TOA

DP-K1

Digital Audio Processor

Innovative Automatic Resonance Control creates optimal sound fields based on the venue's acoustic response

safe&sound

TOA

TOA's DP-K1 automatically creates a cl challenging venues.

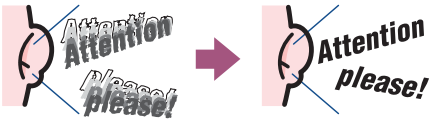
TOA again leads the way in ensuring optimal commercial sound audio, with an easy-to-operate digital audio processor. The DP-K1 is equipped with TOA's new Auto Resonance Control (ARC) function, which automatically measures and processes the acoustic resonance characteristics of complex environments and provides compensatory parameter settings. The ARC processing algorithm creates a matching inverse response curve and employs the DP-K1's digital parametric equalization filters to compensate for the venue's response characteristics. This latest addition to the TOA line of commercial sound digital audio processors makes it easy to bring optimal sound enhancement even to acoustically challenging venues, such as convention centers, multi-purpose halls, churches, airports and sports facilities.

DP-K1

Automatic parameter adjustments ensure clear sound, simply and easily.

After obtaining measurements of the acoustic characteristics from up to eight locations in the venue, the Auto Resonance Control function calculates the room mode frequency response curve and resonant frequencies. Based on the results, within minutes it automatically creates an accurate compensating filter curve, for a sound field with fully clear audibility.

Conceptual Image



High performance efficiency saves on time, labor and operating costs.

ARC requires no expert knowledge or training to carry out automatic acoustic analysis and creation of parameter settings in minutes via a PC. For quick set-up and control of multi-zone or room combination applications, the DP-K1 has a full input-to-output 8-bus matrix, and also comes with 8 internal memories that allow the operator to easily store and recall input-to-output routing and parameter configurations.

Quick and easy setting of parameters via a PC.

Fine tuning of parameter settings is made possible by onboard multi-band parametric filters and additional processing tools such as crossovers, compressors and delays. The DP-K1 is programmed for operation via PC control software, and includes a built-in interface for network remote access.

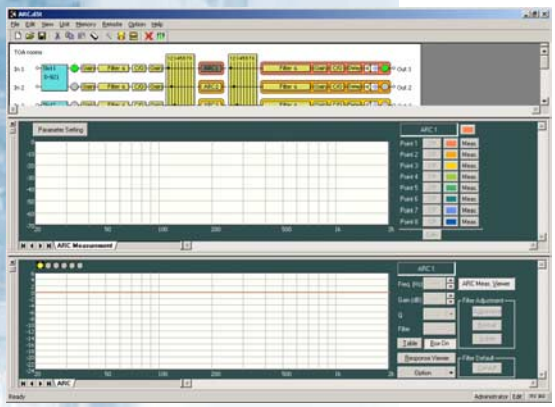
Operational versatility for wide-ranging applications.

Working in tandem with the unit's 8-bus matrix capability, the DP-K1's modular design allows up to 8 line/mic inputs and 8 line outputs, as well as flexible contact-closure remote control. To ensure extra-precise versatility, five separate modules are available for both input and output, plus three for remote control operation.

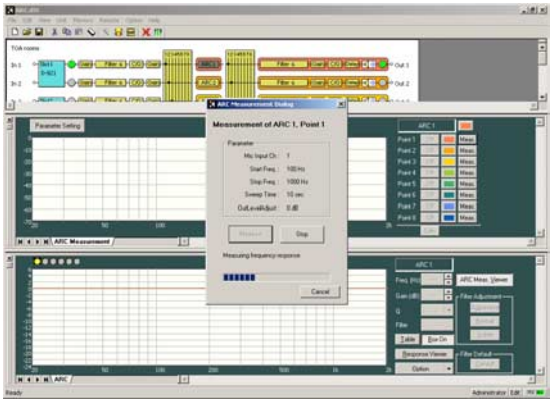
Rack mounting available in three sizes.

ear sound field even for acoustically

Click the measurement button on the PC software.



Automatically measures room acoustic characteristics of broadcasting area.



After completing the room acoustic measurement and room acoustic tuning, DP-K1 automatically creates the ARC filter curve that improves intelligibility.

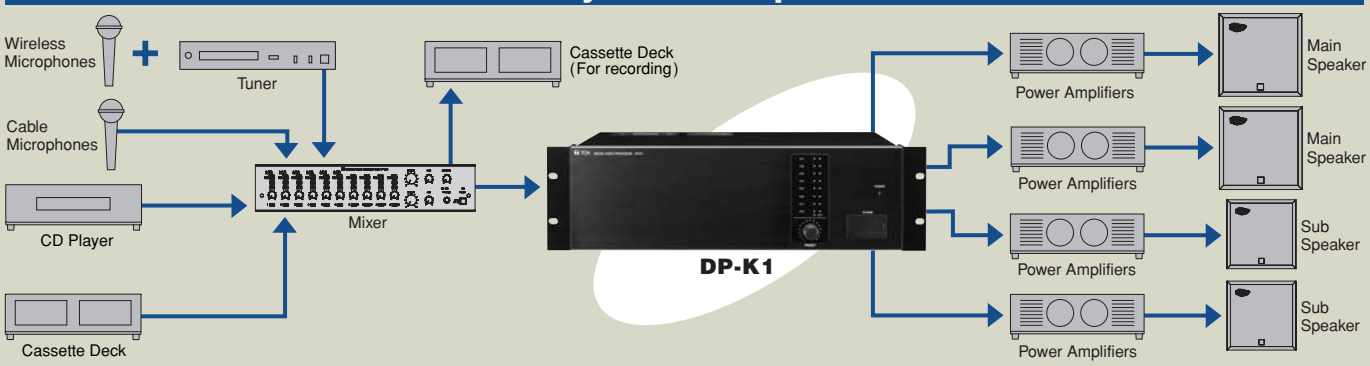
After measuring at the several points, just push the calculation button on the PC software.

Modules

Modular design allows you to configure the most cost-effective design for each application.
TOA offers a range of modules to suit a variety of input and output requirements.

DP-K1 Rear

System Example



SPECIFICATIONS

Power Source	AC mains, 50/60Hz
Power Consumption	40W (750mA)
Frequency Response	20 – 20,000Hz, ±1dB (+4dB* Input)
Input	Max. 8 channels, modular construction (modules optional)
Output	Max. 8 channels, modular construction (modules optional)
Signal Processing	
Auto Resonance Control function	Parametric equalizer: 20 – 20,000Hz, ±12dB, Q: 0.267 – 69.249
Level Control	–∞ to +12dB (0.5dB steps), wutg polarity selector
Equalizer/Filter	Parametric equalizer: 20 – 20,000Hz, ±12dB, Q: 0.267 – 69.249 Filtering: High-pass filter: 20 – 20,000Hz, 6dB/oct, 12dB/oct Low-pass filter: 20 – 20,000Hz, 6dB/oct, 12dB/oct Notch filter: 20 – 20,000Hz, Q: 8.651 – 69.249 All-pass filter: 20 – 20,000Hz, Q : 0.267 — 69.249 High shelving filter: 6 – 20kHz, ±12dB Low shelving filter: 20 – 500Hz , ±12dB Horn equalizer: 20kHz, 0 to +18dB,(1dB steps) Crossover filter: 20 – 20,000Hz, 6dB/oct, 12dB/oct, 18dB/oct, 24dB/oct
Compressor	Threshold: –16 to +24dB* (1dB steps) Ratio: 1 : 1, 2 : 1, 3 :1, 4 : 1, 8 : 1, 12 : 1, 20 : 1, ∞ : 1 Attack time: 0.02 – 100ms Release time: 10ms – 5s
Compressor	Threshold: –∞ to +26dB* (1dB steps) Attack time: 0.1 – 100ms Release time: 20ms – 5s Gain: –∞ to +10dB
Delay	Delay time: 0 – 682.6ms (0.021ms steps)
Matrix	8 × 8 Level control: –∞ to 0dB (1dB steps), with polarity selector
Preset memory	8
Auxiliary Function	Key lock function
Setting Software	OS: Windows*2 2000/XP Control system: 10/100 BASE-T, Auto-nagotiation, RJ45 connector
Front Panel Section	Preset memory recall knob: 1 Input indicator: Green LED Output indicator: Green LED
Module Slot (Rear Panel)	Input module slot: 4 Output module slot: 2 Remote control module slot: 1
Operating Temperature	+5 to +40°C
Finish	Panel: Aluminum, hair-line finish, black Others: Pre-coated steel plate, black, 30% gloss
Dimensions	482.6 (W) × 132.6 (H) × 320 (D)mm (excluding projection)
Weight	7.4kg
Accessory	Power cord (2m) × 1, Rack mounting bracket (preinstalled on the unit) × 2, Rack mounting screw × 4, Fiber washer × 4, Blank panel (preinstalled on the unit) × 8, Module mounting screw (spare) × 4, CD (software) × 1
Option	Mic/Line input module: D-921E, D-921F, D-922E, D-922F Stereo input module: D-936R Digital input module: D-923AE, D-937SP Line output module: D-971E, D-971M, D-971R Digital output module: D-972AE, D-961SP Remote control module: D-981, D-983 VCA control module: D-984VC

* 0 dB =0.775 V

*2 Windows is a trademark of Microsoft Corporation.

Note: When installing the unit, never block the intake vents provided in the unit's bottom near the rear.

TOA Corporation
www.toa.jp
Specifications are subject to change without notice.
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