

F1222

Manual (3.0E)

References in the manual

WARNING!

This refers to a potentially dangerous situation which may lead to personal injury.

CAUTION!

This refers to a potentially dangerous situation which may lead to damage to the equipment.

IMPORTANT!

This refers to a situation which may cause the equipment to malfunction.

Symbols on the equipment



Please refer to the information in the operating manual.



WARNING!
Dangerous voltage!

General Information

F1222 Manual

Version 3.0E, 10/2003, D2087.E.03

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The information contained in this manual has been carefully checked for accuracy, at the time of going to press, however no guarantee is given with respect to the correctness.

d&b audiotechnik AG accepts no responsibility for any errors or inaccuracies that may appear in this manual or the products and software described in it.

Technical specifications, dimensions, weights and properties do not represent guaranteed qualities.

As manufacturers we reserve the right to make alterations and modifications within the framework of legal provisions, as well as changes aimed at improving quality.

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Safety precautions

Before you use our products, read the manual carefully and observe all the safety precautions. They will protect you and help to avoid equipment failures.

Keep this manual in a safe place so that it is available for future reference.

If you supply d&b products, please draw the attention of your customers to these safety guidelines. Enclose the relevant manuals with the systems. If you require additional manuals for this purpose, you can order them from d&b.

Information regarding use of loudspeakers

WARNING!

Never stand in the immediate vicinity of loudspeakers driven at a high level. Professional loudspeaker systems are capable of causing a sound pressure level detrimental to human health. Seemingly non-critical sound levels (from approx. 95 dB SPL) can cause hearing damage if people are exposed to it over a long period.

In order to prevent accidents when deploying loudspeakers on the ground or when flown, please take note of the following:

When setting up the loudspeakers or loudspeaker stands, make sure they are standing on a firm surface. If you place several systems on top of one another, use straps to secure them against movement.

Only use accessories which have been tested and approved by d&b for assembly and mobile deployment. Pay attention to the correct application and maximum load capacity of the accessories as detailed in our specific "Mounting instructions" or in our "Flying system and Rigging manuals".

Ensure that all additional hardware, fixings and fasteners used for installation or mobile deployment are of an appropriate size and load safety factor. Pay attention to the manufacturers instructions and to the relevant safety guidelines.

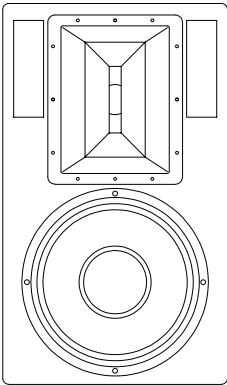
Regularly check the loudspeaker housings and accessories for visible signs of wear and tear, and replace them when necessary.

Regularly check all load bearing bolts in the mounting devices.

CAUTION!

Loudspeakers produce a static magnetic field even if they are not connected or are not in use. Therefore make sure when erecting and transporting loudspeakers that they are nowhere near equipment and objects which may be impaired or damaged by an external magnetic field. Generally speaking, a distance of 0.5 m (1.5 ft) from magnetic data carriers (floppy disks, audio and video tapes, bank cards, etc.) is sufficient; a distance of more than 1 m (3 ft) may be necessary with computer and video monitors.

F1222



CAUTION!

The F1222 is a compact, actively driven, 2-way full-range loudspeaker which uses a 12" LF driver and 2" HF compression driver in an arrayable bass-reflex cabinet. The HF driver is coupled to a 60° x 40° (hor. x vert.) constant directivity (CD) horn. As an option the F1222 loudspeaker can be equipped with a 90° x 40° horn.

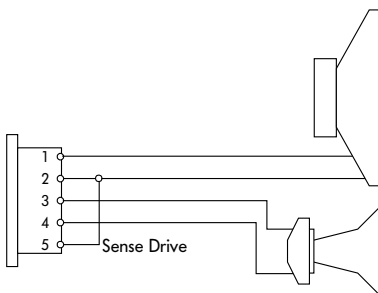
The F1222 cabinet is constructed from marine plywood and has an impact resistant paint finish. The front of the loudspeaker cabinet is fitted with a rigid metal grill, covered with a replaceable acoustically transparent foam. The cabinet incorporates a pair of steel handles, a pair of countersunk M10 threaded inserts on the top and bottom panels to accept stand adapters and mounting frames. The top, bottom and rear panels of the cabinet also have Anca flying tracks to accept rigging hardware.

Only operate F1222 cabinets with a d&b D12 amplifier in "2-Way Active" and F1222 mode or an A1 mainframe fitted with a F1222 controller module, otherwise there is a risk of damaging the loudspeaker components.

Connections

The F1222 cabinet is fitted with a single EP5 connector and uses the pin assignments 1/2/3/4 and 5 (Pin 5: SenseDrive - D12 in conjunction with 5-wire cables).

The F1222 can be supplied with a single CACOM connector as an option to drive the F1222 cabinet with the d&b A1 mainframe. SenseDrive is also available when the F1222 is driven by the A1 mainframe.

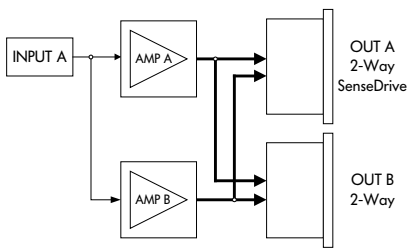


Connector wiring

	LF+	LF-	HF+	HF-	SenseDrive LF
EP5	1	2	3	4	5

EP5 pin assignments

Operation with D12



**D12 Input/Output routing
2-Way Active mode**

Selecting "2-Way Active" and F1222 mode enables up to two F1222 cabinets to be driven actively by the D12 amplifier.

The input signal is fed to INPUT A, while the input signal is routed (linked) to INPUT B internally.

Controller settings

For acoustic adjustment the settings CUT, HFC and CPL can be selected.

CUT

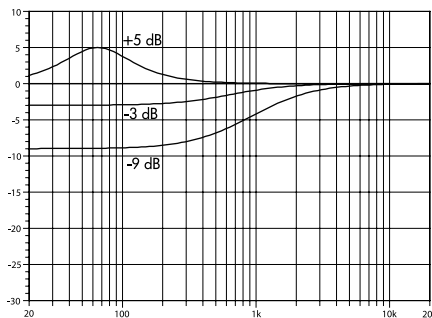
Set to CUT, the frequency and phase response of the F1222 loudspeaker is modified for operation with d&b active subwoofers.

HFC circuit

Set to HFC (High Frequency Compensation), the level above 10 kHz is raised to give a flat response up to 17 kHz.

CPL circuit

The CPL (Coupling) circuit compensates for coupling effects between the cabinets when building closely coupled arrays. CPL begins gradually at 1 kHz, with maximum attenuation below 250 Hz, providing a balanced frequency response when the F1222 cabinet is used in arrays of two or more. The function of the CPL circuit in the D12 amplifier is shown in the diagram opposite and can be set in dB attenuation values between -9 and 0, or a positive CPL value which creates an adjustable low frequency boost around 65 Hz (0 to +5 dB).



Frequency response of CPL circuit

Operation with A1

Two F1222 cabinets can be driven by a single A1 mainframe fitted with a F1222 controller module.

CUT switch

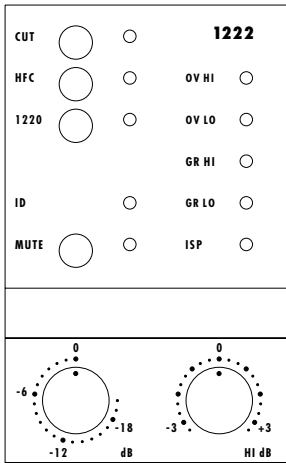
The CUT setting is available. The characteristics of the CUT setting is explained under the previous section "Operation with D12 - Controller settings".

HFC switch

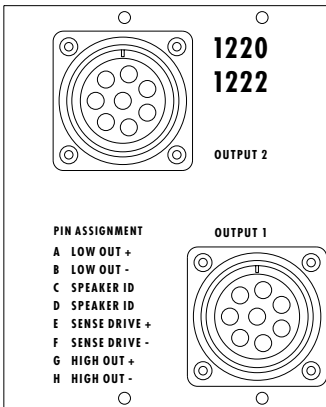
The HFC setting is available. The characteristics of the HFC setting is explained under the previous section "Operation with D12 - Controller settings".

1220 switch

The 1220 switch configures the controller module to drive existing F1220 loudspeakers. This setting is identical to the standard setting of the 1220 controller module.



Controls on 1222 controller module



1222 controller rear panel

Controller module rear panel

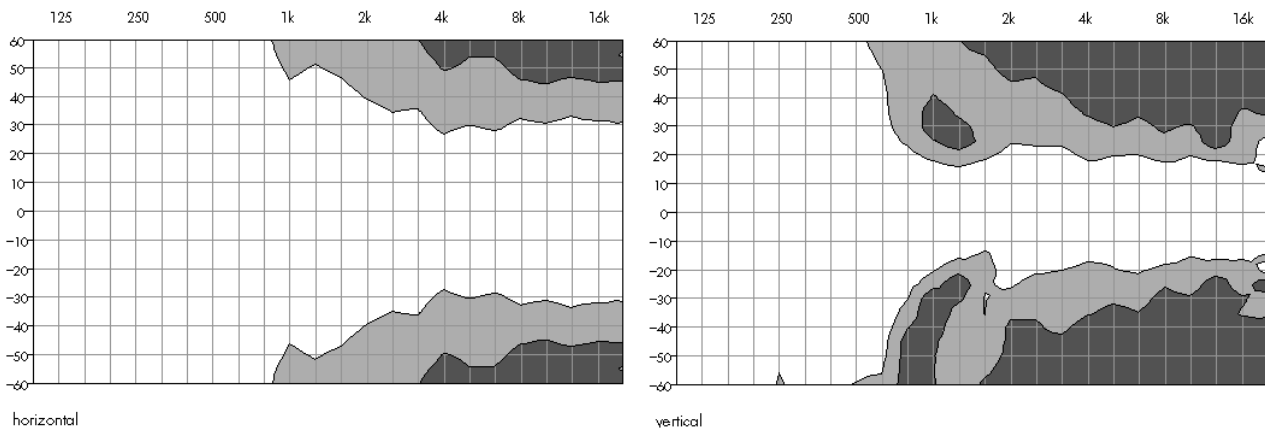
Two 8 pin, identically wired, CACOM output connectors (male) are fitted to the module rear panel. To avoid a potential shock hazard, if a single F1222 cabinet is connected, the pins on the unused socket are internally isolated from the mainframe power amplifier outputs.

Compatibility to 1220 systems

The F1222 cabinet uses a different 12" low frequency driver to the F1220. Both systems have identical power handling capacity and acoustical quality. For sound reasons the F1222 cabinet should not be driven with a 1220 controller.

Dispersion characteristics

The diagrams below show dispersion angle vs frequency plotted using lines of equal sound pressure (isobars) at -6 dB and -12 dB.



horizontal
F1222 isobar diagrams (60°x40°)

vertical

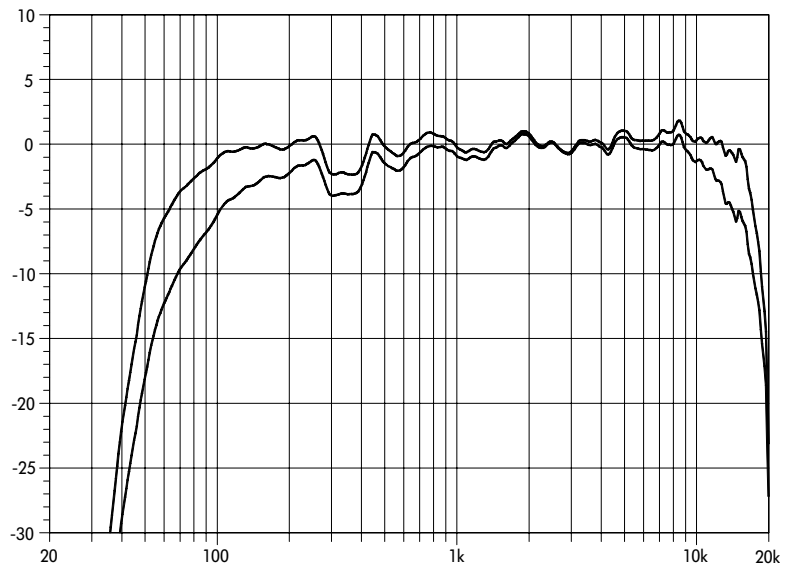
Technical specifications

F1222 System data

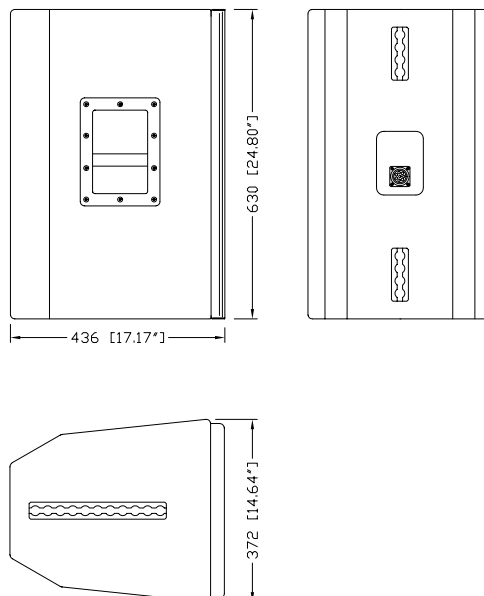
Frequency response (-5 dB) 60 Hz - 16 kHz
 Max. sound pressure (1 m, freefield) with D12 or A1 134 dB
 (SPLmax peak, test signal pink noise with crest factor 4)
 Input level for 100 dB SPL / 1 m -13 dBu
 Polarity to controller INPUT (XLR pin 2: + / 3: -) LF: - / HF: +

F1222 loudspeaker

Nominal impedance (LOW / HIGH) 8 / 16 ohms
 Power handling capacity LOW (RMS / peak 10 ms) 300 / 1200 W
 Power handling capacity HIGH (RMS / peak 10 ms) 50 / 200 W
 Nominal dispersion angle (hor. x vert.) 60° x 40°
 optional 90° x 40°
 Connections 1 x EP5
 Pin assignments 1: LF+/2: LF-/3: HF+/4: HF-/5: SenseDrive
 optional 1 x CACOM
 Pin assignments printed on the A1 controller module rear panel
 Weight 35 kg (78 lb)



F1222 frequency response, standard, CUT and HFC switch settings



F1222 cabinet dimensions in mm [inch]

EU declaration of conformity (CE symbol)



EU conformity of loudspeakers

This declaration applies to loudspeakers manufactured by d&b audiotechnik AG and includes the types listed in the table below:

- **F1222 Z0055**

All production versions of these types are included, provided they correspond to the original technical version and have not been subject to any later design or electromechanical modifications.

We herewith declare that said products are in conformity with the provisions of the following EC directives including all applicable amendments:

- **89/336 Electromagnetic Compatibility**

The following standards have been applied:

- **DIN EN 55013:08-1991**
- **DIN EN 55020:05-1995**
- **DIN EN 50082-1:03-1993**