

TGX20 DSP power amplifier 4x5000W, live



- Multichannel DSP amplifier for live applications
- Market leading power density with 20kW in 2RU
- Fully integrated DSP with native 96 kHz and FIR Drive technology
- OMNEO integration for seamless compatibility with Dante and OCA
- Full color touch screen for control without software

Parts included

| Quantity | Component |
|----------|--|
| 1 | TGX 4-channel power amplifier |
| 4 | M6x20 screw for rack mounting |
| 1 | Installation manual |
| 1 | Mains power connector, 32 A with safety & assembly instruction |
| 1 | Safety instruction booklet |

Technical specifications

| OUTPUT POWER | | | | |
|--|-----------------------|--------|--------|--------|
| Load impedance | 2 Ω | 2.7 Ω | 4 Ω | 8 Ω |
| Maximum Output Power ¹ All channels driven | 5200 W | 6000 W | 5000 W | 2500 W |
| Number of amplifier channels | 4 | | | |
| Maximum Output Voltage | 210 V _{peak} | | | |

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| Maximum Output Current | 84 A _{peak} |
| AMPLIFIER | |
| Voltage Gain ref. 1 kHz | 32.0 dB, adjustable 24-40 dB |
| Input Sensitivity ref. to Max. Output Voltage | 13.7 dBu (3.73 V), adjustable 5.7-21.7 dBu |
| THD 3 dB below Max., AES17, 1 kHz | < 0.05 % |
| IMD-SMPTE, 60 Hz, 7 kHz | < 0.15 % |
| DIM100, 3.15 kHz, 15 kHz | < 0.15 % |
| Crosstalk ref. 1 kHz, 12 dB below Max., 8 Ω | < -80 dB |
| Frequency Response ref. 1 kHz, analog in to speaker out | 20 Hz to 20 kHz (±1 dB) |

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| Damping Factor, 20 Hz to 200 Hz, 8 Ω | > 400 |
| Output Stage Topology | Class D, fixed frequency |
| Signal to Noise Ratio | |
| A-weighted, analog input | 115 dB |
| A-weighted, digital input | 118 dB |
| Output Noise | |
| A-weighted, analog input | < -70 dBu |
| A-weighted, digital input | < -73 dBu |
| DIGITAL SIGNAL PROCESSING | |
| Sampling rate | 48 kHz/96 kHz, OMNEO/Dante synchronized |
| Signal Delay/Latency | |
| Analog in to Speaker Out, 48 kHz/96 kHz | 0.70 ms/0.53 ms |
| AES3 in to Speaker Out, 48 kHz/96 kHz | 1.00 ms/0.66 ms |
| Dante Network Latency | typ. 1.00 ms |
| Signal Processing | 32/40 bit, floating point |
| User EQ | 12 filters per channel, selectable as PEQ, Lo-Shelv, Hi-Shelv, Lo-ShelvQ, Hi-ShelvQ, Hi-Pass, Lo-Pass and Notch; 2 filters of them with additional asymmetric filter type |
| User Delay | 0 to 2000 ms per channel (units: μs, ms, s, cm, m, inches, feet) |
| Array EQ | 5 filters per channel, selectable as PEQ, Lo-Shelv, Hi-Shelv, Lo-ShelvQ, Hi-ShelvQ, Hi-Pass, Lo-Pass, and All-Pass |
| Array Delay | 0 to 500 ms per channel (units: μs, ms, s, cm, m, inches, feet) |
| Speaker EQ | 10 filters per channel, selectable as PEQ, Lo-Shelv, Hi-Shelv, Hi-Pass, Lo-Pass, and All-Pass |
| Speaker X-Over | Hi-Pass and Lo-Pass per channel, 6/12/18/24/30/36/42/48 dB Bessel/Butterworth, 12/24/48 dB Linkwitz-Riley; Alignment Delay, 0 to 20 ms per channel |
| Speaker FIR | up to 1025 taps, Linear Phase Filter, Linear Phase Brickwall X-Over |

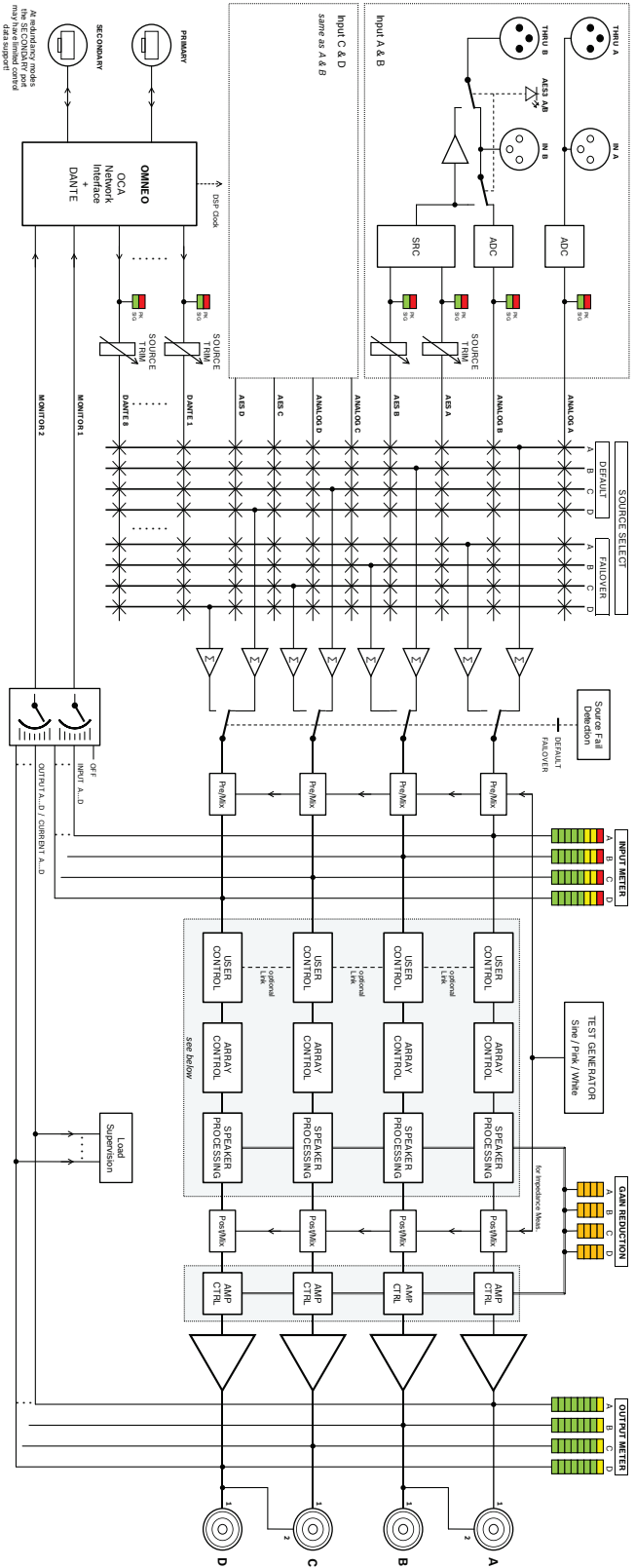
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| Speaker Limiters | Peak Anticipation Limiter and RMS/TEMP Limiter per channel |
| Other functions | Source Selection and Mix, Level, Mute, Polarity, Sine and Noise Generator, Level Meters, Impedance Measurement, and Load Monitoring |
| Memory | |
| DSP Presets | 1 Factory + 20 User |
| Speaker-Pool Presets | 30 speaker settings |
| Source Supervision and Fallback | AES3 Lock and OMNEO/Dante network supervision, switchover to alternative Source Selection |
| CONNECTIVITY | |
| Analog Audio Input/Thru | |
| Type | 4 x 3-pin XLR female/male |
| Maximum Input Level | +24 dBu |
| Input Impedance, active balanced | 20 kΩ |
| Reference level equal to digital input | +21 dBu for 0 dBFS |
| Digital Audio Input/Thru | |
| Type | 2 x 3-pin XLR (alternative use of Analog In/Thru) |
| Format | AES3 (AES/EBU) |
| Input Sample Rates | 32 to 192 kHz, internal Sample-Rate-Converter |
| Thru Connector | active buffered, direct bypass if device is unpowered |
| Network | |
| Type | 2 x Neutrik etherCON/RJ45, redundant PRIMARY/SECONDARY |
| Format | 1000base-T/100base-TX, integrated switch |
| Network Audio Inputs | 8 channels, 48/96 kHz, OMNEO/Dante format |
| Network Audio Outputs (Monitor) | 2 channels, 48/96 kHz, OMNEO/Dante format |
| Front side Service Port | 1 x USB Type A |
| Mains Input | 1 x Neutrik powerCON-HC |
| Speaker Output | 4 x NL4 |
| GENERAL | |
| User Interface | |

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| Display | 320 x 240 pixel, 3.5" color TFT |
| Front panel indicators | Full color LED illuminated ring |
| Front panel operating elements | Rotary encoder, Capacitive Touch Screen |
| Rear panel indicators | 2 x LED (AES3 Input mode active, Amp-Find) |
| Rear panel operating elements | Mains switch |
| Power Requirements | 100 V to 240 V, 50 Hz to 60 Hz AC |
| Power Consumption | |
| Rated Power Consumption | 2250 W |
| 1/8 Maximum Output Power at 4 Ω | 2850 W |
| Idle Mode (no input signal) | 110 W |
| Standby Mode | < 19 W |
| Power Supply Topology | Switching Mode Power Supply with digital controlled Power Factor Correction |
| Protections | Audio Limiters, High Temperature, DC, HF, Short Circuit, Back-EMF, Peak Current Limiters, Inrush Current Limiters, Turn-on Delay, Mains Circuit Breaker Protection, Mains Over/Under voltage Protection |
| Cooling: | Front-to-rear, temperature controlled fans, supervised |
| Ambient Temperature Limits | +5 °C to +40 °C (+40 °F to +105 °F) |
| IEC Protection Class | Class I (grounded) |
| Electromagnetical Environment | E1, E2, E3 |
| Color | Black |
| Dimensions (W x H x D), mm | 483 x 88.1 x 514.2 |
| Weight | 18.3 kg (40.4 lb) |
| Shipping Weight | 20.5 kg (45.2 lb) |

Amplifier at rated conditions; all channels driven, 4 Ω loads, analog input, 32 dB gain, 48 kHz sample rate, unless otherwise specified.

¹Test signal for max. output power according IHF-A-202 (Dynamic-Headroom, burst 1 kHz/20 ms on/480 ms off/low level -20 dB).

TGX AUDIO SIGNAL FLOW



USER CONTROL

- EQUALIZER: 12 x PEQ / Lashley / Heshel / Heiss / Casper / Nech (Band 1 to 12 with address/Aggress/Shape)
- DELAY: 0 to 2000 ms (888 Hz / 255 Hz)
- MUTE
- LEVEL

ARRAY CONTROL

- DELAY: 0 to 500 ms (127 Hz / 563 Hz)
- POLARITY
- LINEAR PHASE EQ: Pre-filtered tone requires appropriate control settings
- EQUALIZER: 5 band PEQ / Lashley / Heshel / Heiss / Casper / Nech

SPEAKER PROCESSING

- configured via speaker settings
- HPF EQ and Xover F.R. Delay, Priority, Trim, Phase, Limiter, MSB Limiter with transient modeling

AMPLIFIER CONTROL

- GAIN: 30dB / +12dB
- AMP LIMITERS & PROTECTIONS: 4
- USER ACCESSIBLE: NO USER ACCESS

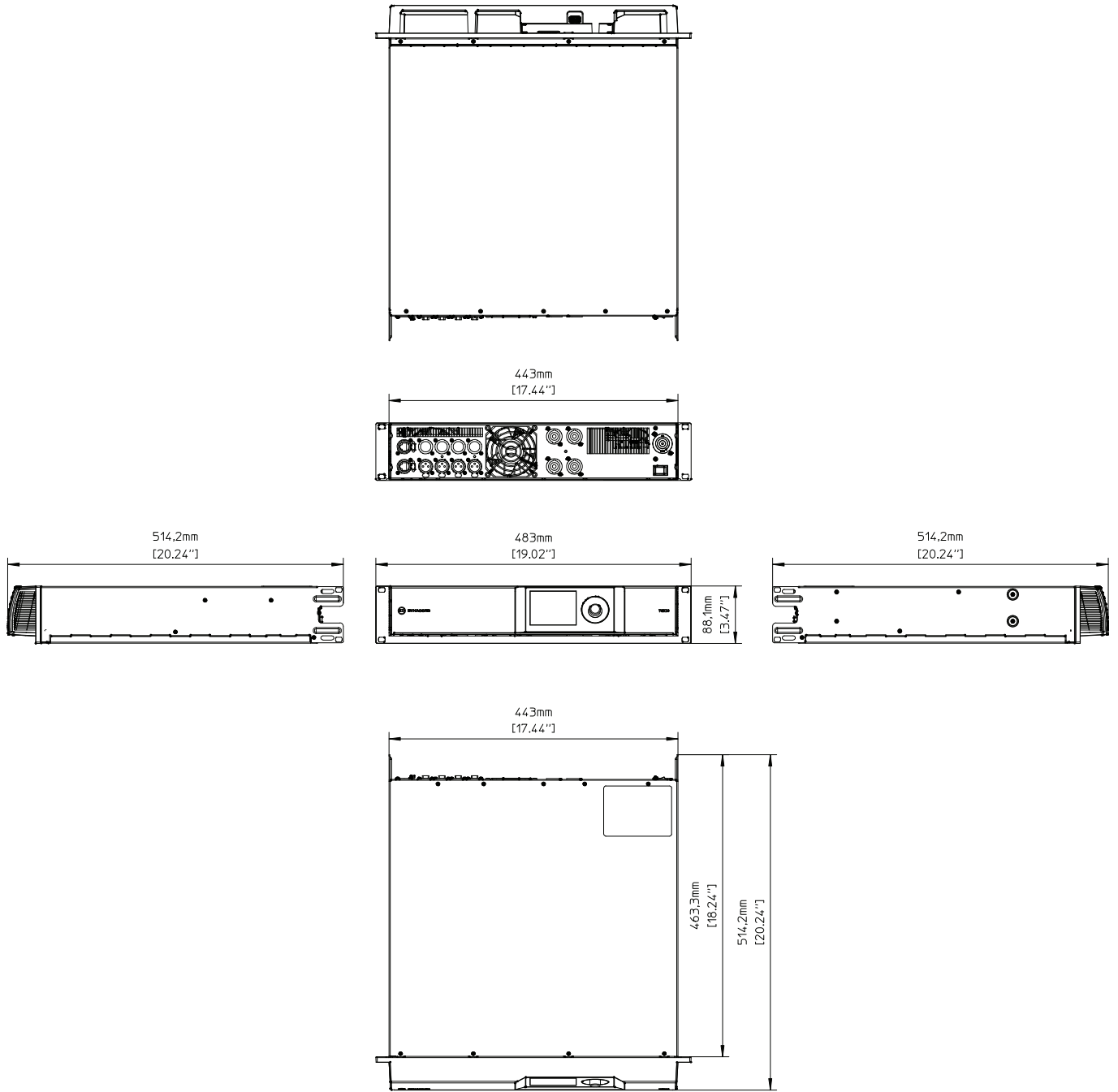
Accessed by remote control software and front panel interface

only accessible by remote control software

configured via speaker settings

NO USER ACCESS

Block diagram



Dimensions: TGX

Ordering information

TGX20 DSP power amplifier 4x5000W, live

DSP power amplifier 4x5000W @ 4 ohms, OMNEO, 8 Dante-, 4 AES-3/analog inputs, XLR/NL4 connectors, 100-240V, black
Order number **TGX20**

Accessories

PD32-EU Power distro 3x32A, 230V, CEE 32A

Power distribution for 3x 32A and 3x 16A, CEE32A mains connector, 3-phase 230/400V, European region, black
Order number **PD32-EU**

PD30-US Power distro 3x30A, 208V, NEMA L21-30

Power distribution for 3x 30A and 3x 15A, NEMA L21-30 mains connector, 3-phase 208V, North American region, black
Order number **PD30-US**

PCO32A30-US Power cord, powerCon32/NEMA L6-30

Power cord, powerCON32 to NEMA L6-30 mains connector, 2m, black

Order number **PCO32A30-US**

PCO32A16-EU Power cord, powerCon32/CEE7/7

Power cord, powerCON32 to CEE7/7 (Schuko, 16A) mains connector, 2m, black
Order number **PCO32A16-EU**

PCO32A16-UK Power cord, powerCon32/BS1363

Power cord, powerCON32 to BS1363 (UK-plug) mains connector, 2m, black
Order number **PCO32A16-UK**

PCO32A10-AU Power cord, powerCon32/AU3-pin10A

Power cord, powerCON32 to AU, 3-pin 10A mains connector, 2m, black
Order number **PCO32A10-AU**

DC-RMK15 RMK-15

Rack Mount Kit for amplifiers, Length 15,5"; 1L/1R
Order number **DC-RMK15**

Germany:

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