DL-212EF

DATASHEET



The DL-212EF is a passive two-way full-range loudspeaker built around two 12-inch Eighteen Sound neodymium low-frequency transducers and a 1.4-inch Faital Pro exit compression driver, housed in a bass-reflex cabinet with an integrated passive crossover. It delivers 143 dB maximum SPL from a cabinet weighing 40 kg, and can be floor-stacked, wall-mounted, flown from its integrated rigging rails, or paired with a subwoofer.

Where the DL-212EF departs from conventional touring designs is in what it was specified to survive. Every material decision in the cabinet, the suspension and the magnetic assembly was made for continuous operation in a hot, humid, salt-laden climate — not for a dry warehouse and a truck.

The low-frequency cone is moisture-treated high-strength paper with a continuously curved profile that suppresses bell-mode resonance, carried on a triple-roll ribbed linen surround chosen over rubber for its ageing resistance in tropical humidity. The motor places the neodymium ring magnet outboard of the core, concentrating flux at 1.7 T while opening a direct thermal path to a heatsink block — the practical result is less power compression under sustained output. A shorting ring in the gap linearises impedance and phase and cuts cross-modulation distortion.

The high-frequency section drives the Faital Pro ketone-polymer dome diaphragm from a 65 mm aluminium voice coil into a square constant-directivity horn, with a ring-shaped phase-correction device holding phase coherence from the driver throat into the horn mouth. The enclosure is multi-ply Russian birch plywood with alternating 90-degree grain orientation, finished in sprayed textured polyurea; cone and magnetic assembly are treated against salt and oxidation for permanent outdoor and coastal installation.

Key Features

- Two 12" Eighteen Sound neodymium LF transducers in parallel and one 1.4" Faital Pro exit compression driver, crossed over at 650–700 Hz, 24 dB/oct symmetrical linear phase
- 143 dB maximum SPL at 1 m and 112 dB sensitivity at 1 W / 1 m, from a 40 kg cabinet
- 60° × 40° constant-directivity square horn for long-throw coverage in reverberant halls and open-air stages
- Outboard neodymium ring magnet with direct-contact heatsink – reduced power compression under sustained output
- Triple-roll ribbed linen suspension and moisture-treated cone – ageing resistance beyond rubber in tropical humidity
- Multi-ply Russian birch plywood cabinet, sprayed textured polyurea finish, double-flared bullet-profile ports
- Integrated rigging rails both sides with multiple pick-up positions, four recessed reinforced handles
- Two recessed Neutrik speakON® NL4 connectors: IP54 when mated, 30 A / 250 V per contact, ≥ 500 mating cycles
- Operating temperature range –30 °C to +80 °C

Applications

- Outdoor stages and touring productions
- Theatres, arenas and cultural centres
- Places of worship and religious sites
- Coastal and outdoor installations

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Technical Data

Drivers	**2× 12" Eighteen Sound neodymium LF** **1× 1.4" Faital Pro HF compression driver**
Frequency range	**65 – 18,000 Hz**
Power capacity AES / peak	**1,400 / 2,800 W**
Impedance	4 Ω nominal
Coverage (h × v)	**60° × 40° constant directivity**
Crossover frequency	650 – 700 Hz | 24 dB/oct, symmetrical linear phase
Sensitivity 1 W / 1 m	112 dB
SPL max / 1 m	**143 dB**
LF voice coil	Ø 65 mm aluminium on high-temperature polyimide former
LF motor	Outboard neodymium ring magnet | 1.7 T gap flux density Shorting ring | direct-contact heatsink block
LF cone / suspension	Moisture-treated high-strength paper, continuously curved Triple-roll ribbed damped linen surround
HF driver	35.6 mm (1.4") throat, 29° conical exit Ketone-polymer dome diaphragm with annular phase plug
HF electrical	8 Ω (min. 6.8 Ω) | Re 5.5 Ω | 0.7 – 18 kHz 80 W AES / 160 W max above 0.9 kHz | min. crossover 0.9 kHz
HF mechanical	Ø 123 mm | 4× M6 on Ø 102 mm PCD | 63.5 mm depth | 2.0 kg
Connection	2× recessed Neutrik speakON® NL4, parallel wired IP54 when mated and locked | 30 A per contact / 250 V Contact resistance ≤ 3 mΩ | ≥ 500 mating cycles Max. cable 4 × 4 mm² (12 AWG) Glass-fibre reinforced polyamide shell, silver-plated copper contacts
Operating temperature	–30 °C to +80 °C
Cabinet	Multi-ply Russian birch plywood, alternating 90° grain Water- and fungus-resistant adhesive
Ports	Aerodynamic double-flared bullet profile, internal airflow guide
Grille	Perforated powder-coated black steel, oxidation resistant
Rigging	Integrated rigging rails both sides, multiple pick-up positions M10 fixings | four recessed handles
Dimensions (H × W × D)	**700 × 460 × 440 mm | 27.56 × 18.11 × 17.32 in**
Weight	40 kg | 88 lbs
Finish	Sprayed textured polyurea paint, black
Accessories	Flying bracket | wall mount bracket | pole mount Transport cover | rain cover – see dlaudio.vn

Product Views



front view (grille removed)



side view



rear view



side view, rigging rail

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Architect Specification

The loudspeaker shall consist of a passive two-way bass-reflex enclosure with an integrated passive crossover network, driven by an external power amplifier.

The enclosure shall feature two 12-inch Eighteen Sound neodymium low-frequency transducers wired in parallel and one Faital Pro compression driver with a 35.6 mm (1.4-inch) exit mounted on a square-profile constant-directivity horn. The nominal impedance shall be 4 Ω.

The low-frequency transducers shall employ a 65 mm aluminium voice coil on a high-temperature polyimide former, carried on a high-strength fibreglass former wound on both inner and outer surfaces to balance coil mass and eliminate off-axis rocking at high excursion. The magnetic assembly shall use an outboard neodymium ring magnet rather than an underhung core arrangement, achieving a gap flux density of 1.7 T, and shall incorporate a heatsink block in direct contact with the magnetic circuit and chassis. A shorting ring shall be fitted in the gap to linearise impedance and phase response and reduce cross-modulation distortion.

The low-frequency cone shall be high-strength paper with a continuously curved profile to suppress bell-mode resonance, treated against moisture without increasing moving mass. The suspension shall be a triple-roll ribbed damped linen surround, maintaining linear piston motion and providing ageing resistance superior to rubber under tropical humidity.

The Faital Pro high-frequency driver shall use a ketone-based polymer dome diaphragm with an annular phase-correction device maintaining phase coherence from the driver throat into the horn mouth. The driver shall have a 29-degree conical exit angle, a nominal impedance of 8 Ω (minimum 6.8 Ω), a DC resistance of 5.5 Ω, an operating range of 0.7 to 18 kHz, power handling of 80 W AES and 160 W maximum above 0.9 kHz, and a minimum crossover frequency of 0.9 kHz. It shall measure 123 mm outside diameter, four M6 fixings on a 102 mm pitch circle, 63.5 mm depth, 2.0 kg.

The usable system bandwidth shall be 65 Hz to 18 kHz. The passive crossover shall operate between 650 Hz and 700 Hz with a symmetrical linear-phase characteristic of 24 dB per octave. The driver configuration shall generate a nominal polar coverage of 60 degrees horizontal by 40 degrees vertical.

Maximum SPL shall be 143 dB at 1 m. Sensitivity shall be 112 dB at 1 W / 1 m. The power handling capacity shall be 1,400 W AES and 2,800 W peak.

The enclosure shall be constructed from multi-ply Russian birch plywood with plies laid at alternating 90-degree grain orientation for multi-directional strength, resistance to warping and suppression of panel resonance at high output, bonded with water- and fungus-resistant adhesive. The cabinet shall employ aerodynamic double-flared bullet-profile reflex ports with an internal airflow guide column to reduce port turbulence and harmonic distortion at the tuning frequency. The front shall be protected by a perforated powder-coated black steel grille. The exterior shall be finished in sprayed textured polyurea coating resisting abrasion, transport impact and water ingress. The enclosure dimensions shall be 700 mm high by 460 mm wide by 440 mm deep and the weight shall be 40 kg.

The cone and the magnetic assembly face shall be treated for humidity, salt and oxidation resistance, qualifying the loudspeaker for outdoor and coastal installation. The operating temperature range shall be –30 °C to +80 °C.

The enclosure shall include integrated rigging rails on both side panels with multiple pick-up positions for flying, together with mounting points permitting floor stacking, wall mounting and subwoofer pairing, and four recessed carrying handles reinforced directly into the load-bearing structure. Connection shall be via two parallel recessed Neutrik speakON® NL4 connectors with glass-fibre reinforced polyamide shell and silver-plated copper contacts, rated 30 A per contact at 250 V, contact resistance not exceeding 3 mΩ, IP54 when mated and locked, minimum 500 mating cycles, accepting conductors up to 4 × 4 mm² (12 AWG).

The loudspeaker shall be the D&L DL-212EF.

References

Full measurement data and loudspeaker presets are available on request – dailycompanyltd@gmail.com