



## Architectural Datasheet: Commercial 100V/70V Line Invisible Loudspeaker

Life Fidelity Series

# LFi2T

### Application:

Flush mounted into walls and ceilings (Gypsum board or solid construction types) and skimmed over for a truly invisible audio solution in multi speaker commercial properties and public buildings.

### Environment:

Interiors, wet rooms (bathrooms, kitchens and pool areas)

### Life Fidelity LFi2T Part Numbers:

LFi2T70/5	(5W tapped for 70V line systems)
LFi2T70/10	(10W tapped for 70V line systems)
LFi2T70/20	(20W tapped for 70V line systems)
LFi2T100/5	(5W tapped for 100V line systems)
LFi2T100/10	(10W tapped for 100V line systems)
LFi2T100/20	(20W tapped for 100V line systems)



Zero visual impact, easily installed, wide bandwidth, mid power, highly dynamic, wide dispersion, loudspeaker system.

The Amina LFi2T is a totally invisible full range loudspeaker system designed for use in commercial installations where high clarity sound and wide, even audio coverage is required whilst allowing the ability to create exceedingly high quality wall or ceiling finishes of all kinds.

Using Distributed Mode Technology the LFi2T works just like a natural musical instrument creating a large, vibrating soundboard. It shares the musical instrument's ability to generate high sound pressure levels over wide areas and with even distribution. The vibrating area of the speaker is flat and has been designed specifically to be embedded behind a surface Gypsum plaster skim or a thin veneer of wood or fibreboard.

Due to their wide dispersion of sound, positioning the LFi2T in a room is much less critical compared to conventional loudspeakers. Also, the number of loudspeakers required in any one space is dramatically reduced (up to 4 to 1) resulting in reduced installation cost and complexity.

The vibrating panel surface of the LFi2T is composed of an absorbent paper skin providing high bond adhesion to wet plaster – similar to the surface of plasterboard/dry wall/Gypsum. Once plastered over with a standard 2mm high quality finish skim coat (accepts many plaster types including polished), the wall or ceiling surface can then accept paint, wallpaper, flock, leather or textured finishes.

The LFi2T is supplied with installation lugs required for 12.5mm (1/2in & 5/8in for USA) plasterboard stud walls or ceilings. Lugs for alternative board thicknesses are available on request. A quick installation process is made possible because this lightweight loudspeaker is attached to the plasterboard and not to the stud work or any rear structural sections.

Optional metal back boxes are available for pre-installation in solid walls or for providing additional sound proofing in plasterboard cavity walls or ceilings.

The Amina LFi2T allows the ultimate in ambient entertainment and communication systems to be achieved with zero aesthetic impact on room design and decoration.

### Warranty:

The product is maintenance free and is designed to operate reliably for many years. Correctly installed and operated in accordance with this specification, Amina warrants the LFi2T against defective materials and workmanship for a period of 7 years.

### Optional Accessories:

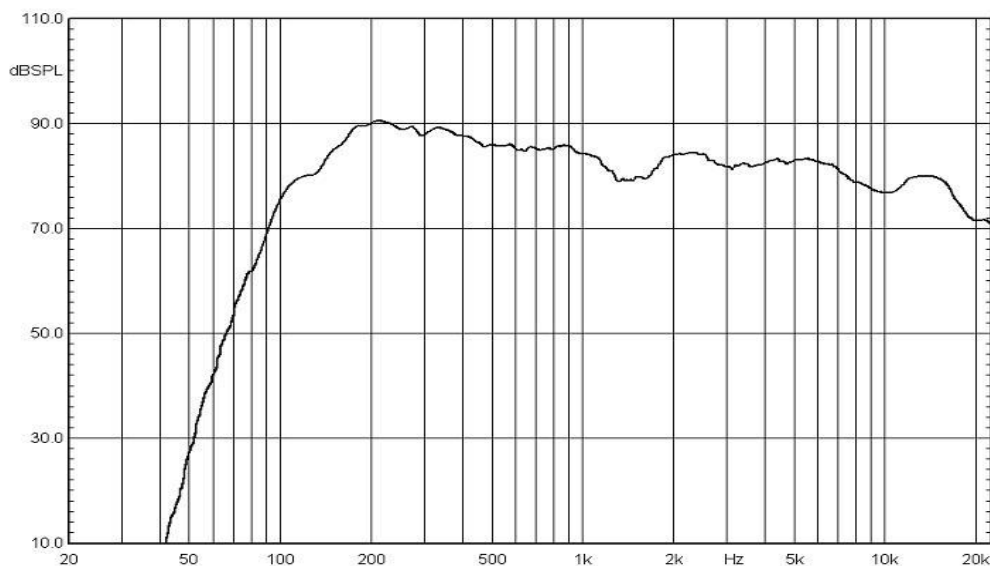
- LFiBackboxSolid - metal back box for easy installation in solid and block wall types.
- LFiBackboxCavity - aluminium back box for Gypsum board walls/ceilings. Provides additional sound insulation.
- AF2/80 - 2 channel, 24dB/octave, 80Hz active high pass filter.



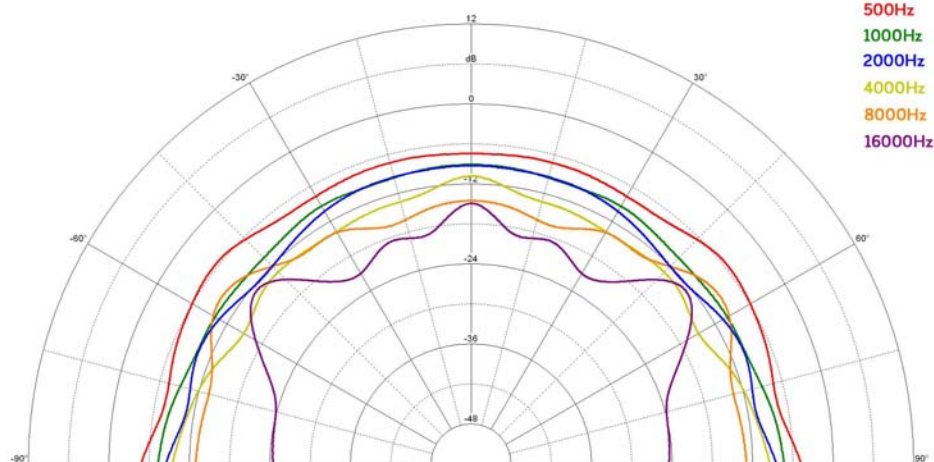
## Technical Specifications:

Dimensions:	400mm x 300mm x 40mm (15.75in x 11.8in x 1.6in)
Weight:	1060g (2.3lb)
Available Input Tappings:	100V Line: 5W, 10W, 20W 70V Line: 5W, 10W, 20W
Frequency Response:	110Hz - 15.6KHz (-6dB)
Dispersion Angle (HxV):	180° x 180° (6dB)
Active radiating area:	120,000mm <sup>2</sup> (186in <sup>2</sup> )
Sensitivity:	85dB 1m / 1W (measured with 2mm/0.08in multi-finish plaster skim applied)
MAX SPL:	98dB 1m / 20W (measured with 2mm/0.08in multi-finish plaster skim applied)
Electrical Connection:	Professional insulated butt splice, accepts <2.6mm (14AWG) conductor diameters. (requires professional crimp tool)
Manufacturer:	Amina Technologies Ltd, Cambridgeshire, UK
Model:	LFi2T (state full part number when ordering)
Construction:	Fire retardant glass filled ABS frame structure, aluminium honeycomb core, doped paper skin, composite active panel.
Installation kit provided:	Lugs suitable for 12.5mm thick gypsum/plaster board (other thicknesses available on request). Lugs for 1/2in and 5/8in board supplied as standard in USA and Canada.
Required external filtering:	24dB/octave high pass filter at 80Hz or higher (e.g. Amina AF2/80 or equivalent)
Operating temperature range:	5°C - 35°C (41°F - 95°F)

## Frequency Response, on-axis, 1m/1W:



## Horizontal Polar Response: (measured in portrait orientation)



# Plaster-In Loudspeakers

Concealed Audio Solutions with inspirational results

**amina**<sup>®</sup>  
TECHNOLOGIES LTD



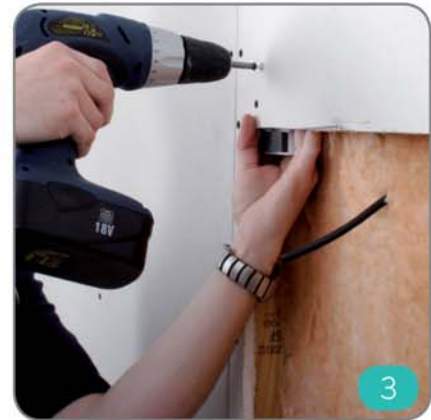
## Simple Installation into Stud Walls or Ceilings:



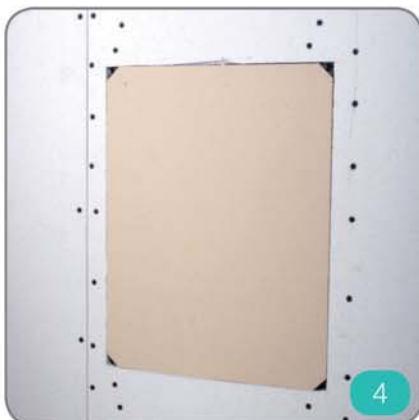
1  
Create aperture using a sharp knife, making a series of shallow cuts. Add sound insulation into cavity.



2  
Position installation lugs under top and bottom corners of surrounding plasterboard. Ensure cables are pulled to this position.



3  
Fix installation lugs using two drywall screws secured through the front of the plasterboard into the plastic lug.



4  
Position product in aperture. Connect loudspeaker to cable and test its operation.



5  
Secure product in place with one drywall screw through each corner of product. Adjust screws to ensure panel is flush with wall.



6  
Apply joint tape, covering joint between panel and plasterboard. Perform final electrical/audio test.



7  
For drywall applications only, set panel back 1mm to 2mm from front wall. Fill joint and skim surface with Easi-fill lightweight repair plaster.



8  
Skim with plaster (ordinary multifinish is fine). The best finish is produced when the entire wall is skimmed at the same time. Allow plaster to dry thoroughly before using and before decorating with paint or wallpaper.



### Installing in Stud walls or Ceilings

For increased fire barrier protection and to create additional rear-ward sound isolation use the 70mm deep LFIBackboxCAVITY



### Installing in Solid walls

For block and solid wall structures, create a 50mm aperture and embed the Amina LFIBackboxSOLID ready for fitting the loudspeaker prior to plastering.





## Architects and Engineering Specification:

The concealed loudspeaker shall be a mid power device for 100V or 70V lines producing, once fixed into a wall or ceiling, frequencies ranging from 110Hz up to 15,600Hz (-6dB points). The active radiating surface of the loudspeaker shall be 120,000, mm<sup>2</sup>. Further acoustic contribution shall possibly be made by any surrounding Gypsum board structure, but to a much smaller degree. The resulting acoustic dispersion shall be over 180 degrees creating a highly affective means of covering large spaces with sound. The loudspeaker, when installed with a 2mm final skim of finish plaster, shall have a sensitivity of 85dB (1w/1m). The loudspeaker shall have input tappings (100V or 70V) for 5W, 10W and 20W. The maximum sound pressure attainable at 1m using the 20W tapping shall be 98dB. The loudspeaker shall be suitable to be driven by a 100V or 70V line amplifier. The loudspeaker shall be required to be used in conjunction with external high-pass filtering of 24dB/octave at 80Hz or higher.

The concealed loudspeaker shall have a lightweight, fire retardant glass filled ABS plastic frame giving an overall product dimension of 400mm x 300mm x 40mm. The loudspeaker shall be supplied with all the required fixings for 12.5mm Gypsum board (1/2in and 5/8in in USA). The fixing method shall not require any direct anchorage to structural work, but fix directly to the Gypsum board with all levels established by the supplied installation lugs. For different Gypsum board thicknesses, appropriate lugs shall be available from the factory on request. The cavity depth required behind the Gypsum board shall be 30mm or greater.

The active sound surface of the loudspeaker shall be composed of an aluminium honeycomb core and absorbent paper skin composite panel. The loudspeaker shall weigh 1060g and be fully RoHS compliant.

Once fully installed, the loudspeaker shall be compliant with Class 1 surface spread of flame requirements. In cases where specific fire barriers are required the loudspeaker shall be required to be used in conjunction with a steel backbox.

The loudspeaker shall have an insulated butt splice crimp connection, creating a reliable and permanent insulated electrical connection within the wall/ceiling. The connectors shall be suitable for cable conductor diameters of 1.0mm to 2.6mm.

The loudspeaker shall be fitted with a high quality, toroidal transformer. There shall be a choice of three different power tappings for 100V or 70V line systems: 5W, 10W or 20W. The power tapping shall be required to be specified at the time of ordering.

There shall be a backbox available to allow the loudspeaker to be easily installed into solid construction type walls and ceilings. There shall be a backbox available to provide sound insulation if necessary in cavity walls or ceilings.

The loudspeaker shall be the Amina Technologies Ltd LFi2T.

## Commercial Application Possibilities:

Restaurants • Hotels • Retail Stores • Houses of Worship • Convention Centres • Meeting Facilities • Boardrooms • Sports Bars  
Theme Parks • Fitness Centres • Medical/Professional Offices • Under-balcony • Lobbies/Foyers • Reception Areas • Airports  
Cruise Ships • Museums • Exhibition Centres

## European Union WEEE regulations:

The product is fully RoHS compliant, eliminating to a minimum the use of hazardous materials within its manufacture. At the end of its useful life it should be returned to the manufacturer for recycling according the European Union's WEEE directive  
All products are subject to change without notification. E&OE

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