GF82I - GF82AI - GF82TI
8x2" Line Array Column Speaker - Passive - Active - Passive With transformer

Thank you for choosing KGEAR!

To ensure proper operation, please carefully read this owner's manual and safety instruction before using the product. After reading this manual, be sure to keep it for future reference. If you have any questions about your new device please contact K-array customer service at info@kgear.it or contact the local distributor in your country.

GF82I, GF82TI, GF82AI are the medium-size and minimalist line array elements of the GF family in a practical and compact column format and resistant frame. The GF82I, GF82TI, GF82AI comprise 8x2" ferrite magnet woofers closely-spaced into a recycled ABS enclosure, featuring PAT (Pure Array Technology).

These columns speakers are the perfect solution for speech reproduction with high definition and intelligibility, thanks to their directivity and a narrow vertical dispersion, as well as music reproduction when coupled with a KGEAR subwoofer.

GF82I is a 200W line array element with selectable impedance: low Z - 16 Ω / high Z- 64 Ω.

GF82TI has the feature of an internal transformer and it is compatible with high voltage lines at 70V or 100V and has different power taps: 4/8/16/32 W @ 100V or 2/4/8/16 W @ 70V.

GF82AI is an active speaker with a built-in amplifier module with a balanced line input, a mute contact and an auto ON-OFF switch with selectable thresholds, plus a speaker output to connect another KGEAR speaker or passive subwoofer from KGEAR GS family.

Unpacking

Each KGEAR device is inspected before leaving the factory. Upon arrival, carefully inspect the shipping carton, then examine and test your new device. If you find any damage, immediately notify the shipping company. Check that the following parts are supplied with the product:

- 1 x GF82I - (GF82AI or GF82TI) line array column speaker
- 1x Phoenix connectors x GF82I (Euroblock 1,5/ 4-ST-3,81)
- 2x Phoenix connectors x GF82AI (Euroblock 1,5/ 4-ST-3,81)
- 1x Phoenix connectors x GF82TI (Euroblock 1,5/ 5-ST-3,81) with dedicated jumpers to selectable impedance and connections.
- 2 x Wall mount L-brackets + screws and covers.

x2
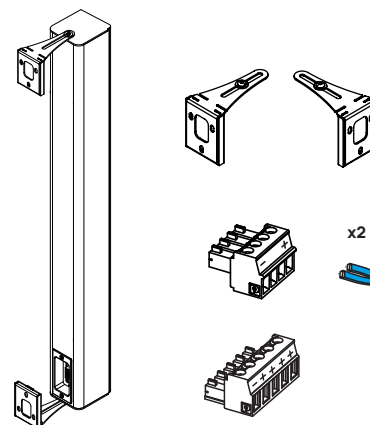
GF82I Rear Panel

GF82I passive speaker is equipped with 1x Phoenix connector compatible 4 pin - Euroblock 1,5/ 4-ST-3,81.

GF82I - GF82AI - GF82TI
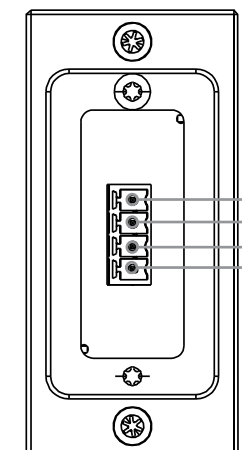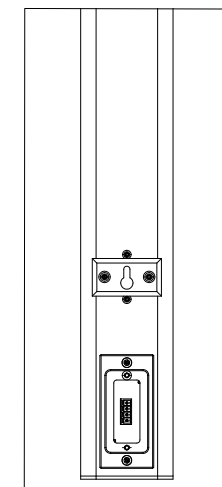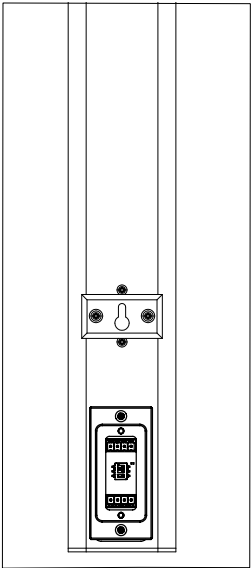
GF82I Wiring

Signal polarity output and wiring of GF82 passive speaker:

GF82 I - Wiring		
PIN 1	🔴	SIGNAL -
PIN 2	🔵	SIGNAL +
PIN 3	🔴	SIGNAL -
PIN 4	🔵	SIGNAL +

Impedance selection

With GF82I passive speaker the user can set the speaker @ Low impedance 16 Ω or @ High impedance 64 Ω. A jumper cable is provided to connect the two central pins of the Phoenix flying connector for the 32Ω configuration.

Impedance selection 16Ω Low-Z

Impedance selection 64Ω High-Z

GF82AI Rear Panel

GF82AI 2x Phoenix connector Euroblock compatible 4 pin - Euroblock 1,5/ 4-ST-3,81.

DIP SWITCH

1 2 3 4

GF82AI Wiring

Signal polarity Input - mute contact - speaker output and ON-OFF switch selector of GF82A.

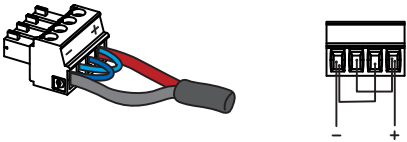| GF82A I - Wiring				
	Connector 1		Connector 2	
PIN 1	MUTE	⚫	+ DC POWER IN	⚫
PIN 2	SIGNAL - BALANCED	🔵	- DC POWER IN	🟡
PIN 3	SIGNAL +BALANCED	🔴	SPK. OUTPUT +	🔴
PIN 4	GROUND BALANCED	🟡	SPK. OUTPUT -	🔵

GF82AIControls

GF82AI features 2 x Phoenix connectors (4-pin Euroblock 1,5/ 4-ST-3,81) with:

INPUTS:
- 1x balanced line input
- 1x mute contact (normally open) - more information about mute wiring and connections in the Mute contact section in the next page.

OUTPUTS:
- 1x speaker output to connect another KGEAR speaker or passive subwoofer driven by the built-in amplifier module, 4 Ω minimum load.

CONTROLS:
- 1x auto ON/OFF switch with selectable thresholds The dip switch controls the auto-standby mode of the speaker and can be set to 3 different thresholds - see the table in the next page for more information about ON/OFF switch modes.

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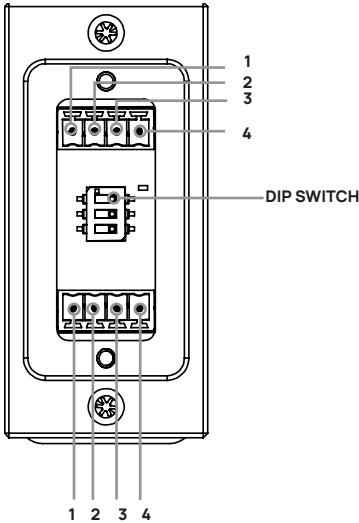
Mute Contact

It is possible to connect an external switch to the Mute contact input to close the circuit down and switch the speaker off. Please follow the wiring scheme below.

INPUTS

MUTE GND + −

MUTE CONTACT

normally open

LINE IN

GND

24V DC POWER SUPPLY

DC + DC - + −

OUTPUTS

It is possible to use the G-AL120 power supply accessory to provide power to the internal amplifier module. This accessory is able to drive up to 1x GF82AI amplifier module and 4x GF82I connected in parallel with the LOW-Z → 16 Ω impedance selection.

With a minimum load of 4 Ω, the amplifier module is capable of delivering a power of 100 W with a maximum consumption of 6.5 A (Irms).

DIP Switch modes

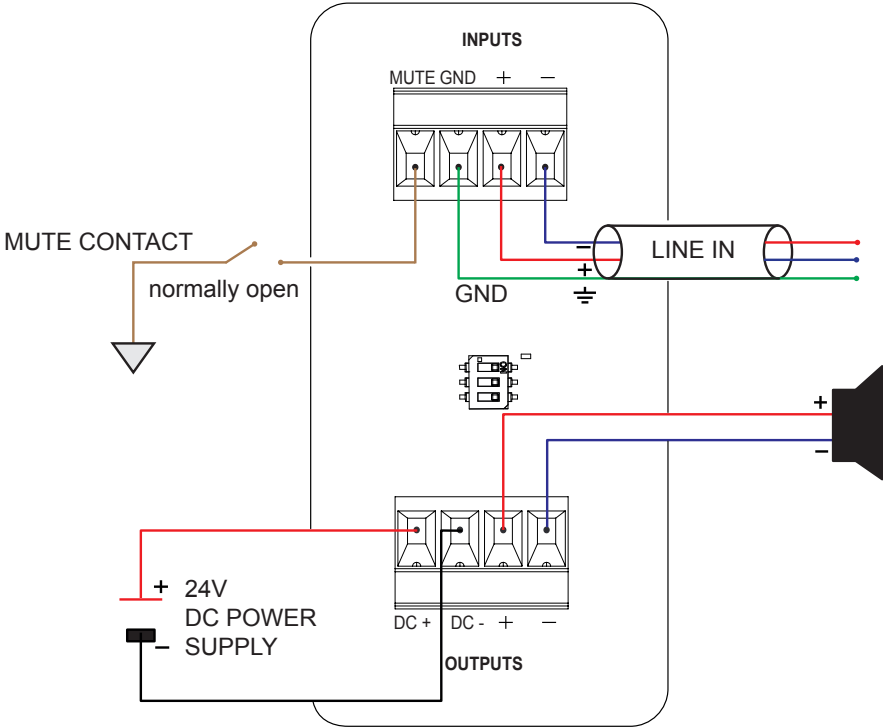The table below illustrates the three different modes available along with their corresponding input signal values/thresholds values, which can be used to configure the ON/OFF switch.

ON/OFF SWITCH MODES			
MODES		**Thresholds Values**	**Description**
NO THRESHOLDS		/	
HIGH THRESHOLDS LOW + MID + HGH ON		-42 dBu	The amplifier switches on only after a stronger signal has passed the chosen threshold. This mode is useful to avoid noisy signal to enter the circuit
MEDIUM LOW+MID ON		-46 dBu	This mode requires the input signal to be stable and exceed the minimum threshold for an extended period to keep the speaker switched on.
LOW THRESHOLDS LOW ON		-52 dBu	The amplifier module switches ON immediately when the signal is higher than this minimum threshold, this mode is useful when a quick response is needed.

GF82I - GF82AI - GF82TI

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GF82TI Rear Panel

GF82TI 1 x Phoenix connector compatible
5 pin - Euroblock 1,5/ 5-ST-3,81
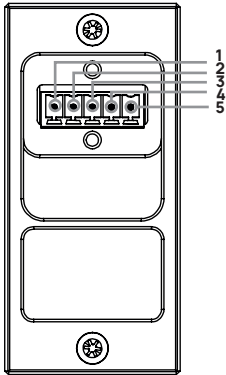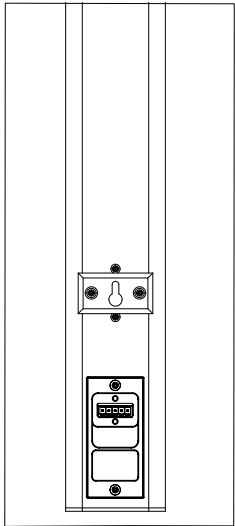
TRANSFORMER'S POWER TAPS

GF82T - Wiring				
	70 V		100 V	
PIN 1	COMMON -	●	COMMON -	●
PIN 2	2 W	●	4 W	●
PIN 3	4 W	●	8 W	●
PIN 4	8 W	●	16 W	●
PIN 5	16 W	●	32 W	●

GF82TI Transformer wiring

GF82TI has the feature of an internal transformer and it is compatible with high voltage lines at 70V or 100V and has different power taps: 4/8/16/32 W @ 100V or 2/4/8/16 W @ 70 V.

This selector makes it easy to connect a large number of speakers in parallel with high power and efficiency and setting different output levels on each speakers, for every kind of use and different settings.

GF82T can be installed with the dedicated IP accessory G-IPCAP2.

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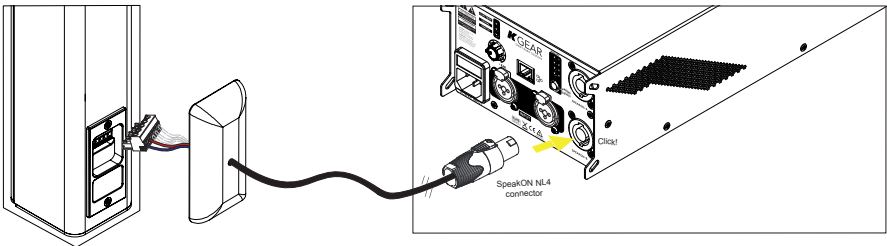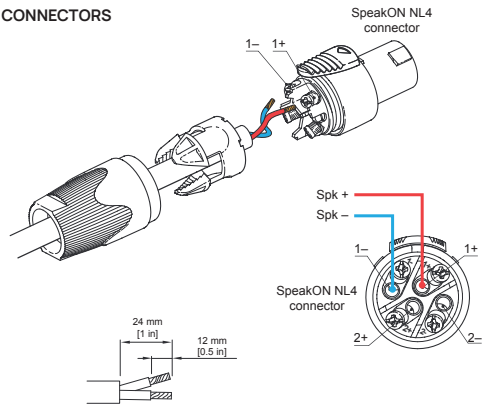
G-IPCAP - IP sealing accessory

GF82, GF82A and GF82T can be protected against external agents, salt, chlorine and water using the G-IPCAP1 and G-IPCAP2. These are dedicated IP sealing CAP made of highly resistant and tight rubber, thought to be mounted at the rear panel of the speakers to protect connectors from water.

G-IPCAP1 is thought to be mounted to raise the IP grade of GF82 passive speaker and GF82A active speaker, while G-IPCAP2 is dedicated to GF82T speaker with transformer.

To install the speakers with the dedicated accessory, please follow the procedure shown below:

1. Take the dedicated accessory G-IPCAP1 and make a hole into the rubber material with a bradawl.
2. Choose a cable with a sheath for greater insulation and pass it through the hole.
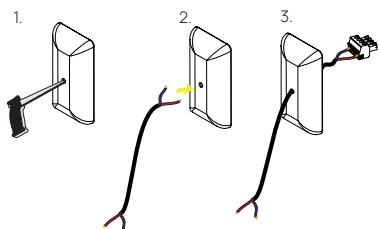
3. Connect the wires to pins 1 - 4 of the provided Euroblock connector and plug it to the speaker terminals
4. Use the jumper cables for the desired impedance configuration.
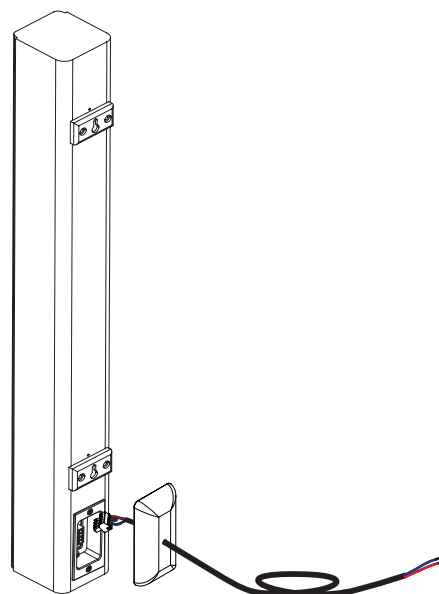
5. GF82A connections are shown in the picture below. For external input and DC power connection,connect the wires to the provided connector and plug it to the speaker terminals at the top of the rear panel.
6. Connect the wires for speaker output to the terminals at the bottom of the panel.
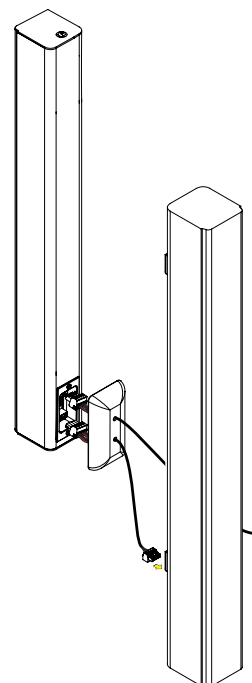
7. Ensure a secure fit by firmly pressing down the accessory's gasket to close the connector compartment.

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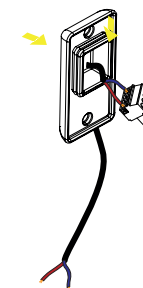
8. Connect the speaker to the dedicated amplifier channel. Finally GF82 is installed with its dedicated G-IPCAP1 or G-IPCAP2 accessory.
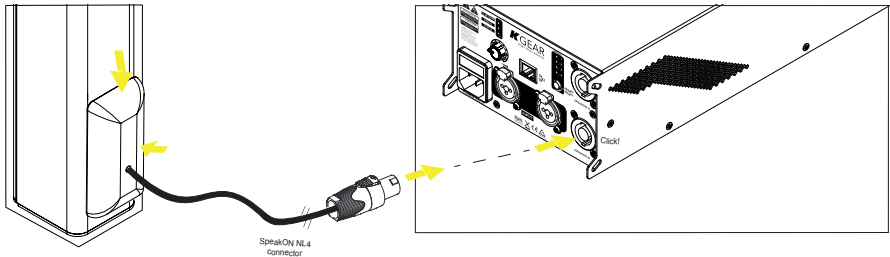
Example of configuration

It is possible to mount more GF82 elements in array setting, connecting each speaker with high impedance configuration. In this example, 16x GF82 are connected with the selected impedance and driven by a single channel of GA43L/GA46L amplifier..

SpeakON NL4 connector

Click!

Euroblock connector to SpeakON
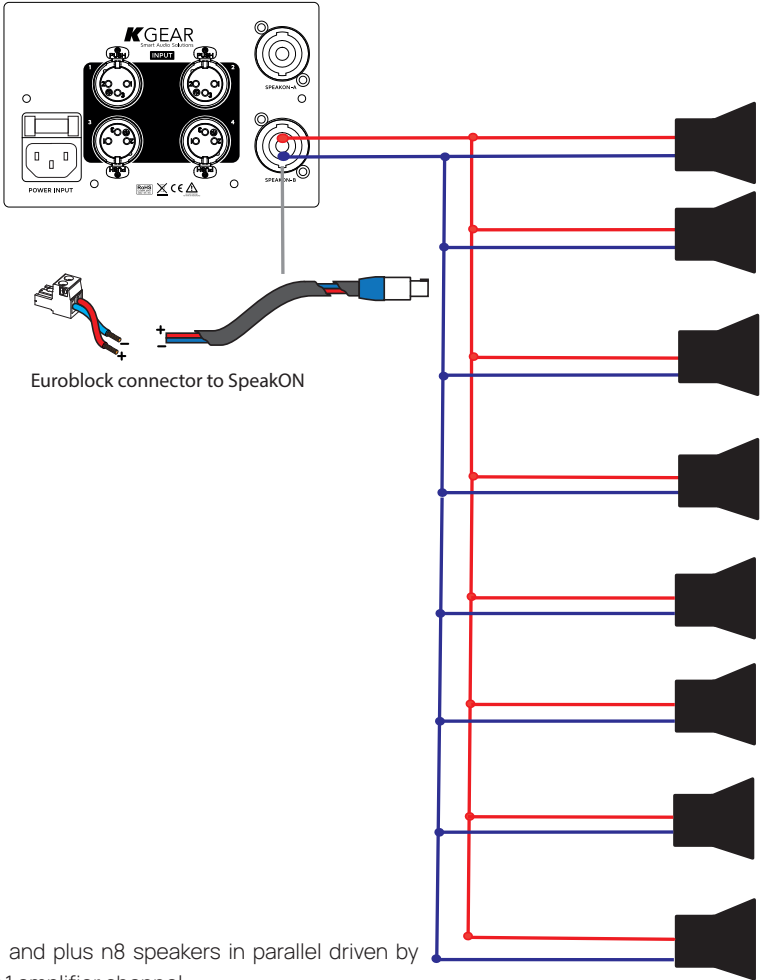
... and plus n8 speakers in parallel driven by just 1 amplifier channel

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IMPORTANT SAFETY INSTRUCTIONS

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

ATTENTION: RISQUE DE CHOC ELECTRIQUE NE PAS OUVRIR

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This symbol alerts the user to the presence of recommendations about the product's use and maintenance.

The lighting flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated, dangerous voltage within the product enclosure that may be of magnitude to constitute a risk of electrical shock.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in this guide.

Operator's manual; operating instructions
This symbol identifies the operator's manual that relates to the operating instructions and indicates that the operating instructions should be considered when operating the device or control close to where the symbol

For indoor use only
This electrical equipment is designed primarily for indoor use.

WEEE
Please dispose of this product at the end of its operational lifetime by bringing it to your local collection point or recycling center for such equipment.

This device complies with Restriction of Hazardous Substances Directive.

Warning. Failure to follow these safety instructions could result in fire, shock or other injury or damage to the device or other property.

General heed and warnings

- Read these instructions.
- Keep these instructions.
- Heed all warnings.
- Follow all instructions.
- Do not use this apparatus near water.
- Clean only with dry cloth.
- Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat
- Only use attachments/accessories specified by the manufacturer.
- Clean the product only with a soft and dry fabric. Never use liquid cleaning products, as this may damage the products cosmetic surfaces.
- Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury   from tip-over.
- Unplug   this apparatus during lightning storms or when unused for long periods of time.
- Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

CAUTION: These servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

These apparatus are intended for professional use.

Installation and commissioning may only be carried out by qualified and authorized personnel.

WARNING: Only use attachments/accessories specified or provided by the manufacturer (such as the exclusive supply adapter, battery, etc.)

Use only speaker cables for connecting speakers to the speaker terminals. Be sure to observe the amplifier's rated load impedance particularly when connecting speakers in parallel. Connecting an impedance load outside the amplifier's rated range can damage the apparatus.

KGEAR will not shoulder any responsibilities for products modified without prior authorization.

Service

To obtain service:

Please have the serial number(s) of the unit(s) available for reference.

Contact the official KGEAR distributor in your country: find the Distributors and Dealers list on www.kgear.it website. Please describe the problem clearly and completely to the Customer Service.

You will be contacted back for on-line servicing.

If the problem cannot be resolved over the phone, you may be required to send the unit in for service. In this instance, you will be provided with an RA (Return Authorization) number which should be included on all shipping documents and correspondence regarding the repair. Shipping charges are the responsibility of the purchaser.

Any attempt to modify or replace components of the device will invalidate your warranty. Service must be performed by an authorized K-array service center.

Cleaning

Use only a soft, dry cloth to clean the housing. Do not use any solvents, chemicals, or cleaning solutions containing alcohol, ammonia, or abrasives. Do not use any sprays near the product or allow liquids to spill into any openings.

Installation

According to Table 35 of IEC/EN 62368-1:2018, equipments are suitable for mounting at heights ≤ 2 m. Install in a well ventilated location at 35°C (95°F) max environment temperature.

GF82I - GF82AI - GF82TI

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Mechanical Drawings

GF82I

35mm [1,4in]
64mm [2,5in]
[2,9in]

GF82AI

35mm [1,4in]
64mm [2,5in]
[2,9in]

GF82TI

35mm [1,4in]
64mm [2,5in]
[2,9in]

60mm [2,36in]
65mm [2,56in]
7mm [0,28in]
45mm [1,77in]
25mm [0,96in]
390mm [15,35in]
600mm [23,62in]
8mm [0,3in]
[2,1in]
109mm [4,3in]

30mm [1,2in]
28mm [1,1in]
54mm [2,1in]

13mm [0,5in]
48mm [1,9in]
40mm [1,6in]
29mm [1,1in]

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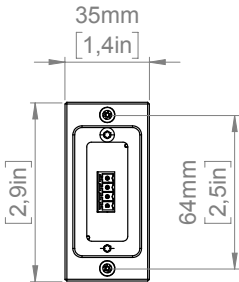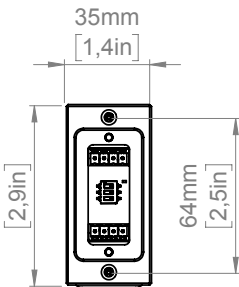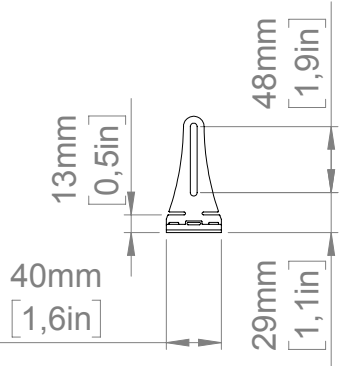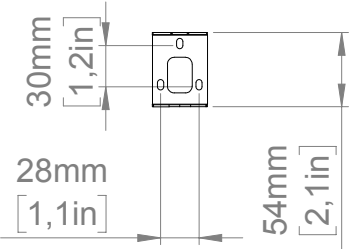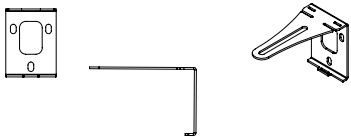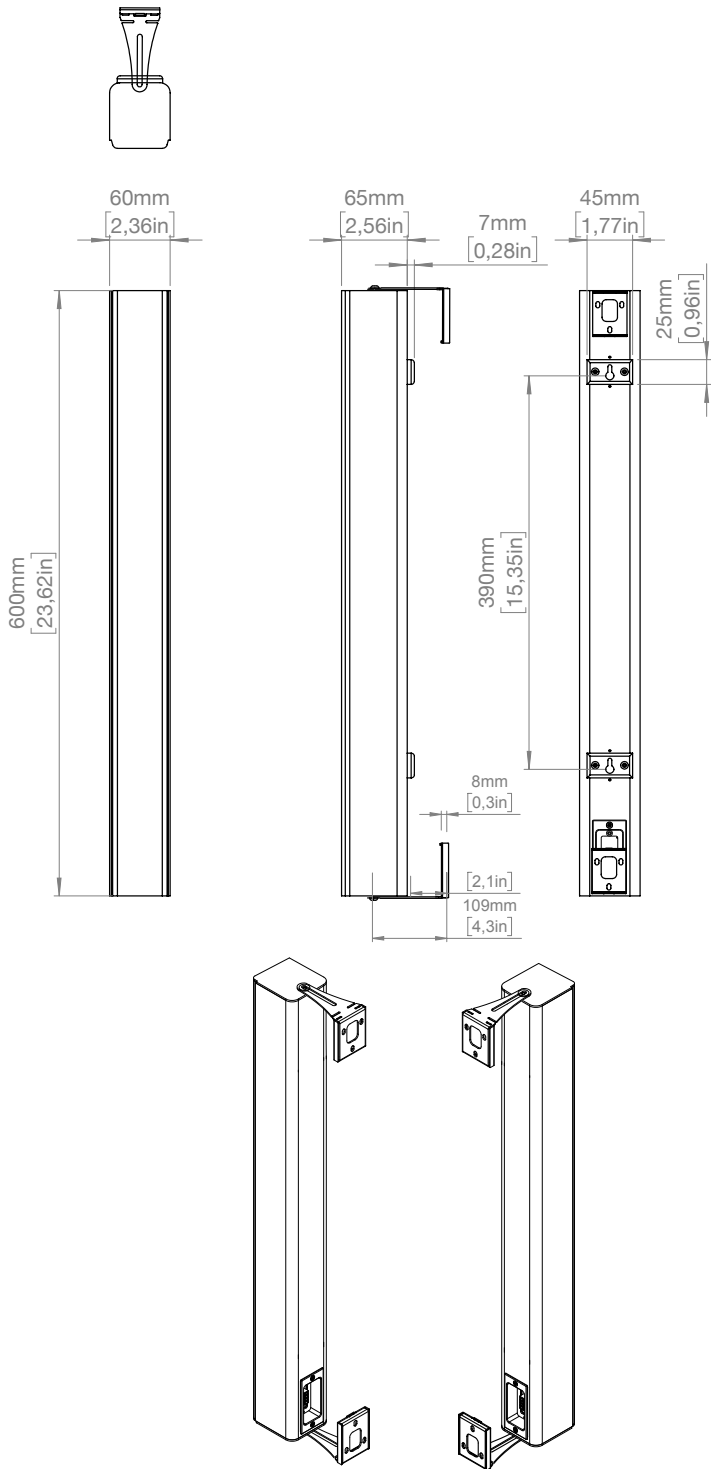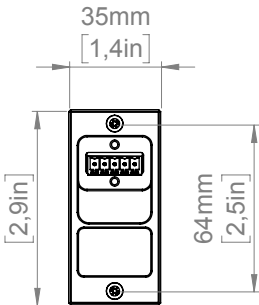
GF82I - GF82AI - GF82TI

GF82

Technical specifications

Type
Passive line array loudspeaker

Transducer
8 x 2" ferrite magnet woofer

Frequency Response[1]
150 Hz - 20 kHz (-6dB)

Max SPL[2]
119 dB Peak

Power Handling
200 W

Coverage
V.15° I H.90°

Connectors
1x Phoenix connector (4-pin euroblock)

Nominal Impedance
16Ω-64Ω

IP Rating[3]
IP54

Handling & Finishes

Dimensions (WxLxH)[4]
60x600x65 mm (2.36x23.62x2.56 in)

Weight
1,6 kg (3.5 lb)

Material
ABS

Color
Black - White (GF82W)

1 With dedicated preset
2 Maximum SPL is calculated using a signal with crest factor 4 (12 dB) measured at 8 m then scaled at 1 m
3 IP55 With dedicated G-IPCAP1 accessory
4 Brackets not included in measures - for more details see the mechanical drawings.

1 With dedicated preset
2 Maximum SPL is calculated using a signal with crest factor 4 (12 dB) measured at 8 m then scaled at 1 m
3 IP55 With dedicated G-IPCAP2 accessory
4 Brackets not included in measures - for more details see the mechanical drawings.

GF82A

Technical specifications

Type
Active line array loudspeaker

Transducer
8 x 2" ferrite magnet woofer

Frequency Response[1]
105 Hz - 20 kHz (-6dB)

Max SPL[2]
105 dB

Coverage
V.15° I H.90°

Connectors
2x Phoenix connector (4-pin Euroblock)
Balanced line in
Mute Contact
Power out
24V DC IN (power supply not included)

Controllers
Auto ON/OFF with selectable threshold

Amp Module
1-channel Class D amplifier

Output Power
100W @ 2 Ω (24V power)

Power Consumption
30W Power Load 1/8 Max Power

Protections
Thermal Protections
(Power-Limiting - Thermal Shutdown)
Short - circuit/overload output protections

Operating Range
12-24 V DC

IP Rating[3]
IP54

Handling & Finishes

Dimensions (WxLxH)[4]
60x600x65 mm (2.36x23.62x2.56 in)

Weight
1,6 kg (3.35 lb)

Material
ABS

Color
Black - White (GF82AW)

GF82T

Technical specifications

Type
Passive line array loudspeaker with transformer

Transducer
8 x 2" ferrite magnet woofer

Frequency Response[1]
150 Hz - 20 kHz (-6dB)

Max SPL[2]
119 dB Peak

Rated Power
200 W

Transformer Taps
2/4/8/16 W @ 70 V 4/8/16/32 @ 100 V

Coverage
V.15° I H.90°

Connectors
1x Phoenix connector (4-pin euroblock)

IP Rating[3]
IP54

Handling & Finishes

Dimensions (WxLxH)[4]
60x600x65 mm (2.36x23.62x2.56 in)

Weight
2,2 kg (4.85lb)

Material
ABS

Color
Black - White (GF82TW)

1 With dedicated preset
2 Maximum SPL is calculated using a signal with crest factor 4 (12 dB) measured at 8 m then scaled at 1 m
3 IP55 With dedicated G-IPCAP1
4 Brackets not included in measures - for more details see the mechanical drawings.

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