GTO

Outline’s concept for GTO is to produce a large format line-source loudspeaker system that is flexible, adaptable, easy to use and which provides audio performance that meets the demands of the most discerning engineers, rental companies and production managers.





Cena:
Kategorie: Audio, Scena, Głośniki, Instalacje AV, Nagłośnienie obiektów

GALLERY IMAGES










OPIS

GTO is an acronym for Grand Touring Outline, which describes our concept of a system engineered specifically for large-scale sound reinforcement applications. In 2002 we launched the Butterfly system which contained a number of unique Outline engineering concepts, and which has brought us many new friends and customers around the world.

GTO benefits from a process of natural evolution which retains the basic design principles, proven within the Butterfly project, and expands them into a new system which provides greater SPL, more control, improved resolution, faster transient response and unrivaled uniformity in long-distance projection.

One of the essential design elements retained from Butterfly is the V-shaped front baffle, for which Outline was awarded an international design patent in 2002, and to which we refer as

the ‘V-Power Concept’. This ground-breaking design allows individual sound sources to be positioned, when coupled in an array, much closer together than in conventional line-source systems. This facilitates superior acoustical coupling between high-frequency modules thus producing a smooth yet extended HF response. It also creates the ideal ‘unbroken baffle’ shape through an array which minimises diffraction and deterioration of the mid-high frequencies, thus contributing to the far-field performance of the system.

GTO cabinets contain ten transducers in a compact cabinet with an internal volume of just 340 litres (74.79 gals). It features four 3-inch diaphragm compression drivers, each loaded with our patented D.P.R.W.G. (first used in Butterfly), and whose combined output is channelled through a single output slot. Four 8-inch drivers produce the midrange frequencies, which are output via the same horizontal dispersion waveguide as the HF. Two 15-inch cone transducers generate the low frequency range, providing tremendous depth, articulation and fast transient response.

Despite the very high concentration of individual transducers within a GTO cabinet, we have managed to keep the weight down to just 96 kg (212 lb). The design contains a number of weight-saving components, but the greatest contribution to this success is the use of a space-age aluminium alloy from the aerospace industry, which we have used for the integrated flying hardware in preference to steel. This innovation reduces the per cabinet weight of the hardware by 66%, yet is strong enough to fly up to 24 GTO cabinets with a total weight of 2.4 tons. The splay angle between GTO cabinets is adjustable between 0° and 5° in 0.5° increments, with the addition of a 0.25° position intended for the uppermost cabinets in an array to provide additional control in far-field performance. Since the splay angle between cabinets affects the physical distance between drive units, the overall performance of a line-source system demands precise control over these parameters. A goniometer (a splay angle indicator), which is integral to the cabinet flying hardware, allows precise adjustment of the angle between individual cabinets which is then locked by insertion of a captive steel pin.

For Downfill applications, we have specifically designed the GTO-DF. This modular cabinet gives 25 degrees of coverage in the vertical plane and attaches by using the same rigging hardware. If upward system coverage is required, it is possible to mount Butterfly and Mantas cabinets above the main flying frame. Both these solutions provide adequate coverage in venues where a very large vertical dispersion is required.

Features

- Ten transducers in a compact cabinet with an internal volume of just 340 litres (74.79

gals)
- 4 x 3-inch diaphragm compression drivers, each loaded with Outline patented D.P.R.W.G. (first used in Butterfly) and whose combined output is channelled through a single output slot.
- 4 x 8-inch drivers produce the midrange frequencies, which are output via the same horizontal dispersion waveguide as the HF
- 2 x 15-inch cone transducers generate the low frequency range, providing tremendous depth, articulation and fast transient response
- Equipped with the high-precision, lightweight, integrated rigging system to allow accurate aiming and coverage.
- Design file available within the ‘Open Array’ 3D acoustic simulation software
- Ideal for theatre, arena, festival and stadium productions

FREQUENCY RESPONSE (-10 dB)	35 Hz – 18 kHz
AVERAGE DISPERSION	Horizontal: 90° Vertical: Depending on array configuration
IMPEDANCE	Low: 2 x 8 Ω (min 2 x 6.5 Ω) Mid: 8 Ω (min 6.8 Ω) High: 16 Ω (min 15.3 Ω)
POWER – WAES	Low: 2 x 600 (2 x 2400 peak) Mid: 800 (3200 peak) High: 500 (2000 peak)
MAX SHORT-TERM SPL @ 1 m, free-field*	149.5 dB SPL
LOUDSPEAKERS AND LOADING	Low: 2 x 15″ NdFeB Hybrid band-pass loaded woofers Mid: 4 x 8″ NdFeB partially horn loaded mid woofers High: 4 x 3″ diaphragm NdFeB compression driver loaded by 2 double D.P.R.W.G.
WEIGHT – SINGLE UNIT	96 kg (212 lb)
DIMENSIONS (Net)	Height: 465 mm (18 5/16″) Width: 1126 mm (44 11/32″) Depth: 655 mm (25 25/32″)

DIMENSIONS (With Pins)	Height: 465 mm (18 5/16″) Width: 1181 mm (46 1/2″) Depth: 655 mm (25 25/32″)
	* calculated using +10 dB crest-factor signal