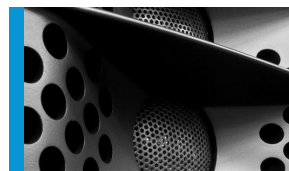




GL 16 i + GL 16 c

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. The integrated amplifier electronics are based on Class D power amplifiers, which are controlled via particularly low-noise FPGA DSP processing. Various factory-configured presets and volume settings can be called up. Remote monitoring and control is carried out via the Ethernet interface using SEEBURG Network Manager. Signal transmission (AoE) in accordance with the AES 67 standard is also possible.



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



GL 16 c / GL 16 Sub



Integrated fittings for easy connection.

## PRODUCT SPECIFICATIONS



GL 16 i



GL 16 c



GL 16 i Front Grill Version



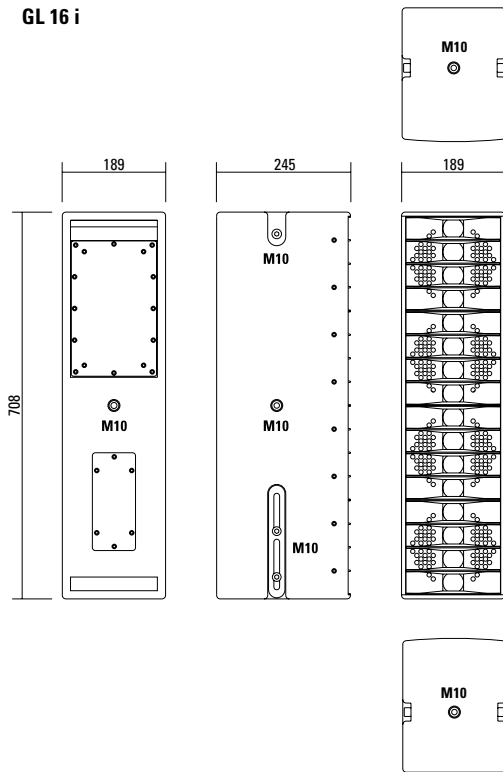
GL 16 c Front Grill Version

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

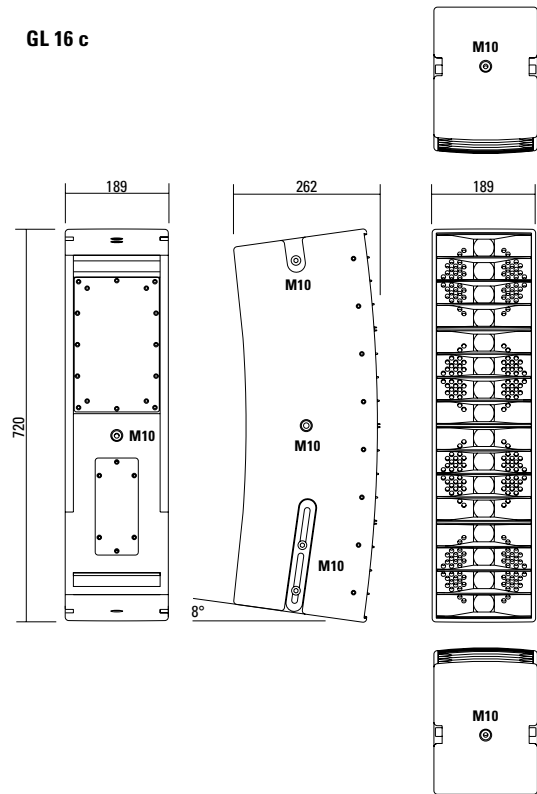
|                                           | GL 16 dp 1000                                                                 | GL 16 a                                                                       | GL 16 xov                                                                     |
|-------------------------------------------|-------------------------------------------------------------------------------|-------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| <b>Speaker Components</b>                 | 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                                              |
| <b>Description</b>                        | Digitally Powered Cylindric Wave Radiator                                     | Cylindric Wave Radiator                                                       | Cylindric Wave Radiator                                                       |
| <b>Power</b> AES / Peak                   | ---                                                                           | LF: 400 W / 1200 W<br>HF: 150 W / 450 W                                       | 400 W / 1200 W                                                                |
| <b>Amp Power</b>                          | 2 x 500 W AES biamped/ 110-230 V                                              | ---                                                                           | ---                                                                           |
| <b>Impedance</b> nominal                  | ---                                                                           | LF: 8 Ω / HF: 8 Ω                                                             | 8 Ω                                                                           |
| <b>Rated Current</b>                      | 0,85 A @ 230 V                                                                | ---                                                                           | ---                                                                           |
| <b>SPL</b> 1 W / Peak @ 1 m               | ---                                                                           | LF: > 96 dB / 127 dB<br>HF: > 97 dB / 124 dB                                  | > 127 dB                                                                      |
| <b>SPL</b> Peak @ 1 m                     | > 130 dB                                                                      | ---                                                                           | ---                                                                           |
| <b>Max. Input Signal</b>                  | 25 dBu                                                                        | ---                                                                           | ---                                                                           |
| <b>DSP</b>                                | DPLMx<br>FPGA Processing 32 bit floating point                                | ---                                                                           | ---                                                                           |
| <b>AD / DA</b>                            | 24 bit / 96 kHz                                                               | ---                                                                           | ---                                                                           |
| <b>Latency</b>                            | 0,8 ms (analog in to analog out)                                              | ---                                                                           | ---                                                                           |
| <b>Usable Range</b>                       | 80 Hz - 20 kHz (- 6 dB)                                                       | 80 Hz - 20 kHz (- 6 dB)                                                       | 80 Hz - 20 kHz (- 6 dB)                                                       |
| <b>Tuning Frequency</b> excursion minimum | 90 Hz                                                                         | 90 Hz                                                                         | 90 Hz                                                                         |
| <b>X-Overpoint</b> acoustical             | Depends on preset                                                             | Depends on preset                                                             | 1,1 kHz                                                                       |
| <b>Coverage</b> horizontal/ vertical      | 100° x 7° (i-version)<br>100° x 23° (c-version)                               | 100° x 7° (i-version)<br>100° x 23° (c-version)                               | 100° x 7° (i-version)<br>100° x 23° (c-version)                               |
| <b>Mechanical Splay Angle</b>             | 0° (i-version)<br>16° (c-version)                                             | 0° (i-version)<br>16° (c-version)                                             | 0° (i-version)<br>16° (c-version)                                             |
| <b>Connectors</b>                         | XLR in/thru, Ethercon,<br>Powercon in/thru                                    | 2 x Speakon NL4MP in/out<br>Coding: 1 +/- HF, 2 +/- LF                        | 2 x Speakon NL4MP in/out<br>Coding 1 +/- HiMid, 2 +/- loop thru               |
| <b>Rigging / Fittings</b>                 | 11 x M10<br>Integrated flying hardware                                        | 11 x M10<br>Integrated flying hardware                                        | 11 x M10<br>Integrated flying hardware                                        |
| <b>Weight</b>                             | 17 kg                                                                         | 16 kg                                                                         | 16,5 kg                                                                       |
| <b>Size</b> height x width x depth        | 70,8 x 18,9 x 24,5 cm (i-version)<br>72,0 x 18,9 x 26,2 (24,5) cm (c-version) | 70,8 x 18,9 x 24,5 cm (i-version)<br>72,0 x 18,9 x 26,2 (24,5) cm (c-version) | 70,8 x 18,9 x 24,5 cm (i-version)<br>72,0 x 18,9 x 26,2 (24,5) cm (c-version) |
| <b>Order No.</b>                          | <b>00500/2x500W</b> (i-version)<br><b>00501/2x500W</b> (c-version)            | <b>00500/a</b> (i-version)<br><b>00501/a</b> (c-version)                      | <b>00500/xov</b> (i-version)<br><b>00501/xov</b> (c-version)                  |

## DIMENSIONS

GL 16 i

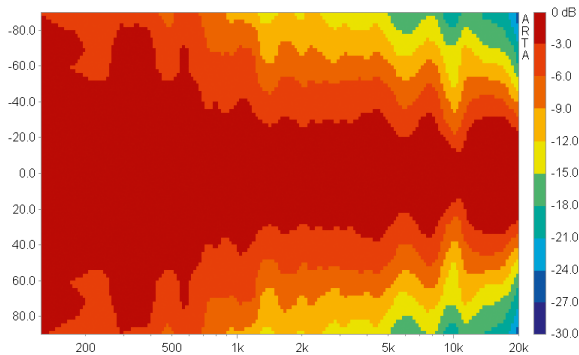


GL 16 c

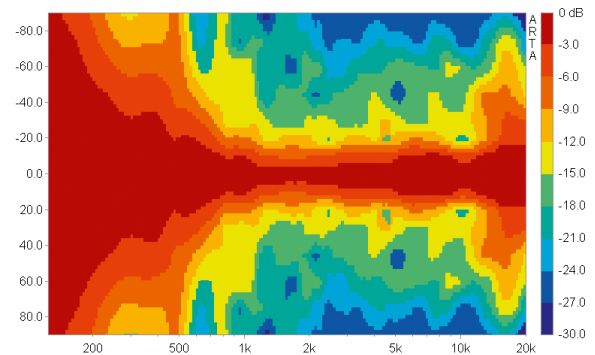


## COVERAGE PATTERNS

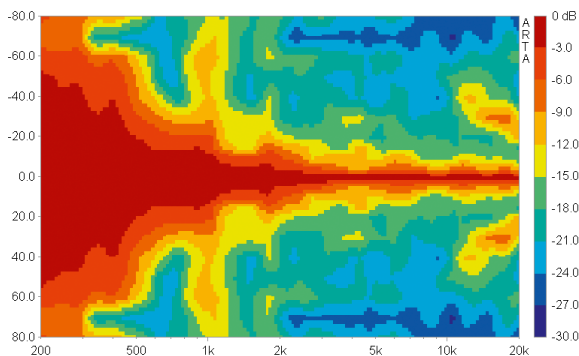
GL 16 i / GL 16 c - horizontal - 2D Directivity Plot



GL 16 c - vertical - 2D Directivity Plot



GL 16 i - vertical - 2D Directivity Plot



### Design of two GL 16 systems

**Continuous internal steel frame**  
with integrated M10 threads.

**M10 thread**  
for installation of the Flying Bracket.

**Fitting with elongated holes**  
for connecting two systems together.

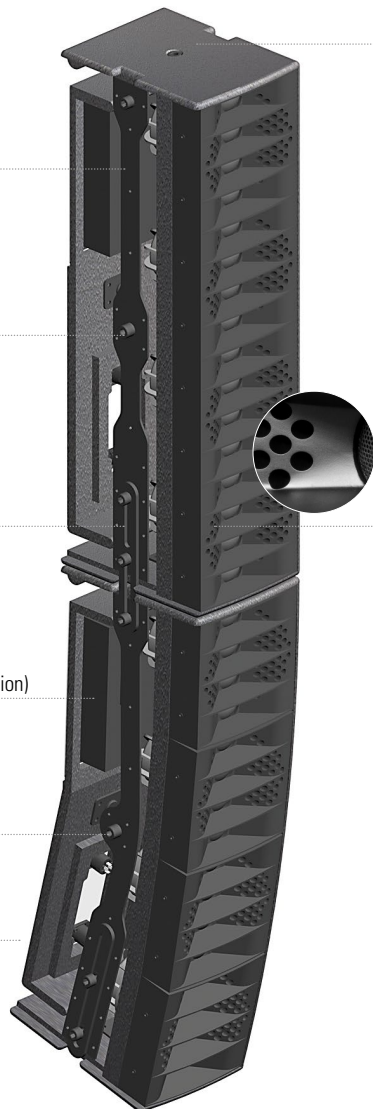
**Integrated amplifier electronics** (dp-version)  
Cover panel in the passive version.

**M10 thread**

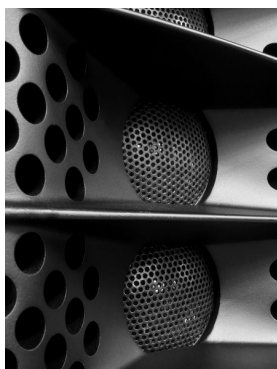
**Additional M10 thread**  
on the rear.

**M10 thread for connection**  
of the Flying Cradle or ring screw.

**AMR® - Channels**



### AMR® PRINCIPLE

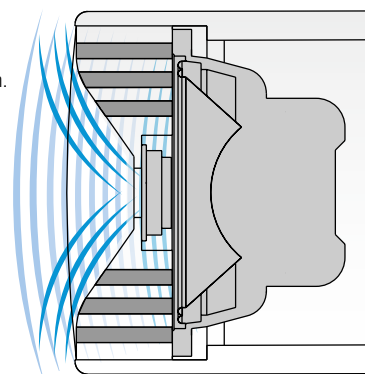


#### AMR® Principle\*

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



Adapter > MultiRigg™ > M10



**GL 16 i / GL 16 c-> GL 16 Sub**  
Mounting using connectors



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



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



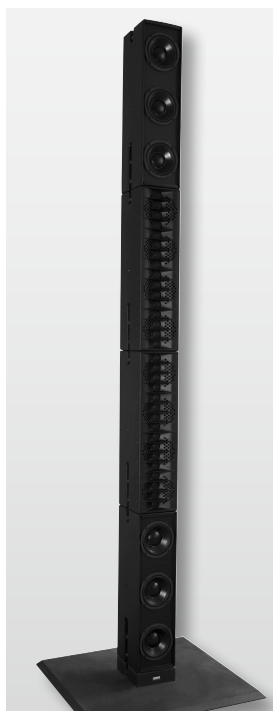
**GL 16 i dp > Height Extender**



**GL 16 i > Monopod**



**GL 16 c / 2 x GL 16 Sub**



**2 x GL 16 Sub / 2 x GL 16 i**



**4 x 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 called up directly on the box or via a network connection.**

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.

 **Presets > Quick Start Manual**

#### Level

Adjustment in 3 dB steps  
(-12 dB to +6 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.

#### Ethercon

Interface for remote control and audio transfer via ethernet (AES 67).

#### XLR

- Symmetrical analog input.
- 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 (grey)

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

#### Powercon (blue)

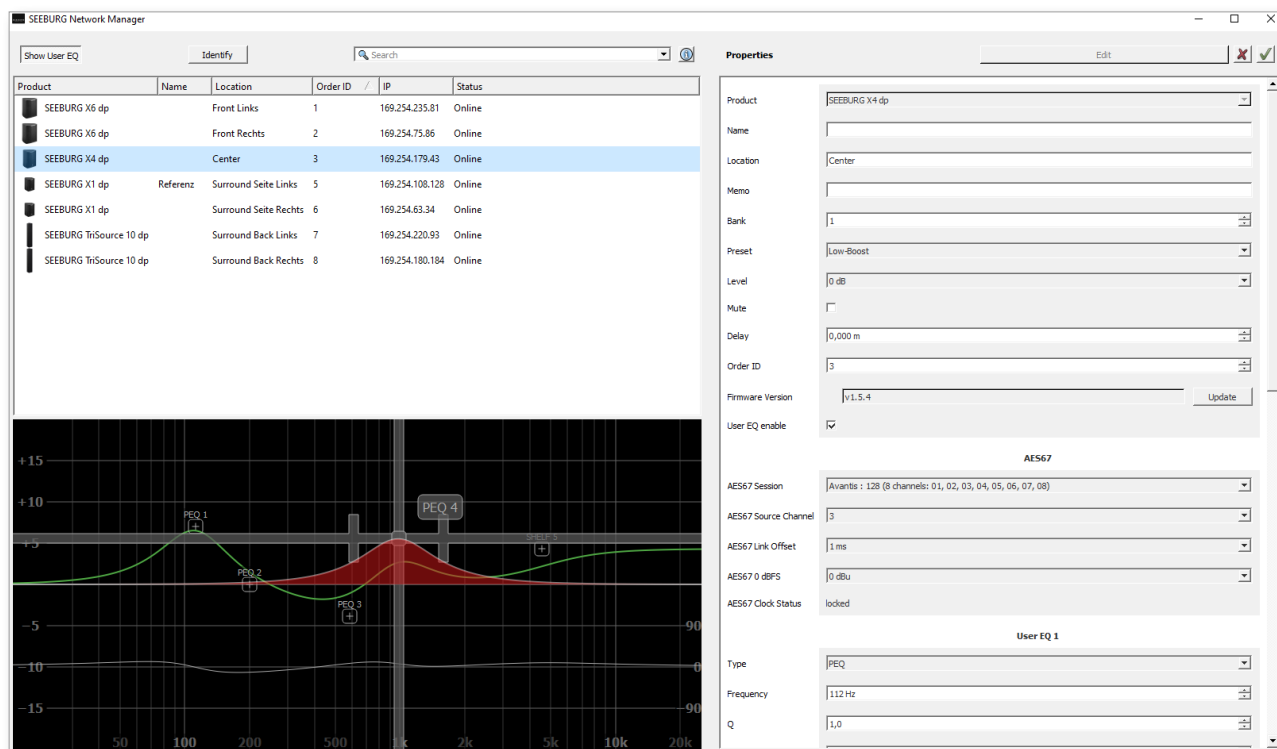
Power supply  
~ 110-230 V / 16 A max.

#### Controller Setups:

 <https://www.seeburg.com/en/downloads>

# SEEBURG NETWORK Manager

With the Software SEEBURG Network Manager all selfpowered systems can be controlled via network.



## Features:

- > **Remote control** of functions such as recalling presets and banks, level control and mute, and locking the controls on the loudspeakers.
- > **Visual display** of all systems connected to the control network.
- > Storable names and location labels with a **global search function**.
- > **Selection of loudspeakers** in the list for simultaneous set-up and control changes.
- > **Fully parametric user EQs and delay settings** for time alignment, with a graphical user interface
- > **Time Delay** with up to **2.8 seconds runtime**.
- > **Audio-over-Ethernet (AoE) via AES 67.**
- > Connection with **media control systems via API.**
- > Basic **network settings**.
- > **Documentation** is available **online**.
- > **Identification function** by way of flashing LEDs on the dp loudspeaker systems.
- > **Firmware updates** can be applied.



## Quick Start Guide:

[www.seeburg.com](http://www.seeburg.com) > DOWNLOADS > User Manuals

## AES NETWORK interface

All selfpowered systems are equipped as standard with an **AES Network interface**.

This is used for **remote control** via the **SEEBURG Network Manager** and for **Audio-over-Ethernet (AoE) audio transmission via AES 67.**



AES Network



### Flying Cradle

for GL System,  
(incl. 1 x load adapter M10,  
1 x ball lock pin 8 x 25 mm),  
max. load: 120 kg  
Order No. **01354/II**



### Flying Cradle

for GL System,  
(incl. shackle / 01372/GL),  
max. load 120 kg  
Order No. **01354**



### Flying Bracket

for GL 16,  
(incl. black version: 2 x handle screws  
M10 x 30 mm, 1 x knurled head nut /  
white version: 2 x socket head screws  
M10 x 30 mm, 1 x knurled head nut)  
Order No. **01352/GL16/set/w** (RAL 9010)  
Order No. **01352/GL16/set**



### Handle Screw

for flying brackets, adjustable  
Order No. **08375/20** (M10 x 20)  
Order No. **08375/30** (M10 x 30)



### Pole Mount Adapter - M20

for flying bracket,  
M20 x 35 mm with nut,  
(incl. 1 x socket head screw  
M20 x 30 mm, 1 x flat  
Order No. **08127/nut**



### Load Adapter M10

M10, for flying cradle GL System  
Order No. **01328**



### Ball Lock Pin

for flying cradle GL System  
Order No. **01380/8x25** (8 x 25 mm)



### Shackle

for GL flying cradle,  
max. load 1000 kg  
Order No. **01372/GL**



### Quick Trigger TV Clamp

max. load 200 kg  
Order No. **01223/TV**



### Quick Trigger Clamp

max. load 100 kg  
Order No. **01223/100 kg**



### Quick Trigger Clamp - small

M10, max. load 20 kg  
Order No. **01223/20 kg**



### Ring Screw

M10– DIN 580  
Order No. **73700** (zincd)  
Order No. **73700/sw** (black zincd)



### TV Adapter

M20 external thread,  
28 mm Ø  
Order No. **08128/M20**



### Chain Fastener

VBS 7 mm  
Order No. **01378**



### Steel Safety

6 mm x 600 mm, black,  
quick connector undetachably,  
max. load 22 kg (BGI 810-3)  
Order No. **01376/6**



TV Adapter -> Flying Bracket

### Wall Mount



2 x M6 fixing holes (d=73 mm),  
1 x M10 fixing hole (center),  
max. load 25 kg

Order No. **03034/w** (RAL 9010)

Order No. **03034**

### Wall Mount Spacer



for Wall Mount (03034), socket head  
screw M10 x 55 mm, 65 (height)  
x 100 (width) x 40 mm (depth)

Order No. **03034/spc**

Order No. **03034/spc/w** (RAL 9010)

### Wall Mount



(incl. socket head screw M10 x 70 mm,  
M10 hex lock nut and flat washer),  
max. load 40 kg

bar: 269 mm

Order No. **08130/F/269/w** (RAL 9010)

Order No. **08130/F/269**

bar: 400 mm

Order No. **08130/F400/w** (RAL 9010)

Order No. **08130/F400**

### Connection Adapter



for GL 16 i / GL 16 Sub  
-> M20 base plates, (incl. 1 x flat  
head screw M20 x 80 mm, 2 x flat  
head screws M10 x 20 mm)

Order No. **01276/GL16i**

### Connection Adapter



for GL 16 c -> GL 16 Sub,  
(incl. 1 x screw M10 x 30 mm,  
1 x flat washer, 2 x flat head screws  
M10 x 20 mm)

Order No. **01276/GL16c**

### MultiRigg™



for flown and ground stacked  
applications, (incl. 2 x knurled screws  
M10 x 20 mm, 1 x handle screw  
M8 x 55 mm), max. load 50 kg

Order No. **01360**

### MultiRigg™ Light



for fixed installations,  
(incl. 2 x socket head screws M10 x  
20 mm), max. load 50 kg

Order No. **01362**

### MultiRigg™ Basic



(incl. load adapter M10,  
2 x knurled screws M10 x 20 mm),  
max. load: 50 kg

Order No. **01364**

### Adapter



for MultiRigg™ / Light / Basic  
for mounting on M10, (incl. 1 x screw  
M10 x 25 mm), max. load 20 kg

Order No. **01358**

### Height Extender



for stacking  
GL 8 i, GL 16 i, GL 16 Sub  
height 35,4 cm

Order No. **01277/35**

height 110 cm

Order No. **01277/110**



Spacer -> Wall Mount



Connection Adapter



Adapter > MultiRigg™ > M10



Height Extender

## ACCESSORIES GL 16

### 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 / GL 16 Sub

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, inserts for  
accessories, interior lined with felt,  
size (H x W x D): 48 x 77 x 61 cm

Order No. **16004/pro/T**

### 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**

### Speaker Stand



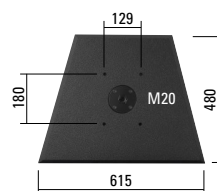
incl. wind up,  
height 138,5 to 218 cm,  
max. load 50 kg

Order No. **03011**

height 137,5 to 218,5 cm,  
max. load 50 kg

Order No. **03010**

### Base Plate, Small

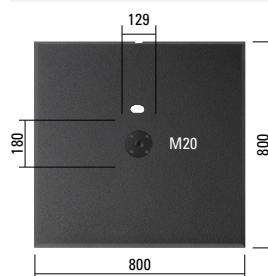


for GL 16 / GL 16 Sub / L-Series,  
with M20 flange, 61,5 x 48,0 cm

Order No. **01278**

Order No. **01278/w** (RAL 9010)

### Base Plate, XL



for stacked mounting  
of multiple GL 16 units / GL 16 Sub,  
with M20 flange, cable channel,  
80,0 x 80,0 cm

Order No. **01279**

Order No. **01279/w** (RAL 9010)

