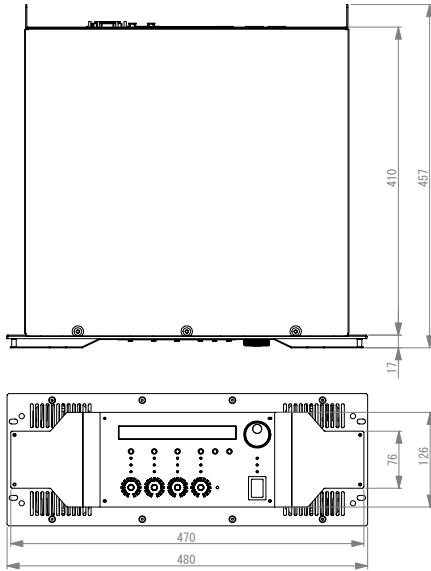


# DIGITAL NXAMP

TD CONTROLLER



# NXAMP

## 4x1 & 4x4 Powered TDcontrollers

A major breakthrough in high powered amplification for both fixed and mobile applications.

### NXAMP Advantages

- NXAMP 4x4 is among the industry's most powerful amplifiers
- Cost effective integration of command, control, protection and amplification of all NEXO loudspeaker systems
- Lighter and requires less rack space than conventional amplifier-processor systems
- Eliminates unnecessary A/D conversion
- Optional EtherSound Networking

NXAMP technology is far more complex than a bundled power amplifier and loudspeaker controller. More than two years of research yielded significant DSP innovations which allow multiple voltage/current/temperature sense lines, from the amplifier's output, to protect both the amplifier and power supply.

### NXAMP DSP Protection includes:

- Power-on protection (smooth start-up with in-rush limitation)
- Power-off protection (clean shut-down procedure)
- Peak Voltage limiter (clip limiting)
- Peak Current limiter
- VHF protection
- Integrate current limiter
- DC offset protection
- Short circuit protection
- Fan speed control
- Power Amp overheat protection
- SMPS overheat protection
- SMPS fault protection
- Power cable monitoring

### Robust, Rugged Power Supplies

NXAMP power supplies are full resonance types with half bridge converters. This exceptional design minimizes noise is via (Zero Current Switch (ZCS) technology. NXAMP4x4 employs four times the structure of a monaural amplifier to present very high power with low load drive.

This requires four converters, four transformers and of course four power supplies. In addition, on both NXAMP models, two converters work synchronize the opposite phase, thus cancelling noise. The benefits include unrivalled sonic performance and low EMC.

### Clean and Cool EEEngine

Both NXAMP amplifiers employ YAMAHA's EEEngine technology. This technology offers the sonic purity of conventional class AB, but with a heat dissipation equaling class D technology. In fact, NXAMP rails constantly follow the output signal needs, minimizing the required headroom (and wasted energy).

### Ferocious Final Stage (with Protection)

NXAMP's final stage output transistor is customized for these devices via thin chip technology, with minimized thermal resistance, to reach 300 Volts. NXAMP4x4's final stage uses nine such transistors in parallel, to supply 135Amp output current capacity.

Even though DSP protection is already used on both NXAMP models, an Area of Safety Operation (ASO) limiter circuit is also included. ASO limiting is done in analog, as the limiter attack required is too fast for digital protection and converter latency.

# NEXO

www.nexo.fr

# DIGITAL TD CONTROLLER NXAMP

NEXO is one of the world's leading sound reinforcement loudspeaker manufacturers. Founded in 1979, the company is dedicated to crafting practical solutions with solid engineering. Each new design begins with a proprietary sophisticated computer simulation process that allows every parameter to be extensively modeled and simulated, leading to breakthrough cost and performance gains. NEXO's comprehensive product line includes loudspeakers, analogue and digital control electronics and amplification; all designed to deliver consistent sound quality and long term reliability for a broad range of applications.

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| POWER SPECIFICATIONS FOR NXAMP4x1 |                                | POWER SPECIFICATIONS FOR NXAMP4x4 |
|-----------------------------------|--------------------------------|-----------------------------------|
| Number of amplifiers channels     | 4x channels, 2 by 2 bridgeable | 4x channels, 2 by 2 bridgeable    |
| Max. output voltage (no load)     | 4 x 105Volts                   | 4 x 200Volts                      |
| Max. output power (8Ω)            | 4 x 600W                       | 4 x 1900W                         |
| Max. output power (4Ω)            | 4 x 900W                       | 4 x 3300W                         |
| Max. output power (2Ω)            | 4 x 1300W                      | 4 x 4000W                         |
| Power consumption (Standby)       | 10W                            | 20W                               |
| Power consumption (Idle)          | 100W                           | 150W                              |
| Power consumption (1/8 Power)     | 1100W                          | 3000W                             |

| COMMON NXAMP SPECIFICATIONS FROM ANALOG IN TO POWER OUT |   |
|---|---|
| Analog Inputs channels                                  | 4x channels, analogue inputs on XLR 3 with a second XLR 3 for linking |
| Frequency response                                      | ±0.5dB from 10Hz to 20KHz   |
| Input Impedance   | 20KΩ  |
| Max Input Level   | +28dBu  |
| Dynamic Range   | All Channels = 105dB unweighted                                       |
| THD + Noise   | Typical 0.1% flat setup   |
| Latency time  | 500us on a flat setup   |
| Power Supply  | Dedicated version for 100 ~ 120Volts or 220 ~ 240Volts                |

| COMMON NXAMP FEATURES |  |
|-----------------------|--|
| Audio Inputs          | <ul style="list-style-type: none"> <li>• 4x balanced analogue inputs on XLR3 with a second XLR3 for linking, using 24bit converters.</li> <li>• 4x digital inputs via the optional network card slot at the back.</li> </ul>   |
| Power Outputs         | 4x Speakon outputs using internal power relay for automatic output assignment regarding setup.   |
| RS232 port            | Allow firmware upgrade for software improvement and new cabinet setups.  |
| GPIO port             | 5x Global Purpose Inputs and 8x Global Purpose Outputs for simple remote control and monitoring.   |
| Processing            | Two DSPs, 24bit data with 48bit accumulator. 700MIPS.  |
| Front Panel           | On/Off Mains switch, Select Wheel, Menu A and Menu B buttons, 40 characters by 2 lines display, Amp protect, Stand-by and power LED's. Then for each channel: volume indicator (15x LEDs), Individual Mute buttons and red LED, output current signal green led, Speaker Protection yellow LED, Amp. Peak red LED. |
| Rear Panel            | 1 (NXAMP4x1) or 2 (NXAMP4x4) mains socket; RS232 serial communications connector; GPIO port, Expansion slot for networking audio extension card, 4 XLR inputs with link and 4 Speakon 4 outputs.   |
| Dimensions & Weight   | NXAMP4x1: 3U 19" Rack - 457 mm (18") Depth - 16.5kg (33lbs) net<br>NXAMP4x4: 4U 19" Rack - 457 mm (18") Depth - 24.5kg (49lbs) net   |

| NXAMP USER CONTROLS |   |
|---------------------|---|
| System Selection    | Allows control across all NEXO ranges.  |
| System Set-up       | Within the selected range, if possible, allows cabinets to be set for passive or active mode, wideband or crossover mode, choose among available crossover point, cardioid or supercardioid mode. |
| Protection          | Multiple Peak Limiters fitted for both selected cabinet and amplifier. Multiple Acceleration, Displacement and Temperature protections on every channel. Inter-channel regulation.                |
| Delay               | Up to 150m (330 ft.) of delay in 10cm (.4in) steps  |
| Input Patching      | Allows any of the 4x analogue (or digital) inputs combination to be routed on each output.  |
| Output Gain         | Global and inter-channel gain ±6dB in 0.5dB steps.  |
| Volume control      | Each channel with 16x steps from -∞ dB to 0dB.  |
| Save/Recall         | Set-up Stores up to 40x user set-ups; On-the-fly recall, without mute or glitches for instant comparison.   |
| Array EQ            | LF or HF shelving filters to compensate ground or stacking effects, ±6dB, frequency factory tuned.  |
| Security Mode       | Password protected for Read-Only or Remote-Only Mode.   |
| Remote control      | Full remote control via the Ethersound protocol and ESmonitor software.   |
| Certification       | UL, SEMKO (CE), CCC, KOREA, TSS, PSE  |
| Green status        | Compliant with ROHS and WEEE directive  |

#### LIMITED WARRANTY

NEXO loudspeakers and electronics are covered against defects in workmanship or materials for a period of two (2) years from the original date of purchase. At the option of NEXO the defective item will be repaired/replaced with no charge for materials/labour. The item is to be adequately packaged and dispatched, pre-paid, to a NEXO authorised distributor/service centre. Unauthorised repair shall void the warranty. The NEXO warranty does not cover cosmetics or finish and does not apply to any items which in NEXO's opinion have failed due to used abuse, accidents, modifications or any type of misuse. All images and text herein are the property of NEXO SA, and deemed accurate, although specifications are subject to change without notice.

# NEXO