

## Portable Speakers

# MILAN M12

1100 Watt 2 Way  
12" Full Range Powered Loudspeaker with  
KLARK TEKNIK DSP Technology for  
Portable PA and Installation Applications

- 2 way full range powered loudspeaker for portable PA and installation applications
- 1,100 Watt power featuring KLARK TEKNIK Class-D technology
- KLARK TEKNIK Digital Signal Processing for total system control
- High excursion 12" low frequency driver with low mass voice coil for improved transient response
- 1" high temperature dome compression driver with extended high frequency reproduction
- Converging elliptical waveguide provides wide dispersion and excellent pattern control
- Speech/music switch featuring optimised equalisation for voice or music applications
- Switchable 100 Hz high pass filter for subwoofer integration
- Lightweight composite enclosure with black finish
- Rugged powder coated perforated steel mesh grille
- Dual angle pole mount for accurate audience coverage
- Multiple internal rigging points for installation applications
- 3-Year Warranty Program\*
- Designed and engineered in England



The MILAN M12 is a portable 12" two-way powered loudspeaker featuring two independent input channels, mic and line inputs, two band EQ, intelligent limiting, and a Mix Out function for connection to additional MILAN loudspeakers for easy system expansion.



The Class-D amplifier is a two channel unit with an integrated electronic crossover, allowing the HF and LF drivers to be powered separately without one being able to influence the sound of the other. Total output power is 1,100 watts peak, providing plenty of headroom to maintain good dynamic range so that transient signals are delivered effortlessly.

The lightweight switch-mode power supply coupled with industry leading Klark Teknik digital signal processing, providing dynamic equalisation and sophisticated limiting functions to ensure optimum performance and long term reliability.

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The two discrete input channels are each equipped with balanced, combination jack/XLR connectors and a level control, catering for a range of music sources from low impedance microphones, acoustic guitars and keyboards to mp3 players and mixing consoles, selectable via a mic/line slide switch.

Common to both channels are bass and treble controls with  $\pm 6\text{dB}$  of cut or boost to allow the loudspeaker to be equalised to the venue. In addition, a low cut filter is provided at 100Hz to shelve the low frequency response when used on the floor as a wedge monitor, or to ensure correct integration with subwoofers. A speech/music switch optimises the loudspeaker's frequency response either for predominantly vocal material or for music programme. A Mix Out function sends the mix of both input channels post-EQ to additional MILAN loudspeakers on a balanced male XLR for easy system expansion.

The trapezoidal enclosure is fabricated from high density polypropylene, and is extensively ribbed externally and internally to eliminate resonances and also to provide an attractive and durable cabinet finish. The symmetrical side angles allow the loudspeaker to be conveniently used as a floor monitor. A recessed grab handle on the top is designed for easy lifting and carrying, while the dual angle pole mount socket allows the loudspeaker to be mounted on straight poles or speaker stands either vertically, or raise higher and angled down to optimise audience coverage. A total of six M10 rigging points are provided on the top and bottom of the cabinet to enable vertical or horizontal suspension in permanent installations using M10 shoulder eyebolts.

Mains power is connected via a non-locking IEC receptacle with integrated fuseholder. The illuminated front badge can operate in one of three possible modes: permanently on; permanently off; or to indicate the action of limiting.

## Rigging

The MILAN M12 loudspeaker can be wall mounted using the PB-55 universal wall bracket with the built in pole mount socket.

It can also be suspended in permanent installations using shoulder eyebolts attached to the M10 rigging points provided on the top and bottom of the cabinet. The loudspeaker can be oriented either vertically or horizontally to suit the available venue space.

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## A&E Specifications

The system shall be of the two-way self-powered type consisting of one 12" (305mm) low frequency loudspeaker and one 1" (25mm) aluminium diaphragm high frequency compression driver together with an integrated Class-D amplifier providing two independent input channels with microphone and line inputs, bass and treble equalisation, low cut filter, speech/music contour and Mix Out function. Performance specifications of a typical production unit shall meet or exceed the following: frequency response, measured with swept sine wave input, shall be flat within  $\pm 3\text{dB}$  from 50Hz to 18kHz, and within -10dB from 45Hz to 20kHz. Nominal dispersion, at -6dB points, shall average 90°H x 60°V. Maximum SPL measured with music program input shall be 128dB (peak).

Dimensions: 620mm high x 394mm wide x 330mm deep (24.4" x 15.5" x 13"). Net weight: 20.5kg (45.1lbs). The loudspeaker system shall be the Turbosound MILAN M12. No other loudspeaker shall be acceptable unless submitted data from an independent test laboratory verify that the above combined performance / size specifications are equalled or exceeded.

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### Technical Specifications

#### Dimensions (H x W x D)

620 x 394 x 330 mm (24.4 x 15.5 x 13")

#### Net Weight

20.5 kg (45.1 lbs)

#### Components

1 x 12" (305 mm) LF driver, 1 x 1" (25 mm) HF compression driver

#### Frequency Response

50 Hz – 18 kHz  $\pm 3$  dB, 45 Hz – 20 kHz -10 dB

#### Nominal Dispersion

90° H x 60° V @ -6 dB points

#### Maximum SPL

128 dB (peak)

#### Construction

Injection-moulded polypropylene enclosure.  
Recessed carrying handles. Integral dual-angle pole mount socket

#### Grille

Powder coated galvanised perforated steel mesh grille with foam backing

#### Connectors

Mic/Line input: combo jack/female XLR wired pin 2 hot;  
Mix out: male XLR wired pin 2 hot; IEC mains connector with integrated fuseholder

#### Controls

Level, Line/Mic, Low Cut, Speech/Music, Bass and Treble, Front LED, Mains on/off

#### Indicators

Power LED (blue), SIG LED (green), LIMIT LED (red), CLIP LED (red)

#### Amplifier

Type:	Class-D
Max Output Power:	LF: 1000 W; HF: 100 W
Input Sensitivity:	Mic: -32 dBu; Line: -2 dBu
Input Impedance:	Mic: 560 $\Omega$ unbalanced, 1 k $\Omega$ balanced Line: 20 k $\Omega$ unbalanced, 40 k $\Omega$ balanced
Equalisation:	Bass: $\pm 6$ dB @ 80 Hz; Treble: $\pm 6$ dB @ 12 kHz
Amplifier Protection:	Full short circuit, open circuit, thermal

#### Mains Voltage

USA / CAN:	100–120 V~ (T 8.0 A H 250 V)
UK / AUS / EUR:	220–240 V~ (T 4.0 A H 250 V)
CH:	220–240 V~ (T 4.0 A H 250 V)
JP:	100–120 V~ (T 8.0 A H 250 V)

#### Power Consumption

140 W @ 1/8 max power

#### Rigging Options

(6) M10 threaded internal rigging points

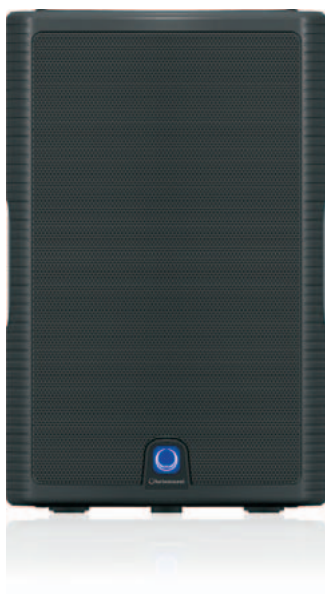
#### Spares And Accessories

LS-1229	12" (305 mm) replacement LF loudspeaker
RC-1229	Recone kit
CD-125	1" (25 mm) HF compression driver
RD-125	HF diaphragm
AMP-M12M15	Replacement amplifier assembly
PB-55	Wall bracket, pole mount fixing
EB-10	M10 shoulder eyebolt

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