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Electronics AS

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# CableBuster CB DiffAnt

## Your personal Cable Locator

Exploits longwave transmitters  
to find cables  
Is not disturbed by radio  
signals



Longwave  
transmitter



Cable with  
magnetic noise  
field - incl. secondary  
emission of radio signals.  
(The cable acts as an antenna)

Induced  
signal current

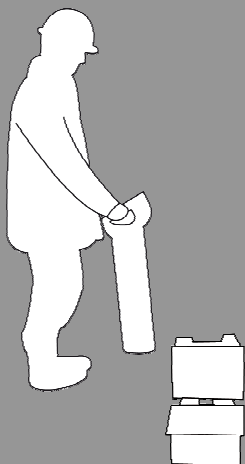
Seek



Measure  
depth







Conventional cable locator with sender



CB DiffAnt



Useful accessory  
**CableAnimator**  
(Sender left, batteri right)

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## CB DiffAnt – Cable Locator with differential antenna

### Passive cable locating:

All cables and metallic pipelines are contaminated by high frequency noise and surrounded by a magnetic noise field that can be used to localize them. CB DiffAnt "hears" the magnetic noise and does not normally require any transmitter signal to localise hidden cables and pipelines. The strongest signals stem from active power and telecom cables, but also powerless and unconnected cables can be detected based on the fact that they act as antennas and pick up signals from their surroundings.

Plastic pipes and fiber cables can not be detected.

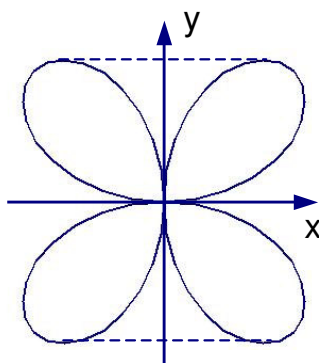
**CB DiffAnt** has a differential antenna arrangement (near field antenna) with two opposite ferrite rod antennas (detection antenna and compensation antenna) at either end of a 1m long rod, suppressing direct incoming radio signals. A ferrite rod antenna is only sensitive to magnetic fields in its longitudinal direction. The field encompasses the cable, so the signal disappears (sharp zero crossing) when the rod points at the cable (normal to the field). The signal also disappears (is neutralized) if both antennas receive identical signals – i.e.: if the signal comes from a remote source (radio wave). Hence direct radio signals are suppressed, whereas they are received indirectly via cables, helping to localize the cables. Thereby a problem is turned into an advantage.

**Zero crossing straight downwards** indicates that you are standing over the cable. **The depth** is determined by tilting the rod 45° and searching for the distance from the center line at which the signal disappears. Then you are pointing at the cable at an angle of 45°. The distance from the point where the line of sight hits the ground to the center line is the same as the depth.

**CB DiffAnt has no built in visual display.** You hear the detected signal modulated by a tone with a pitch following the signal strength in ear phones. The variable pitch makes it easy to hear maxima and minima at the same time as the signal is still recognizable. (Cables can sound quite differently.) It is much faster and gives more information than a visual display. You may also choose to hear the unmodulated raw signal by keeping the "On"-button depressed.

### Metal detector:

With a small signal source (e.g. pipe location sender) placed in the neutral spot between the antennas, CB DiffAnt can also be used as a metal detector.



DiffAnt antenna diagram

### TECHNICAL DATA:

<b>Frequency range:</b>	133kHz +/- 7,5kHz
<b>Length and weight:</b>	1m, <400g
<b>Temperature range:</b>	-20 bis +50°C
<b>Battery:</b>	9V / 550mAh (IEC 6LR61) sufficient for ca. 20 hours (600 button pushes).
<b>Telephone jack:</b>	3,5mm Stereo
<b>On / Off:</b> (push button)	Time limited ca. 2min.



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