

# Howard II



Castle  
Acoustics  
Limited



Howard II. The efficient three way,  
active four speaker system from Castle.

**Speakers  
for connoisseurs**  
available from:





# Howard II

The Howard II loudspeaker is a wide-band low colouration system, superbly finished in cabinets built by our own craftsmen. Particular attention has been paid to accurate bass performance and, like other 'Castle' loudspeakers, they exploit modern design techniques based on high-efficiency magnetically damped true reflex loading.

The Howard II is a three-way loudspeaker system intended

for use in the larger room with medium to high powered amplifiers (15 — 150 watts per channel).

A matching plinth (as illustrated) can be supplied at extra cost. The plinth which has its own castors enables ease of movement for correct room positioning and also serves to raise the system from floor level.

## CROSSOVER

A thirteen element crossover is used to integrate the output of the individual units and has been designed to complement their electrical and acoustic characteristics. The load presented to the amplifier is free from narrow minima and the system is easy to drive. The crossover is fully fused to prevent damage to the units in the event of accidental overload.

## THE CABINET

The braced cabinet is constructed of 18mm high density chipboard, hand finished with selected wood veneers and protected with a final coat of tough polyurethane lacquer. The cabinet walls are damped internally with bituminous layer panels, and lined with acoustically absorbent foam.

## TREBLE RANGE

4 - 22 kHz

The 30mm treble unit (Castle Acoustics type 3QV2) has a plastics diaphragm with an integral driving coil. The exceptionally low dynamic mass of 0.15 grams gives a unit of high efficiency and a smooth response over an extended frequency range, together with the wide dispersion necessary for good stereo reproduction.

## MIDRANGE

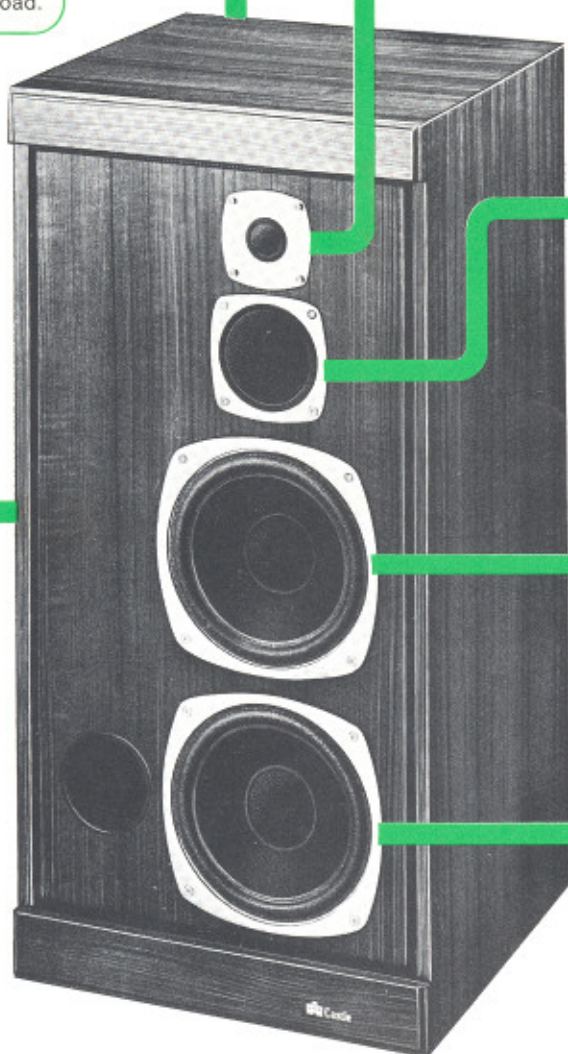
750 - 4000 Hz

A newly developed midrange unit (Castle Acoustics type 11LS1) has a low mass, treated pulp diaphragm with an effective diameter of 80mm. The aluminium die cast chassis has been designed to minimise rear cavity resonances, and the back radiation of the unit is absorbed in a long resistive tube.

## BASS RANGE

30 - 750 Hz

Two heavy duty 21cm die cast chassis bass units (Castle Acoustics type 21AL3) have been specifically designed to match the 90 litre internal cabinet volume available. The magnetically damped true reflex loading used in this system provides a 4th order Butterworth response at low frequencies which is smooth down to the cut-off frequency of 30Hz without spurious bass effects due to inadequately damped resonances.



## HOWARD II

The Howard II is a high quality, efficient, three way, active four speaker floor standing system intended for domestic use in the larger room with amplifiers of 15 to 150 Watts output per channel requiring 4-8 ohms load.

Electro-acoustic conversion efficiency  $\left( \frac{\text{Acoustic power output}}{\text{Electric power input } 7.5\Omega} \right) : -26 \text{ dB}$

**Sensitivity:** 10 Watts for + 96 dB SPL\*  
1 Watt for + 86 dB SPL\*

**Power handling:** 75 Watts speech/music (DIN 45 500)  
150 Watts (Maximum short duration)

**Acoustic output:** + 105 dB SPL\* for 75 Watt amplifier  
+ 108 dB SPL\* for 150 Watt amplifier  
(Maximum short duration)

**Impedance:** 7.5  $\Omega$  nominal. Minimum 6.2  $\Omega$   
/300 Hz for amplifier requiring  
4 to 8  $\Omega$  load

**Size:** Speaker 800mm (31½") high x 400mm  
(15¾") wide x 415mm (16½") deep  
Plinth 193mm (7½") high x 404mm (16")  
wide x 380mm (15") deep.

**Weight:** 28 kg (62 lbs) Plinth: 5 kg (11 lbs)

\*SPL = Sound Pressure Level at 1 metre  
referred to 20  $\mu\text{N/m}^2$

In accordance with our policy of constant improvement, we reserve the right to alter any specification at anytime and without notice.

Castle Acoustics Limited



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