

**ELEVEN STEPS TO SECONDARY
FAULT FINDING USING DYNATEL™
2273 EARTH RETURN AND FAULT
CABLE LOCATOR**



1. Isolate and de-energize conductors.
2. Identify the faulted conductor utilizing RED lead to conductor, BLACK lead to ground and select the ohms (Ω) mode to measure the fault resistance.
3. Place transmitter and ground rod in line with cable, but opposite side of transformer (away from cable path).
4. Select FAULT LOCATE and select high output level for maximum fault sensitivity.
5. Plug earth frame cable into jack on 2273 receiver and frame. Select fault locate.
6. Place frame penetrating soil, opposing cable and behind ground rod, approximately 3 feet, with GREEN facing transmitter. Receiver bar graph should indicate RED. **OBSERVE:** Field strength and reference with gain adjust.
7. Place frame between ground rod and transmitter. Receiver bar graph should indicate GREEN.
8. Follow along cable path, probing every 8 to 10 feet. Release frame after penetrating soil.
9. Receiver bar graph will continue to indicate GREEN until frame passes fault; at which time, bar graph will reverse to RED.
10. Back frame up in smaller increments until GREEN appears on bar graph.
(By moving frame one inch either direction bar graph will show GREEN then RED.)
11. Now turn frame 90°. Bar graph will show color of probe closest to fault. Bar graph will reverse at cable path.



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**ELEVEN STEPS TO CABLE PATH AND
DEPTH LOCATING USING DYNATEL™
2250 AND 2273 LOCATORS**



33 kHz & 200 kHz RF (TRANSMITTER)

1. Couple to concentric (neutral) on energized or de-energized primary cable before the ground rod and other ground connections. On vinyl jacketed (JCN) cables place coupler around the cable to include the jacket — follow local safety procedures.
2. If cable is not terminated and ends are isolated, you must use BLACK and RED leads. Black to ground rod, red to cable to be located. Place ground rod 90° from suspected cable path.
3. Energized secondary cable is same basic hookup as (1) and (2) above. You may couple all conductors if location is from meter base. (If coupled at riser pipe, be sure coupler is fully closed.)
4. As a last resort, you may set transmitter on ground over cable path with the hinge in line with the cable and induce signal using 200 kHz and high output.
5. Turn transmitter on with trace key using, 33 kHz or 200 kHz, use high output if trace is over 500 feet.

RECEIVER

6. Locating in RF and AUDIO modes, receiver can be used in NULL, PEAK or DIFFERENTIAL. If NULL or DIFFERENTIAL are used, verify in PEAK.

60 Hz (RECEIVER)

7. When using 60 Hz selection on receiver, no transmitter is needed; however, cable should be energized with sufficient current. H60Hz is best.

DEPTH & CURRENT

8. To determine depth, set antenna of receiver on the ground over the cable path and select depth. Current will also be displayed.

577 Hz & 8 kHz (TRANSMITTER)

9. To be used for long locates, most likely on primary cable in excess of 1500 to 2000 feet.
10. Direct connection only (*DO NOT USE COUPLER*). RED to concentric neutral (only) connect BLACK to ground rod at 90° from cable path. Use ground extension cable whenever possible.
11. Turn transmitter on to 577 Hz or 8 kHz, depending on length of locate. **NOTE:** If unsure of frequency to use, select ALL and try each frequency for best available selection. Be sure to use high output when in "ALL" mode.