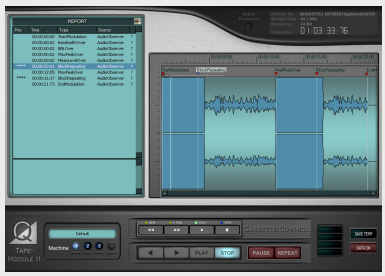
The addition of the 9-Pin Module to the QUADRIGA family of Import-Modules significantly broadens the spectrum of machines that can be controlled remotely. Machines that support the Sony 9-Pin protocol can be controlled, as can other machines (parallel/bi-phase) via synchronizers with 9-Pin protocol conversion. The 9-Pin Module can also capture from machines that have no remote control functionality, such as wax cylinders, wire recorders and standard turntables, using a simple audio connection.

DAT-Inspector



The DAT-Inspector Module is designed for capturing from Digital Audio Tapes. CRC, mute and interpolation errors from source R-DATs will be logged, as well as track start IDs or sample rate changes. Full timecode support is offered, with timecode jumps and invalid areas in a timecode track being reported.
Optimized support for: Sony PCM 7030, -7040 and -7050.

Cassette-Module



The Cassette-Module is designed for capturing from compact cassette recorders.
Optimized support for: Tascam 112 MK II, -122 MK III and -322.

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QUADRIGA Hardware

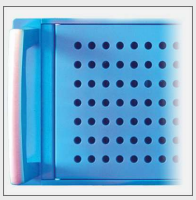
MachineControl - A Single Hardware Controller for all devices

The QUADRIGA MachineControl, accessible from all QUADRIGA Import-Modules, offers optimal control for all connected devices. It's a 19" unit accessible from up to four QUADRIGA workstations at the same time, scalable for up to four simultaneous remote connections.

The MachineControl provides remote connections for any source playback device via serial RS-232, parallel 15-Pin/25-Pin SUB-D and RS-422 Sony 9-Pin Protocol. The ultimate remote control hardware for optimal use of parallel recording with QUADRIGA.

Cube-Tec System Integration - Complete Audio Solutions

AudioCube - Digital Audio Workstation for Mastering And Restoration



The AudioCube is a multi-channel, 24 bit / 192 kHz integrated audio workstation, offering the most comprehensive selection of professional audio production tools ever assembled in a single platform. Through the direct link from QUADRIGA you are only one click away from professional audio restoration.

Cube-Workflow – Management Solution and Database Connection

Cube-Workflow is a flexible archive management solution that supports the ingest team in organizing their daily tasks. It can be used as a standalone workgroup solution, or as the connecting link to existing asset management systems in order to exchange metadata with Cube-Tec products.

DOBBIN – Mass Processing for Sound Archive Content

DOBBIN is an automatic audio processing and rendering solution, used for archives, studios and large online media centres. The DOBBIN system is a distributed, fully scalable, high-availability audio-processing and rendering engine, created to fully automate file management and media processing functions. QUADRIGA output files can be systematically processed using DOBBIN, eg. for encoding, automatic restoration or other post-processing requirements.

Contact

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