

# AURUS

the Direct-Access Console



22 DIRECTLY ACCESSIBLE PARAMETERS – II DUAL CONCENTRIC ENCODERS PER CHANNEL STRIP •  
READY FOR 96 KHZ • PARALLEL MIXDOWN TO MULTIPLE MULTICHANNEL FORMATS •  
FULLY INTEGRATED INTO THE NEXUS STAR ROUTING SYSTEM



member of the  
SALZBRENNER STAGETEC  
MEDIAGROUP



# AURUS - the Direct-Access Console

Since its foundation in 1993, Stage Tec Entwicklungsgesellschaft has specialised in developing digital audio technology. Since then, it has set new benchmarks continuously thanks to constant research and development. From the outset, Stage Tec has pursued an innovative approach for digital mixing systems – the concept of the logical separation of mixing console and I/O matrix. All Stage Tec products reflect this idea.

Introduced in 2002, Stage Tec's flagship product – the AURUS – is also based on this concept. The AURUS also implements an unprecedented operating concept with maximum consistency: Direct access to all important parameters.

Direct access makes the AURUS a digital console with an analogue surface. The unusually large number of controls provides the user with all necessary information. There is no need for paging or scrolling. Due to the large number of controls multiple assignments can be largely dispensed with.

Direct access is made possible through the use of dual concentric encoders. Each dual encoder provides independent control of two parameters and an additional button. The AURUS was the very first digital console to incorporate dual concentric encoders.

## SPECIFICATIONS OVERVIEW

- Classical direct access to channel parameters – up to 96 control channel strips
- Clear operation as in an analogue desk
- High resolution metering, optional analogue response curve
- Inputs and outputs via a fibre-optic NEXUS network with routing
- Analogue I/O has the headroom of an analogue desk; levels of up to +24 dBu
- No overloads in channel signals and first-class audio quality thanks to 40-bit floating-point arithmetic
- Outstanding dynamic range
- Noise-free summing
- Guaranteed headroom on mix buses (48 dB)
- Sample rates: 44.1, 48 and 96 kHz system-wide
- Up to 300 audio channels (depending on configuration)
- 128 buses
- Up to 32 full channels per DSP board (depending on configuration)
- Multichannel-capable architecture throughout (e.g. Mono, Stereo, 5.1, 7.1)
- The new NEXUS XDSP board integrate the ISOSTEM method from DSPECIALISTS. It generates a proper multichannel mix from stereo input signals in real time, which is fully reversible. (optional)
- Fibre-optic cable interconnects between sub-systems, spanning distances of up to 100 km (60+ miles)
- Three types of automation: Snapshot, Scene and Dynamic automation of all console parameters
- Excellent microphone A/D converters: Microphone inputs: 32-bit TrueMatch A/D conversion; dynamic range exceeding 158 dB (A)
- Line inputs: 24-bit TrueMatch A/D conversion; dynamic range: 133 B (A) typical
- Line outputs: 24-bit D/A conversion; dynamic range: 131 dB (A) typical @ 24 dBu
- Digital audio formats: AES/EBU, AES42, S/PDIF, SDIF-2, MADI, ADAT, TDIF, SD-SDI, HD-SDI, Dolby-E®, Dante
- Sample-rate converters as standard or optional (depending on the module type)
- Modular structure for easy system expansion
- Integrated OEM version of the RTW TM9 audio monitor (optional)
- Compact dimensions

- Low heat dissipation
- No cooling fans in any of the components
- Portable

## CONFIGURATION

- The mixing-console structure is freely configurable (for example the distribution of channels and buses and the assignment of audio channels to channel control strips).
- Thanks to this concept, the AURUS may (and usually will) have less control strips than audio channels.

## ERGONOMICS

- Optimum instant access to the 22 key functions of each audio channel thanks to 11 dual concentric encoders per control channel strip.
- A central channel control panel: All parameters of the currently selected channel control strip can be accessed simultaneously from this centrally located panel.



- Console dimensions: Optimum access to all controls, perfect visibility of displays and indicators, optimum view to the studio, to video displays or to the stage.
- Arabic, Japanese or Cyrillic characters may be displayed.

## THE NEXUS AUDIO NETWORK/ AUDIO PROCESSOR NEXUS STAR

- Fibre-optic cables simplify installation and allow distances of 100 km (60+ miles) and more to be spanned between Base Devices.
- The NEXUS STAR central router hosts the AURUS signal processing and the core of the audio network.

## MONITORING

- AURUS provides multiple independent and interdependent monitoring paths that fully support a variety of multichannel formats (including two inserts e.g. for external cinema processors).
- Monitoring sources: In addition to the PFL and solo buses, almost all signals within the system are accessible (i.e. NEXUS inputs, channel outputs, mixing buses and direct outs).

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## AUDIO PROCESSING

- AURUS provides for individual distribution of audio processing (DSP) resources as required. These distribution setups can be stored as mixing-console projects.
- Digital audio processing with 40-bit floating-point arithmetic and the superlative NEXUS routing system analogue modules guarantee impeccable sound quality in recording, mixdown, and sound-reinforcement applications.
- Direct routing of buses to outputs without signal processing is also possible, for example, to conserve resources.
- AURUS allows direct monitoring of the outputs of specific processing modules within the channel.

## N-1 SYSTEM

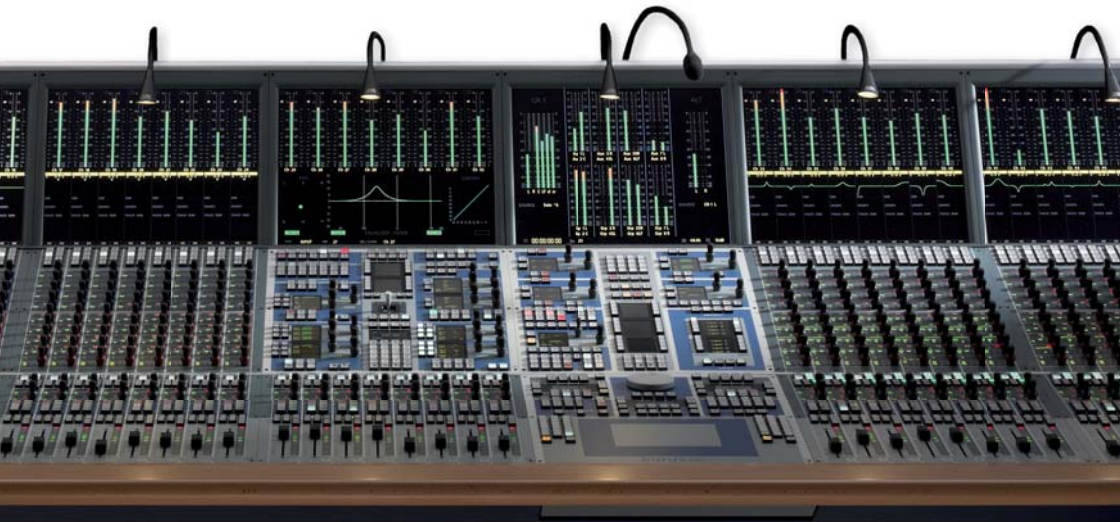
- This system allows for complex feeds to be achieved simply as required, for example, at sports events or conferences.
- 96 N-1 buses can be individually configured. The off-air matrix can be configured separately.

## LOGIC CONTROL

- Logic Control is a flexible user-programmable logic system for switching and control functions (for example, crosspoint statuses, fader-start relays, input or output levels and internal error statuses).
- Logic Control can evaluate and control many different events such as the red light, mute keys, routing switches, level control auto-fallback measures and intercom systems.
- AURUS has up to 256 Logic Control inputs and outputs.

## DAW CONTROL

- AURUS allows for comprehensive DAW control directly from the console: channel strips and the Master panel on the AURUS surface can be used via the HUI protocol as a DAW controller. Nuendo, Cubase, and Pro Tools programmes are supported.
- AURUS consoles include a control interface for the Pyramix DAW. For this purpose, it relies on the proprietary OASIS protocol, which provides a high bandwidth for transmission of control and display information.



## SYNCHRONISATION

- All NEXUS Base Devices and AURUS audio processors in the overall system synchronise to a common internal or external clock source.
- The NEXUS controller boards (XCPU, RCX) are equipped with precision word clock generators and can be used as the studio master clock.
- At sync-source failure, the overall system automatically switches to a different source without disturbance; if no valid external source is available, internal synchronisation is enabled.

## AUTOMATION

- With its three automation approaches, the AURUS goes well beyond the standard offer of many other mixing consoles:
- **Static Automation:** all or a selection of parameter settings of all audio channels can be stored as a snapshot
- **Scene Automation:** snapshots can be stored in any order and later recalled, one by one, using dedicated keys. Crossfades with configurable fade times are applied when loading snapshots.
- **Dynamic Automation:** is controlled by timecode. It captures changes made to any audio parameters in a mix.

## CONFIGURATION PC

- The AURUS offline editor offers time and cost benefits on tight production schedules. The offline editor makes it possible to configure an AURUS while it is still in use on another production.
- All preparatory work including channel assignments, channel configurations etc. are made in a stand-alone editor application running on a Windows PC. Projects are then imported into the console from SD cards.
- It also works the other way round. Projects are imported from the console projects into the offline editor for further processing in the offline editor.

## PARAMETER LIBRARIES

- Equaliser and dynamics settings are organised in libraries, for example filter/equaliser, compressor, limiter, expander/gate and input gain
- The channel parameters are stored separately from the project
- The library can also be exported as a file for use with other projects

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## RELIABILITY

- Selectable and configurable redundant signal processing card
- Automatic power failure backup system which restores the last known settings after Power ON
- Redundant power supplies in all components
- AURUS has its own redundant power supply
- Continuous auto diagnostics and error logging in AURUS and NEXUS
- Direct display of error messages on console interface
- Projects saved in console and accessible without a PC



AURUS was awarded with the Golden iF Statuette in the consumer electronics/telecommunications category for outstanding design achievement. Decisive aspects included the design quality, workmanship, choice of materials, degree of innovation, environmental friendliness, functionality, ergonomics, visualisation of use, safety, and brand value/branding.

## CONSOLE

- Configuration: desktop or standalone console; min. width approx. 140 cm/4.6' (24-channel version)
- Control channel strips: max. 96 assignable channel control strips plus Master section
- Width: from 1,350 mm/53.15"
- Depth (user interface): 800 mm/31.5" plus arm rest
- Depth (total): 1,057 mm/41.61"
- Height (total): 1,049 mm/41.30"

## OPERATING PANELS

- Dimensions: 332 x 400 mm/13.07" x 15.75"
- Channel control strips per panel: 8
- Hot-swap-enabled
- Electrical connection: ribbon cable with square post header, incl. power supply

## FEATURES

- Headphone sockets: 2
- Talkback-microphone sockets: 2
- Ready for lights
- Speaker brackets: 2
- Backup drive (USB memory stick)
- Mounting for optional stereo-image display (option)
- Script rest (optional)
- USB ports on the console

## HARDWARE

- External interfaces: SMPTE-LTC, MIDI, USB, Ethernet, Fibre-optic
- Fibre-optic connections: 50/125- $\mu$ m fibre;
- Rate: 1 Gbit/s;
- Spanning distance: up to 1 km/0,62 miles, LC duplex terminals.

## SIGNAL-PROCESSING MODULES

- Channel inputs
- Side-chain input/side-chain filter
- Gain
- Compressor
- Limiter
- Expander/noise gate
- High-pass filter
- Low-pass filter
- High shelving
- Low shelving
- Bell EQ (HF, HMF, LF, LMF)
- Notch filter ( $\times 2$ )
- Delay
- Panpot
- Direct out PF/AF
- PF/AF aux, PF/AF-TR, PF/AF-N-1
- PFL/solo
- Insert
- Main fader
- Channel out

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