



**SPECIAL
REPORT**

A young woman with long dark hair, wearing glasses and a brown jacket over a leopard-print top, is smiling and adjusting her white headphones. The background is a blurred outdoor setting.

BUYING THE BEST HEADPHONES

**How to Choose
Bluetooth Headphones,
Noise-Cancelling Headphones,
Wireless Headphones,
Running Headphones & More**

HOW TO PICK GREAT SOUNDING HEADPHONES

Headphones are basically very small speakers, so a lot of the same factors apply when picking out good ones.

WHEN SHOPPING FOR A QUALITY HEADPHONE, there are few factors worth considering to help ensure that your money is well spent. While no one aspect will definitively assure fantastic sound, knowing what to look for (and what to ignore) will assist you in narrowing down your options and reading between the hype.

Factor One: Driver Type and Number

Does It Matter? : Yes.

The type and number of drivers (the material or membrane which pushes air to produce sound) will affect the frequencies that a headphone can create as well as how accurately the sound is produced. Most inexpensive headphones have dynamic drivers which operate on a similar principle as a PA system or dynamic microphone. The current is sent through a coil which is attached to and moves the driver mechanically. A dynamic driver is very durable, but the sound quality is determined by the material from which the driver is made. A dynamic driver can have better bass response than a single balanced armature, but often lacks the dexterity in creating delicate sounds that other driver styles are capable of producing.

A balanced armature driver is much smaller than a dynamic driver and is really fantastic for in-ear headphones. In a balanced armature, the coil isn't attached to the driver, but rather suspended in a magnetized state and attached to a tiny rod

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SENNHEISER URBANITE XL

This slick over-ear set promises plenty of bass for your face—or at least your ears. It boasts 18 ohms impedance, a sensitivity rating of -44dB V/Pa, and a frequency response of 16-22,000Hz. Other features include stainless steel hinges, aluminum sliders, and a detachable cable with a 3-button remote. It also collapses for travel and has a choice of interesting colors, including black, denim, sand, olive, and “nation” (which is pictured). MSRP. \$249

For More Information:

[Sennheiser](#)



BOSE QUIETCOMFORT 25

Bose has been cranking out noise-canceling headphones for years. The company's latest boasts a new design and a better ability to drown out annoying noise around you. Other features include a new Active EQ for a

which moves a diaphragm. This diaphragm is what actually moves the driver. This setup enables BA drivers to be more dexterous than dynamic drivers, creating more clear, crisp sounds. However with all the tiny parts, they are also more easily broken. In addition, single BA headphones are generally not as good at bass response as dynamic drivers. So, when dealing with balanced armature headphones, you'll ideally want two or more drivers so that one driver can be assigned to lower frequencies and compensate.

Electrostatic Headphones are far less common, but generally far more expensive. Used only in over-ear headphones, the electrostatic driver is suspended between metal plates, which then push and pull the driver back and forth between them. This style of driver is optimal for creating detailed sound and can create frequencies beyond human hearing capabilities. However, you'll want to use an amplifier to control these headphones, as the current must be carefully controlled to get the most out of these drivers. In other words, you'll be dropping some serious cash.

Factor Two: Claimed Frequency Response

Does It Matter?: No.

Unfortunately, the claimed frequency response on the side of the headphone packaging is virtually meaningless in terms of the quality of sound a headphone can produce. Just because a headphone can create a frequency doesn't mean it sounds any good. Driver quality, voicing, and build materials can make an impressive-looking headphone a listening disappointment. A flat response headphone with a quality driver that has a slightly smaller frequency range is a far more pleasant experience than a peaked, broader-ranged headphone.

Factor Three: Build Quality

Does It Matter?: Yes.

If a headphone is easily broken, uncomfortable, or the chassis creates noise, you'll never wear your new headphones as often or as long as you could. For over-ears look for metal-reinforced headbands, quality headband and earcup padding, as well as replaceable ear pads and cables. Check to see if the

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smoother frequency response, Bose's TriPort technology for deep, detailed low notes, and an in-line remote and microphone. It's even more portable. Yes, this set can fold up even smaller, so it can stuff into your tiniest carry-on. The QuietComfort 25 does need a single AAA battery, but Bose says that should get you about 35 hours of use. Even when the battery dies though, the music plays on. MSRP: \$299.95 (\$399.95 for color)

For More Information: [Bose](#)



OPPO PLANAR PM-2

OPPO's PM-2 headphones include planar magnetic drivers and 7-layer diaphragms with an FEM-optimized high energy Neodymium magnet system. The technology produces transparent, highly dynamic sound that exhibits well-balanced tonal qualities with very little distortion or fatigue. They featuring an over-the-ear, open back design that's lightweight and comfortable. MSRP: \$699

For More Information: [Oppo](#)

joints creak when you move around. Investigate the clamping pressure: if it's too tight, you'll end up with a headache, if it's too loose, the headphones will fall off your head. For longer listening sessions, you'll want a headphone that is as lightweight as possible, otherwise you'll end up with a sore neck. For in-ears, look for a vast variety of eartips (or invest in compatible Comply tips), a compact earbud chassis design that won't gradually fall out of your ear canal, and a cable that's coated in a material that doesn't transfer noise easily. Check the cable length, and whether there is a huge in-line remote, which can bang against your body while you're in motion.

While all of these factors will assist you in getting the most for your money, you'll also want to read a few reviews on the sound quality before you buy. Even headphones that are fantastic on paper can be ill constructed and be clunkers. So do a little research from respected sources, and if possible, try before you buy. In the end, if your ears are happy, you will be too.



Foam tips like these from Comply can make in-ear headphones more comfortable.

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PSB M4U1

This model doesn't have amplification and noise canceling modes. It just has great sound. The specs include a frequency response of 20-20,000Hz, a sensitivity rating of 102dB, and 32 ohms of impedance. Other features include a tangle-free cord and gyro-suspended ear pads for hours' worth of listening. It even has a dual input connection. Available in black, gray, red and white, the M4U 2 also folds up nicely for travel and storage.

MSRP \$299 to \$399

For More Information:

[PSB Speakers](#)



HIFIMAN HE-400i

Designed for the home or the studio, this full-size planar magnetic model was introduced back in the summer, as a replacement for the company's HE-400. HiFi-MAN made the HE-400i lighter and increased the efficiency to 93dB. It even has newly-designed

THE MOST IMPORTANT FEATURES WHEN SELECTING HEADPHONES

Great sound is important, but it's not the only factor in picking your top headphones.

OBVIOUSLY, SOUND QUALITY IS IMPORTANT when selecting a headphone. But no matter how good a headphone sounds, they won't be of use to you if they don't fit seamlessly into your life. To make sure that your next pair does, you'll want to take into account where and how you'll most use your headphones.

When it comes to where/how you'll use your headphones, consider:

- Will you need to block out external noise?
- Do you need to be aware of your surroundings?
- Will you be using you headphones on the go?
- Will you use your headphones to exercise?
- Are you willing to sacrifice some sound quality to be free of a cable?
- Do you need to use these for a professional capacity?

If you need to block external noise, look for headphones that are over-ear, or sealed in-ear. Both of these designs, when properly fit, will naturally block some noise. If airplane engine hum, an air conditioner sound, or general office noise is a factor, active noise canceling will be useful so that you can listen at lower volumes.

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single-ended drivers and an open-backed design. It's also comfortable, thanks to a new headband and the FocusPad ear pads, which are made out of pleather and velour. MSRP. \$499
For More Information: [HiFiMAN](#)



POLK ULTRAFOCUS 8000

If you're an audiophile in need of noise-cancellation on the go, Polk has the perfect travel companion. This over-ear model has both active and passive noise-isolation features to cut out any and all distractions. Other features include Ultra Fidelity Dynamic Balance transducers and Push-to-Hear Ambient Control for muting audio signals and pumping up the outside noise, on the off-chance you want to be more aware of your surroundings. It also comes with leather earpads, a Skype adapter, a 1/8-to-1/4-inch plug adapter, and an on-ear 3-button remote control for use with an iPhone, iPod or iPad. MSRP. \$299.95

For More Information:

[Polk Audio](#)

Being aware of your surroundings means either a non-sealed in ear or open-backed over ears. These designs will let some air and sound in so you can keep an ear on what's happening around you. Just be aware, it also lets sound out, so if you have a roommate or work in a quiet office, you'll risk disturbing others if you listen at moderate to high volumes.

On the go, in-ears are your best bet. They're lightweight, can fit in your pocket when not in use, and often have in-line remotes and mics for controlling your mobile device. If you get the correct fit, they'll stay put while commuting. If you can't stand the feel of something in your ear, a second best option is on-ears. Look for a pair that is very lightweight and folds up to a compact size.

If you're going to work out with headphones, you need water resistance. While technically you can wear any headphones at the gym, sweat, steam, and body oils will take a toll on the chassis as well as the drivers. Used in sport conditions, moisture damage will often void a warranty. Look for water and sweat resistant headphones with a warranty that backs that claim up, and you'll save yourself a lot of hassle and heart-break.

Sometimes, a cable just won't do. Whether the music source is too far away, or you get snagged on your desk chair too often, we all have a reason for wanting to cut the cord. Bluetooth headphones can be really fantastic at solving these problems, but you want to be sure to consider battery life, charging time, and, if these are your primary pair of headphones, to look for the ability to use the headphones through a cable if the battery runs out. Also be sure you can control your device through the headphones, so you can pause, skip tracks, and adjust the volume if you aren't right next to your music player. Be aware that you will lose some sound fidelity over higher-quality corded headphones, but sometimes that's a sacrifice worth making.

If you're using headphones for recording, podcasting, mixing or DJing, you will want over-ear sealed headphones. Not only will you get the best sound quality for the money by choosing over-ears, but you'll also block out external noise (so you can hear what you're working on clearly). If you're using the head-

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DENON AH-D7100

When Denon announced 11 pairs of headphones simultaneously back in 2012, the AH-D7100 did not get lost in the frenzy. Dubbed the "Music Maniac," this set is geared towards audiophiles and has Denon's 50mm Free Edge Nano Fiber driver, which promises to perform as nicely as a box loudspeaker. Other features include real African Mahogany wood ear cups, detachable cables, and the pentagonally-shaped memory foam earpads. Denon thinks you'll be so pleased with this pair, they're throwing in a desktop display stand, so you can show off your purchase. MSRP. \$1,199

For More Information: [Denon](#)



PARADIGM SHIFT H150NC

These noise-cancelling Shift headphones come from Paradigm, the company with a long history in high-performance speakers. The dual-microphone design allows it to selectively

phones in a recording booth, you'll also prevent feedback or bleedthrough of the monitor tracks. If you are DJing, also look for an earcup that swivels fully around or hinges back, so you can hear what the crowd is doing. Also, coiled cables can be handy for avoiding clotheslining yourself if you walk a touch too far away from your input, while also preventing a huge pile of excess cable at your feet. An bonus feature to look for is headphones that have the ability to connect the cable to either earcup: extremely useful if your music source is in a fixed position on the opposite side of your head from where the cable is attached.

Keep in mind that these factors can often be combined to fit your specific need. On the go and need to block noise? Get in-ear ANC headphones. Working out and can't handle a cord? Get water-resistant Bluetooth. Making sure that your headphones fit your lifestyle will mean you'll get the most out of your money, and the best out of your new headphones.



If you want headphones for active wear, wireless Bluetooth models like these Onkyo ES-BT1 will give you the freedom you need.

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isolate and attenuate outside noise. The three layered foam ear cup prevents loss of bass, so you get all the boom from your tunes. MSRP. \$299

For More Information:
[Paradigm Shift](#)



BOWERS & WILKINS P5 SERIES 2

This isn't the Maserati model that was released earlier this year, but it's just as sharp. Packing in driver technology based on the popular P7 model, this new option is designed to deliver hi-fi sound anywhere and everywhere. It's because the P5's drivers have a suspended diaphragm that's more like a traditional speaker versus typical headphones. That allows for a spacious soundstage, crisp detail and controlled bass. Adding to the experience is a frequency response of 10Hz to 20kHz, 22 ohms impedance, a sensitivity rating of 108dB, and an Apple-approved cable for taking calls and controlling your devices. MSRP. \$299.99

For More Information:
[Bowers & Wilkins](#)

WHAT TO LOOK FOR IN NOISE CANCELING HEADPHONES

Active and passive noise canceling headphones both have their place.

SO YOU WANT TO CUT THE NOISE in your life and listen to some tunes. Should you buy active noise canceling, or passive? What's the difference? What are the pros and cons to each? Read on to find out.

How Do Headphones Block Outside Noise?

Both active and passive noise canceling headphones help to block out external sounds. The difference is in how each accomplishes that task. Passive noise canceling headphones block external sounds through physical means. Basically, passive NC headphones stop outside sounds from reaching your ears by sealing off your ear canal. In over-ear headphones, this means that the earcup is solid, and the earpads need to seal against your face. Think hearing-protective earmuffs that air-traffic controllers wear. For in-ears, the tips of the headphone (or in the case of custom monitors the chassis of the monitor itself) seal off your ear canal from external soundwaves getting in. In this example, think earplug.

For passive noise canceling to work properly, fit is important. But done well, a surprising amount of external noise can be eliminated. For most situations, passive NC can be enough. In addition, it's not dependent on battery life, and it's far less expensive. On the flip side, inevitably some sound will bleed through, and louder sounds like engine noise can be tough to overcome without an increase of your music volume.



JBL SYNCHROS S700

JBL has made this affordable set a standout by using real materials, such as lightweight die cast aluminum, woven cordura, steel, and even leather ear pads. Perfect for long-term listening, the S700 sounds as good as it looks and feels. It includes JBL PureBass performance technology, as well as proprietary Live-Stage signal processing to create sound that feels like it's filling the entire room. Other features include 50mm drivers, a frequency response of 10Hz-22kHz, and a built-in remote/microphone. MSRP: \$299.95

For More Information: [JBL](#)



YAMAHA PRO 500

Last year, Yamaha cranked up its headphone offering, announcing three new products inspired by the power, elegance and performance of racing motorcycles. The top-of-the-line entry is the PRO 500. However, if your idea of a cool bike is a Schwinn, you should still be able to appreciate this model's noise-isolation

Passive Pros:

- Less expensive
- Not dependent on battery
- Much more commonly found

Passive Cons:

- Not effective on louder noises
- Some sound will bleed through, although muffled
- Compensating for noise bleedthrough results in louder listening volumes

Active noise canceling is a completely different idea than passive noise canceling, although many ANC headphones use some form of passive noise canceling in their designs. With active noise canceling, we're going to need to talk a little bit about the physics of sound. Basically, sound travels in waves: little patterns of up and down that hit your eardrum. But if one sound wave meets another sound wave that is its exact opposite (going down where the other goes up, and vice versa) the two waves cancel each other out. The result? Silence. So active noise canceling functions by having a small microphone somewhere on the headphone that processes noises in the environment. Then the headphones create a waveform that is out of phase with the sounds around the listener thereby canceling out that plane engine noise or whirring air conditioner. What's left is the sounds that you actually want to hear. It's not a perfect system, lower sounds are easier to cancel to higher ones, so voices are tougher to block than a constant hum. Plus, active noise canceling is battery dependent, so once the battery runs out, the noise comes back. And of course, for quality ANC, you're going to pay much more than for passive. But in an environment where you'd need to raise the volume to block out noises around you, ANC can literally save your hearing.

Active Pros:

- Actually removes noise rather than just muffling
- Enables you to listen to music at lower volumes, saving your hearing

Active Cons:

- More expensive
- Battery required to function
- Limited ability to cancel higher pitched sounds

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features, as well as the over-ear design, ultra-premium drivers, and rigid aluminum alloy ear cups. Available in racing blue and piano black, it also comes with 4- and 10-foot cables, a folding design, and a gold-plated 1/4-inch adapter. MSRP. \$399.95

For More Information: [Yamaha](#)



BEATS STUDIO WIRELESS

If you want to know why headphones have become so insanely popular lately, look no further than Beats. The Studio is the model that really started the whole high-end headphone craze. However, this version takes that Beats sound a step further, making it completely wireless. Having Bluetooth support means you don't have to be tethered to your devices; it allows you to stream music, change tracks, pump up the volume, and even take calls up to 30 feet away. Other features include Adaptive Noise Canceling, an in-line remote/microphone, and a built-in rechargeable battery that lasts up to 12 hours wirelessly or 20 hours when you want to get old-school and decide to plug in. MSRP. \$379.95

For More Information:

[Beats Electronics](#)

GETTING THE BEST-FITTING HEADPHONES

Proper fit can make or break your headphone listening experience.

IN ADDITION TO AFFECTING your comfort, improper fit can also affect sound quality. Gaps in the seal can allow low frequencies to escape the ear canal rendering them inaudible, or cause high frequencies to ricochet inside your ear painfully. But with a little research and trial and error when fitting, a good headphone will give you a fit that's just right.

Over-Ear Fit:

Over-ears are some of the easiest to get to fit many differently sized heads. But there are a few factors that can trip up even over-ears. First up, the headband: clamping force and padding. If you have a smaller head, a tighter headband can be a good thing; it prevents headphones from slipping off while in use. However, for medium and larger hat sizes, too much clamping force can literally be headache-inducing. Try on the headphones and gently shake your head in a "yes" and "no" motion. They shouldn't slip around too much. If they feel tight, especially after a few minutes, look elsewhere.

While some headphones do loosen over time, quality headphones are designed not to lose their shape as you use them, so you may end up feeling as though your head is in a vice. While padding on a headband isn't necessary, it can be if you are wearing heavier cans. If the headphones you're trying feels weighty in your hands, you'll want padding on your head.

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VELODYNE VBOLD

With this release, Velodyne is making a pretty bold statement—about how awesome wireless headphones can be! The vBold uses Bluetooth to connect to iOS, Android and other compatible devices wirelessly up to 33 feet and creates killer sounds, thanks to support for the aptX codec. It also has 40mm drivers, a frequency response of 20Hz to 20kHz, a sensitivity rating of 105dB, and 32 ohms impedance. Available in matte black and satin silver, it's also foldable for travel. MSRP. \$349

For More Information: [Velodyne](#)



AUDEZE LCD-3

You don't get "the best in the world" without paying a premium price. And frankly, this is about as premium as you can get for headphones. The priciest model on our list has received tons of accolades, thanks to a long voice coil

Secondly, look at the padding and earcup size. If you have too small a cup size, it can end up being more of an on-ear than over-ear and pinch your outer ear, which can be fatiguing over time. Too large for your face, and sound will leak out. Check for gaps. You want a padding that isn't too firm so that it seals comfortably around your ear, but not so soft that it doesn't quickly spring back into shape.

In-Ear Fit:

When it comes to the trickiest fit, in-ears (or earbuds) are the most likely to cause problems for music fans. The best way to avoid having an improper fit is purchasing a headphone with lots of replaceable tips. Standard issue is three sets of two (S,M,L) but in higher quality headphones, you should find several sets of tips in different sizes, shapes, and materials. If you know you have a larger ear canal, look for large bulbous-shaped tips. Smaller ear canals may want to find headphones that offer an extra small or oval-shaped tip. [Comply](#) foam tips are being included with more headphones than ever, but if you find a pair of headphones you love don't fit perfectly, and you like the feel of the memory-foam-like tips, Comply tips can also be purchased separately. Just be sure that the barrel size is the correct size for your make and model of in-ears.

When trying the in-ear headphones on, you should have a complete seal in your ear, meaning no air is coming in or out. Try rubbing your fingers together near your ear to see if you can hear it through the seal. If you can, you may need to try larger tips. In contrast, you should never feel pain or discomfort. Do the same head waggle as with over-ear headphones, and also gently tug on the cable. The headphones should not easily fall out of your ear if they snag on your collar or zipper. If you find many headphones fall out easily, look for headphones with flexible wings, or that hook over the ear. These can add stability. Again, the more size options available, the more likely that you'll find a fit that works for you. With in-ears, fit is highly personal, so don't be afraid to use the trial-and-error method until you find what fills your needs.

In the end, when it comes to looking for that perfect fit, you

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and two patent-pending "Fazor" elements, which are placed outside the two magnetic structures surrounding the diaphragm. The end result is the most lifelike sound that money can buy—a lot of money. "I'm pretty hard to impress, especially when it comes to headphones, and these impressed me," said Forbes' Geoff Morrison. "They're that good." While they may be good, they don't work alone; Audeze says that this model needs an external headphone amplifier or an integrated amp to deliver the goods. MSRP. \$1,945

For More Information: [Audeze](#)



AUDIO-TECHNICA ATH-M50X

This model is pretty popular—and not just because of that price tag. It's because this follow-up to the acclaimed ATH-M50 has proprietary 45mm large-aperture drivers with rare earth magnets and copper-clad aluminum wire voice coils, as well as sound-isolating ear cups and detachable cables. Other features include a frequency response of 15-28,000Hz, a sensitivity rating of 99dB, and 38 ohms impedance. The

may need to try a few options before you get to know your ears' individual needs. So be sure you know your retailer's return/exchange policy before you bring home a new pair of headphones. Finding the perfect fit may sound a bit daunting. But like the search for a good pair of shoes, it's truly worth it. The more comfortable headphones are, the longer you can happily listen.

If you're interested in learning more about headphones check out these useful resources

If you're interested in learning more about headphones check out these useful resources.

[EH Headphones Channel](#)

[EH Library](#)

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headphones are typically found in black and white, but there's also a limited edition blue model available. MSRP. \$239

For More Information:

[Audio-Technica](#)



NAD HP50

This was the company's first headphone product—and it certainly doesn't disappoint. The over-ear design has comfy ear pads designed to keep the sound sealed in. It also adds in a pair of 40mm drivers set in optimized acoustic chambers and NAD's RoomFeel technology, which promises deep bass and a lifelike listening experience. It even has internal wiring that's OFC (Oxygen Free Copper), which boasts maximum signal transfer and minimal loss. Also worth mentioning is that the cord has an iOS-compatible 3-button multi-click remote and microphone. Designed by Paul Barton, this model is available in a choice of black, white and red finishes. MSRP. \$299

For More Information:

[NAD Electronics](#)