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What is the best antenna for a cobra 29 ltd

CB radios, even the best CB radio on the market, come standard with only 4 watts of power, which is a great equalizer. The way that you can stand out is to get the best CB antenna that you can afford. Prices for antennas are affordable, so buying the best CB radio antenna won't set you back much more than if you buy a cheap antenna. If you want to maximize the distance that you're able to transmit and receive (and that's the point, to communicate, right?), you'll need to pay attention to the brand and type of antenna that you buy, how tall it is, and where and how you mount it. The best CB antenna for you is the one that best suits your needs and the type of vehicle that you're putting it on. That being said, some brands are better and more popular than others. We can tell you this upfront—the most popular wire-wound CB radio antenna, and our best selling CB radio antenna, is the easy to tune Firestick antenna. We encourage you to read on, however. Suggestions for how to choose a CB antenna for your needs are discussed by equipment type below. CB Antenna Wattage While shopping for a CB antenna, you will notice that there are several different wattage ratings. This rating tells you how much wattage the antenna can handle. You need to make sure that the antenna you select can handle the wattage that your radio is pushing out. Please note that all CB radios should not be pushing out more than 4 watts. Even CB radios with SSB have only 12 watts. Many people believe that if they purchase a 10,000 watt antenna, it will make their 4 watt CB radio perform better. This is not the case. These antennas with high wattage power ratings are typically used for CB radios that have been modified to output more power than legally allowed by the FCC, for CB radios that have an amplifier attached to output more wattage allowed by the FCC, or for 10 meter radios (these are not CB radios). Understanding the Types of CB Antennas Before Choosing the Best There are three general types of CB antennas: fiberglass antennas, whip antennas, and base station antennas. Most antennas are fiberglass antennas, which are fiberglass poles wrapped with a copper wire and coated with a protective material. While fiberglass antennas are cheaper, their advantage is that they can be mounted lower on the vehicle than other types. Whip antennas are base or center loaded antennas topped with a long steel whip that can be tied down when not in use. That's common for professional drivers and magnetic antennas. They need to be mounted higher on the vehicle and aren't as efficient as top loaded antennas. The best CB base antennas are much taller fiberglass or aluminum antennas (12-18 feet), and they are used for base stations in fixed locations rather than mobile CB operations. They need to be mounted very high, but can handle high power. There is also a difference between a standard antenna versus a NGP (No Ground Plane) antenna! Please read the section below for a more detailed explanation. Ground Plane Versus No Ground Plane Ground plane is important to signal propagation for standard CB antennas. Standard CB antennas are antennas that require a ground plane (a metallic counterpoise) to perform properly. If your antenna is mounted on a metal roof, the entire roof surface provides a ground plane, assuming that you don't have a sunroof. The signal is transmitted downward from the antenna, then it hits the ground plane and radiates outward. If the antenna is in the center of the roof, the signal goes out equally in all directions. If, however, the antenna is mounted in the back, the signal toward the front will be more efficient than those toward the back due to the larger ground plane. Standard antennas should not be used for applications that do not have an adequate ground plane. Ground plane dependent antennas require a metallic counterpoise to perform properly. They are not suited for use on non-metallic (composite) vehicles or those with insufficient metal. They can be used as a base station antenna if an adequate ground plane is provided. Before transmitting with a radio, these antennas should be tested and tuned across the radios operating frequency. Using an untested, unturned antenna for transmitting can damage the transmitter's circuitry. Ground plane dependent antennas require mounting brackets and antenna stud mounts that are electrically grounded to a chassis ground point. Powder coating, paint, and/or anodized surfaces are insulating coatings and may need to be removed down to the metal surface where a ground is required. Another option can be to attach a grounding strap or wire to electrically ground the mount to a grounding point. That's where the No Ground Plane (NGP) antenna saves the day for those with RVs, motorcycles, vehicles, and boats without metal chassis. The required ground is built into the coax cable to use without an external ground. If you application does not have a metal ground plane, you should consider utilizing a NGP (No Ground Plane) antenna system OR create a ground plane that is at least 2 feet by 2 feet. Be aware that NGP antennas lose about 15-20% of their potential field strength when compared to a standard ground plane antenna. An additional caution is that NGP antennas are not interchangeable with ground-based equipment. Your NGP antenna system will require a NGP antenna and NGP coax. You can use any mount that is compatible with the connections for your NGP antenna and NGP coax. If you're having trouble finding a mounting location, Procomm makes a nifty window mount NGP antenna. Remember, all CB antennas need to be tested and tuned across the radio's operating frequency to ensure that potential damage to the radio transmitter circuitry is not potentially damaged. Also, standard antennas require that the antenna mount is electrically grounded. Powder coating, paint, and/or anodized surface may need to be removed to ensure contact for sufficient ground. NGP antennas do not require the antenna mount to be electrically grounded. Choosing the Optimal CB Antenna Length Yes, taller/longer is better for range of distance when it comes to an antenna and the optimal antenna length is 1/4 wavelength. That translates to 102 inches (8.5 feet), too tall to be practical for most mobile applications. So, antenna designers have devised solutions such as coils. If you want a tall antenna, but are concerned about clearances for parking structures, garages and other barrier clearances, you might consider getting a tool-free quick disconnect for the antenna you select. If you want the tallest antenna, a true 1/4 wave antenna, the best option is the Hustler IC56. If it's practical for your application, this antenna will provide the best transmit range. A ball mount and heavy spring are suggested to mount it. A good whip tie down will secure it for travel. For a standard CB antenna, you can typically expect 1-2 miles of range for every one foot of antenna. Types by CB Antenna Coil In one widely used antenna solution to compensate for height, antenna makers wrap wire closely around the main shaft of the antenna to form a coil. That allows the antenna to be shorter and more practical, but the tradeoff is that the antenna loses some efficiency. To counteract that, load position and antenna placement become even more important. CB Antenna Load Position The electrical length of a CB antenna includes everything from the back of the CB radio to the tip of the antenna, such as the cable, coil and whip. The electrical length is how manufacturers compensate for lack of height. Using coils, they can make an antenna that matches the ideal electrical length. Where the coil is placed in the antenna is the "load position." Load position simply describes where the coil is wrapped on the antenna. Load positions include: base-loaded, center-loaded, top-loaded and no ground plane. When deciding on a load position, keep in mind that the coil and about two-thirds of the antenna need to be above the roof line of the vehicle for the best operation. Base Loaded CB Antennas (including NMO Mount Antennas) A base loaded antenna has a coil wrapped around the antenna body at the base (bottom). Often all-in-one magnetic mount and room antennas are base loaded. They provide simple mounting and can use thicker coil, which provides a higher Watt capacity. The drawback is that there are fewer effective mounting positions, as the coil has to be above the vehicle. Advantages are that they are less vulnerable to damage when struck and they can handle higher power outputs. The police use this type, and a good brand is PCTEL (formerly Maxrad) antennas. Their best option for CB is an MLB2700 (shown to the right). Wilson also makes a popular base-loaded antenna. Center-Loaded CB Antennas In the center-loaded antenna, the coil is above the base on top of a thick shaft base and usually is covered with a plastic housing of some type. The rest of the antenna is a long whip. Many professional trucking CBs have this type of antenna. It is more efficient than the base-loaded antenna type, but less efficient than a top loaded fiberglass antenna. Often when people look for center-loaded antennas, they consider the higher quality Hustler antennas. The SCB has excellent electrical performance as well as durability. The high efficiency coil is capable of easily covering 120 channels at 1000-Watt power levels. The lower half of the SCB is a virtually indestructible solid stainless steel rod. Top-Loaded CB Antennas The best mobile cb antenna is considered a top-loaded antenna, and is usually made of fiberglass. The coil is tin wire wrapped around the antenna and then covered with a protective shield. The top-loaded is the cheapest and most effective antenna. It also has more mounting options, as the coil is located higher on the antenna, therefore, the coil can clear the body of the vehicle from several mounting positions. Top-loaded antennas have a lower Watt capacity, but enough to handle the standard four Watts limitation of CBs that have not been modified. This type of antenna is often used on cars, trucks, tractor-trailers and RVs. Our most popular CB antenna...the original Firestick The most popular wire-wound CB antenna in the world is the original Firestick design. The "KW" antennas are compatible with autos, trucks, vans, motorcycles and ATV's in a single antenna configuration when metallic ground plane is available. Or, they may be used in dual (co-phased) configuration on any vehicle made from any type of material. Buyers also tend to like Firestick's Tuneable Tip (FS Series) antenna since they don't require cutting. CB Antenna Mount Size/Type If you get a mounting kit made for your antenna, you'll avoid compatibility issues. If not, you'll need to make sure the antenna matches the threads in the mount to be able to screw into the mount. Also make sure that the mount you are getting will support the antenna you want to use. For antennas 4 ft. or longer, get a heavy-duty mount. When you're speeding down the highway, you don't want to see your antenna going the other way in your rear view mirror, but it can happen. You need to make sure that your mount is large and sturdy enough to support your antenna. Magnetic mounts are handy and good, but they will not support a long (5 ft. or more) antenna, as the wind will make short work of it, whipping it back and forth then tipping it over. If you want the best CB antenna and magnetic mount combination, consider the PCTEL MLB2700 with their magnet mount (both are shown to the right). The cost is a bit high on that combination, but you'll get high value. For a good and less expensive solution, look at the Little Wil antennas. The Little Wil is the smallest magnetic antenna from Wilson, and it out performs all similar types of small base loaded antennas. It was designed specifically for users who want a high performance antenna with a short whip at a low price. Looking for flexible antenna options? Check out the AUFLEX and JBCXX00. Both of these are very flexible, have various lengths to choose from, and offer easy tune options. Here are some other good options for you to consider: W4FD-B and FLX Choosing the Best CB Antenna Mounting Location Mounting location is important for the effectiveness of your antenna. The general rule is that the higher the antenna is mounted, the better. Also, you want it vertical. At a minimum, the coil and most of the antenna needs to clear the roof line of the vehicle to avoid interference and having too much of the signal reflected back into the antenna. All other things being equal, the higher that your antenna is above the roof line, the better your reception and transmission. You also don't want the antenna mounted where it will break off easily. You can mount the antenna on the fender, but if you mount it on the front driver's side, the signal will be weaker to the front-left of the vehicle. Choosing the Best CB Antenna Cable An essential part of the overall electrical length of the antenna is the coax cable. You will need to consider how long the coax needs to be to run from the radio to the antenna mount. If you mount the antenna in the back of the vehicle or the mirrors of a semi, you'll need more coax cable. We always recommend that you get 18 feet of coax even if you don't need that much to attach the radio to the antenna mount. Most CB antennas are somewhat pre-tuned with 18 feet of coax. If you select coax that is shorter or longer than the 18 feet, you might come across some issues with achieving optimal SWR readings. If you must go shorter or longer, try to stay in 3 foot increments to match the wavelength of the radio. If you have extra cable, don't cut it off or coil and wrap it. When you coil the excess coax, it is essentially creating another antenna coil and could severely effect SWR readings. Instead, be sure to properly store any excess coax in a figure 8, about one foot in length, and bound in the middle. It should look like a long, skinny 8. If your path has to run through the firewall, a window or interior linings, you'll have to consider the size of the connectors on the cable. It may be better to get cable with detachable connectors. For example, the HSB18TN-NIP offers an easy route option. For more information, check out our Help Center Article about Selecting the Correct Coax Cable. The CB Antenna's Electrical Ground There is a difference between the ground plane and an electrical ground. Your antenna needs both. The mount your antenna is connected to needs to have a good ground to the vehicle chassis. For metal mounts, this is achieved through metal to metal contact. You can test this with a light, just as you would test any vehicle ground. If you don't have a good ground, you could scrape paint off where the mount contacts the vehicle, but many people don't want to do that. A good alternative is to use a grounding strap from the mount to the chassis, but the grounding strap needs to be as short as possible. For magnet mounts, the ground is formed when the magnet couples with the metal of the vehicle. Good quality magnetic mount antennas shouldn't have a problem with grounding. NGP antenna systems do not require that the antenna mount is electrically grounded. Tuning the CB Antenna This is VERY important! Tuning your CB antenna not only optimizes the performance of your antenna system but also helps to reduce the potential to damage your radio by operating with high SWR readings. We have several articles in our Help Center to help you. Check them out! CB radios operate on channels 1-40, and one antenna cannot provide ideally tuned reception for all of those. Most people opt for the middle ground and tune the antenna for best reception at the mid-point. The measurement instrument that is used for tuning is called a Standing Wave Ratio (SWR) meter. There are external SWR meters and SWR that are built into radios. SWR meters will also help with trouble-shooting your equipment to find a bad coax, a poorly grounded mount, or a weak or non-functioning ground plane. CB World You Tube Video - Tuning an Original Firestick Antenna The Firestick II "FS" Series antennas have a unique bare hands tuning mechanism on the top. Not only does it provide ease of tuning, it broadens the antenna's bandwidth to keep the SWR lower over more channels. To tune an "FS" antenna, you just remove the tip and turn the adjustment screw up or down as needed. Always tune the antenna when it's in the final location. You also need to tune the antenna every time you move it, add a spring or quick disconnect, and every time you modify your vehicle with a large metal component. We recommend that you check your SWR readings as part of regular system maintenance to ensure that it is always optimized. Now...You Choose the Best CB Antenna For Your Needs Choosing the best CB Antenna for your needs starts with education. Knowing what to look for, in relation to your specific setup, is the first step in ensuring that you buy the best CB antenna for your unique situation. We're here to help, so please don't hesitate to contact us or feel free to browse our CB antennas for sale now that you know what to look for!

