

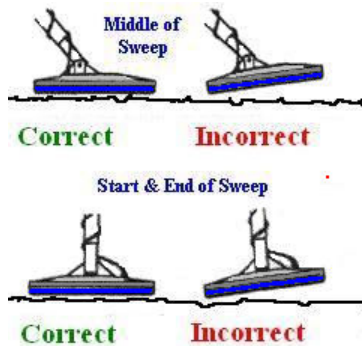
## Metal Detecting Coil Sweep Tip

The first thing a detectorist needs to master is the swinging or sweep of the detector's search coil. This is essential no matter which manufacturer you choose or model you purchase. Mastering the search coil sweep or swing will yield far greater results if done correctly.

There are a number of search coil sweep factors that must be mastered and they are: *search coil height above the ground, keeping the search coil level or parallel to the ground, search coil sweep speed, and overlapping the search coil sweep pattern.*

First the *search coil height above the ground* is one of the most important factors to master since for every one inch you hold the search coil above the ground you will lose an equal amount of magnetic signal penetration into the ground. So if you sweep the search coil three inches above hard packed ground you will lose three inch in ground magnetic signal penetration. This lost of magnetic signal penetration will result in missing the deeper targets. Hint: To maximize your target recovery you should always feel the search coil scrubbing the ground.

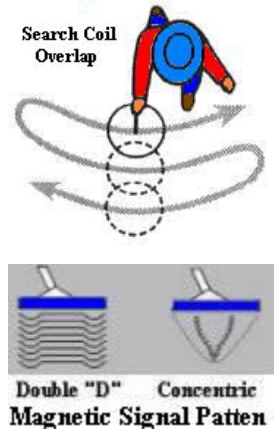
Second *keep the search coil level or parallel to the ground* at all times. This meaning that the coil needs to be level or parallel to the ground at the beginning, middle and end of the search coil sweep. This may mean a shorter sweep span but it is important to get maximum signal penetration during the entire search coil sweep. See the figure for the correct search coil positions.



Third the *search coil sweep speed* should be reasonable slow and consistent in speed during each pass of the search coil. A rule of thumb is it should generally take 1 ½ to 3 second for a complete sweep in one direction. To know what sweep speed you should apply, you must read / study the owner's manual. Plus you need to practice with your detector so that you can master the sweep speed required for your detector's

target response time. Sweep Speeds that are either too slow or too fast will result in missed targets. Also added to the sweep speed issue are ground conditions (trash or mineralized soil), which will affect your search coil sweep speed.

Finally *overlapping the search coil sweep pattern* is extremely important because a Concentric search coil produces a cone shaped ground penetration magnetic signal pattern and without a search coil overlap you will miss many targets. The Double "D" search coil has a wedged shaped ground penetration magnetic signal pattern and overlapping an inch is usually enough while sweeping the "DD" search coil.



The lesson to learn for sweeping the search coil is to scrub the search coil against the ground, keep the search coil level at all times, maintain the sweep speed down to a level that the detector can handle and remember to apply an overlap for each search coil sweep.