

Cylindric Wave Radiator **GL 16**



GL 16 i + GL 16 c

The GL 16 is a high-performance line array system for high definition voice and music transmission in acoustically challenging venues, particularly in long throw situations. Acoustic coupling between two line arrays arranged one behind the other within the cabinet is exploited in the innovative design of the GL series to provide vertical directivity up to 15 kHz without any loss of power in the lower frequencies, and exceptionally homogenous and symmetrical horizontal dispersion. The design principle also allows the cabinet width to be kept down to a slim 19 cm. The acoustic and mechanical properties of the GL 16 system make it particularly suitable as an alternative to conventional column speakers and compact line arrays. From single element installations in churches, auditoriums and conference facilities to multiple element applications in array configurations in theatres and concert halls, the GL 16 is suitable for a multitude of application. For operation without separate amplifiers and controllers, active dp (digitally powered) version of the GL 16 is available.



GL 16 with front grille available in all RAL-colors.



GL 16 i dp on Monopod.



Integrated fittings for easy connection.

PRODUCT SPECIFICATIONS



GL 16 i



GL 16 c



GL 16 i Front Grill Version



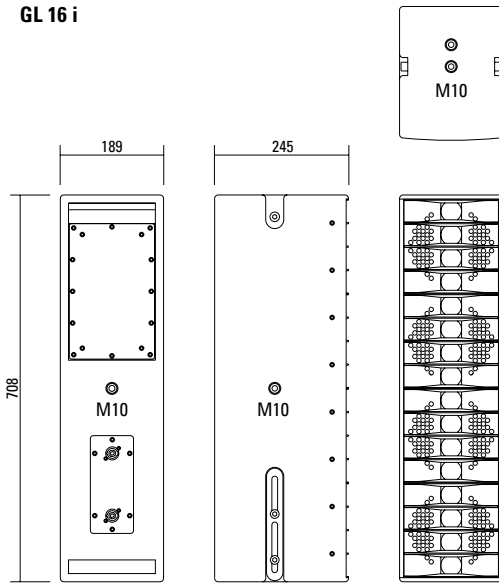
GL 16 c Front Grill Version

GL 16 with Front Grill
for unobtrusive installation
(custom version).

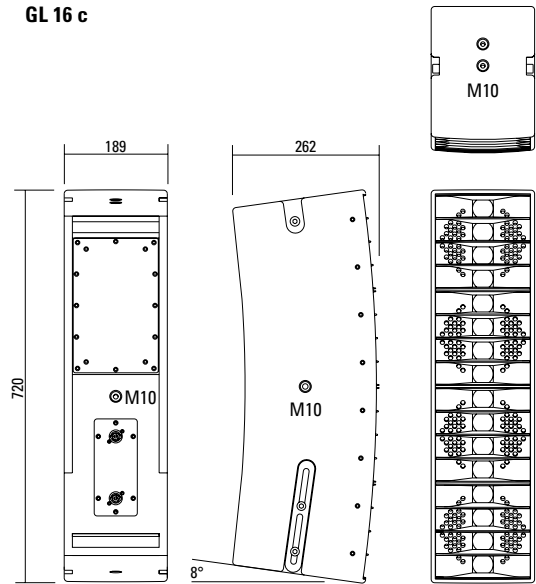
	GL 16 dp 1000	GL 16 a	GL 16 xov
Speaker Components	4 x 6,5" Nd / 16 x 1" Nd Tweeter	4 x 6,5" Nd / 16 x 1" Nd Tweeter	4 x 6,5" Nd / 16 x 1" Nd Tweeter
Description	Digitally Powered Cylindric Wave Radiator	Cylindric Wave Radiator	Cylindric Wave Radiator
Power AES / Peak	---	LF: 400 W / 1200 W HF: 150 W / 450 W	400 W / 1200 W
Amp Power	2 x 500 W AES biamped/ 110-230 V	---	---
Impedance nominal	---	LF: 8 Ω / HF: 8 Ω	8 Ω
Rated Current	0,85 A @ 230 V	---	---
SPL 1 W / Peak @ 1 m	---	LF: > 96 dB / 127 dB HF: > 97 dB / 124 dB	> 127 dB
SPL Peak @ 1 m	> 130 dB	---	---
Max. Input Signal	25 dBu	---	---
DSP	HDL M FPGA Processing 32 bit floating point	---	---
AD / DA	24 bit / 96 kHz	---	---
Latency	0,8 ms (analog in to analog out)	---	---
Usable Range	80 Hz - 20 kHz (- 6 dB)	80 Hz - 20 kHz (- 6 dB)	80 Hz - 20 kHz (- 6 dB)
Tuning Frequency excursion minimum	90 Hz	90 Hz	90 Hz
X-Overpoint acoustical	Depends on preset	Depends on preset	1,1 kHz
Coverage horizontal/ vertical	100° x 7° (i-version) 100° x 23° (c-version)	100° x 7° (i-version) 100° x 23° (c-version)	100° x 7° (i-version) 100° x 23° (c-version)
Mechanical Splay Angle	0° (i-version) 16° (c-version)	0° (i-version) 16° (c-version)	0° (i-version) 16° (c-version)
Connectors	Neutrik XLR in/out Neutrik PowerCon in/out	2 x Neutrik Speakon NL4MP in/out Coding: 1 +/- HF, 2 +/- LF	2 x Neutrik Speakon NL4MP in/out Coding: 1 +/- HiMid, 2 +/- loop thru
Handles	1 x	1 x	1 x
Rigging / Fittings	12 x M10 Integrated flying hardware	12 x M10 Integrated flying hardware	12 x M10 Integrated flying hardware
Weight	17 kg	16 kg	16,5 kg
Size height x width x depth	70,8 x 18,9 x 24,5 cm (i-version) 72,0 x 18,9 x 26,2 (24,5) cm (c-version)	70,8 x 18,9 x 24,5 cm (i-version) 72,0 x 18,9 x 26,2 (24,5) cm (c-version)	70,8 x 18,9 x 24,5 cm (i-version) 72,0 x 18,9 x 26,2 (24,5) cm (c-version)
Order No.	00500/2x500W (i-version) 00501/2x500W (c-version)	00500/a (i-version) 00501/a (c-version)	00500/xov (i-version) 00501/xov (c-version)

DIMENSIONS

GL 16 i

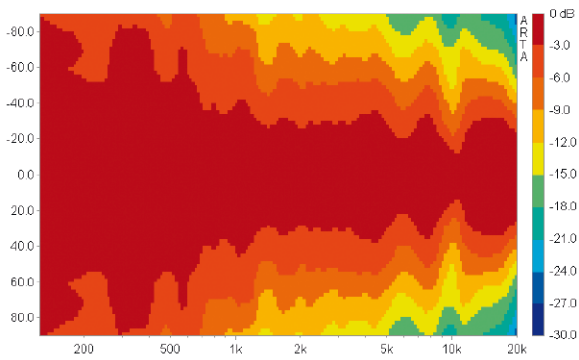


GL 16 c

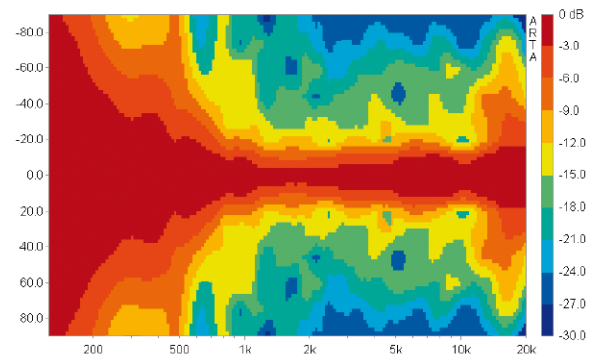


COVERAGE PATTERNS

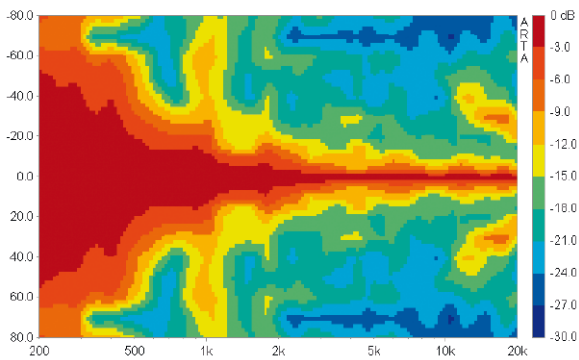
GL 16 i / GL 16 c - horizontal - 2D Directivity Plot



GL 16 c - vertical - 2D Directivity Plot



GL 16 i - vertical - 2D Directivity Plot



Controller Setups are available on our website:

<http://www.seeburg.net/downloads.php>

Design of two GL 16 systems.

Continous internal steel frame
with integrated M10 threads.

M10 thread
for installation of the Flying Bracket.

Fitting with elongated holes
for connecting two systems together.

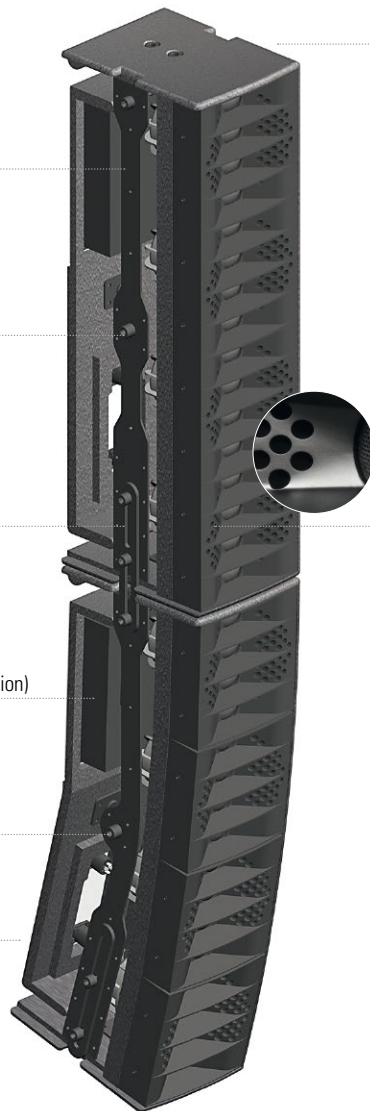
Integrated amplifier electronics (dp-version)
Cover panel in the passive version.

M10 thread

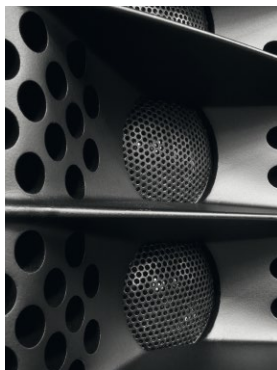
Additional M10 thread
on the rear.

M10 threads for connection
of the Flying Cradle or ring screws.

AMR® - Channels



AMR® PRINCIPLE

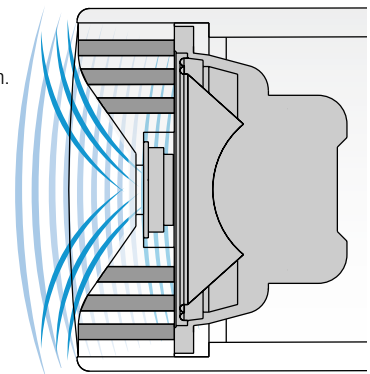


AMR® Principle.*

The AMR horn contains integrated channels which allow the sound waves generated by the low-mid speakers mounted behind the horn to pass through.

For sound waves in the frequency range generated by the 1" HF driver, these channels behave as if they were sealed due to the air mass inside the channels acting as a reflector (AMR = Air Mass Reflection).

The low-mid speakers are coupled to an acoustical band pass filter with a center frequency close to the crossover frequency between the Mid and HF drivers. This construction provides smooth horizontal dispersion over a wide frequency range. Another asset is the extreme compactness of this design.



*patentrechtlich geschützt

APPLICATIONS



Wall Mount for Flying Bracket.



Flying Bracket.



Wall Mount with Spacer.



Flying Cradle.



Flying Bracket.



GL 16 c -> GL Sub
GL 16c systems can be mounted with the use of the Connection Adapter.



GL 16 i -> GL Sub
GL 16i systems can be mounted directly.



GL 16 c -> G Sub 1501
Easy mounting with the use of the Connection Adapter.



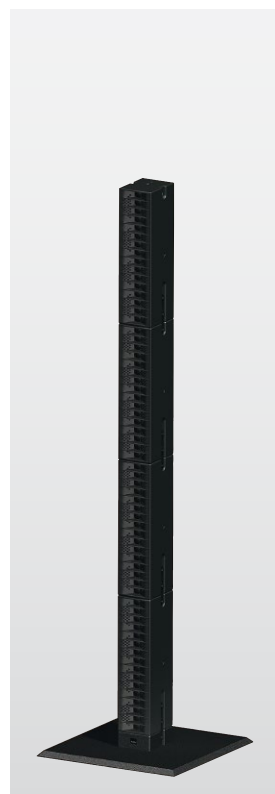
GL 16 i auf Monopod



GL 16 i / GL 16 c / GL Sub



GL 16 i / GL 24 / G Sub



Four GL 16 i mounted on XL Base Plate by means of a Connection Adapter.

GL 16 systems are available not only as „i“ (straight) and „c“ (curved) versions, but also as selfpowered dp- versions (dp = digitally powered), featuring digital amplifier electronics with a DSP controller. Various factory-configured presets and volume settings can be selected.

High-grade electronic components from the industrial sector and a first-class circuit design ensure excellent audio quality with low distortion and a minimal noise floor. Highly efficient and “intelligent” limiter systems ensure optimum protection against overload, without restricting the possibilities offered by this high-performance sound system.

Level

Adjustment in 3 dB steps (-6 dB to +3 dB).

Status

Mute LED

Red light when the system is muted or under technically critical conditions.

Limit LED

Yellow light when the limiter is restricting the level.

Signal LED

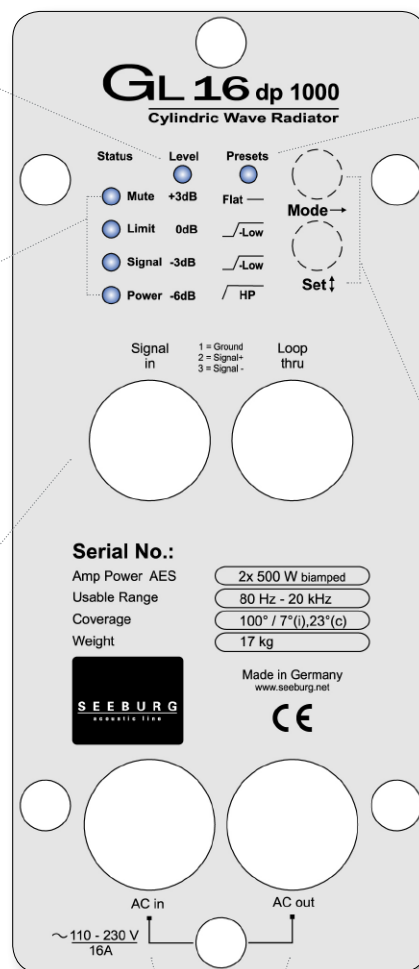
Green light when the input signal exceeds -20 dBu

Power LED

Green light when the system is switched on.

XLR

Symmetrical analog input max. Input +25 dBu. Effective filter protection against HF interference and DC Voltages. Electronically balanced to prevent noise.



Presets

Flat

This setting provides a linear frequency response with a neutral sound characteristics. Standard setting for many applications.

Low (slight)

Slight reduction of low / mid range frequencies for combination with one GL 16 system.

Low (strong)

Strong reduction of low / mid range frequencies for combination with several GL 16 systems.

HP 120 (high pass filter)

Activates a high pass filter (cut-off frequency 120 Hz) for use in combination with a subwoofer.

Mode - key

Switches between control modes Status, Level and Presets.

Set - key

Setting of various values and Mute on / off.

PowerCon (blue)

Power supply
~ 110-230 V / 16 A max.

PowerCon (grey)

~ 110-230 V / 16 A max.
loop through connector

Flying Cradle



for up to 6 units GL 16 or
for one unit GL 24
Order No. **01354**

Flying Bracket



for GL 16
incl. accessories:
2 x M10 x 30 handle screws
Order No. **01352/GL16/set**

Handle Screw



for flying brackets,
adjustable
Order No. **08375/30** (M10 x 30)

Knurled Head Screw



Reduction screw for fastening
M10 Flange.
Order No. **73755**

Flange



for G 3 / GL 16 / GL 24 / K 24
flying bracket,
M20 x 35 mm \varnothing with nut,
incl. M20 x 20 socket head screw
Order No. **08127/nut**

Doughty Trigger Clamp



for flying brackets,
SWL 200 kg
Order No. **01222**

Shackle



for GL-flying cradle,
WLL 1000 kg
Order No. **01372/GL**

Ring Screw



M10– DIN 580
Order No. **73700**

TV Spigot



10 mm internal thread,
28 mm \varnothing
Order No. **08128**

Wall Mount



for one single GL 16 / GL 24 /
A 2 / A 3 / L-Series
Order No. **03034**

Spacer



for wall mount (03034),
M10 x 55 (screw),
polyurea coated
Order No. **03034/spc**

Wall Mount



for U-brackets, 40 kg max., incl. screws
(M10 x 70 mm socket head screw,
M10 hex lock nut and flat washer)
Order No. **08130/F/400** (400 mm)
Order No. **08130/F/269** (269 mm)



Spacer.



Knurled Head Screw.

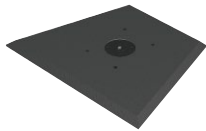
ACCESSORIES GL 16

Monopod



for GL 16,
height 110 cm
Order No. **01277**

Small Base Plate



for GL 16 / GL Sub / L-Series
with M20 flange,
61,5 x 48,0 cm
Order No. **01278/M20**

XL Base Plate



for stacked mounting
of multiple GL 16 units / GL Sub
with M20 flange,
80,0 x 80,0 cm
Order No. **01279/M20**

Connection Adapter



for Small and XL base plate
for stacking GL 16 i -> base plate
Order No. **01276/GL16**

Connection Adapter



for GL 16 c -> GL Sub, G Sub 1501
Order No. **01276**

Hybrid Cable System



PowerCon-PowerCon / XLR-XLR
2,5 m Order No. **08462**
5 m Order No. **08464**
10 m Order No. **08466**
15 m Order No. **08468**

Stretch Cover



for one unit GL 16,
other colors available on request
Order No. **01230/GL16**

for two units GL 16,
several colors on request
Order No. **01230/GL16/long**

Rain Cover Set



for GL 16,
set incl. low lid and
high lid (by using flying cradle),
connectable to other covers of the
GL-system
Order No. **01230/outdoor**

Bag



for one unit GL 16
Order No. **01230**

Flight Case



for 2 pcs. GL 16 i/c units
and accessories, heavy duty, 9 mm
birch multiplex, PVC coated, hinged
lid, 6 x recessed sprung handles, 2
x butterfly catches, 4 x 100 mm blue
wheels, 2 pcs. with brake, stackable,
inserts for accessories, interior lined
with felt, loading measurements,
Size (H x W x D): 48 x 77 x 61 cm
Order No. **16004/pro/T**



Rain Cover Set GL 24 + GL 16,
connectable



Rain Cover Set, high lid