

## ATC C4 Sub Mk2 – Product Information

The C4 Sub Mk2 is a high-performance 12"/300mm active subwoofer, designed to deliver the exceptional levels of performance demanded by audiophiles and film & music lovers and integral to partnering with ATCs range of loudspeakers. The subwoofer performance and features make it ideally suited to stereo, AV and home cinema applications.

### Key Features

- High performance sealed box design using 12"/314mm ATC proprietary sub driver
- Ideal partner to SCMI9, SCM20, SCM40, SCM50, SCM100
- Suitable for use in stereo, AV and home cinema applications
- On-board 300W convection cooled discrete MOSFET class A/B amp
- 2 x balanced XLR inputs
- 2 x balanced XLR outputs (un-filtered/processed)
- User adjustable gain, low pass frequency, polarity and phase settings

### Acoustic Specifications

Drive Unit – Bass: 1 x SS75-314SC 8Ω

Low Frequency Cut-off: 22Hz (-6dB, half space, low pass filter set at 80Hz).

Low Pass Filters: 50Hz, 65Hz, 80Hz, 320Hz. (-6dB, 4th order Linkwitz Riley).

MaxSPL: 110dB continuous, 116dB peak (IEC Weighted Pink Noise, 1m, half space, low pass filter @ 80Hz).

Sensitivity: +4dBu ref. 88dBC (single channel driven, Gain +6dB, Level 0dB, pink noise, low pass filter @ 80Hz).

### Electronic Specifications

Amplifier type: Grounded Source MOSFET based Class A-B, convection cooled

Output Power: 300W into 8Ω

THD+N: <0.003%/-90dB, at 100Hz, 300W into 8Ω over 90kHz bandwidth



Balanced Inputs: 2 x Rear Panel Mounted Female XLR, pin 2 hot

Input CMRR: 90dB at 200Hz

Input Impedance: 20k $\Omega$  (differential)

Balanced Outputs: 2 x Rear Panel Mounted Male XLR, pin 2 hot

Output Impedance: 100 $\Omega$  (differential)

Frequency Response: <2Hz (-3dB) – 320Hz (-6dB, set by panel-controlled LP filter)

Low Pass Filters: 4th Order Linkwitz Riley

Gain Control: 0, +6dB, +10dB

Level Control: 0dB -11dB in 1dB steps. Total range 21dB with use of Gain switch

Phase Control: 0-180° ref. Input

Polarity Control: In-phase/Out-of-phase ref. Input

Limiter: ATC Active FET Momentary Gain Reduction.

Sensitivity: 1.55Vrms for full power (single channel driven, Gain 0dB, Level 0dB)

Mains Input: 220-230V or 115V – Factory set. Please observe panel markings and labels!

Power Consumption: Idle 8W/14VA. 1/8th Power 170W/230VA. Full Power 500W/600VA.

Additional: Mute via 1/4" / 6.35mm Jack socket, controlled via latching footswitch\*.

\*Footswitch supplied separately, latching type, 1/4" / 6.35mm jack connection.

### Physical Specifications

Dimensions: (H x W x D): 568 x 465 x 519mm / 22 3/8 x 18 5/16 x 20 7/16 inches

Heatsink protrudes a further 40mm / 1 9/16 inches from rear and optional spikes add an additional 22mm / 7/8 inches to height.

See data sheet (to follow) for a detailed drawing.

Net Weight: 42kg / 92.6lbs.

### Finish Options

Standard veneers - Cherry, walnut, oak, black ash.

Standard finishes – Satin black, satin white.

Premium veneers\* – European crown cut walnut, pippy oak, rosewood, burr magnolia, burr poplar.

High gloss\* – Piano black, piano white.

High gloss over veneer\*.

\*Additional cost for premium veneers, high gloss and high gloss over veneer.

## Shipping Weights & Dimensions

Packed weight: 64kg / 140.8lbs

Crate dimensions (H x L x W): 82 x 73 x 63cm / 32 1/4 x 28 3/4 x 24 3/4 inches.

## Technology

ATC has a rich history of developing loudspeaker systems from component level up and the C4 Sub Mk2 is no different. The subwoofer features a new sub-bass driver, developed by ATC's R&D team and optimised for reproduction of the lowest four octaves of the audio band. To best achieve this, it is designed with a 30mm magnetic gap, 50% longer than any other offered by ATC. The long-gap and short-coil configuration takes a long-standing ATC design feature to its limit. Distortion is minimised, while simultaneously delivering the high linear excursion required to generate accurate and dynamic low frequency output. Generating a high level of magnetic flux over such a long gap required extensive FEA computer modelling and the resultant 6"/150mm N48M Neodymium magnet is the most powerful ever assembled by ATC and a first for the company. As well as minimising distortion, the short-coil long-gap configuration ensures the voice coil remains surrounded by the motor structure - even at high drive levels - maximising cooling, reducing power compression, and improving reliability. Turbulent air noise within the driver is minimised via a large, flared vent running through the centre of the motor structure, which has the added benefit of increasing voice coil and motor cooling.

The C4 Sub Mk2 delivers an extended low-frequency response without employing electronic equalisation, quite unlike many subwoofers available today. Instead, the more elegant combination of exceptional transducer engineering and a marginally larger cabinet volume is used. The simplicity of this approach reduces phase shift and group delay, aiding the integration of the sub with the partnering monitor loudspeakers. Ultimately, it delivers a more balanced and coherent experience for the listener, extending the low-frequency response without masking details or changing the tonal character in the upper bass/lower mid-range.

Drawing on 34 years of experience in amplifier design and development, ATC's electronic engineering team have delivered an all-new amplifier for the new subwoofer. The 300W class AB design is hand-built by ATC at their UK facility and precisely optimised to the requirements of the drive unit, resulting in fast, dynamic bass with minimal colouration. Two balanced inputs provide connectivity suited to both stereo and AV/home cinema systems plus two balanced outputs provide connections to partnering loudspeakers or to 'daisy-chain' multiple subs. Low-pass filters are analogue, 4th order Linkwitz-Riley and filter frequency options ensure optimal integration with a wide range of studio monitors. An industry-standard 80Hz low-pass and an 'off' option (for use with external processing) are also provided. A polarity switch plus a continuously variable 180° phase adjustment allows further optimisation of the subwoofer crossover and a stepped attenuator with a 21 dB range provides precise level matching.

## In-Use

The size and performance of the C4 Sub Mk2 make it the ideal partner for a wide range of ATC loudspeakers, from the SCMI9 up to and including the SCMI00. Multiple subs can be employed to elevate performance, to fill larger rooms and also when partnering with larger models of loudspeakers. Buffered linkable inputs and outputs makes connection of



multiple subs simple. Home cinema can be particularly demanding of subwoofers and this new design offers improvements in dynamic range and clarity at higher SPLs.

Designed and engineered with a focus on resolution and integration, the C4 Sub Mk2 offers additional low frequency extension and dynamic range but without compromising balance in the upper bass and lower mid-range. They provide an upgrade path to customers owning smaller loudspeakers and lacking space for larger stereo loudspeakers whilst also strengthening ATC's options in AV & home cinema applications.