

K&F TGX Series



- Multi-channel DSP amplifier for live applications for operating all K&F loudspeakers
- Power density of 10 kW and 20 kW in 2U
- Fully integrated 96 kHz DSP with FIR Drive technology
- OMNEO integration for seamless compatibility with Dante and OCA
- Color touchscreen for control without software

The TGX Series delivers uncompromising power, ultimate reliability and state-of-the-art DSP performance, purpose-built for the most demanding live sound environments. With market-leading power density of up to 20 kW in just 2U, a fully integrated 96 kHz DSP with FIR-Drive, and seamless Dante/OCA networking, TGX amplifiers provide exceptional control and pristine audio quality. Their rock-solid stability down to 2 ohms and robust German-engineered construction make them the first choice for large-scale touring applications. TGX represents engineering at its finest, setting a new benchmark for professional amplifier platforms.

K&F TGX10

Load impedance	2 Ω	2.7 Ω	4 Ω	8 Ω
Maximum Output Power ¹ All channels driven	2,600 W	3,000 W	2,500 W	1,250 W
Number of amplifier channels	4			
Maximum Output Voltage	150 V Peak			
Maximum Output Current	53 A Peak			
AMPLIFIER				
Voltage Gain ref.1 kHz	32.0 dB, adjustable 24-40 dB			
Input Sensitivity ref. to Max. Output Voltage	10.7 dBu (2.66 V), adjustable 2.7-18.7 dBu			
THD 3 dB below Max., AES17, 1 kHz	< 0.05 %			
IMD-SMPTE 60 Hz, 7 kHz	< 0.05 %			
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 (± 0.5 dB)			
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	112 dB			
A-weighted, digital input	115 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/96kHz	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 FIR	up to 1025 taps, Linear Phase Filter, Linear Phase Brickwall X-Over			
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			
Source Supervision and Fallback	AES3 Lock and OMNEO/Dante network supervision, switchover to alternative Source Selection			

K&F TGX Series



CONNECTIVITY

Analog Audio Input/Thru

Type	4 x 3-pin XLR female/male
Maximum Input Level	+24 dBu
Input Impedance, active balanced	20 k Ω
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 Typ A

Mains Input

1 x Neutrik powerCON-HC

Speaker Output

4 x NL4

GENERAL

User Interface

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	1,200 W
1/8 Maximum Output Power at 4 Ω	1,765 W
Idle Mode (no input signal)	80 W
Standby Mode	< 18 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

15.0 kg (33.0 lb)

Shipping Weight

17.2 kg (37.8 lb)

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

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

K&F TGX20

Load impedance	2 Ω	2.7 Ω	4 Ω	8 Ω
Maximum Output Power ¹ All channels driven	5,200 W	6,000 W	5,000 W	2,500 W
Number of amplifier channels	4			
Maximum Output Voltage	210 V Peak			
Maximum Output Current	83 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)			
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/96kHz	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 FIR	up to 1025 taps, Linear Phase Filter, Linear Phase Brickwall X-Over			
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Type	4 x 3-pin XLR female/male
Maximum Input Level	+24 dBu
Input Impedance, active balanced	20 k Ω
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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
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Rear panel operating elements	Mains switch

Power Requirements

100 V to 240 V, 50 Hz to 60 Hz AC

Power Consumption

Rated Power Consumption	2,250 W
1/8 Maximum Output Power at 4 Ω	2,850 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

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