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Tracking Plastic Pipe with a Locator and a Fish Tape

It is possible to track non-conductive items like plastic pipe by inserting a metal 'fish tape' into them and tracking the path of the tape with a conventional wire locator.

There are two pipe locating techniques that can be used with metal fish tape:

1. Tracking the tape itself by applying the tracking signal to exposed metal with reference to earth or ground. See photo at right and Figure 1.
2. Use the fish tape to push a home-made "amplifying coil" and wire into the pipe. See Figure 2.



Method 1. With a metal fish tape inserted in the pipe, apply the locator tracking signal to the exposed metal outside the pipe. Use the Black reference lead to connect to a ground stake. A trackable signal will appear along the path of the tape, getting weaker as you approach the end. This is useful for some tasks, though it doesn't clearly indicate where the end of the tape is (at a blockage, tee or valve).

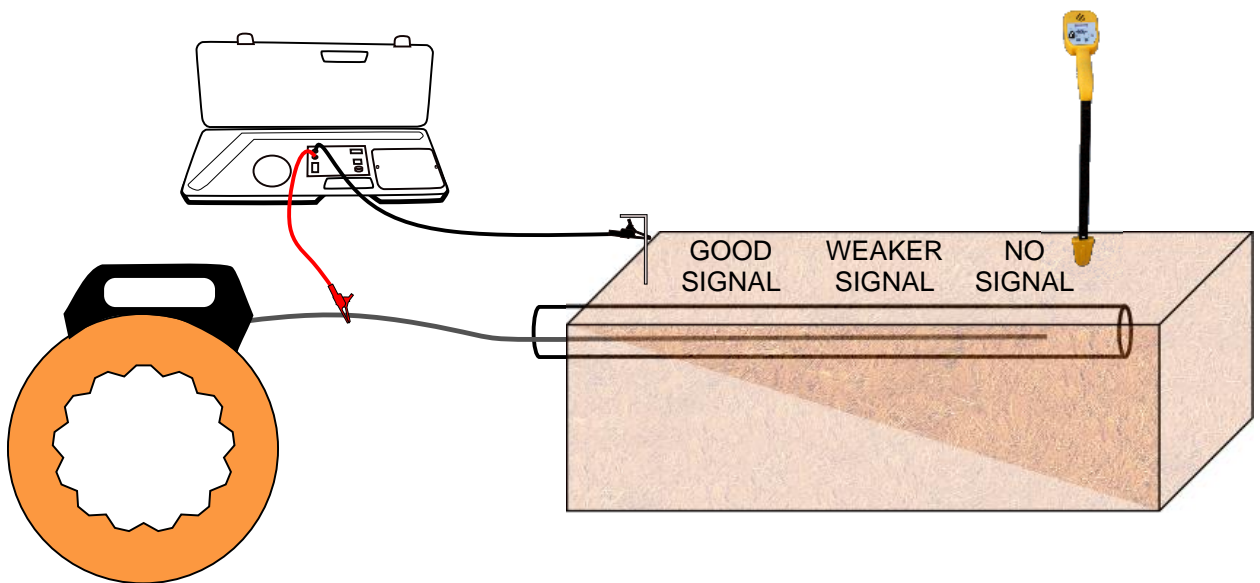


Figure 1 – Tracking a fish tape to reveal to location of a plastic pipe.

Method 2. Make a wire coil “signal amplifier” (see below), connect it to a pair of wires and use the fish tape to push the coil into the pipe. Attach the Red and Black leads of the locator the wires leading to the coil. When the locator is transmitting the will be a strong signal just above the coil at the surface. This provides an accurate location for the end of the tape, and can be used to follow the progress of the fish tape end as it is inserted. There is no tracking signal along the path when the locator is connected to the wires.

When the Black lead is disconnected from one coil wire and attached to a ground stake, the path of the wire can be tracked again.

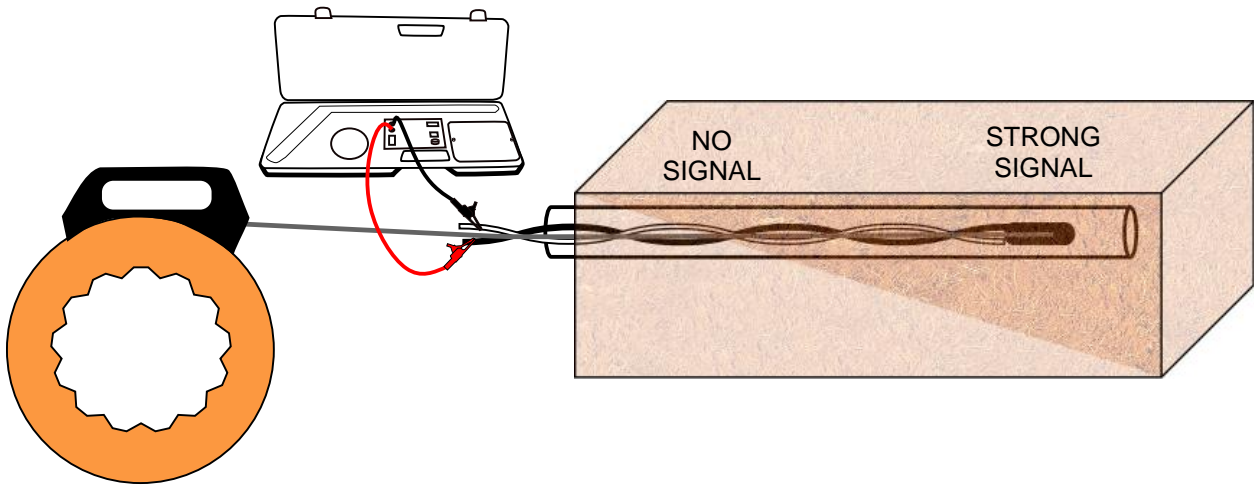
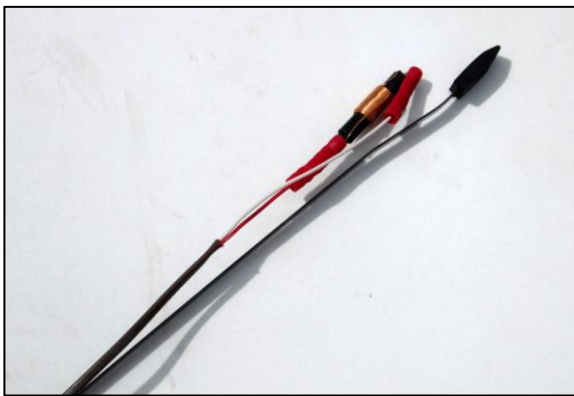


Figure 2 – Using a fish tape to push a locating wire and ‘amplifying coil’ into a plastic pipe for locating.



This 100 mH coil from Radio Shack made a good amplifying coil when spliced onto the end of an 18-2 jacketed wire. Wrap it in electrical tape to protect it and keep the coil near the tip of the fish tape. You could use a home-made coil of wire around a nail, a valve solenoid or the antenna coil from an old locator.