

CLEAR K12 Digital Signal Processor



With its stable performance, excellent sound quality and years of dedication, Tendzone digital signal processor is now world-renowned. The CLEAR K Series is the newly developed fixed professional signal processor which is easy to use and cost-effective. It is tailored for conference audio systems and suitable for conference rooms, churches, star hotels, auditoriums, conference centers, multi-functional rooms, digital courts and other applications.

With graphical user interface, clear signal route and multi-type control medias like wall panels and cell phones, K12 does not only presents high-quality sound, but also provides high customer experience with strong compatibility, flexible control and simple operations.

Features:

Inputs & outputs

- 12* balanced microphone /line input, with 48V phantom power supply & soft switch;
- 8* balanced line output;

Signal Processing

- AEC:** Acoustic echo cancellation, rapid elimination of echo in video conferencing;
- AFC:** Adaptive feedback cancellation, employing high-speed floating-point digital algorithm provides feedback suppression for each microphone to prevent the system from squealing;
- AM:** Multi-mode of automatic mixing (AM), with threshold type and gain sharing type selectable;
- AGC:** Automatic gain control, to ensure smoothing output volume of the sound system and make sure the audiences won't be affected by variations of the speaker's distance from the microphone.
- Outstanding sound quality with 24bit/48kHz sampling rate;
- Optimized pre-process gain, with 0,6,30,36,42

dB multi-level adjustment, for MIC and LINE level;

- Full-function matrix mixing with intuitive signal routing table and cross-point controllable level;
- Limiter responding instantly to the input level protects the post-devices perfectly.
- A variety of parameter equalization type, PEQ, High-Shelf, Low-Shelf, Notch, can be flexibly applied to many occasions;

USB Recording

- USB2.0 audio interface, easily play the USB audio resource and audio can be easily recorded;

A variety of control methods

- Ethernet port: easy connection to computers and other network equipment;
- RS-232 bidirectional serial control interface;
- GPIO control interface: 8* logic input/output, 4 * voltage input control (can be connected to potentiometer or CLEAR CV4);
- Compatible with TENDZONE full range RC panels via TCP/IP connection



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Specification

Item	Specification
Scene storage:	8 presets
Input channel function	Preamplifier, Signal generator, Expander, Compressor, 5-band PEQ, High-Shelf, Low-Shelf, LP, HP and etc.
Output channel function:	optional 8-band PEQ or 31-band GEQ, Delay, Crossover, High and low pass filter, Limiter
AEC	Echo Elimination Tail Length: 256ms; Built-in ANC Noise Reduction: Max. 18dB
Adaptive Feedback Cancellation (AFC)	16* Suppression points; With manual, dynamic, fixed type of processing, multi-modes optional
Sampling frequency	48kHz
Input to output dynamic range	106dB
Phantom power supply	DC 48V
Input common mode rejection	75dBu @ +20dBu, 60Hz
Channel isolation	106dB
Frequency response	20Hz~20kHz (±0.5dB)
Floor noise (A-weighted):	-90dBu
Equivalent input noise EIN:	≤-125dBu
Total harmonic distortion (THD+N):	≤0.0025% @1kHz, +4dBu
Maximum input gain:	42dB
Input impedance:	10KΩbalance
Output impedance:	Max. 100 ohm
Maximum output level:	20dBu
Operating voltage:	220VAC or 110VAC\50Hz
Power	60W
Size (width*depth*height):	44mmx488mm×260mm
Weight:	3.2kg

REAR PANEL



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