



QUANTUM 650

Wireless multiplatform gaming headset



Sound is survival.

Designed for performance, the JBL Quantum 650 wireless gaming headset gives you a clear edge over the competition with accurate and immersive sound. JBL Quantum Spatial Sound, customizable through the QuantumENGINE, delivers a wider, more realistic spatial environment, so you never miss a detail. Hear every sound your opponents make, and know immediately if they're above or below you. With the 6mm Cardioid boom mic, your squad will always hear your instructions loud and clear. Connect seamlessly to any gaming platform via the low-latency 2.4 GHz dongle, via Bluetooth® 5.3, or wired via the included USB-C cable. The JBL QuantumENGINE delivers gamer-centered audio that you can customize to your own gaming style. Best of all, the cables, microphone, ultra-light mesh hammock, and high-comfort fabric ear cushions are all replaceable, and the fully adjustable ergonomic fit means you can play all night long.

Features

- ▶ 50mm carbon dynamic drivers for a powerful JBL Quantum Sound
- ▶ JBL QuantumENGINE
- ▶ JBL Quantum Spatial Sound
- ▶ Cardioid Noise Cancelling boom mic
- ▶ Dual Wireless Connection
- ▶ Low-latency wired USB Audio
- ▶ Light and comfortable design
- ▶ Replaceable components
- ▶ 45 hours of playtime
- ▶ Multi-platform compatibility
- ▶ Zoom certification
- ▶ Sustainability





QUANTUM 650

Wireless multiplatform gaming headset



Features and Benefits

50mm carbon dynamic drivers for a powerful JBL Quantum Sound

Our 50mm dynamic drivers are engineered with a unique carbon damping material for powerful performance and low distortion. That means you get the immersive, realistic audio experience you need for your most intense gaming sessions.

JBL QuantumENGINE

Use your device-specific JBL QuantumENGINE dashboard to customize your preferred sound profile, spot where in-game sounds are coming from with a real-time sound visualizer, reduce keyboard noise, optimize the mic's performance and noise reduction and even update your headset's firmware. It works on all platforms and connects all your JBL Quantum headsets simultaneously.

JBL Quantum Spatial Sound

Next-generation JBL Quantum Spatial Sound is a more natural, accurate, and immersive audio experience. Processing more sound details from your gaming content, it generates reflections and reverberation signals. By applying diverse parameters at different frequency ranges, it creates an altogether more realistic gaming experience.

Cardioid Noise Cancelling boom mic

The new 6mm unidirectional mic with Cardioid pattern makes sure your team can always hear you loud and clear but doesn't hear your keyboard thanks to the noise reduction technology through JBL QuantumENGINE. And the mic is also detachable for extra convenience.

Dual Wireless Connection

Connect seamlessly and simultaneously via low-latency 2.4 GHz dongle or Bluetooth® 5.3 and you'll always have the fastest and most stable connection, no matter what other people in the house are doing online.

Low-latency wired USB Audio

For ultra-low latency use the included USB-C cable to get the most stable and reliable connection with latency under 30ms.

Light and comfortable design

The light mesh hammock under the soft headband smartly distributes the headset's weight, so it'll stay comfortable all night long. And our fabric ear cushions are designed for total comfort during long sessions, while the sliding arm allows you to adjust the size to your most comfortable fit.

Replaceable components

Quickly and easily replace not just the microphone and the cable, but the fabric ear cushions and mesh hammock so your headsets will always look as good as new. Not only do replaceable parts* keep your JBL Quantum 650 headset working, but they also make your headset more sustainable. (*spare parts sold separately)

45 hours of playtime

The rechargeable battery delivers 45 hours of playtime. If that's not enough, you can quickly replace the battery* and keep on playing. (*spare battery sold separately)

Multi-platform compatibility

Windows, Mac, iPhone, iPad, Android, PlayStation, Nintendo Switch—no problem. The JBL Quantum 650 headset works with them all.

Zoom certification

Your JBL Quantum 650 headset meets all the technical and sound qualifications for Zoom certification. So you can even use it for work calls.

Sustainability

JBL is committed to making more sustainable products. So the JBL Quantum 650 headset is packaged in FSC-certified paper packaging printed with soy ink. The plastic we use is partly recycled, and the headset's ear cushion, microphone, hammock, and cable can be replaced by the user, which reduces waste.

Technical Specifications

- ▶ Maximum operation temperature: 45°C
- ▶ Frequency response (Passive): 20 Hz - 20 kHz
- ▶ Microphone frequency response: 100 Hz - 8 kHz
- ▶ Max input power: 30 mW
- ▶ Sensitivity: 88.6 dB SPL @1 kHz / 1 mW
- ▶ Maximum SPL: 95 dB
- ▶ Microphone sensitivity: -40 dBV/ Pa@1 kHz
- ▶ Impedance: 32 ohm
- ▶ Microphone pickup pattern: Cardioid
- ▶ 2.4GHz wireless transmitter power: < 12 dBm (EIRP)
- ▶ 2.4GHz wireless modulation: GFSK
- ▶ 2.4GHz wireless carrier frequency: 2.4 GHz - 2.4835 GHz
- ▶ Bluetooth transmitted power: < 12 dBm (EIRP)
- ▶ Bluetooth transmitted modulation: GFSK, π/4 DQPSK
- ▶ Bluetooth frequency: 2.4 GHz - 2.4835 GHz
- ▶ Bluetooth profile version: A2DP V1.4, HFP V1.8
- ▶ Bluetooth version: V5.3
- ▶ Driver size: 50 mm Dynamic Driver
- ▶ Weight: 331.5 g
- ▶ Battery type: Lithium-ion battery (3.7 V / 700 mAh)
- ▶ Power supply: 5V=1A
- ▶ Charging time: < 3 hrs from empty
- ▶ Music play time with only 2.4GHz on: Up to 45 hrs
- ▶ Talk time with only 2.4GHz on: Up to 30 hrs
- ▶ Music play time with only BT on: Up to 60 hrs
- ▶ Talk time with only BT on: Up to 39 hrs

What's in the Box

- 1 x Quantum 650
- 1 x detachable microphone
- 1 x windshield foam for boom microphone
- 1 x USB wireless dongle
- 1 x replaceable battery
- 1 x QSG | Warranty card | Warning card



HARMAN International Industries, Incorporated
8500 Balboa Boulevard, Northridge, CA 91329 USA
www.jbl.com

© 2025 HARMAN International Industries, Incorporated. All rights reserved. JBL is a trademark of HARMAN International Industries, Incorporated, registered in the United States and/or other countries. Features, specifications and appearance are subject to change without notice.