Continue



Who hasn't fantasized about finding a hidden horde of coins or relics with a metal detector? The allure of buried treasure has always been enticing-just look at the legends of Captain Kidd or Oak Island. And using a metal detector? The allure of buried treasure has always been enticing-just look at the legends of Captain Kidd or Oak Island. And using a metal detector to find coins or jewelry hiding in plain sight, is probably the closest to living it we'll likely find in our day-to-day lives. Of course, as any serious detectorist will tell you, the reality of metal detecting involves more long, pleasant strolls in the sun and fewer treasure chests. It often takes hours of work to find anything of value. The thrill you get from finding something interesting, though, makes it worth it. Heck, you might even find a hoard of ancient artifacts. But even if you don't stumble on anything, metal detecting is a fun and relaxing hobby, especially with friends. To find the best metal detectors for new hobbyists and experts alike, I also consulted with an expert detectorist, who helped me understand what makes a great detector. Then, I spent two days hunting for treasure across the beaches of South Florida to test them. I didn't find anything of real value besides a few children's toys, but it was a lot of fun. Steven T. Wright: As a longtime nerd and technology writer, I've covered computers and tech products for almost 10 years at publications like PC Gamer, Ars Technica, and Polygon. I have extensive experience testing and reviewing all sorts of consumer gear, from gaming keyboards to pizza ovens. I consulted Jeff Lubbert, an expert detectorist who has been tracking down treasures and finding lost rings since the mid-'80s. He has used his metal detector in 28 states, one U.S. territory, five foreign countries, and three foreign countries, where he has recovered items adding up to approximately \$980,000. He is president of the Eureka Treasure Hunters Club in Denver, Colorado, and has written articles about metal detectors for outlets like American Diggers and appeared on the TV show Forensic Files. While shopping for a metal detector, you need to take into account a number of key factors, particularly the type, coil size, weight, and extra features like backlight and frequency customization. Weight and build quality also make a big difference, especially when you use these devices for hours at a time. It was initially hard to weigh these distinct traits, but after testing these machines myself, the features worth springing for became clear. If you're going to shop for a hobby-grade metal detector, it's important to understand how they work. This is fairly technical equipment, so manufacturers will cater their products primarily to veterans who already have a bit of knowledge, which may be intimidating to new people. Most metal detectors have a round head called the "search coil," which is the actual detector itself. It has two parts, the transmitter coil and the receiver coil, which work in tandem to produce an electromagnetic field that shoots down into the ground wherever you wave it. When the field hits metal, it triggers another magnetic effect in response, which the coil picks up. Depending on the device, that signal may be able to tell you how deep an object is buried, based on the strength of the response. Most of the detectors I recommend can determine what kind of metal they're reading by measuring the object to react when the coil changes its magnetic current. This function, called "discrimination," can sometimes help you figure out if your quarry is worth digging up before you go to the trouble of getting your digging if you think you've found something worthwhile. The first thing to look at before buying a metal detector is where you plan to use it, as some detectors are better equipped to scan specific types of terrain. For example, if you live near the coast and plan to sweep your local beach, you may want a different model than someone looking under hard soil in local parks. Though there are many kinds of detectors, I focused on the two most frequently used by novices and veteran hobbyists. Very low frequency (VLF) metal detectors operate on one frequency at a time. They are generally cheaper and easier to use than multi-frequency detectors, but come with certain disadvantages. Most VLF detectors allow users to switch among a number of frequencies but rarely allow you to input a specific one yourself. They often don't work as well in mineralized soil or on saltwater beaches, and they're not ideal for gold prospecting. In general, VLF machines are great for those who plan to look for coins and jewelry in favorable conditions. Multi-frequency detectors run a range of frequencies simultaneously. They're expensive but generally very effective, which makes them appealing to seasoned enthusiasts. Multi-frequencies simultaneously. frequency detectors are ideal for conditions that challenge VLF machines, such as mineralized soil, wet sand, and saltwater beaches in general. They tend to be more complicated, and often weigh more. Think of it as a sign of your commitment to the craft. The best of the best can actually get quite light, but they're also very expensive. The physical size of the metal detector coil is important, too. If you don't sweep the coil over an object, you aren't going to get a ping, so bigger is better. Under most conditions, Lubbert advises that smaller coils have their uses, especially in wooded areas, since it's easier to get between twigs, grass, and weeds with a more compact head. Larger coils can theoretically detect objects that are deeper underground, but they're also more susceptible to electromagnetic interference from the environments. In general, all of my recommendations here seem relatively light on paper-the heaviest weighs only a few pounds. Keep in mind, though, that you could be waving this device around with one arm for hours at a time. Even a few pounds. Keep in mind, though, that you could be waving this device around with one arm for hours at a time. which comes in handy when searching in low-light conditions. (Some high-end models even come with flashlight functions). Though not a universal feature, I consider this an essential for all but the cheapest options. High-end metal detectors grant you a degree of customization through advanced settings, allowing you to set a specific level of discrimination that, when properly used, can help you identify relics and coins in a variety of environments. You need to know what you're doing to take full advantage of these do-it-yourself search modes, but there are guides online to help you learn as you go. Lastly, most metal detectors I researched and/or tested feature built-in batteries that last for hours on a full charge. That said, some models-including one of my picks-use disposable batteries instead. There are advantages and disadvantages and disadvantages to both: Disposable batteries can be replaced quickly, but you need to keep spare cells on you. It comes down to your preference, so go with what feels right. I selected the best metal detectors after trying a handful of options that came recommended to me by Lubbert, other expert detectorists, and enthusiast websites like MetalDetectingForum.com.To test accuracy, I buried an old spoon and two different coins-a quarter and a penny-8 inches underground to check their level of discrimination and pinpointing. I also used each detector for several hours in a variety of conditions, including a grassy park and at the beach, in both dry sand, wet sand, and under several inches of surf. Credit: Steven T. WrightProsMulti-frequency functionality works well over any terrainPhysically durableFind modes are easy to use and understandConsHeadphones are underwhelmingTypeMulti-frequencyCoil Size10 in.Weight2.6 lbWaterproofYes, up to 1 meter (3.3 ft)Because it's a multi-frequency detector, the Minelab Vanquish 440 works well in any terrain with minimal fussing. I was able to use it at the park and at the beach, even on wet sand. It was easy to adjust the default find modes to optimize for specific conditions, leading me to find a child's toy buried 6 inches deep in the surf. It's not the most compact detector on our list, but it's easy to handle. And relying on disposable AA batteries, while not environmentally friendly, is more convenient when you're using your detector and need to top up. My only knock against the Vanquish 440 is that it comes with a very flimsy pair of headphones, which broke the first time I used them. That's not a huge loss, though: Many of the detectorists I know prefer to connect their own headphones, and even an inexpensive pair will do. In the end, this is a dynamic, accurate detector and relatively affordable, to boot. Credit: Steven T. WrightProsIncludes backlight and four find modesAll-in-one kit comes with a carrying case and a diggerGood performance for the priceConsLess precise than my other recommendationsTypeVLFCoil Size11 in.Weight2.6 lbWaterproofYes, up to 5 meters (16 ft)Since I primarily spoke with experts and enthusiasts, the Nokta FindX Pro was not remotely on my radar when I first began my research. But it may just be the best option for new detectorists looking to dip a toe into the hobbyist pool. It's an all-in-one kit, complete with an effective digging tool, a nice duffel bag, and decent headphones-all for less than \$200.While it is not as accurate as my other recommendations, it's a more than capable VLF detector. I was able to find items at both parks and beaches, though I noticed that its performance really suffered on wet sand and underwater. Its compact frame and adjustable handle make it accommodating to a wider-than-average range of newcomers, including kids and adults. If you're interested in the hobby and don't want to spend too much to try it, the FindX Pro is a great fit for beginners. ProsVery affordable for a waterproof detectorBacklight and flashlight modes help with visibilityLightweight and easy to useConsBluetooth-enabled model costs moreTypeVLFCoil Size9.5 in.Weight2.6 lbWaterproofYes, up to 5 meters (16 ft)The Simplex line is often recommended by experts as a good entry point for new detectorists. Nokta is one of the two biggest brands in the metal detecting game-the other is Minelab-and the Simplex Lite is a strong, basic VLF detector. I found it had top-notch discrimination, plenty of find modes, and a good coil size that easily found my testing materials and led me to beer cans, aluminum foil, and plenty of other objects on the beach. Because this is a single-frequency VLF detector, it doesn't perform as well as the Vanquish 440, especially on the mineralized sand at saltwater beaches. It's still a very capable machine, though it offers fewer customization options than its more expensive multi-frequency counterparts, it's also much easier to pick up and use as a newcomer. For those who are looking to spend a bit more, you can upgrade to the Nokta Simplex BT, which adds Bluetooth support, or the Simplex Ultra, which gives you precision detector tools like target ID scale and depth. Now 9% OffCredit: Steven T. WrightProsBluetooth connectivity for wireless headphones is extremely convenientAmazing performanceVery customizableConsComes with a learning curveTypeMulti-frequencyCoil Size11 in.Weight2.8 lbWaterproofYes, up to 5 meters (16 ft)The Minelab Equinox 900 is the most feature-rich metal detector I tested. From the second I picked it up, I could tell that it would be a cut above the rest. The build quality is noticeably better than other, less expensive models I tested-it just feels more substantial. Its features and performance back up that first impression. The Equinox 900 consistently performed better than its less expensive counterparts, as well, pinpointing targets precisely and identifying both their depth and target ID. Though I was able to find my planted targets with every detector, the Equinox 900 directed me precisely to all three, making the process quicker and easier in both dry and wet sand. It also features a number of settings, an easy-adjust handle, and Bluetooth support so you can use wireless headphones. All that customization is incredible if you're an expert. I personally had more success using the pre-made settings, but I can see detectorists like Lubbert fine-tuning searches to great effect. I was especially taken with its handgrip vibration feature, which gives you a rumbling haptic response when the Equinox picks up a target It's a great way to get your attention in a loud area, if you're hearing-impaired, or if you're just on a long walk and not paying close attention. Personally, I found it very helpful while roaming some very popular stretches of Miami's beaches. It's worth noting that Minelab lists the Equinox 900 as a bit heavier than the other models we tested, though I personally didn't notice a difference, even after several hours of sweeping. At more than double the price of my best overall pick, it's fair to say that the Equinox 900 is an investment for serious hobbyists. But it is far and away the most effective choice I tested and a worthy upgrade. ProsUnparalleled performance2D ID Map creates a physical space on-screen as you exploreAbsurdly customizable with 10 search modesConsHeavyTypeMulti-frequencyCoil Size11 in.Weight2.9 lbWaterproofYes, up to 5 meters (16 ft)While I wasn't able to get it in for this round of tests, Lubbert recommended the Minelab Manticore for expert detectorists looking for the ultimate metal detector experience. He says it can visualize the ground beneath it in a 2D map, directing you to finds with depths and ID targets. It should work well in any terrain, including underwater, and has the most advanced backlight of any Minelab machine. Plus, with 10 search modes, there are many options for veteran detectorists looking to optimize for a specific type of search. The price is substantial, but if you're willing to spend this much money on a detector, I'm confident that it will be worth it. An Extremely Helpful AccessoryProsWaterproof up to 10 ftHelps you locate the target more preciselyBuilt-in flashlight and discrimination, which most pinpointers don't haveConsMust use in tandem with a traditional detectorTypePinpointerCoil Size11 in.Weight.5 lbWaterproofYes, up to 3 meters (10 ft)In addition to a decent pair of headphones, it helps to carry a good pinpointer when you use your metal detector. These precise, short-range auxiliary detectors help you determine the exact location of a find after picking something up with your detector's large coil. This one, from Minelab, is relatively expensive, but its fully waterproof design and five sensitivity levels work very well. It also features ferrous metals like iron or non-ferrous discrimination, which allows it to tell if a target is made of ferrous metals like iron or non-ferrous metals filled parks. Trevor Raab "Make each swing of the detector take about 2 seconds and overlap your swings so that the coil covers all of the ground," Lubbert also said that detectorists should be happy with what they find, and that you should expect 95 percent of your digs to result in trash. When that happens, be cool, and make sure to dispose of it properly. According to Lubbert, a dedicated detectorist should have a pinpointer, proper recovery tools like a shovel, and a pouch to store trash and treasure separately. Based on my testing experience and to echo his point above, I found headphones to be a must-have when using a metal detector, as the built-in speakers are difficult to hear, especially on a crowded beach. Finding a legal place to use your metal detector in U.S. National Parks and historic battlefields. Many cities ban using them on public property, or require you to apply for a permit beforehand. Make sure to check your local city and county laws to determine if and where you may be allowed to use a metal detector and if you'll need a permit to do so. And, of course, if you plan to use your detector and if you'll need a permit to do so. And, of course, if you plan to use a metal detector and if you'll need a permit to do so. And, of course, if you plan to use your detector on private property, you should obtain permission from the owner, or else you might dig up a lawsuit instead of treasure. Steven T. WrightSteven T. Wright is a freelance writer based in Miami, FL. He has been a full-time writer of various things for around a decade, especially long-form features about tech and digital culture. He enjoys spending time with his wife and cat, hiking, and reading weird fiction. You can follow him on Twitter @MadCathedral. Expert consulted:Jeff Lubbert Jeff Lubbert has been an avid metal detector since 1980 and joined The Ring Finders directory in 2010. He is an active officeholder in Denver's Eureka Treasure Hunters Club and the co-host of American Digger Magazine's Relic Roundup, a weekly metal detecting podcast. Who hasn't fantasized about finding a hidden horde of coins or relics with a metal detector? The allure of buried treasure has always been enticing-just look at the legends of Captain Kidd or Oak Island. And using a metal detector to find coins or jewelry hiding in plain sight, is probably the closest to living it we'll likely find in our day-to-day lives. Of course, as any serious detectorist will tell you, the reality of metal detecting involves more long, pleasant strolls in the sun and fewer treasure chests. It often takes hours of work to find anything of value. The thrill you get from finding something interesting, though, makes it worth it. Heck, you might even find a hoard of ancient artifacts. But even if you don't stumble on anything, metal detecting is a fun and relaxing hobby, especially with friends. To find the best metal detectors for new hobbyists and experts alike, I also consulted with an expert detectorist, who helped me understand what makes a great detector. Then, I spent two days hunting for treasure across the beaches of South Florida to test them. I didn't find anything of real value besides a few children's toys, but it was a lot of fun. Steven T. Wright: As a longtime nerd and technology writer, I've covered computers and tech products for almost 10 years at publications like PC Gamer, Ars Technica, and Polygon. I have extensive experience testing and reviewing all sorts of consumer gear, from gaming keyboards to pizza ovens. I consulted Jeff Lubbert, an expert detectorist who has been tracking down treasures and finding lost rings since the mid-'80s. He has used his metal detector in 28 states, one U.S. territory, five foreign countries, where he has recovered items adding up to approximately \$980,000. He is president of the Eureka Treasure Hunters Club in Denver, Colorado, and has written articles about metal detectors for outlets like American Diggers and appeared on the TV show Forensic Files. While shopping for a metal detector, you need to take into account a number of key factors, particularly the type, coil size, weight, and extra features like backlight and frequency customization. Weight and build quality also make a big difference, especially when you use these devices for hours at a time. It was initially hard to weigh these distinct traits, but after testing these machines myself, the features worth springing for became clear. If you're going to shop for a hobby-grade metal detector, it's important to understand how they work. This is fairly technical equipment, so manufacturers will cater their products primarily to veterans who already have a bit of knowledge, which may be intimidating to new people. Most metal detector itself. It has two parts, the transmitter coil and the receiver coil, which is the actual detector itself. It has two parts are conclusively a second between the second be produce an electromagnetic field that shoots down into the ground wherever you wave it. When the field hits metal, it triggers another magnetic effect in response, which the coil picks up. Depending on the detectors I recommend can determine what kind of metal they're reading by measuring the object's "phase shift," or the time it takes for the object to react when the coil changes its magnetic current. This function, called "discrimination," can sometimes help you figure out if your quarry is worth digging up before you go to the trouble of getting your digging tools out. However, as Lubbert notes, discrimination is not always reliable, and it's generally best to err on the side of digging if you think you've found something worthwhile. The first thing to look at before buying a metal detector is where you plan to use it, as some detectors are better equipped to scan specific types of terrain. For example, if you live near the coast and plan to sweep your local beach, you may want a different model than someone looking under hard soil in local parks. Though there are many kinds of detectors, I focused on the two most frequency (VLF) metal detectors operate on one frequency at a time. They are generally cheaper and easier to use than multi-frequency detectors, but come with certain disadvantages. Most VLF detectors allow users to switch among a number of frequencies but rarely allow you to input a specific one yourself. They often don't work as well in mineralized soil or on saltwater beaches, and they're not ideal for gold prospecting. In general, VLF machines are great for those who plan to look for coins and jewelry in favorable conditions. Multi-frequency detectors run a range of frequencies simultaneously. They're expensive but generally very effective, which makes them appealing to seasoned enthusiasts. Multi-frequency detectors are ideal for conditions that challenge VLF machines, such as mineralized soil, wet sand, and saltwater beaches in general. They tend to be more complicated, and often weigh more. Think of it as a sign of your commitment to the craft. The best of the best can actually get quite light, but they're also very expensive. The physical size of the metal detector coil is important, too. If you don't sweep the coil over an object, you aren't going to get a ping, so bigger is better. Under most conditions, Lubbert recommends looking for a coil that's at least 11 inches in diameter. That said, Lubbert advises that smaller coils have their uses, especially in wooded areas, since it's easier to get between twigs, grass, and weeds with a more compact head. Larger coils can theoretically detect objects that are deeper underground, but they're also more susceptible to electromagnetic interference from the environments. In general, all of my recommendations here seem relatively light on paper-the heaviest weighs only a few pounds. Keep in mind, though, that you could be waving this device around with one arm for hours at a time. Even a few ounces can greatly impact how quickly you tire out. Mid-range and high-end metal detectors tend to feature backlit displays, which comes in handy when searching in low-light conditions. (Some high-end models even come with flashlight functions). Though not a universal feature, I consider this an essential for all but the cheapest options. High-end metal detectors grant you a degree of customization through advanced settings, allowing you to set a specific level of discrimination that, when properly used, can help you identify relics and coins with in a variety of environments. You need to know what you're doing to take full advantage of these do-it-yourself search modes, but there are guides online to help you learn as you go. Lastly, most metal detectors I researched and/or tested feature built-in batteries that last for hours on a full charge. That said, some models-including one of my picksuse disposable batteries instead. There are advantages and disadvantages to both: Disposable batteries can be replaced quickly, but you need to keep spare cells on you. It comes down to your preference, so go with what feels right. I selected the best metal detectors after trying a handful of options that came recommended to me by Lubbert, other expert detectorists, and enthusiast websites like MetalDetectingForum.com.To test accuracy, I buried an old spoon and two different coins-a quarter and a penny-8 inches underground to check their level of discrimination and pinpointing. I also used each detector for several hours in a variety of conditions, including a grassy park and at the beach, in both dry sand, wet sand, and under several inches of surf.Credit: Steven T. WrightProsMulti-frequency functionality works well over any terrainPhysically durableFind modes are easy to use and understandConsHeadphones are underwhelmingTypeMulti-frequencyCoil Size10 in.Weight2.6 lbWaterproofYes, up to 1 meter (3.3 ft)Because it's a multi-frequency functionality works well over any terrainPhysically durableFind modes are easy to use and understandConsHeadphones are underwhelmingTypeMulti-frequencyCoil Size10 in.Weight2.6 lbWaterproofYes, up to 1 meter (3.3 ft)Because it's a multi-frequency functionality works well over any terrainPhysically durableFind modes are easy to use and understandConsHeadphones are underwhelmingTypeMulti-frequencyCoil Size10 in.Weight2.6 lbWaterproofYes, up to 1 meter (3.3 ft)Because it's a multi-frequency functionality works well over any terrainPhysically durableFind modes are easy to use and understandConsHeadphones are underwhelmingTypeMulti-frequencyCoil Size10 in.Weight2.6 lbWaterproofYes, up to 1 meter (3.3 ft)Because it's a multi-frequency functionality works well over any terrainPhysically durableFind modes are easy to use and understandConsHeadphones are underwhelmingTypeMulti-frequencyCoil Size10 in.Weight2.6 lbWaterproofYes, up to 1 meter (3.3 ft)Because it's a multi-frequency functionality works well over any terrainPhysically durableFind modes are easy to use and understandConsHeadphones are underwhelmingTypeMulti-frequencyCoil Size10 in.Weight2.6 lbWaterproofYes, up to 1 meter (3.3 ft)Because it's a multi-frequencyCoil Size10 in.Weight2.6 lbWaterproofYes, up to 1 meter (3.3 ft)Because it's a multi-frequencyCoil Size10 in.Weight2.6 lbWaterproofYes, up to 1 meter (3.3 ft)Because it's a multi-frequencyCoil Size10 in.Weight2.6 lbWaterproofYes, up to 1 meter (3.3 ft)Because it's a multi-frequencyCoil Size10 in.Weight2.6 lbWaterproofYes, up to 1 meter (3.3 ft)Because it's a multi-frequencyCoil Size10 in.Weight2.6 lbWaterproofYes, up to 1 meter (3.3 ft)Because it's a multi-frequ frequency detector, the Minelab Vanquish 440 works well in any terrain with minimal fussing. I was able to use it at the park and at the beach, even on wet sand. It was easy to adjust the default find modes to optimize for specific conditions, leading me to find a child's toy buried 6 inches deep in the surf. It's not the most compact detector on our list, but it's easy to handle. And relying on disposable AA batteries, while not environmentally friendly, is more convenient when you're using your detector and need to top up.My only knock against the Vanquish 440 is that it comes with a very flimsy pair of headphones, which broke the first time I used them. That's not a huge loss, though: Many of the detectorists I know prefer to connect their own headphones, and even an inexpensive pair will do. In the end, this is a dynamic, accurate detector and relatively affordable, to boot. Credit: Steven T. WrightProsIncludes backlight and four find modesAll-in-one kit comes with a carrying case and a diggerGood performance for the priceConsLess precise ecommendationsTypeVLFCoil Size11 in.Weight2.6 lbWaterproofYes, up to 5 meters (16 ft)Since I primarily spoke with experts and enthusiasts, the Nokta FindX Pro was not remotely on my radar when I first began my research. But it may just be the best option for new detectorists looking to dip a toe into the hobbyist pool. It's an al in-one kit, complete with an effective digging tool, a nice duffel bag, and decent headphones-all for less than \$200.While it is not as accurate as my other recommendations, it's a more than capable VLF detector. I was able to find items at both parks and beaches, though I noticed that its performance really suffered on wet sand and underwater. Its compact frame and adjustable handle make it accommodating to a wider-than-average range of newcomers, including kids and adults. If you're interested in the hobby and don't want to spend too much to try it, the FindX Pro is a great fit for beginners. ProsVery affordable for a waterproof detector Backlight modes help with visibilityLightweight and easy to useConsBluetooth-enabled model costs moreTypeVLFCoil Size9.5 in.Weight2.6 lbWaterproofYes, up to 5 meters (16 ft)The Simplex line is often recommended by experts as a good entry point for new detectorists. Nokta is one of the two biggest brands in the metal detecting game-the other is Minelab-and the Simplex line is often recommended by experts as a good entry point for new detectorists. Lite is a strong, basic VLF detector. I found it had top-notch discrimination, plenty of find modes, and a good coil size that easily found my testing materials and led me to beer cans, aluminum foil, and plenty of other objects on the beach. Because this is a single-frequency VLF detector, it doesn't perform as well as the Vanquish 440, especially on the mineralized sand at saltwater beaches. It's still a very capable machine, though-even more so if you're searching for a specific type of item, particularly coins than its more expensive multi-frequency counterparts, it's also much easier to pick up and use as a newcomer. For those who are looking to spend a bit more, you can upgrade to the Nokta Simplex BT, which adds Bluetooth support, or the Simplex Ultra, which gives you precision detector tools like target ID scale and depth. Now 9% OffCredit: Steven T. WrightProsBluetooth connectivity for wireless headphones is extremely convenientAmazing performanceVery customizableConsComes with a learning curveTypeMulti-frequencyCoil Size11 in.Weight2.8 lbWaterproofYes, up to 5 meters (16 ft)The Minelab Equinox 900 is the most feature-rich metal detector I tested. From the second I picked it up, I could tell that it would be a cut above the rest. The build quality is noticeably better than other, less expensive models I tested-it just feels more substantial. Its features and performance back up that first impression. The Equinox 900 consistently performed better than its less expensive counterparts, as well, pinpointing targets precisely and identifying both their depth and target ID. Though I was able to find my planted targets with every detector, the Equinox 900 directed me precisely to all three, making the process quicker and easier in both dry and wet sand. It also features a number of settings, an easy-adjust handle, and Bluetooth support so you can use wireless headphones. All that customization is customization is customizable frequency settings and tools that improve the detecting experience, including six customization is customization is customization. incredible if you're an expert. I personally had more success using the pre-made settings, but I can see detectorists like Lubbert fine-tuning searches to great effect. I was especially taken with its handgrip vibration feature, which gives you a rumbling haptic response when the Equinox picks up a target. It's a great way to get your attention in a loud area, if you're hearing-impaired, or if you're just on a long walk and not paying close attention. Personally, I found it very helpful while roaming some very popular stretches of Miami's beaches. It's worth noting that Minelab lists the Equinox 900 as a bit heavier than the other models we tested, though I personally didn't notice a difference, even after several hours of sweeping. At more than double the price of my best overall pick, it's fair to say that the Equinox 900 is an investment for serious hobbyists. But it is far and away the most effective choice I tested and a worthy upgrade. ProsUnparalleled performance2D ID Map creates a physical space on-screen as you exploreAbsurdly customizable with 10 search modesConsHeavyTypeMulti-frequencyCoil Size11 in.Weight2.9 lbWaterproofYes, up to 5 meters (16 ft)While I wasn't able to get it in for this round of tests, Lubbert recommended the Minelab Manticore for experience. He says it can visualize the ground beneath it in a 2D map directing you to finds with depths and ID targets. It should work well in any terrain, including underwater, and has the most advanced backlight of any Minelab machine. Plus, with 10 search modes, there are many options for veteran detectorists looking to optimize for a specific type of search. The price is substantial, but if you're willing to spend this much money on a detector, I'm confident that it will be worth it. An Extremely Helpful AccessoryProsWaterproof up to 10 ftHelps you locate the target more preciselyBuilt-in flashlight and discrimination, which most pinpointers don't haveConsMust use in tandem with a traditional detectorTypePinpointerCoil Size11 in. Weight. 5 lbWaterproofYes, up to 3 meters (10 ft)In addition to a decent pair of headphones, it helps to carry a good pinpointer when you use your metal detector. These precise, short-range auxiliary detector's large coil. This one, from Minelab, is relatively expensive, but its fully waterproof design and five sensitivity levels work very well. It also features ferrous discrimination, which allows it to tell if a target is made of ferrous metals like iron or non-ferrous metals like gold, silver, or copper. It isn't strictly necessary but is a nice extra feature to have in trash-filled parks. Trevor Raab "Make each swing of the detector take about 2 seconds and overlap your swings so that the coil covers all of the ground," Lubbert says. "Wear headphones, as it helps you hear those deep target whispers." Lubbert also said that detectorists should be happy with what they find, and that you should expect 95 percent of your digs to result in trash. When that happens, be cool, and make sure to dispose of it properly. According to Lubbert, a dedicated detectorist should have a pinpointer, proper recovery tools like a shovel, and a pouch to store trash and treasure separately. Based on my testing experience and to echo his point above, I found headphones to be a must-have when using a metal detector, as the built-in speakers are difficult to hear, especially on a crowded beach. Finding a legal place to use your metal detector is not as easy as you might think. It's illegal to use a detector in U.S. National Parks and historic battlefields. Many cities ban using them on public property, or require you to apply for a permit beforehand. Make sure to check your local city and county laws to determine if and where you may be allowed to use a metal detector and if you'll need a permit to do so. And, of course, if you plan to use your detector on private property, you should obtain permission from the owner, or else you might dig up a lawsuit instead of treasure. Steven T. Wright is a freelance writer based in Miami, FL. He has been a full-time writer of various things for around a decade, especially long-form features about tech and digital culture. He enjoys spending time with his wife and cat, hiking, and reading weird fiction. You can follow him on Twitter @MadCathedral. Expert consulted: Jeff Lubbert has been an avid metal detector since 1980 and joined The Ring Finders directory in 2010. He is an active officeholder in Denver's Eureka Treasure Hunters Club and the co-host of American Digger Magazine's Relic Roundup, a weekly metal detecting podcast. The Motorsport Images Collections captures events from 1895 to today's most recent coverage. Discover The CollectionCurated, compelling, and worth your time. Explore our latest gallery of Editors' Picks.Browse Edi FavoritesExperience AI-Powered CreativityThe Motorsport Images Collections captures events from 1895 to today's most recent coverage. Discover The CollectionCurated, compelling, and worth your time. Explore our latest gallery of Editors' Picks. Browse and I may earn a small commission if you purchase through these links. If you're just getting into the metal detector right for you? In an effort to provide clarity we'll address the specifics behind the tech that helps you to find more gold and treasures without the junk. We will take a look at some of the best metal detectors, this lineup has a range of high-quality models at every price point. Whether you're looking for an upgrade or you're just starting out with your first buy, this lineup covers them all. To get straight to the point, there is no one, best metal detector. What may be best for you just won't work for someone else. The best detector has the features you need and an interface you can understand and maximize to make the most of your detecting goals. Buyer preference is king and will determine what the best model looks like for you. But, there is a tier of quality that you can expect that can be determined by price. The most basic of entry-level metal detectors are within the \$100-\$200 price range. This is aimed for older children or those who are just getting into detecting for recreational use to find a range of objects from junk to coins. The upper entry-level price range is from around \$200-\$400. Detectors at this price point have the basics, plus some, to allow beginners to get an idea of what is expected for successful detecting. Intermediate and expert users can spend anywhere from \$700 to thousands of dollars for a high-end detectors. It's important to evaluate what your detectors are usually rated by their ability to find gold. If there's a machine that can do it best, it's the GPZ 7000 - hands down. While expensive, the retail price has actually dropped from its original listing price. It's now, arguably, more affordable. Regardless, it has been bought, used, and tested by expert detectorists who have had plenty of time to put it through its paces. What do they say? It's worth it. The GPZ 7000 performs as advertised. It has an improved detection depth by 40% more than the GPX 5000. It gives up nothing to achieve this type of performance as it detects sub-gram and large nuggets from the surface to three foot depths. This is all thanks to the new metal detecting technology, ZVT (Zero Voltage Transmission). It's high frequency, highly sensitive, powerful, and immune to ground minerals and interference. It wouldn't be as impressive if it didn't have new searchcoil tech too. The DD-style design holds some familiarity, but the central oval transmit winding gives it a central axis point for detecting deep, large nuggets - something new. You'l hear the difference in its operation through the audio response that you'll learn. While extremely fancy and outfitted with all the fixin's, it has an easy-to-use menu that tells you that everything is about finding that gold. If you're not a prospector yet, you're not a prospector yet, you're hunting in the most difficult conditions expecting to get high performance and data that no other metal detector sou won't find one for under \$1000. However, if price is not an issue, the DeepHunter 3D is a very different kind of instrument as it goes beyond a metal detector's normal functions of detecting metals. With the graphic 3D display, you also have visual display interpretations of voids and cavities within the earth to possibly discover deposits, precious metals, and more. It essentially functions in two modes, a non-motion mode. The non-motion mode incorporates use of the graphic display to slow down detection for larger objects or cavities at extreme depths. many screens, scales, and other visual data that will be displayed to help gather as much information as possible before you dig. The motion mode incorporates traditional audio information for all the "normal" types of detecting you will be doing for coins, jewelry, relics, and small nuggets of gold. There are two available frequencies: 12.5 kHz and 17.5 kHz. They can only be used one at a time, and therefore this is not a true multi-frequency detector. In non-motion mode with the specially-designed T100 coil, you can detect as deep as 4 meters. Of course, there will be a lot of factors that will influence depth, but many user adjustable settings will allow you to fine-tune for accuracy, sensitivity and depth to get the best possible results. Unfortunately, the high price may mean the DeepHunter will forever remain on the wish list. But, if you can pull the trigger on it, you may make your money back on the veins and experts, professional use, and of course, gold. Along with its expensive price tag comes expert-grade tech in the form of pulse induction, simultaneous multi-frequency, and discrimination. No one is going to spend this much on the CTX unless they're serious about detecting and they already have some skills under their belt. There is a steep learning to spend this much on the CTX unless they're serious about detecting and they already have some skills under their belt. curve, so it's best to learn as much as you can from other sources besides the supplied user manual. The CTX is known for its FBS technology. This is the tech behind the rectangular frequencies from 1.5-100 kHz that are in simultaneous operation constantly. This allows you to achieve ultimate depth and extreme thoroughness with every sweep to find targets of all conductivity levels and size. While pulse induction metal detectors are known for their ability to work in highly mineralized soils, their ability to discriminate is pitiful compared to a VLF. However, the CTX 3030 has Smartfind 2D Discrimination to help provide some level of target metal identification. Incredible target metal identification. Incredible target metal identification. Incredible target metal identification adjustable features, and built-in GPS are just some of the extra features you'll learn to use on this premium detector. Is the CTX 3030 worth it? It's still the go-to detector for many serial hobbyists and professionals today. The ATX is a military-grade detector made for the harshest terrains and designed to be in the hands of a professional. With the best features of its kind, the Garrett metal detector will satisfy the demands of the most hardcore detectorists out there. soil to see all the good stuff buried deeper than what a VLF could uncover in the same grounds. It can also be submerged under water to a depth of 10 feet for maximum detection beneath the surf. Impressively, the ATX DeepSeeker also offers discrimination. You have 25 discrimination/delay settings and an Iron Check feature that provides audio for iron targets. You can also ground balance and use Ground Track to maintain maximum performance regardless of the conditions. No grounds will be off limits with the ATX. You can go underwater, wet sand, black sand beaches, salt beds, and hot rocks. The adjustable length of 68" to 20" is extremely convenient. Not only can it be passed around between multiple users, it's collapsible for storage and transportation, and the rear-mounted hinge that allows folding back of the search coil makes it extra unique and compact. The ATX is built like a tank and weighs one too. But, its many features provide excellent performance that lightweight and cheaper detectors just can't compete with. Only the skilled and experienced will know how to wield this professional metal detector. The XP Deus is not a new detector, and it's known by many for its multiple features and its unique 3-element platform. It has a lot under its hood, and only those willing to put the time learning it will prosper. The Deus is not a multi-frequency detector as many have misunderstood. It's a selectable frequency detector with the searchcoil as the detector. Frequencies are 4, 8, 12, 18, and 25 kHz. They can only be used individually and not simultaneously. The 3-element design is truly unique. Each main component, the searchcoil, remote control, and headphones have independent electronic circuitry. The searchcoil is the detector where the signal processing happens. It can communicate to the remote control or the headphones for data interpretation. This means, you can use the remote control box. The Deus is preloaded with 10 search modes with preset parameters for hunting in gold fields, wet and dry beaches, and many more. Additionally, you ground balance with multiple methods, discriminate, adjust threshold and speed recovery, and much more. typical budget model. However, it's a detector built for the expert, and there's room to grow to further fine-tune its performance and customize profiles. Expensive? Yes. Worth it? Only if you're any good. Minelab has the reputation of pumping out high-end and high-performing metal detectors that are hard to beat. The Equinox 800 is one of the best of the best that you could purchase for under \$1000. If there's a feature-loaded detector for under a grand, the Minelab earns the gold. Since there's a heck of a lot to learn, beginners may have a harder time with it. But, its many features are what sets it apart from the crowd as you can fine-tune the Equinox to truly customize the ultimate detector. It'll eat battery life within 12 hours if you're running it to the max. Good thing is, it'll charge quickly, or you can use it with a power bank. One of the features that makes it such a high-performer is its Multi-IQ technology. It's a multi-frequency detector with five frequencies that can be used simultaneously or individually: 5, 10, 15, 20, and 40 kHz. You can deep hunt for coins or go on the high end and comb through for small gold nuggets. You also have multiple methods of ground balance to saltwater! The Equinox is waterproof and can be submerged up to 10 feet. Multiple user settings are adjustable from threshold to noise cancel and even recovery speed. With them, the expert user can ensure no target is missed or masked due to depth or nearby ferrous targets and much more. Minelab has an authoritative reputation in the metal detectors often prove to be the best in the market. There's not much that you can't do with an Equinox 800 in your hand. If you're a serial coin-shooter, the GTI may be the upgrade for you. With a frequency in the Goldilocks range, it can detect all sorts of coins for an afternoon of fun or even for competitions. VLF (Very Low Frequency) technology is not a disadvantage, but the GTI is advertised as a deep-seeking detector. To get maximum depth from the GTI, you'll need the Eagle Eye searchcoil that sees deeper for larget Imaging. There are multiple scales and icons to become familiar with in order to interpret the data, but you can determine the type of target metal down to the coin denomination and other vital information. With this type of info displayed on the screen, you can effectively detect while in a true All Metal Mode without discrimination. You won't have to compromise on sensitivity to accurately detect while in a true All Metal Mode without discrimination. detection within Auto Ground Balance for automatic updates as ground minerals change beneath your feet. You won't have to worry about losing your settings while moving between modes to quick-check a target since the GTI "remembers" with Last Mode Switching. Home in on a good target with the built-in, electronic PinPoint. The GTI is the type of metal detector that can be effective in any type of detectorist's hands. The beginner will learn and grow with it, and intermediates and experts will be satisfied with its performance for all their needs. This brand is quickly gaining a high-end reputation. The first detector to be released after the official announcement of the Nokta and Makro merger was the Anfibio Multi. As a fully-packed detector under \$1000, it has incredible value with the most bang for the buck. There are many that get multi-frequency confused. This often leads to a misconception that the Anfibio has true multi-frequency capabilities when it does not. While the Anfibio has three frequencies, 5/14/20 kHz, they can only be selected for operation individually and not simultaneously. This is still a great feature to fine-tune the frequency setting for your metal target. To make things simple, it has a Single Menu Display. Say goodbye to having to access multiple screens to achieve an outcome that can now be easily changed on a single screen. You will have to familiarize yourself with the icons and symbols needed to understand the display, but once that's mastered, you're ready to go and spend more time detection to 99 Tones and Beach, Deep, and Cache modes. There is also an option to push depth detector is one of the EUD (Extreme Underground Depth) function that allows you to see past high-mineralized soils. Take things to the next level by submerging the Anfibio up to 16 feet below the surf. The Nokta Makro metal detector is one of the best multi-purpose detectors in the market for the price Good for gung-ho beginners through to experts, the Anfibio will see you through all your detectorists of all skill levels. It's made the buyer who wants a dual-purpose detector in one detector. On land or in water, the AT Pro can see you through both types of terrain. The AT Pro is fully waterproof and is submersible up to 10 feet below water. It comes with a waterproof headphones separately. The control box also doesn't feature a backlit display for improved visibility at night or below the water's surface. While the AT Pro may be priced closer to the entry-level price point, it's geared for both beginner and skilled users. It has six search modes that includes three professional modes for pros. Additional target information can be accessed by experts with the Proportional Audio features. There is no doubt that an experienced set of ears can hear the changes that helps to determine more target data. With Auto Ground Balance, experts can fine-tune their detector for the soil conditions. With Manual Ground Balance, experts can fine-tune their detector for the soil conditions. accurately determine a target's exact location. There's not a whole lot left wanting with the AT Pro, and as a detector that can be used by all types of users, it's a winner. As one of the best-selling metal detectors of modern times, the Bounty Hunter Tracker 4 proves that an expensive model isn't always the right detector that does it for all. At its insignificant price point, it's earned its right be honored as a metal detector that is at the top of its class. < Price < 2-Tone Audio < Target Strength Meter. Many find the moving needle a feature that plunges them back into the past of the good ol' days. Even though it's a best-seller at its price point, it's still an entry-level metal detector with the basics. The basics include two tones, low and high. It's extremely easy to interpret as ferrous targets will be notched out, small targets like nickel and aluminum may be indicated with low tones, and high-conductivity targets like silver, quarters, and copper coins will be indicated with high tones. There is an All Metal mode with some discrimination, Tone Mode with some discrimination and two tones, and DISC where you can increase discrimination to silence out trash items. Beginners using the TK4 won't have to struggle with Ground Balance. The GB is preset for average ground conditions found around the country, but experts will find this limiting. But, as a detector that's cheap and worth its salt for providing an afternoon of fun with family and friends, it's worth it. Beyond price, there are also other factors that will influence your choice of what you consider to be the best metal detector. If you're not sure of what specific features you need to know about, they'll be pointed out to you in this buying guide. Your Questions will be answered with Answers right here. Experts - well, they already know what they're after and likely already own more than one detector. You can skip this part. Beginners are often told to start with entry-level metal detectors and there's good reason why. Starter detectors will have preset settings to eliminate potential frustrations with having to adjust settings they don't yet understand. They're also priced significantly cheaper than advanced models, and budget is always a legitimate factor when buying a metal detector, especially when you're not sure yet what extra bells and whistles are right for you. The best price range for a true beginning detector. By now they should know what they want in their next model whether it be multiple ground balance methods, adjustable threshold, or a higher frequency. The other coin of the intermediate user is the intermediate or mid-level tier of detectors. grade detector. The price range may start at \$500 for an intermediate detector but can also sport price tags of \$1000 for something with more trappings with some expert-level features. What you plan to use your detector for may affect your buying choice. specific to improve your detection success rate. Gold Metal Detectors: Gold detectors are made with specific settings to enhance detection of small gold nuggets and hunting in the challenging terrains where gold is known to be found. These types of quality detectors start at \$700 and can run into the thousands as multiple frequencies, pulse induction, and many other technologies are used. Coin & Jewelry Metal Detectors: Detectors made to find coins and jewelry make up most of the models on the market. They're almost always a VLF (Very Low Frequency) single frequency detector. While many have a frequency under 20 kHz, most in this price range will have a frequency of 6-8 kHz that is excellent for finding coins. Relic and artifacts are typically found with the same coin and jewelry detectors; but if you want to get more specific settings, look for a frequency that can cover both high and low conductive targets as steel, iron, and brass are the primary metals of historic relics. You may want to consider a detector with iron audio features and an adjustable threshold to acquire more target information to avoid trash items. Multiple ground balancing methods may be essential, especially if you're hunting for relics in high-mineralization such as battements in the South East of the United States. Then there are also underwater and beach metal detectors that require their own parameters to provide maximum detector operate? Each type has its own benefits and can improve your detection success if you know how to maximize its potential. VLF: VLF (Very Low Frequency) induction balance detectors make up most available. Although they can only operate with a single frequency at a time, they excel in providing both discrimination and notching, and they don't tend to light-up grounds with high mineralization like hot rocks. If you're looking for a specific type of metal and target, these features can be very useful. While low frequencies are especially good for detecting coins and highly conductive targets, high frequencies are known for their ability to detect very small, low conductive targets like gold nuggets. This might have you wondering if there's a detector that can offer both? Multi-Frequency simultaneously, thus, more information is gathered that can't be acquired by single signal analyzation alone. Depending on the type of frequencies offered, you can achieve the benefits of both low and high frequency detection to achieve greater success in detection (PI) detectors are expensive and desired for their maximum depth detection and impervious operation in high-mineralized soils. Its ability to handle hot rocks and other areas where gold can be found and its ability to detect the smallest nuggets proves to be an essential technology in metal detectors that are best used for gold prospecting or for use in saltwater. However, PIs are very sensitive detectors and they don't always offer reliable discrimination. Obviously, there are multiple pros and cons to choosing the right operating principle that will detector is right for you. You must consider where you'll be using it most of the time, what your primary target object is, and how much you want to pay for your choice of detector. There is an intimate relationship between the searchcoil and its depth penetration abilities. Your detector will come with a searchcoil is round in shape and is the cheapest type of searchcoil available. It excels in fast pinpointing as they're easy to use to lineup the center with the target's location. DD searchcoils are waterproof and often provide better depth detection in noisy ground. A larger size means more depth, but it also compromises sensitivity. They may be able to "see" more of the ground, but "noise" or false signals from the ground may interfere with detection. miss small targets or fail to separate targets that are adjacent or within proximity to each other. Smaller-sized searchcoils may see less of the ground but they may work better with ground minerals while also providing high sensitivity to detect and separate small targets. newest and latest technologies to make detecting easier with advanced features. However, many detectors lack an LCD screen as a waterproofing design. They incorporate control knobs and provide color, HD quality with graphics, and can generate multiple charts and scales to interpret signal data. However, most will provide a numeric Target ID, so you can guickly determine what kind of metal it is. Using this along with the audio tone can tell you if it's a target worth digging up. All models will have their own Target ID measurements, depth indicator scales, discrimination and notch segment scales, and other various icons and symbols on the display. You'll also have to consider how much battery time is consumed to run all the programs and features you need may be pointless. Adjustable length, weight, and balance are essential to consider. There is a correct standing position to make the right sweeping motions and reduce strain and fatigue. Balance incorporates all components of the metal detector from the searchcoil to the arm cuff. Sometimes, a detector can be heavy, but if balance and ergonomics are right, that weight is distributed so as not to negatively affect your posture and detectors that can be as light as 2 lbs, and some weigh over 5 lbs. Confirm as much of the specs as you can before you buy. You might also want to consider hip and chest mounts to help with weight issues for long detecting sessions. Picking a good metal detector comes down to personal preference. If you can first set a budget, you will have an idea of the features available to you within that price range. Consider detector type, features, size/weight, searchcoil, and it's included accessory package. There is no definitive answer to this. There are several things that can affect depth detection that can include target metal, ground soil conditions, user technique, and more. However, metal detectors are typically calibrated to detect coin-sized objects at 7" or more and to provide accurate discrimination and Target IDs at 5" or more. The best depth is typically achieved in quiet ground conditions where there is little mineralization and trash. Many detectors may be able to achieve a depth of 8" or more on coins and some can also be detected at 16" if all other factors are ideal. However, in high-mineralization ground, pulse induction detectors, like the Minelab CTX 3030 and the Garrett ATX, generally offer greater depth. Metal detectors significantly vary in price range. Some budget options are found between \$70-\$90, although most quality entry-level detectors are between \$200-\$400. Mid-range detectors are between \$200-\$400. \$500-\$900, but most high-end models will cost over \$1000. Many cheap metal detectors under \$100 are usually designed for children, or they have the most basic technologies and features. If you're an adult or buying for an older child, it's best to spend a little bit more for the upgrade in quality. There are more than a few quality metal detectors within the \$100-\$200 price range that have basic features and are sufficient for beginner and recreational use. What may not fit you today the budget and provides the basics for you today with maybe a little room for growth as you develop your detector to complete your next adventure. You may already own multiple models, and you may need an underwater or prospecting detector to complete your collection. What is it you're hunting and where is it you're going? The answer to these questions may guide you to choosing the best type of metal detector where you can't go wrong. Further Reading Last update on 2025-05-26 / Affiliate links / Images from Amazon Product Advertising API Share — copy and redistribute the material in any medium or format for any purpose, even commercially. Adapt — remix, transform, and build upon the material for any purpose, even commercially. The license terms. Attribution — You must give appropriate credit, provide a link to the license, and indicate if changes were made. You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use. ShareAlike — If you remix, transform, or build upon the material, you must distribute your contributions under the same license as the original. No additional restrictions — You may not apply legal terms or technological measures that legally restrict others from doing anything the license permits. You do not have to comply with the license for elements of the material in the public domain or where your use is permitted by an applicable exception or limitation. No warranties are given. The license may not give you all of the permissions necessary for your intended use. For example, other rights such as publicity, privacy, or moral rights may limit how you use the material.