

# Consumer Electronics & Computing Buyer's Guides

*There are many decisions to make when purchasing consumer electronics gear or a new computer. Get the information you need to help you make the choice that is right for you...*

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## Digital Camera Buying Guide

*Buying your first digital camera? Don't be confused by the jargon—it's easy to choose once you know the basics. Read on for answers to the most frequently asked questions on buying digital cameras.*



From megapixels to memory cards, digital and optical zooms, point-and-shoots to SLRs: the options can be daunting when you're buying your first digital camera. But you really don't need more than a basic understanding of digital cameras to make a good choice. Just like any purchase, it all boils down to what you need and which one best serves it. This guide answers seven of the most common questions about choosing, buying, and using digital cameras.

### 1. What's the difference between a point-and-shoot and an SLR?

A point-and-shoot camera is roughly the digital equivalent of a film automatic. It basically does all the image work for you, so that you just literally point and shoot. If you need a camera for everyday picture-taking, a point-and-shoot should be enough for you.

SLR is short for single-lens reflex, the optical system used in most professional cameras. It took a while for SLR technology to go digital, but many are now available at the consumer level. You'll easily notice a digital SLR by its large changeable lens and usually thick, bulky body. An SLR may be suitable if you're a serious hobbyist or

want to get more creative in your shots.

## 2. What are megapixels? Are they important?

Megapixels are usually the first thing you consider when buying a digital camera. It simply refers to the resolution, or total number of pixels, in the pictures you take. A 5-megapixel camera can capture up to 5 million pixels.

*Some 6-megapixel SLRs far outperform 10-megapixel compacts*

So do they matter? Yes, but only to a certain extent. Some 6-megapixel SLRs far outperform 10-megapixel compacts. If you only want to publish your pictures on the web, 2 to 4 megapixels should be enough; for prints up to 5x7, you'll be fine with 6 megapixels. Anything higher than 8 is usually just for show, at least in compact cameras. Because compacts have smaller image sensors, packing in too many megapixels can make your images grainy.

## 3. Does size matter?

Cameras range from the slim, credit card-sized models to bulky ones that barely fit in your hands. Compact cameras are more attractive, but style often comes at the expense of features. So the question here is: how much function are you willing to sacrifice for style? A pocket-sized model may offer decent resolution but weak flash, or easy handling but poor or limited zoom. The flaws are bearable in some cases, but it all depends on what functions you need. If you're not planning on any professional photography, then you can probably do away with some of the features.

## 4. What's the difference between optical and digital zoom?

Optical zoom works the same way it does in traditional cameras: it brings your subject closer by adjusting the movable glass elements

inside the lens. Digital zoom simply expands the pixels in the center of the frame to make it appear “closer.” Because of the physical limits of the glass lens, optical zoom is usually limited while digital zoom can be stretched past 100x. Some models don’t even have optical.

However, it’s only optical zoom that matters when it comes to image quality. Digitally zoomed pictures are usually blurry and pixelated. It’s best to ignore the digital zoom no matter how high it is, as you won’t be using it much if you want decent pictures.

*If you just want to share pictures online or make regular-sized prints, you can find a decent camera for under \$100*

## 5. How much should I spend on a camera?

It depends on what you want to do with your camera. If you just want to share pictures online or make regular-sized prints, you can find a decent camera for under \$100. In the \$200-\$400 range, you can get enough resolution for prints up to 5x7, or even 8x10 if you’re lucky. “Prosumer” cameras—point-and-shoots with advanced manual controls—can cost up to \$500, and should be good enough for serious amateurs who aren’t ready for a digital SLR just yet. If you’re really into creative photography, you may want to invest in a DSLR, which can range from \$600 to over \$5,000.

## 6. What accessories do I need?

Most digital cameras come with a free memory card, but it’s always a good idea to buy extra storage. The 32-MB card included in most packages can only hold around seven 5-megapixel pictures, so you’ll be running to transfer your pictures every five minutes. A 1GB card should be enough for pictures up to 8 megapixels.

You may also want to invest in rechargeable batteries, unless your camera has a built-in one. Digital cameras eat up power pretty fast—the cheapest battery brands can die out after a couple of shots. Get at least two sets of rechargeables, so you can simply pop them in when you run out in the middle of a shoot. Other add-ons

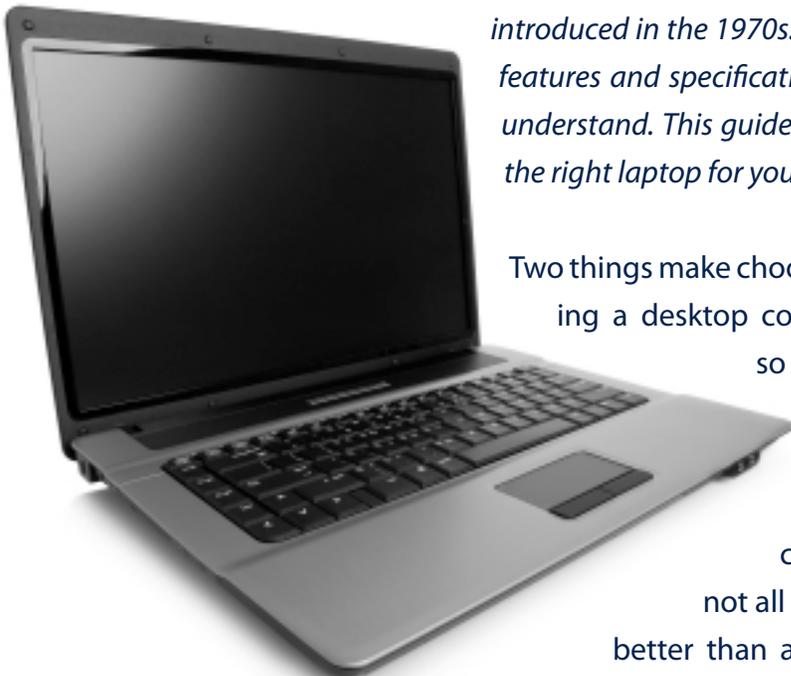
you might need are a carrying case (look for a padded one), wrist or neck strap, and a lens cleaning kit.

## 7. Is digital better than film?

Each medium has its strengths and weaknesses. In terms of quality for price, film is still much better than digital. Few digital cameras can generate pixels so fine that they appear as smooth as a film print. However, some of the newer models can match or even exceed film quality, especially in the hands of a skilled photographer. The added convenience of digital makes it a far better choice for all applications: no film costs, easy printing, unlimited additional prints, and the ability to share and publish your pictures online.

## Before You Buy: Essential tips for buying a new laptop

*Laptops have come a long way from the bulky fold-ups that were first introduced in the 1970s. Buyers are now faced with a slew of features and specifications that the average Joe can't even understand. This guide decodes the jargon to help you find the right laptop for your needs.*



Two things make choosing a laptop different from choosing a desktop computer: one, it's more expensive, so you want to be sure you get your money's worth; and two, it's impractical to upgrade, so you have to choose something you can live with for a while. Of course, not all of us know what makes one laptop better than another. For the non-techie, terms like dual-core processor, DDR2 memory, and 4700 rpm drive might as well be Cantonese.

So how do you know which laptop is right for you? One thing to keep in mind is that your needs always come first - it is important to select a laptop that meets your requirements. Choosing the right laptop is all about understanding what those needs and requirements are.

Most laptop buyers fit into one of these categories:

*Desktop replacements are perfect for those who do little more than room-to-room travel*

## Student

Budget is almost always the top concern for student buyers. If you're on a tight budget, you want a laptop that gives you all the basics for less. Look for something that's small and light, but rugged enough to carry around the campus. You can usually find a decent laptop for under \$1,000, but don't expect gaming-quality video or server-size memory.

*Features to look for: wireless internet, at least 1GB of memory, and enough disk space for your mp3 collection.*

## Home user

If you use your laptop mostly at home, a desktop replacement may be your best choice. A bit bulkier than most laptops, desktop replacements are perfect for those who do little more than room-to-room travel. They carry most of the features you'd get from a PC, but naturally this considerably pulls up the price. Desktop replacements usually start at \$1,500.

*Features to look for: a large hard drive for storing photos, videos and music, a large viewing screen if you're into movies, networking capabilities*

## Mobile entrepreneur

For yuppies on the go, a thin-and-light laptop may offer the best

*Multimedia laptops are designed for maximum video and sound quality*

fit. Thin-and-lights pack in the features of a typical midrange computer in a lightweight, portable package. As with most gadgets, size comes at the expense of some features—expect only a midsize hard drive and limited media capabilities. Thin-and-lights start at \$800; a fully loaded version may cost over \$1,500.

*Features to look for: 2GB memory (1GB will do for older operating systems), wireless networking, quick charging and spare batteries*

## **Frequent traveler**

Jet-setters who can work from anywhere will do well with an ultraportable laptop. Ultraportables are the smallest, lightest laptops on the market, designed to withstand the bumps and thumps of air travel. You'll be giving up some features for size, but most new models aren't much different from thin-and-light and midsize laptops. Expect to pay at least \$1,100 for a basic ultraportable, or over \$2,000 for a feature-packed model.

*Features to look for: wireless connectivity, rugged design, multiple interfaces (USB, FireWire, etc) for peripherals*

## **Movie buff/multimedia author**

Multimedia laptops are designed for maximum video and sound quality, often matching home theater standards. They are a great choice for those who like to bring their entertainment on the road. It's also the laptop of choice for multimedia authors such as filmmakers, video editors, CAD operators, photographers, and sound engineers. Laptops of this type are designed as high-end desktop replacements; the average price is around \$1,300.

*Features to look for: at least 160GB of disk space, 2GB of memory, large widescreen-capable display of 15" or more*

## Hardcore gamer

Desktop PCs remain the most practical choice for gamers, but gaming laptops still enjoy a steady place in the market. If you regularly spend more than four hours straight on computer games, you'll need a high-end multimedia laptop that gives you the speed, graphics, and audio quality you need to get the most out of your game. You'd better have cash to burn, though: a good gaming laptop can cost well over \$2,000.

*Features to look for: at least 2GB of memory, an advanced graphics and sound card, lots of connections for game controllers, and a good cooling system*

## MP3 Player Buying Guide

*MP3 players now come in all shapes and sizes, offering every feature from basic playback to video and broadcast capacities. With all those options, choosing just one can be quite a challenge. Here's a simple buying guide to help you make the right choice.*

First there was the portable cassette player. Next came the Walkman, which brought the world's

first consumer ear-

phones, then the

Discman, which

had teenagers

the world over

lugging their en-

tire CD collec-

tions to

school. Today,

carrying your

music around

is more fashionable



than ever, with MP3 players coming out in all colors, sizes, finishes, and range of extra features.

All those options can be fun, but how do you choose just one? It all boils down to what you want out of your gadget, and how much you're willing to pay for it. Here's a quick guide to choosing an MP3 player that suits your needs.

*Hard drive players go from \$200 to as much as \$700*

## Storage types

The type of storage you choose affects your MP3 player's size, capacity, durability and price. The three main types are flash, expandable memory, and hard drive.

Flash MP3 players use volatile memory, which means they don't need power to retain information. This eliminates the need for moving parts, as is the case with hard drives. Flash players have the longest battery life and can be made in really compact sizes. They're also pretty cheap—you can get a decent player for under \$150. The major drawback is capacity; most mid-range flash players can hold up to 4GB (around 1000 songs).

Expandable memory players are great for those who are constantly adding to their music collection. They usually make use of flash drives, as the storage units are small enough to switch and store. You can use this feature to organize your music or even back up your collection. If you're considering an expandable player, try to get additional storage from the same manufacturer to avoid conflicts. Expandable memory players range from \$100 to \$200.

Hard drive MP3 players use the same storage system as your computer. They are mainly set apart by their enormous capacities—up to 160GB of music, or 40,000 songs! Most hard drive players also store video and pictures, so you can really maximize the storage. If you have a huge collection, make sure to organize your songs into playlists, as it can be hard to scroll through an entire library just to find one song. Hard drive players go from \$200 to as much as \$700.

## Video and photo capability

Mid- to high-end MP3 players offer more than audio playback; they also allow you to store videos, pictures, podcasts, and even documents. Video capacity requires a larger screen for viewing, so they're a little bulkier than audio-only players. If you're getting a video-capable player, it makes sense to invest in larger storage—there's no sense storing video in a 2GB memory card. Video is a good feature for frequent travelers who need mobile entertainment, but they can be too bulky to use during workouts.

*Most new players are universally compatible*

## Computer compatibility

Older MP3 players used to work only on selected operating systems; a classic example is Apple's first classic iPods which worked only on Macs. Most new players are universally compatible, although some may have problems with Windows Vista and other new operating systems. System requirements are printed on the player's box, so be sure to check it out before buying.

Also consider how you'll be connecting to your computer. USB is still the main interface for audio players, but a few high-end models connect via FireWire. This allows faster transfers ideal for copying large video files or even entire libraries. Compatibility can be a problem, though, as not all computers have a FireWire interface.

## Transfer options

Some players have to be installed in your computer to be able to take songs. In most cases you can download them for free on the manufacturer's website, or an installation CD comes with the package. Transferring songs usually involves "syncing," or synchronizing files and folders on your player with those on your computer. This can take some getting used to, but once you get the hang of it, you'll be able to take advantage of extra features such as playlists, song lyrics, and album art displays.

If you like to keep it simple, look for a simple flash-based player whose sync function is optional. These players will work just like flash drives—plug it in, copy and paste your songs, and you're ready to go.

## Smartphone Buying Guide

*Smartphones are the new must-have tool for today's mobile worker. Combining cell phone and PDA functions, they let you do your work anywhere and stay productive on the go. This guide helps you choose the best smartphone for your lifestyle.*



If you're still admiring those super slim phones from five years ago, you're missing out on a fast new trend: the smartphone.

Larger screens, full keypads, and a stylus pen interface set these new phones apart from their predecessors; advanced operating systems and a full range of features give them a lot more punch.

Of course, as gadgets go, smartphones get more complicated as they get more advanced. If you're buying your first smartphone, it helps to know some of the basics to help you make the right choice. Here's a quick guide to help you get started.

### Choose an operating system

Function-wise, the advanced operating system is what sets the smartphone apart from traditional phones. With the exception of the Apple iPhone, which runs on Mac OS X, most smartphones use one of these three:

*Windows Mobile:* This OS works best for business users who like to keep things simple and functional. It comes with the mobile ver-

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advanced*

sions of most Office applications such as Word, Excel, and Powerpoint, although some models only come with viewers (you can't create or edit new files). It also has the best compatibility with third-party applications.

*Palm OS:* Palm OS is one of the most stable options and a great option for smartphones with slower processors. There aren't many program choices, but those that are available are very useful, and many are award-winning.

*Symbian:* This is the leading OS in the world, although not the most popular in the US. Most Nokia smartphones (and some of its traditional phones) use Symbian. This OS works with MS Office file viewers, so file sharing should not be a problem.

## Look for connectivity options

There are lots of connectivity options for smartphones, but you don't need all of them. Decide which connections you need the most and stick to them. Here are some of your choices.

*USB:* Almost all smartphones use the USB port to connect to your computer. Some models can also use it to recharge, although the charging time can be twice as long.

*Bluetooth:* Bluetooth provides wireless connections to laptops, headsets, and other Bluetooth-enabled smartphones. It covers up to 30 feet and transmits through physical barriers, so you can stay connected even from a separate room.

*Wi-Fi:* Wi-Fi lets you connect to the Internet from any wireless hot-spot, usually in airports, libraries and coffee shops. Make sure you have a reliable security program on board, as hackers can easily crack your smartphone over a Wi-Fi connection.

*3G:* Choose a 3G smartphone if you maintain several email and messaging accounts. This feature lets you integrate all your accounts in

a single connection.

*Infrared:* This offers limited connectivity and is rarely used on models that still have them. Unlike Bluetooth, it is sensitive to physical barriers, so it can only be used over short distances.

*GSM:* This feature is only useful for long-distance or overseas travel. It helps you save on roaming rates and delivers excellent voice quality during calls.

*There are lots  
of connectivity  
options for  
smartphones*

## Check for additional features

Most features beyond messaging and connectivity are just add-ons, but they're nice to have anyway. Some of the most popular include:

*Speakerphone:* Make calls without holding the phone to your ear. This feature is great for making conference calls or chatting with friends while doing household chores.

*Camera:* Many smartphones come with a camera feature, although image quality won't match that of an actual digital camera. Use it to take snapshots when you travel or take quick pictures for reference.

*Multimedia:* Integrated MP3 players and video playback allow you to bring your entertainment on the road. This can eat up battery power, though, so make sure you have spares.

*GPS:* Smartphones with a built-in GPS receiver help you navigate unfamiliar roads and find your location anywhere on earth.

## Buying a New Printer

*Buying a new printer can be confusing with all the types, features, and add-ons now available. How do you know which one is right for you? This guide shows you some of the basic features to help you find the best printer for your needs.*



Printers are so inexpensive nowadays, retailers are practically giving them away. A basic printer can go for as low as \$30—practically the same price as a regular dinner! Of course, as with any new device, you get what you pay for. If you're buying your first printer, or replacing your old one after more than five years, it's time you had a crash course in new printer trends. Here are some things to keep in mind when shopping for a new printer.

### Resolution

Resolution affects the fineness of detail that goes into your print. It is measured in dots per inch (dpi) and usually ranges from 600 to 4800. A resolution of 720x1440 dpi should be enough for most applications, but you can move up or down the scale depending on your printing needs. For full-color printing, you want at least 3000 dpi; if you print mostly text-only papers, 600 to 800 dpi should be enough.

### Print speed

If you're always on the go, you want a printer that spits out pages at a reasonable speed. Laser printers have the main advantage in this category, printing up to 100 pages per minute. Of course, if you're after professional photo quality, you'll be willing to give up a bit of speed for better resolution. Don't fall for the speeds printed on the

boxes—quite often, they refer to print speeds at the lowest possible setting using all-text documents. In practical situations, the actual speed is usually half the number being advertised.

## Printing costs

*Generally,  
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Generally, the cheaper the printer, the more expensive it is to use it. Inkjet printers, for example, can go for under \$100, but cartridge replacement can cost up to three times as much over a three-month period. On the other hand, laser printers cost more initially but are very cheap to operate, both in terms of power and cartridge use. Dye-sublimation printers (a popular type for photo printing) are particularly expensive at \$2 per page, but they have the advantage of a fixed cost regardless of photo content.

## Connectivity

For home printing, the USB cable that comes with the package is usually enough. USB is really the best printer interface for any printer type, since most computers can accommodate it. If there are two or more computers in the house, you may want a network-capable computer that allows access from multiple computers. That way, you don't have to connect and reconnect the device every time you want to share. Note that some stores won't include the cable; you'll have to buy it from them for around \$10 to \$30.

## Additional features

Since printers are so affordable, a lot of buyers opt for multifunctional printers (MFPs). Starting at \$100, MFPs double as scanners, fax machines, automatic paper feeders, and even photocopiers. They are especially ideal for office use, as they take up minimal space considering the functions they offer. Most of them are networkable and will even print items directly from USB devices, such as flash drives and digital cameras.

## Camcorder Buying Guide

*Camcorders have become a lot more complicated in recent years, offering more brands, formats, and extra features than their analog ancestors. For the first-time buyer, all the options can be quite confusing. This guide decodes the jargon and helps you better understand your options.*



Ten years ago, buying a camcorder required no more thought than choosing a brand and model. Today's buyer finds himself faced not only with more brands, but with more features to choose from and a lot of jargon to read through. The price range has also widened—you can now start shooting for as little as \$60 or plop down \$5,000 for a top-of-the-line model. How do you know which camcorder is right for you? Here's a simple buying guide to help you decide.

### Choose a format

For the first-time buyer, choosing a format can be the most confusing part. Where there used to be just cassette tape, you can now record on tape, disc, card, and even a hard drive. Some of your choices include:

*MiniDVD.* These camcorders use miniature DVD discs (3" across) that fit into the center slot in most DVD players. They offer all the capabilities of regular DVD, from chapter access to quick file transfers, but with the advantage of a smaller form factor and therefore bet-

*Some people prefer to record on two forms of media at once*

ter handling.

*MiniDV.* The MiniDV format uses Digital8®, a miniature digital tape, which connects to your computer via USB or FireWire for transfer and editing. The sound and picture quality are similar to that of DVD. Most of them have A/V out connectivity so you can watch them directly on your TV.

*HDD.* This format records on a built-in hard disk drive, giving you a good deal of storage without the hassle of buying discs or tapes. Capacities range from 20GB to 80GB. The hard disk format allows a very compact form factor, so most HDD models are built for style as well.

*Flash.* The smallest camcorders often use flash memory—a medium that can be the size of a fingernail. Because it's so small, most flash camcorders can fit in your pocket. Transfer is also a breeze; all you need to do is pull out the memory card and plug it into your computer.

*Hybrid.* Some people prefer to record on two media at once, whether to edit on multiple computers or simply for backup. Whatever your purpose, a hybrid camcorder gives you exactly that kind of flexibility. Most models couple a hard drive with either DVD or flash memory.

## Check for features

When it comes to gadgets, features are a matter of personal preference. A professional videographer can pay hundreds more for an add-on that wouldn't matter to an amateur. Some features are always worth having, though. Here are some of them:

*Optical zoom.* When you can't get close to your subject, optical zoom saves the day. Most camcorders also have digital zoom, but pictures tend to lose quality when zoomed in digitally. For casual shooting and home videos, 6x to 10x digital zoom should be enough.

*Still pictures.* Many camcorders also make pretty decent stills, although image quality may not be comparable to digital cameras. If you like this feature, try looking for a higher resolution still mode—about 4 megapixels will do—to take better, clearer pictures.

*Camcorder lights.* This may come in handy when you're shooting indoors, on overcast days, or other low-light conditions. They won't provide professional-quality lighting, though—if that's what you're after, invest in a separate set of lights.

*Viewfinder.* The swing-out LCD screen may look cool, but using it all the time can eat up your camcorder's power. Most videographers use the viewfinder, which lets you save power and improve your focus at the same time.

*Pictures tend to lose quality when zoomed in digitally*

## Connectivity options

Some high-end camcorders let you edit directly on the screen, but in most cases you'll need to transfer your work to a computer for editing. The most common interfaces are USB and FireWire. The latter allows much higher transfer speeds, making them ideal for large file transfers typically found in HDD camcorders. Not all computers have FireWire ports, though, so compatibility may be a problem.

If you're getting a flash memory camcorder, it's best to stick to cable connections to limit manual handling of your card. Flash memory can be very delicate, and even a bit of mishandling can wipe out all your precious memories.

## Portable DVD Player Buying Guide

*A portable DVD player can make a long trip much more bearable. There are lots of brands and styles to choose from, so you won't run out of choices. Here are some tips on choosing the best portable DVD player for your needs.*

Nothing solves the travel blues like a good movie to take on the road. That's why many parents owe a lot to the portable DVD: it provides just the right on-road entertainment to keep kids from throwing those annoying travel tantrums. But as luck would have it, portable DVD players don't come cheap: you can easily get a new cell phone or camera for the same price. Here's a quick buying guide to help you make the most out of your purchase.



### Size and weight

Bulk shouldn't be an issue if you plan to keep the player in your car, but if you're like most users, you'll want to take it out once in a while. The standard screen size for a car player is 7.5 inches; you can find models up to 10 inches wide for a considerably higher price. It's all a matter of how much portability you can give up for a better viewing experience. Look for something within the middle weight range—too-light players tend to be flimsy, and too-heavy ones may heat up too fast.

## Audio and Video Quality

If you're after top video quality, you may have to sacrifice a bit of sleekness for a larger screen. A 10-inch screen should produce images close to TV-screen quality, although color settings and resolution may affect sharpness. Most players have built-in speakers, some with average sound quality and others offering virtual surround sound. You can plug in a pair of portable speakers if you want better audio quality.

*Choose a player that will run on AC, car power, and batteries*

## Screen Placement

You're probably most familiar with the notebook-style fold-up screen. This is a very versatile style, but it's not the only one out there. Some screens are inverted (that is, they fold downward) so that you can hang them from the car ceiling; this makes it visible from any point in the car and is great for larger viewing screens. Others can be reversed and hung from a seat headrest, offering better stability but limiting the view to those in the backseat.

## Power Options

This is a common yet often overlooked problem in portable DVDs. Since you'll be taking it on the road, you want something that will last at least the full length of a movie. Most models will connect to your car's power; others rely only on the rechargeable battery pack. Generally, the more power options, the better: choose a player that will run on AC, car power, and batteries. That way, you can save the battery power for when you really need it.

## Supported Formats

Most DVD players are backward-compatible, which means they'll play older formats such as CDs and VCDs. If you have home videos or homemade DVD copies, make sure the player recognizes the

file format and disc type you use. It should at least support common file types such as .mpeg, .avi and .wmv. Look for compatibility with common disc formats, including DVD-R, DVD+R, DVD-RW, and DVD+RW.

*A good product should feel solid and sturdy in your hands*

## Durability

Your portable DVD will take a lot of abuse during the trip, so make sure it's up to the challenge. There's no surefire way to tell how sturdy a player will be in the long run, but a good product should feel solid and sturdy in your hands. Features like anti-shock and anti-skip help keep video quality smooth during bumpy trips.

## Connectivity

If you want to use the portable as your main DVD player, you'll want more ports so you can hook it up to your TV, computer, camcorder, and other video sources. Some models come with one or two USB ports, which allow you to play videos directly from a camera or even a flash drive.