

# User's Manual for the

## Path Finder Family

### Cable and Pipe Locators

Model 8840/43/44 Path Finder  
Model 8850 Path Finder II  
Model 8852\*  
Model 8856\*

\*Cable, Pipe and Fault Locator

\* Model 8852 and Model 8856  
Become Fault Locators with the Optional Ground Return Probe

 **RYCOM**®  
**Instruments, Inc.**

Made in the USA

# Index

Introduction . . . . .	1-7
Controls and Indicators for All Units	
Select the Locating Method . . . . .	8
Connect the Transmitter	
Direct Connection . . . . .	9-10
Flexicoupler . . . . .	11
Transmitter Inductive Connection . . . . .	12
Multiple Grounded Circuit . . . . .	13-14
Continuously Grounded Circuit . . . . .	15
Telephone Direct Shield Connection . . . . .	16
Telephone Direct Pair Connection . . . . .	17
Locate the Cable or Pipe	
Locating the Cable or Pipe . . . . .	18-19
Depth Measurements ( for Peak and Null Units) . . . . .	20-23
Fault Finding with 8852 and 8856	
Introduction . . . . .	24-28
Product Specifications . . . . .	29-30
Accessories . . . . .	31
Factory Service . . . . .	32
Warranty . . . . .	back cover

# Introduction

Congratulations on the purchase of your new **RYCOM** Cable Locator. The **RYCOM** Path Finder locators are used to detect buried power cables, CATV cables, gas and water pipes, sewer lines, telephone cables, fiber optics and all utilities with metallic properties. The 8852 and 8856 Pathfinder models are fault locators, when used with Ground Return Probe. Other accessories are also available for the the 8852 and the 8856.

The Path Finder Transmitters apply a tracing signal onto a cable or pipe. The Path Finder Receivers then detect the tracing signal. By following the signal, the user is able to locate the path of the buried utility.

	<b>Path Finder 8840</b>	<b>Path Finder II 8850</b>
Transmitter Unit	001-00104-00	001-00104-01
Receiver Unit	001-00105-00	001-00105-01
Red/Black Test Cord	151-00051-00	151-00051-00
Ground Rod	211-00006-01	211-00006-01
User s Manual	030-00048-00	030-00048-00
8 AA-size Batteries	770-00021-00	770-00021-00
8 D-size Batteries	770-00023-00	770-00023-00
Optional: Flexicoupler		120-00166-00
	<b>8852</b>	<b>8856</b>
Transmitter Unit	001-00125-00	001-00121-00
Receiver Unit	001-00124-00	001-00120-00
Red/Black Test Cord	151-00051-00	151-00051-00
Ground Rod	211-00006-01	211-00006-01
User s Manual	030-00048-00	030-00048-00
8 AA-size Batteries	770-00021-00	770-00021-00
8 D-size Batteries	770-00023-00	770-00023-00
Options:		
Flexicoupler	120-00166-00	120-00166-00
Ground Return Probe	001-00087-04	001-00087-04
Cable Identifier	001-00119-00	001-00119-00
Cable Pair Identifier	120-00300-00	120-00300-00

**Path Finder 8843**

Transmitter Unit	001-00153-00
Receiver Unit	001-00152-00
Red/Black Cord	151-00051-00
Ground Rod	211-00006-01
Users Manual	030-00048-00
8 AA-size Batteries	770-00021-00
8 D-size Batteries	770-00023-00

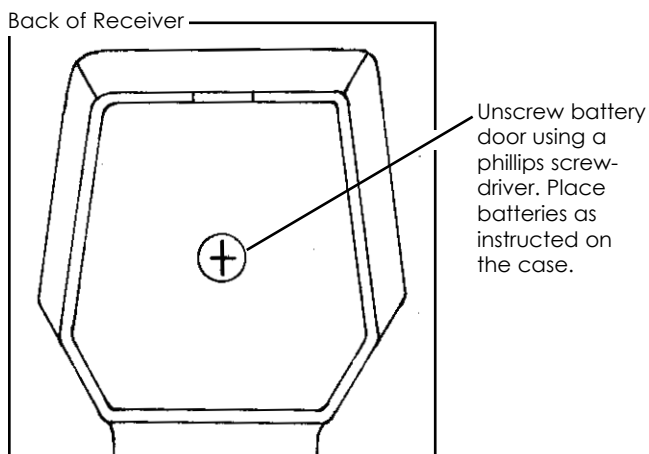
**Path Finder 8844**

Transmitter Unit	001-00150-00
Receiver Unit	001-00149-00
Red/Black Cord	151-00051-00
Ground Rod	211-00006-01
Users Manual	030-00048-00
8 AA-size Batteries	770-00021-00
8 D-size Batteries	770-00023-00

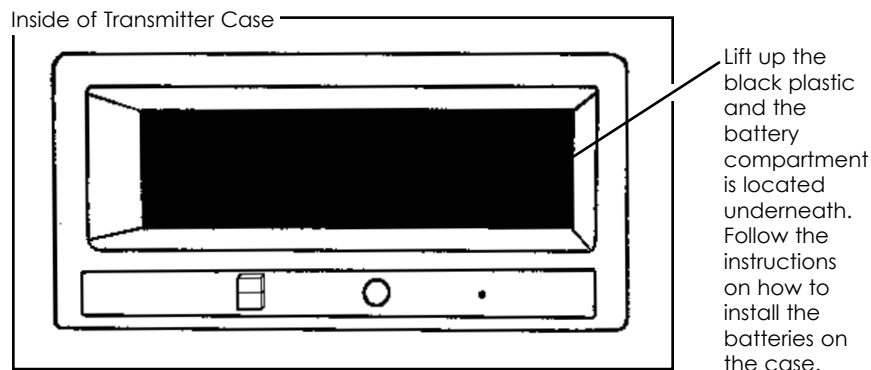
## Make-Ready for Use

First, unpack your Path Finder locator. Make sure there is no shipping damage, and all the parts are included: Receiver, Transmitter, Ground Rod, 8 AA-Batteries, 8 D-Batteries and Manual. Also if you order any of the optional accessories, check to see if you received them.

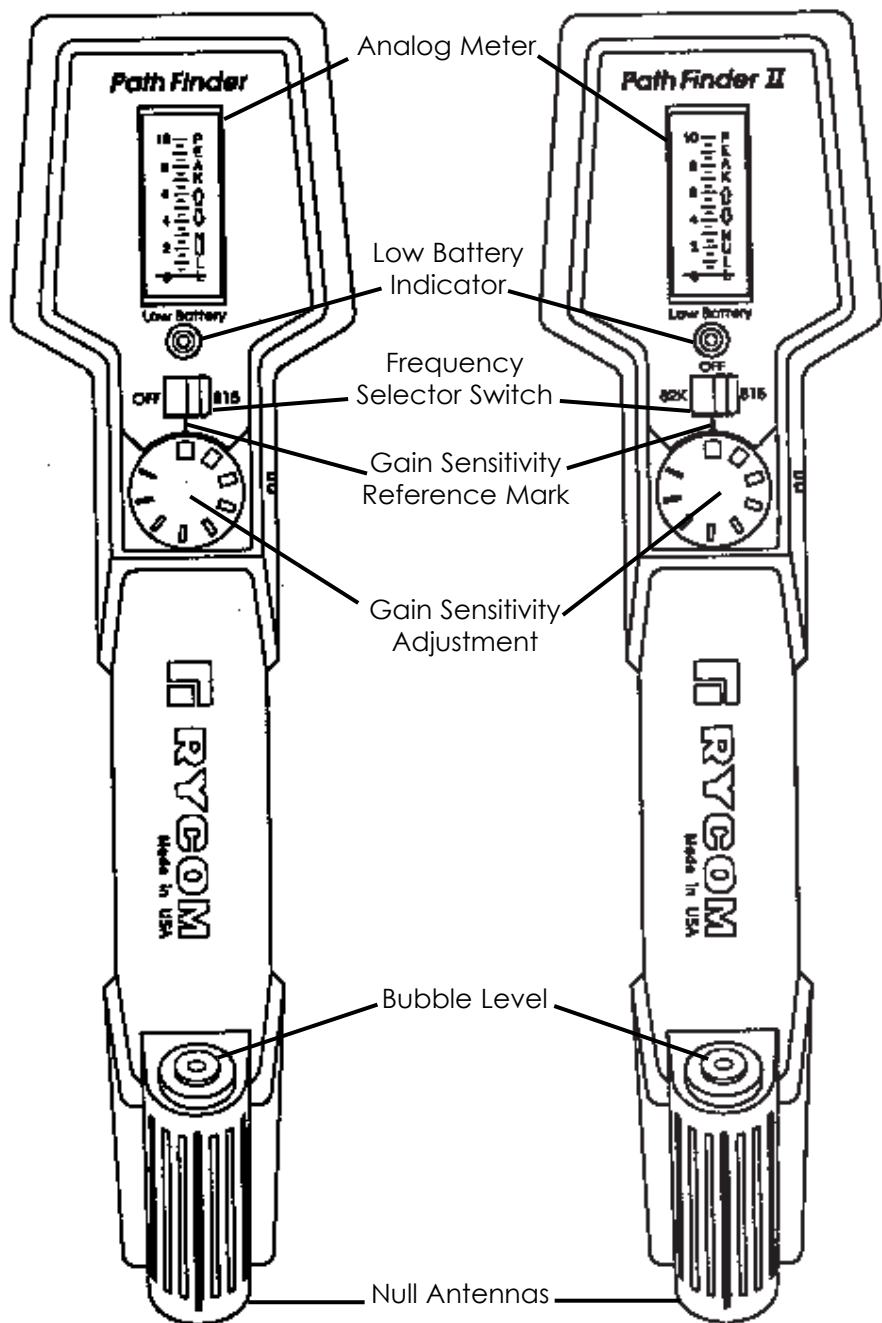
Next, remove the Receiver from the case, and turn it face-down. Locate the battery compartment on the back of the RECEIVER. Unscrew the battery door and install all the eight AA-size batteries as marked on the case.



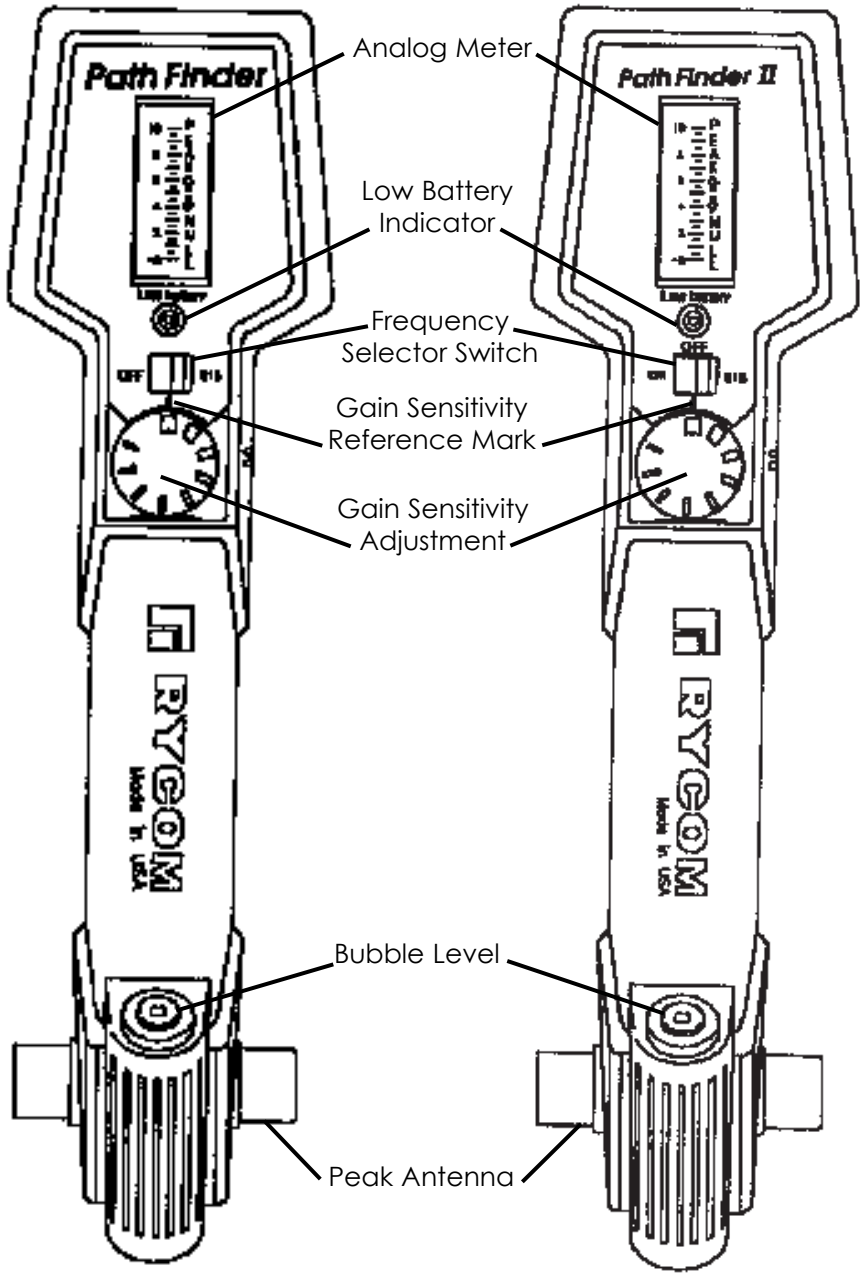
The TRANSMITTER battery compartment is located beneath the RECEIVER storage well (the black plastic), in the bottom of the case. Install the eight D-size batteries as marked on the inside of the case.



# 8840 and 8850 Nulling Unit Receiver Controls and Indicators

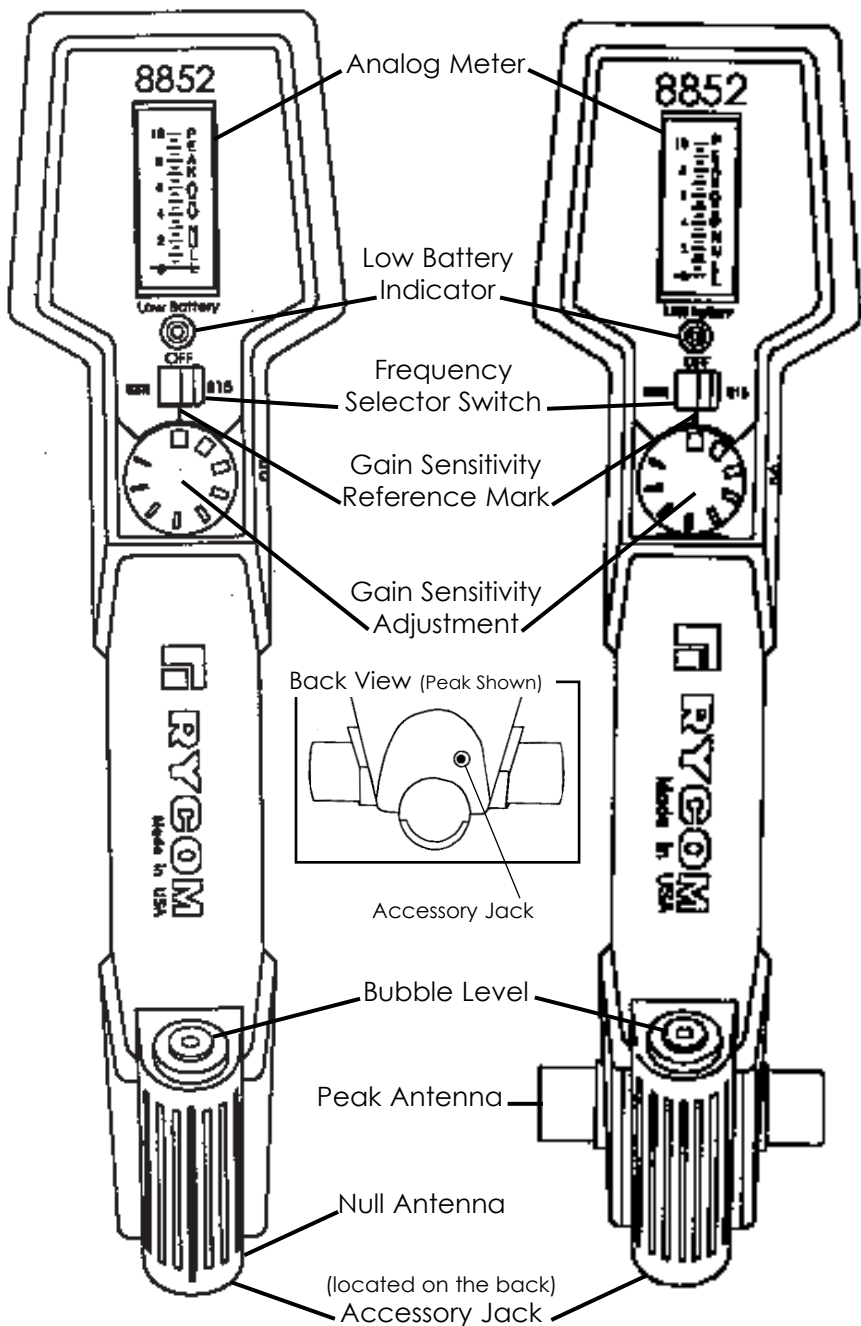


# 8840 and 8850 Peaking Unit Receiver Controls and Indicators

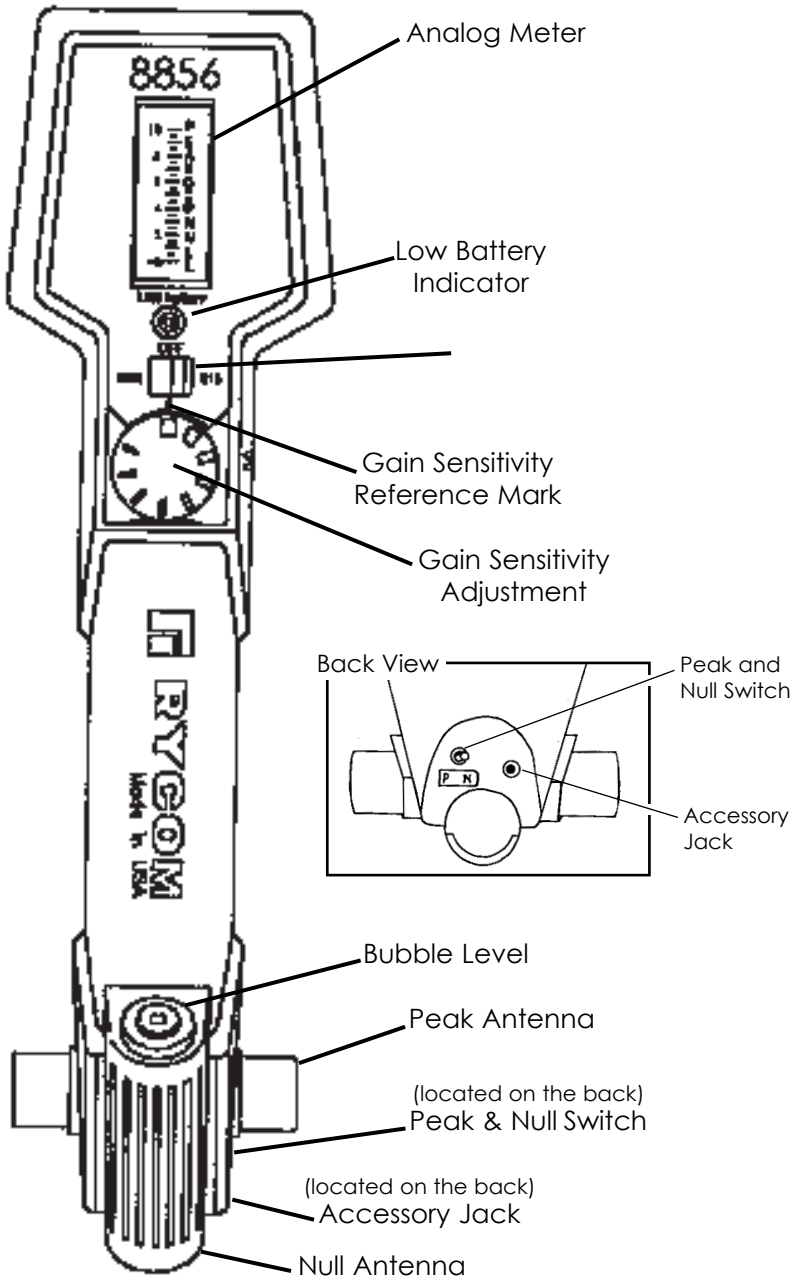


8852

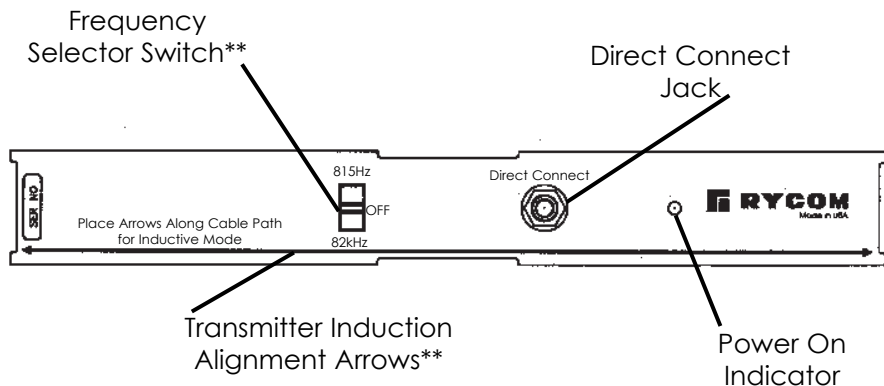
## Null or Peak Receiver Controls and Indicators



# 8856 Null and Peak Receiver Controls and Indicators



# Path Finder Family Transmitter Controls and Indicators



\*\* These controls or indicators are found only on the 8850 Path Finder II, 8852 and the 8856

## Select the Locating Method

Choose the heading below that matches your job, then pick the locating method. The methods under each heading are listed in order of preference. The first method is the easiest, and usually gives the best results. The second listed is next best, and so on. After selecting the locating method, turn to the page that describes how to connect the equipment.

### Electrical Cable and Cable TV (CATV)

Direct Connection . . . . .	9-10
Flexicoupler** . . . . .	11
Transmitter Inductive Connection** . . . . .	12
Multiple Grounded Circuit . . . . .	13-14

### Gas and Water Pipe

Flexicoupler* . . . . .	11
Continuously Grounded Circuit . . . . .	15

### Telephone Cable

Multiple Grounded Circuit . . . . .	13-14
Telephone Direct Shield Connection . . . . .	16
Telephone Direct Pair Connection . . . . .	17

### Fiber Optic Cables

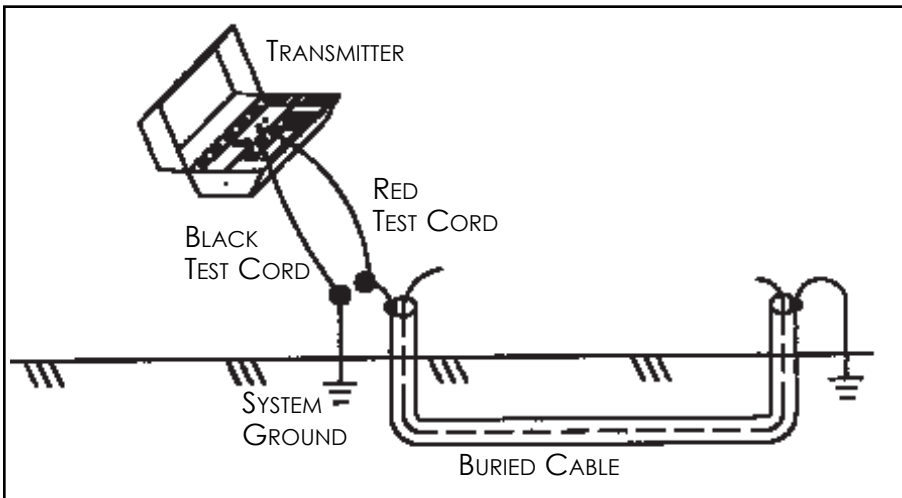
Transmitter Inductive Connection* . . . . .	12
Multiple Grounded Circuit . . . . .	13-14
Continuously Grounded Circuit . . . . .	15
Telephone Direct Shield Connection . . . . .	16

**Note:** The Flexicoupler and Transmitter Inductive Connection methods require using the 82 kHz frequency setting, available on the 8850 Path Finder II, 8852 and 8856.

\*\*These locating methods cannot be performed by the 8840 Path Finder.

# Direct Connection

DO NOT DIRECT CONNECT TO AN ENERGIZED POWER CABLE.



This method is very reliable and free of interference. A GROUND ROD is not needed to use the Direct Connection method. This method is restricted to qualified employees of the service only. The utility services are interrupted. First, disconnect the cable shield or neutral wire. Then, connect the RED TEST CORD to the cable shield or neutral wire. Next, connect the BLACK TEST CORD to the system ground. The system ground is where the cable shield or neutral wire was previously connected.

## 8840 Path Finder

Plug the RED/BLACK TEST CORD into the DIRECT CONNECT 815Hz JACK. The ON indicator will start blinking.

## 8850 Path Finder II, 8852 and 8856

Plug the RED/BLACK TEST CORD into the DIRECT CONNECT JACK. Set the 815Hz/OFF/82kHz switch to the 815Hz position. The ON indicator will start blinking.

\*Turn to Page 18 to Begin Locating the Cable or Pipe

# Direct Connection

## Notes on Selecting the Tracer Frequency

The 815Hz and 82kHz frequencies each have their advantages. Use them in combination for the highest confidence in locating the path. Begin by using the lower frequency, 815Hz, and continue as long as you are confident in the results. If the signal suddenly becomes weak, disappears, or takes an unexpected turn, change to the higher frequency, 82kHz, to verify your results.

The 815Hz is usually preferred to the 82kHz. The 815Hz is less susceptible to locating errors caused by adjacent cables or pipes. Also, the locating range is greater. Unlike the 82kHz, the 815Hz is not capable of jumping disconnected shield bonds or insulated pipe bushings.

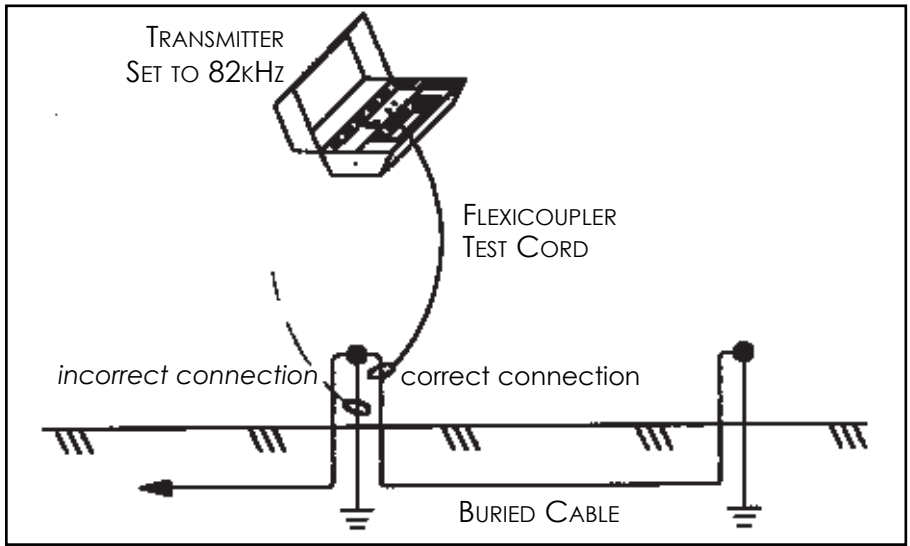
The 82kHz feature on the 8850 Path Finder II, 8852 and 8856 is sometimes better than the 815Hz frequency for locating sharp corners in cables or pipes. The 82kHz is also capable of jumping disconnected shield bonds or grounds. When sudden changes in the tracing signal occur, it may indicate one of these characteristics. The range is quite short for this signal and the TRANSMITTER must be repositioned more often during the 82kHz tracing operation than when using the lower frequency (815Hz).

NOTE(8850,8852 and 8856): Depending upon the ground conditions, you might need to use the 82kHz frequency to transmit a strong signal to complete the circuit.

\*Turn to Page 18 to Begin Locating the Cable or Pipe

# Flexicoupler Connection

(Path Finder 8850, 8852 and 8856)



The optional FLEXICOUPLER is very easy to use, and services do not need to be interrupted during the connection. The operating range is shorter than when using the Direct Connection method. Also the tracing signal can be affected by neighboring cable and pipes. Neither the RED/BLACK TEST CORD nor a GROUND ROD are needed for using the Flexicoupler Connection method.

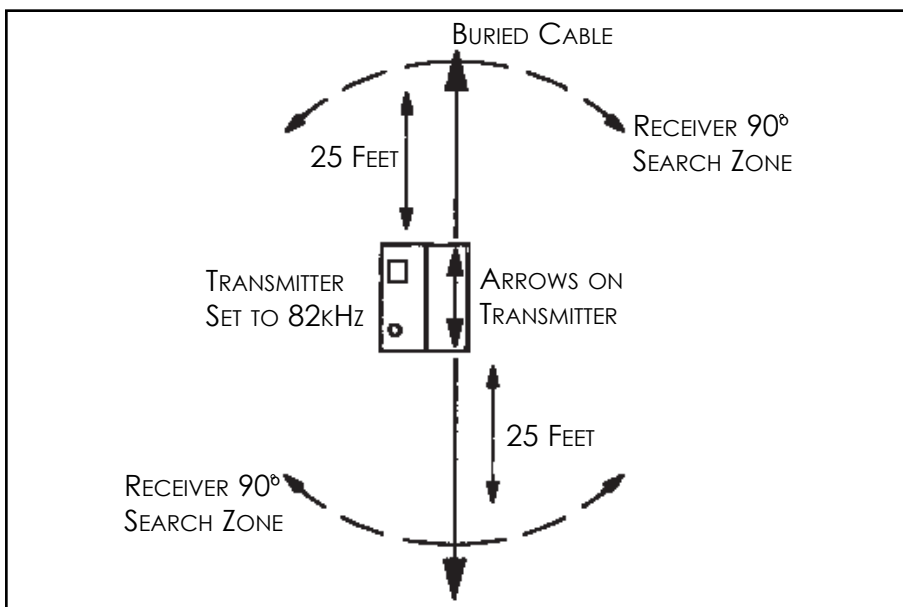
First, loop the FLEXICOUPLER around the cable and connect the two ends together. It is important to connect the FLEXICOUPLER around the cable you want to trace, as shown above. Connecting it incorrectly around a commonly bonded cable (dashed line above) will cause the tracing signal to be weaker. The range will also be shorter, and difficulty will arise in identifying one cable from another when the FLEXICOUPLER is placed incorrectly.

Plug the FLEXICOUPLER TEST CORD into the DIRECT CONNECTION JACK. Set the 815Hz/OFF/82kHz switch to the 82kHz position. The ON indicator will start blinking.

\*Turn to Page 18 to Begin Locating the Cable or Pipe

# Transmitter Inductive Connection

(Path Finder 8850, 8852 and 8856)



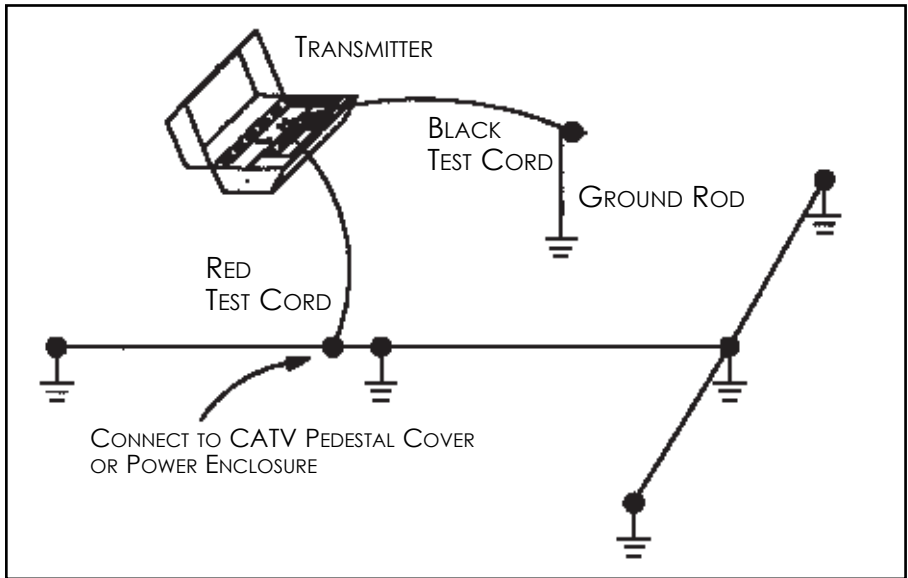
The Transmitter Inductive method is convenient to use, and utility services are not interrupted. Also, no test cords or connections are needed. The cable or pipe must have good insulation or a non-conductive coating, or the operating range will be very short.

Start by placing the TRANSMITTER on the ground. Place it as close as possible to the path of the cable or pipe. Next, align the arrows on the TRANSMITTER control panel with the underground utility. Set the 815Hz/OFF/82kHz switch to the 82kHz position. The ON indicator will start blinking.

Begin tracing the path with the RECEIVER 25 ft from the TRANSMITTER. Search in the 90 degree zone as shown above. When you locate the cable or pipe, follow the path. If the signal becomes weak, move the TRANSMITTER to a point 25 ft behind the last strong signal, and then continue searching for the buried cable or pipe.

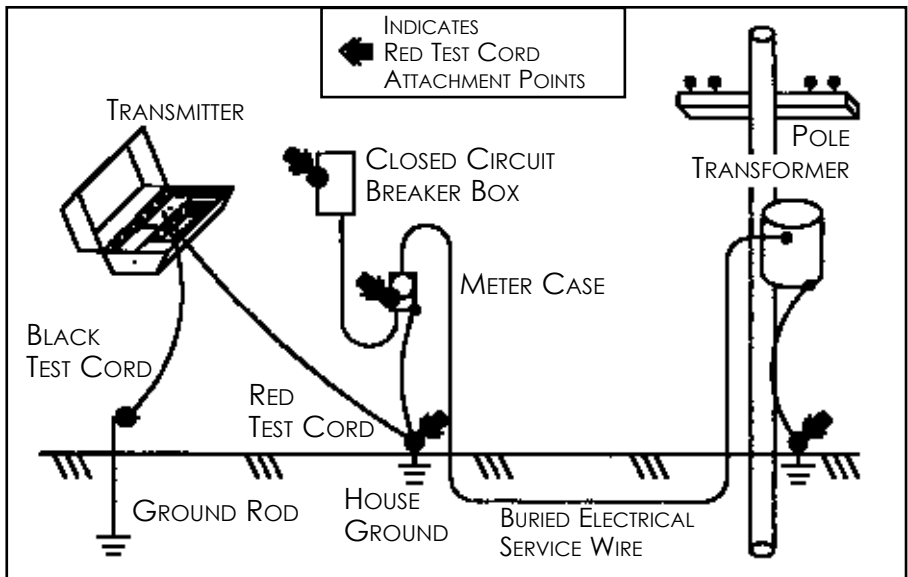
\*Turn to Page 18 to Begin Locating the Cable or Pipe

# Multiple Ground Circuit

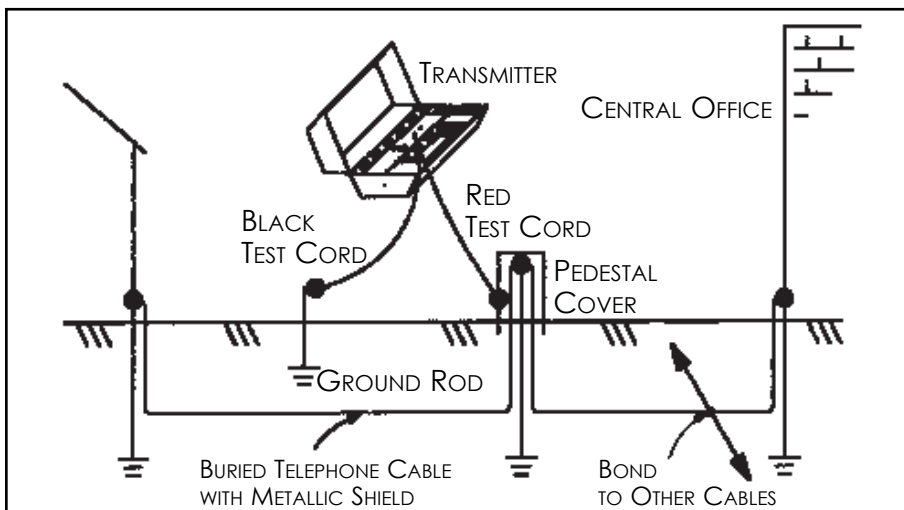


This method uses the existing ground points that are already exposed and available to you. It is not necessary to disconnect the service.

DO NOT DIRECT CONNECT TO AN ENERGIZED POWER CABLE.



# Multiple Ground Circuit



Start by connecting the RED TEST CORD to an existing ground point. Then press the GROUND ROD into the ground at approximately 10 ft from this point. Place the GROUND ROD at an angle of approximately 90 degrees to the buried or pipe. Connect the BLACK TEST CORD to the GROUND ROD.

## 8840 Path Finder

Plug the RED/BLACK TEST CORD into the DIRECT CONNECT 815Hz JACK. The ON indicator will start blinking.

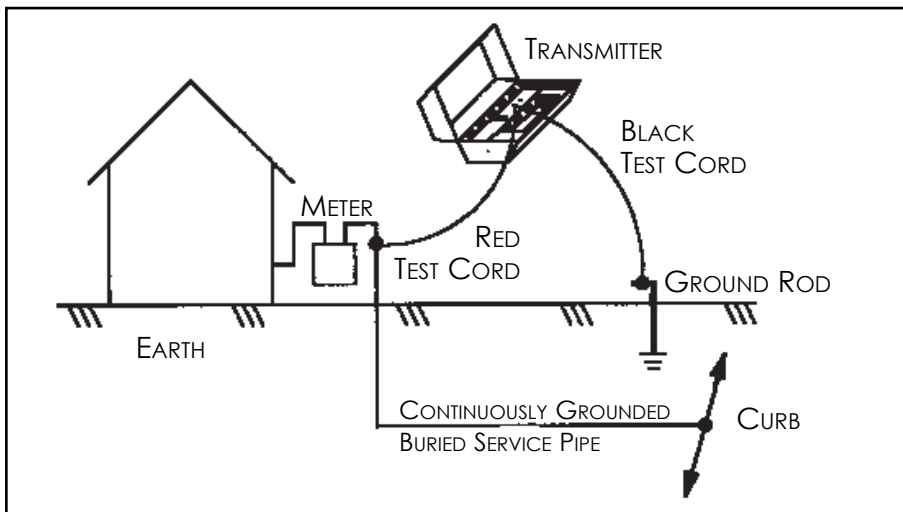
## 8850 Path Finder II, 8852 and 8856

Plug the RED/BLACK TEST CORD into the DIRECT CONNECT JACK. Set the 815Hz/OFF/82kHz switch to the 815Hz position. The ON indicator will start blinking.

\*Turn to Page 18 to Begin Locating the Cable or Pipe

# Continuously Grounded Circuit

Cable, Pipe or Conduit



The locating range for a bare uninsulated pipe is approximately 150 ft and may require frequent relocation of the TRANSMITTER. If the locating range seems very short or unreliable, there may be an insulated bushing in the buried pipe. Try to bypass the insulated fitting by using a different connection point.

Start by connecting the RED TEST CORD to the shut-off valve wrench surfaces or union fittings near the gas or water meter. Then press the GROUND ROD into the ground at approximately 10 ft from this point. Place the GROUND ROD at an angle of approximately 90 degrees to the buried or pipe. Connect the BLACK TEST CORD to the GROUND ROD.

## 8840 Path Finder (may not locate because of low 815Hz frequency)

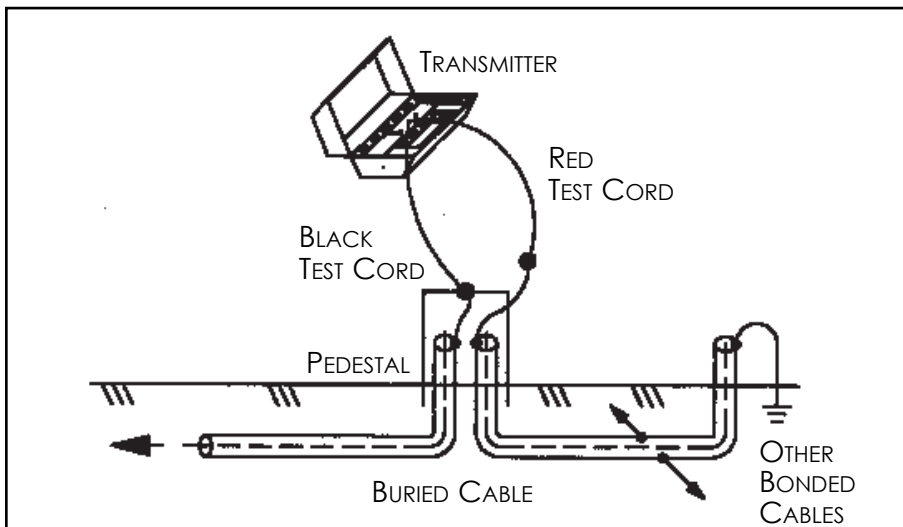
Plug the RED/BLACK TEST CORD into the DIRECT CONNECT 815Hz JACK. The ON indicator will start blinking.

## 8850 Path Finder II, 8852 and 8856

Plug the RED/BLACK TEST CORD into the DIRECT CONNECT JACK. Set the 815Hz/OFF/82kHz switch to the 815Hz position. The ON indicator will start blinking.

\*Turn to Page 18 to Begin Locating the Cable or Pipe

# Telephone Direct Shield Connection



The Telephone Direct Shield is the preferred method for the telephone service. There is usually a ground lug available for making the connections, and therefore damage to the cables is unlikely. Only a service company employee is permitted to make the connections. This connection is reliable and the service is not interrupted. The readings may be confusing if several cable shields are bonded together.

Start by disconnecting the shield from the system ground. Then, connect the RED TEST CORD to the cable shield. Next, connect the BLACK TEST CORD to the telephone pedestal or the previous shield attachment point.

## 8840 Path Finder

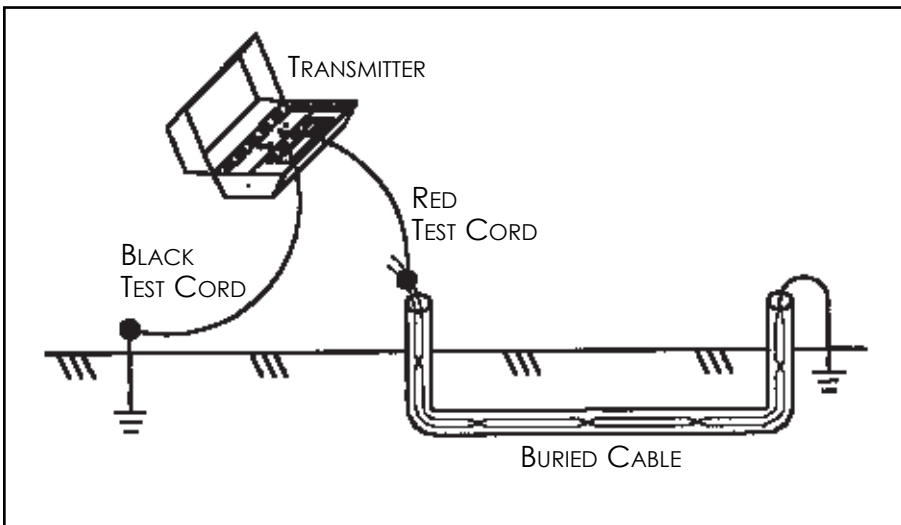
Plug the RED/BLACK TEST CORD into the DIRECT CONNECT 815Hz JACK. The ON indicator will start blinking.

## 8850 Path Finder II, 8852 and 8856

Plug the RED/BLACK TEST CORD into the Direct Connect Jack. Set the 815Hz/OFF/82kHz switch to the 815Hz position. The ON indicator will start blinking.

\*Turn to Page 18 to Begin Locating the Cable or Pipe

# Telephone Direct Pair Connection



The Telephone Direct Pair method provides a very high quality path to the central office. Only a service company employee is permitted to make the connections, because service is interrupted during the tracing operation. Locating errors due to the signal going the other direction or coupling into other cables are unlikely.

Start by selecting one of the wire pairs in the cable you want to trace. Then connect the RED TEST CORD to both wires in the pair. DO NOT USE INSULATION PIERCING CLIPS. Next, connect the BLACK TEST CORD to the system ground at any convenient point.

## 8840 Path Finder

Plug the RED/BLACK TEST CORD into the DIRECT CONNECT 815Hz JACK. The ON indicator will start blinking.

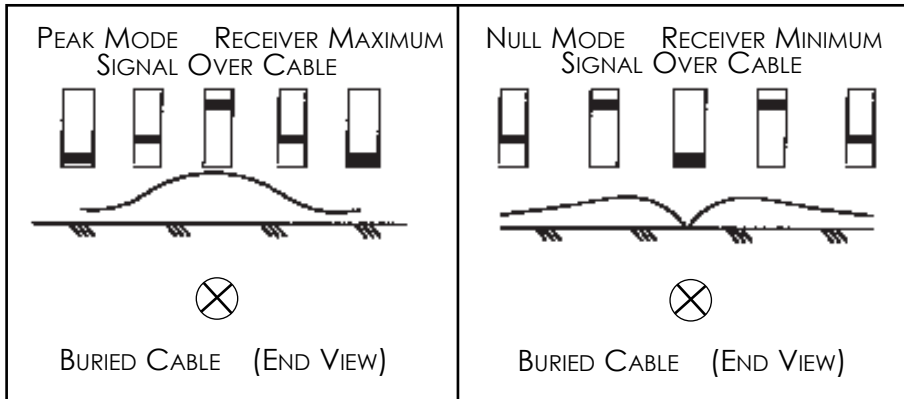
## 8850 Path Finder II, 8852 and 8856

Plug the RED/BLACK TEST CORD into the DIRECT CONNECT JACK. Set the 815Hz/OFF/82kHz switch to the 815Hz position. The ON indicator will start blinking.

\*Turn to Page 18 to Begin Locating the Cable or Pipe

## Locating the Cable or Pipe

Now that you have chosen the method you are going to use to locate the cable or pipe, the next step is determining which type of RECEIVER you have (Peak or Null / Peak and Null). This will determine the depth measurement method you will use. All instruments are capable of locating at the 45 degree method or the straight lift method.



Start by making sure the TRANSMITTER is connected and turned on. Then move about 15 ft away from the TRANSMITTER along the path. For the Inductive Search method (used with the 8850 Path Finder II, 8852 and 8856), move about 25 ft away from the Transmitter. Next, hold the RECEIVER so that the BUBBLE LEVEL is approximately centered, and you can see the meter and controls easily. Flip the RECEIVER FREQUENCY SELECTOR switch to the 815Hz position. If you are using the 8850 Path Finder II, 8852, or the 8856, make sure both the RECEIVER and TRANSMITTER FREQUENCY SELECTORS are set for the same frequency (either 815Hz or 82kHz). Then adjust the SENSITIVITY control to receive a METER and audio tone response.

The Path Finders audio output has a variable tone. This variable tone gives you an indication of the METER READING. As the METER READING increases, the variable tone pitch increases. As the METER READING decreases, the pitch decreases. The variable tone will become silent at any meter setting between 2.0 and 4.5.

## Locating the Cable or Pipe

Keep the BUBBLE LEVEL centered at all times. Start by swinging the RECEIVER across the path. When the RECEIVER is directly above the cable or pipe, the variable pitch audio tone and the ANALOG METER will peak (see Peak Mode Illustration on page 18), when using a peaking unit. When using a nulling unit, the variable pitch audio tone and the ANALOG METER will null, when the RECEIVER is directly over the pipe or cable (see Null Mode Illustration on page 18).

Adjust the SENSITIVITY control knob until the METER READING is between 6 and 9.

Next, begin tracing the path by walking away from the TRANSMITTER at a moderate pace. Continue swinging the RECEIVER left to right as you walk. Follow the peak or null METER READING indicator.

When you trace the path, the METER READING may slowly fade as you move away from the TRANSMITTER. Readjust the SENSITIVITY control to maintain a METER READING between 6 and 9. If the METER READING suddenly changes in level (higher or lower), you may have found:

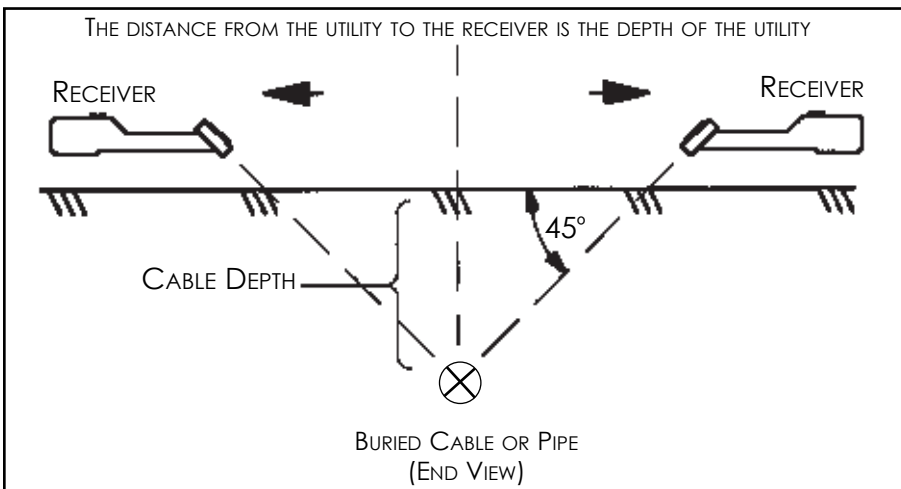
- a) a junction where the signal divides and goes several directions.
- b) a break in the cable or shield.
- c) a change in depth of the cable or pipe.
- d) an insulated pipe fitting.

If you can no longer trace the path, even when the SENSITIVITY control is set at a maximum setting, try connecting the TRANSMITTER to the other end of the path and begin tracing back.

When there are sharp changes in a path, the RECEIVER'S null and peak METER indicators behave differently than when tracing a straight path. Begin by practicing on a path that you know has turns and laterals in it, so that you will be able recognize them.

# Depth Measurements ~ Nulling Unit

## 45 Degree Angle Method



Move to the spot where you want to measure the depth. Stay at least 15 ft away from the TRANSMITTER. Start by swinging the RECEIVER across the path until you locate the null on the METER READING. Then, adjust the SENSITIVITY control for a null METER READING of just below 2. Mark the path on the ground as precisely as possible.

Next lay the RECEIVER on the ground with the meter facing up. Place the heel of the RECEIVER on the path, with the case at a 90 degree angle to the path. The METER will not indicate a null at this time, but do not readjust the SENSITIVITY control.

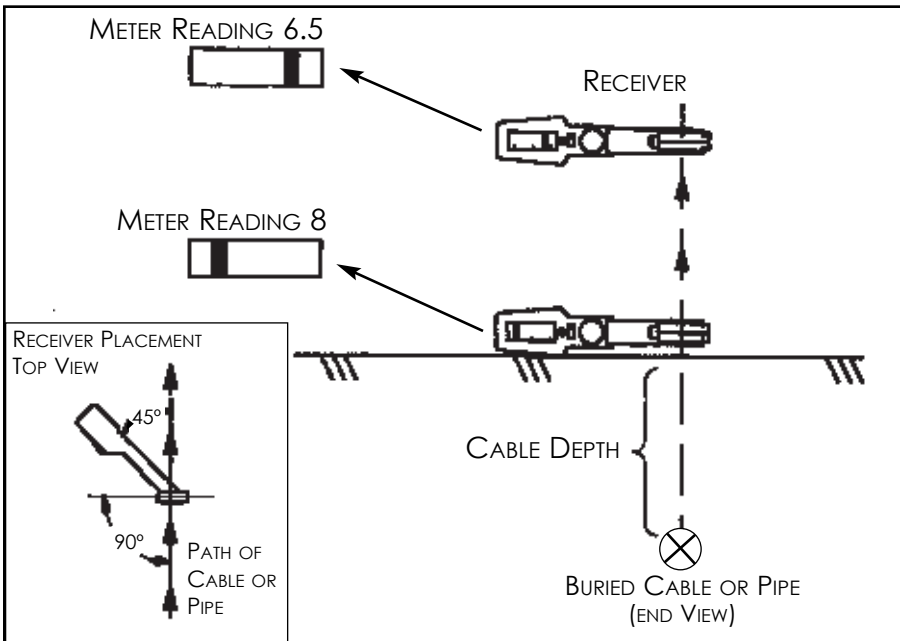
Move the RECEIVER slowly away from the path at a 90 degree angle until you find a new null METER READING. Mark this point. The distance between the RECEIVER and the marked cable path is the approximate depth of the pipe or cable.

A false location can be caused by nearby buried metallic objects, such as a second cable or pipe, sewer, fence, or railroad track. Confirm your depth measurement by repeating the above steps on the opposite side of the pipe or cable.

A difference of more than 5 inches in depth measurements indicates additional buried cables, pipes, or other objects may be present.

# Depth Measurements ~ Nulling Unit

## Straight Lift Method



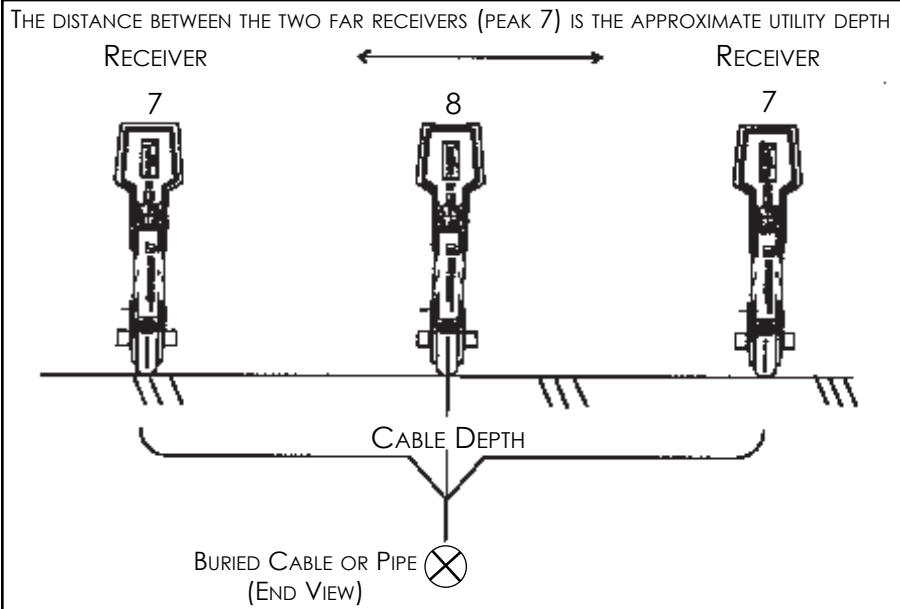
Move to the location where you want to measure the depth of the buried cable or pipe. You must stay at least 15 ft away from the TRANSMITTER. Next, place the RECEIVER on its side on the ground. With the RECEIVER body over the buried cable or pipe, position the RECEIVER at a 45 degree angle to the path.

Without moving the RECEIVER, adjust the SENSITIVITY control for a METER READING of 8.

Then lift the RECEIVER straight up without twisting, turning, or drifting to the left or right of the path. Continue to lift the RECEIVER until a new METER READING of 6.5 is found. If you are unable to reach a METER READING of 6.5 by using the straight lift method, use the 45 degree triangular method to determine the depth measurement of the utility (page 20). The height of the heel of the RECEIVER above the ground is the depth of the cable.

# Depth Measurements ~ Peaking Unit

## 45 Degree Angle Method



Move to the spot where you want to measure the depth of the underground utility. Stay at least 15 ft away from the TRANSMITTER. Start by swinging the RECEIVER across the path until the RECEIVER indicates a peak METER READING. Then, adjust the SENSITIVITY control for a peak METER READING of just below 8. Mark the path on the ground as precisely as possible.

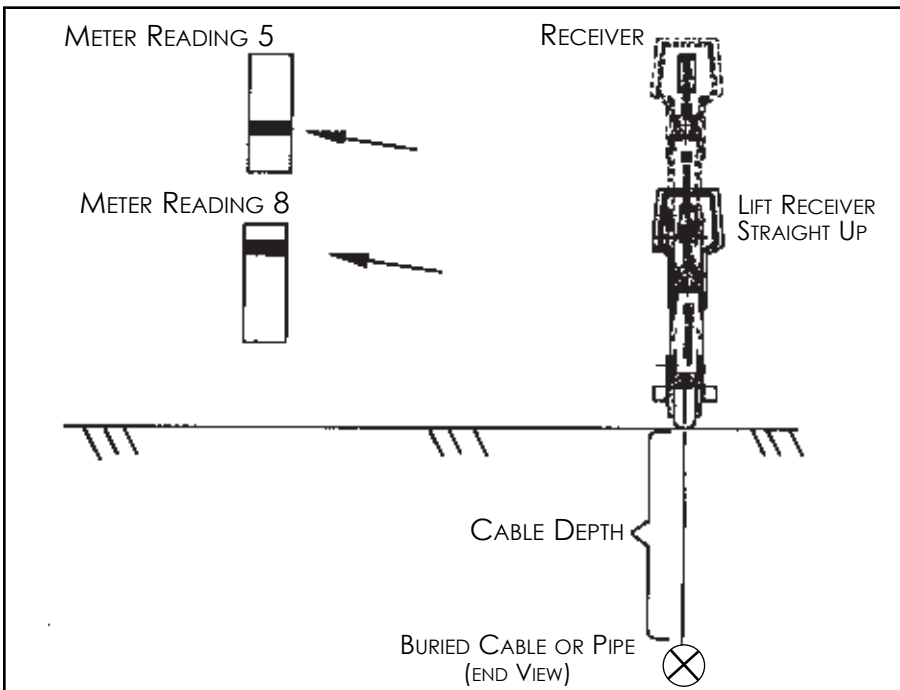
Position the RECEIVER on the ground as shown above. Adjust the SENSITIVITY control for a METER READING of 8.

Move the RECEIVER slowly away from the path at a 90 degree angle until the METER READING drops to 7. Mark this point. Move the RECEIVER back towards the cable until the METER peaks at 8. Next, move to the far side of the cable until the METER READING drops to 7. Measure the distance between the two far RECEIVERS (peak 7 s). The distance between these points is the approximate depth of the pipe or cable.

A false location can be caused by having nearby buried metallic objects such as a second cable or pipe, sewer, fence, or railroad track.

# Depth Measurements ~ Peaking Unit

## Straight Lift Method



Move to the location where you want to measure the depth of the buried utility. You must stay at least 15 ft away from the TRANSMITTER. Begin by placing the RECEIVER on the ground over the buried cable or pipe.

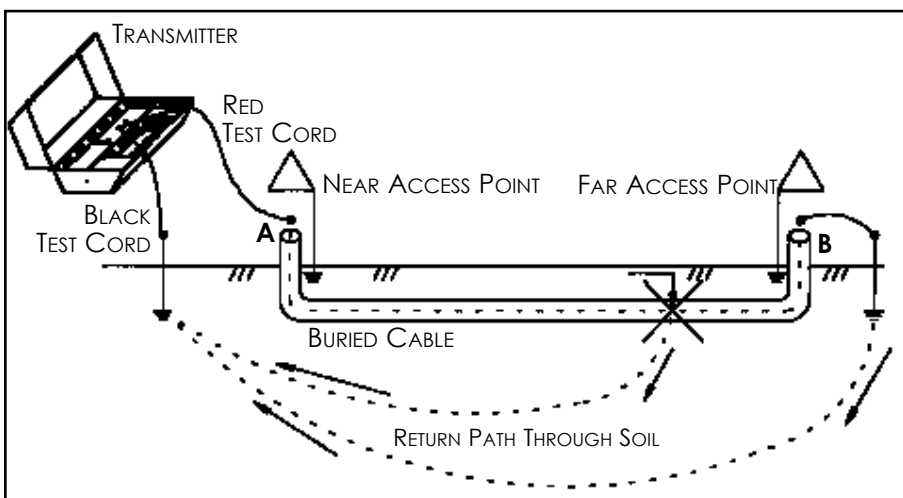
Without moving the RECEIVER, adjust the SENSITIVITY control for a METER READING of 8.

Start by lifting the RECEIVER straight up without twisting, turning, or drifting to the left or right of the path. Continue to lift the RECEIVER until a new METER READING of 5 is found. If you are unable to reach a METER READING of 5 by using the straight lift method, use the 45 degree triangular method to determine the depth measurement of the utility (page 22). The height of the RECEIVER ANTENNA above the ground is the depth of the cable.

## Signal Return Through Insulation Fault

Fault locating determines the location of an insulation break on an underground conductor. With the optional GROUND RETURN PROBE, the 8852 and the 8856 are converted to fault locators.

In the case of an insulation fault, some of the signal will return to the GROUND ROD through a break in the insulation.



Locate the conductor path before attempting to fault locate. If during the path locate an unusual amount of signal loss occurs, it could be that part of the signal has escaped to the ground in the last several feet.

NOTE: The signal could go to the ground at a grounded splice point which would act as a fault during the path and fault locate.

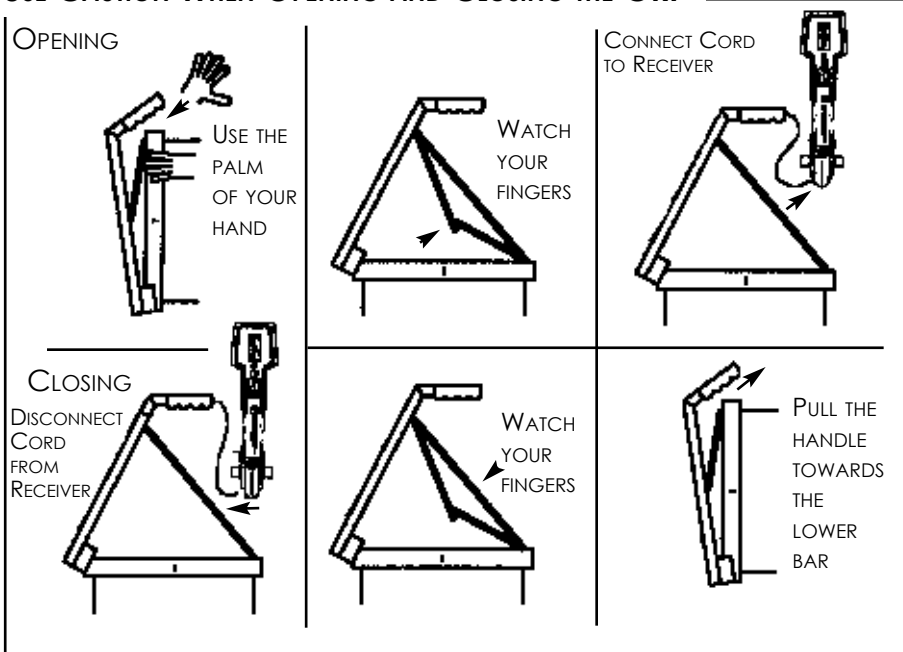
Once the path is determined and there is a general area where a fault is expected, additional current can be forced to flow through the fault by disconnecting and isolating the far point. If the current has no path-to-ground at the far access point, it will be forced to seek ground at the fault. This will increase the current in the soil at the fault and the detectability of the fault.

# Ground Return Probe

## Collapsible Ground Return Probe

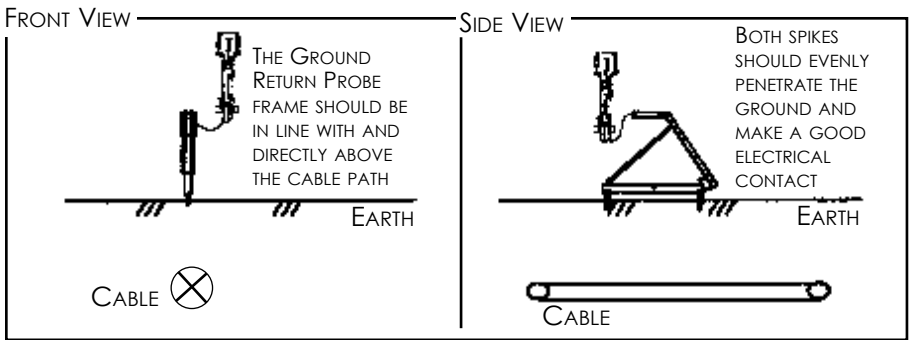
To begin fault locating, open the GROUND RETURN PROBE (GRP) (figure below). First, plug the BLACK MOLDED CORD into the GROUND RETURN PROBE handle. Next, locate the ACCESSORY JACK on the back lower portion of the RECEIVER (8852 and 8856 Models Only). Plug the other end of the BLACK MOLDED CORD into the ACCESSORY JACK. The GRP is specially designed to collapse for easy transport and storage.

### USE CAUTION WHEN OPENING AND CLOSING THE GRP



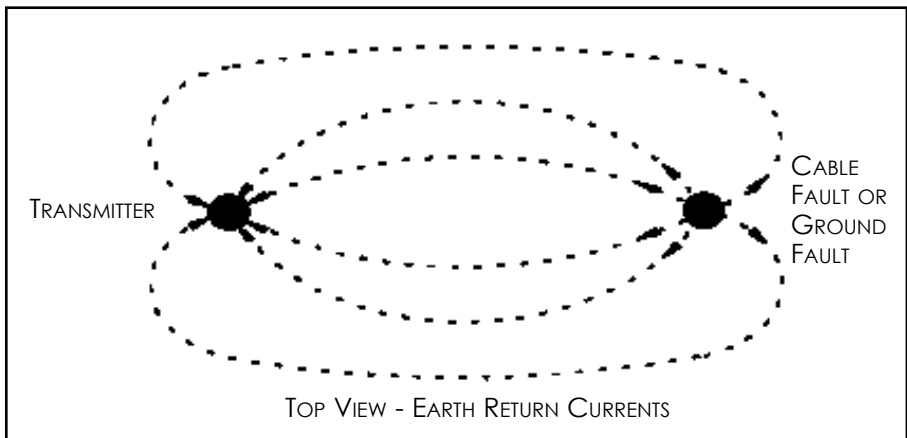
The circuitry between the two ground spikes provides a path for the current in the soil to return to the GROUND RETURN PROBE. The current enters one spike of the GRP and then exits the other. The GRP should be inserted into the soil with a consistent force and depth so both spikes are placed equally within the soil.

# Ground Return Probe Insertion



The current in the soil spreads out from the fault like the spokes of a wheel. The current is highly concentrated in the soil near the fault as it begins its return, and near the GROUND ROD as it finishes its return. Notice that the current is widely dispersed in the soil between the fault and GROUND ROD.

## Spoked Wheel Return Paths

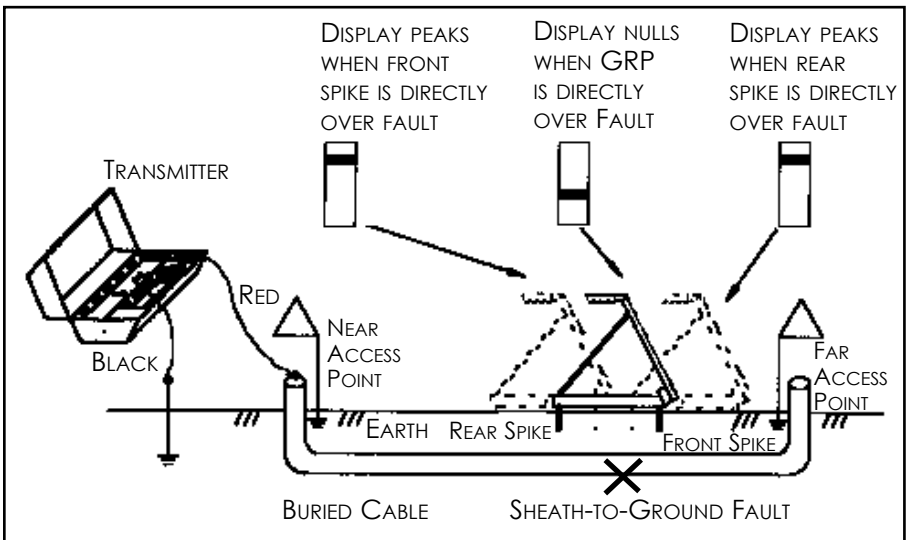


# Ground Return Probe Fault Locating

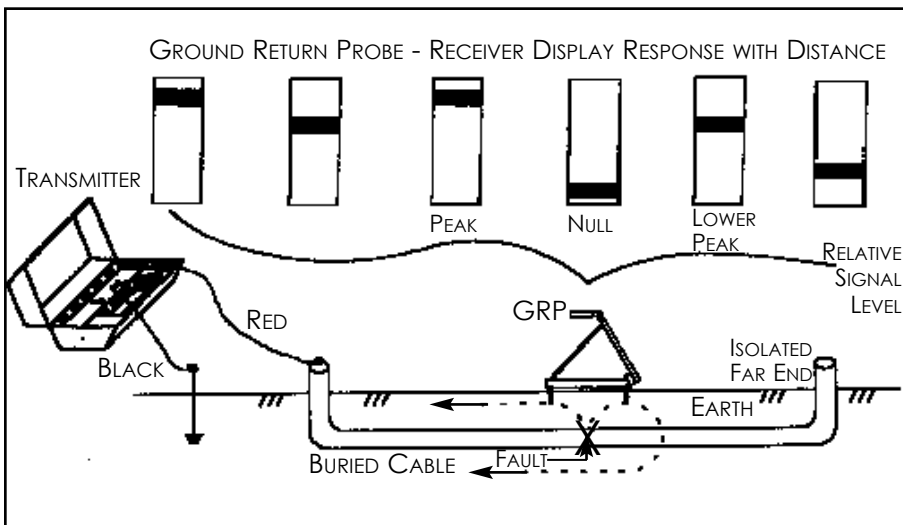
The 8852 and 8856 RECEIVER measures the amount of current that is flowing through the GROUND RETURN PROBE (GRP). The RECEIVER must be on the 815Hz frequency when using the GROUND RETURN PROBE. When you walk the path using the GRP, you drop the probe every three or four steps. As you near an area of high current concentration in the soil, the RECEIVER will record the high METER READINGS (peak). You will find it necessary to reduce the RECEIVER sensitivity by adjusting the GAIN CONTROL. Once the signal starts to increase, you should slow your pace. Begin covering smaller segments of the ground to avoid passing over the fault.

The RECEIVER will continue to record the peak current METER READINGS until one spike of the GRP passes over the fault. When the spike passes over the fault, the current decreases and produces a null METER READING. The fault then lies between the two GRP spikes. If you move the GRP over too far, the RECEIVER will then produce a peak METER READING.

NOTE: The proper GAIN SETTING is essential in locating the fault. Begin at a METER setting between 2 and 4. Adjustments might have to be made depending on the conditions.



# Receiver Meter Response with Distance



In the figure above, notice there is a RECEIVER signal level increase as the GROUND RETURN PROBE approaches a fault and as it is moved away from the TRANSMITTER. A good cable will allow the locating signal to slowly decrease when it is moved away from the TRANSMITTER. While this signature or signal pattern must be recognized, this method is usually more accurate than phase responding to-from types of instruments

# Product Specifications

## Receiver

INPUT FREQUENCY

815Hz

NOISE REJECTION

116 dB minimum

GAIN CONTROL

126 dB minimum

METER OUTPUT

Analog, Peak/Null

SPEAKER OUTPUT

Variable Pitch Tone

POWER SOURCE

8-AA Duracell Batteries

BATTERY LIFE

Greater than 80 hrs

OPERATING TEMPERATURE

-4 to +133F

(-20 to +55C)

SIZE

13x3x3"

(33x7.6x7.6cm)

WEIGHT

1.7 lbs

(.77kg)

## Path Finder 8850

High 82,315Hz

Low 815Hz

116 dB minimum

126 dB minimum

Analog Peak/Null

Variable Pitch Tone

8-AA Duracell Batteries

Greater than 80 hrs

-4 to +133F

(-20 to +55C)

13x3x3"

(33x7.6x7.6cm)

1.8 lbs

(.8kg)

## Transmitter

tone frequency

815Hz

HOOK-UP METHOD

Direct Connection

OUTPUT POWER

100 Milliwatts, Nominal

MAXIMUM OPEN CIRCUIT VOLTAGE

30 V PK-PK AC

OPERATING TEMPERATURE

-4 to +133F

(-20 to +55C)

POWER SOURCE

8-D Duracell Batteries

BATTERY LIFE

Greater than 120 hrs

SIZE

17x7.5x6.5"

(43x19x16cm)

WEIGHT

6.2 lbs

(2.8kg)

OPTIONS

## Path Finder 8850

High 82,315Hz

Low 8158Hz

Direct Connection

Inductive Coupling  
(with Optional Flexicoupler)

Inductive Coupling  
(from Transmitter Case)

100 Milliwatts, Nominal

30 V PK-PK AC

-4 to +133F

(-20 to +55C)

8-D Duracell Batteries

Greater than 120 hrs

17x7.5x6.5"

(43x19x16cm)

6.2 lbs

(2.8kg)

Flexicoupler

# Product Specifications

## Receiver

	<b>8852</b>	<b>8856</b>
INPUT FREQUENCY	High 82,315Hz Low 815Hz	High 82,315Hz Low 815Hz
NOISE REJECTION	116 dB minimum	116 dB minimum
GAIN CONTROL	126 dB minimum	126 dB minimum
METER OUTPUT	Analog, Peak/Null	Analog Peak and Null
SPEAKER OUTPUT	Variable Pitch Tone	Variable Pitch Tone
POWER SOURCE	8-AA Duracell Batteries	8-AA Duracell Batteries
BATTERY LIFE	Greater than 80 hrs	Greater than 80 hrs
OPERATING TEMPERATURE	-4 to +133F (-20 to +55C)	-4 to +133F (-20 to +55C)
SIZE	13x3x3" (33x7.6x7.6cm)	13x3x3" (33x7.6x7.6cm)
WEIGHT	1.7 lbs (.77kg)	1.8 lbs (.8kg)

## Transmitter

	<b>8852</b>	<b>8856</b>
TONE FREQUENCY	High 82,315Hz Low 815Hz	High 82,315Hz Low 815Hz
HOOK-UP METHOD	Direct Connection Inductive Coupling (with Optional Flexicoupler)  Inductive Coupling (from Transmitter Case)	Direct Connection Inductive Coupling (with Optional Flexicoupler)  Inductive Coupling (from Transmitter Case)
OUTPUT POWER	100 Milliwatts, Nominal	100 Milliwatts, Nominal
MAXIMUM OPEN CIRCUIT VOLTAGE	30 V PK-PK AC	30 V PK-PK AC
OPERATING TEMPERATURE	-4 to +133F (-20 to +55C)	-4 to +133F (-20 to +55C)
POWER SOURCE	8-D Duracell Batteries	8-D Duracell Batteries
BATTERY LIFE	Greater than 120 hrs	Greater than 120 hrs
SIZE	17x7.5x6.5" (43x19x16cm)	17x7.5x6.5" (43x19x16cm)
WEIGHT	6.2 lbs (2.8kg)	6.2 lbs (2.8kg)
OPTIONS	Flexicoupler GRP Cable Identifier Cable Pair Identifier	Flexicoupler GRP Cable Identifier Cable Pair Identifier

## Accessories Available

### Flexicoupler

(Use with the 8850, 8852 and 8856)

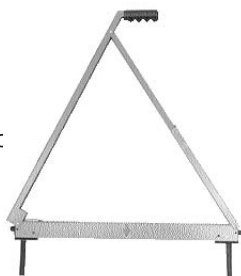
A flexible coupling for inducing the transmitted signal on a pipe or cable when direct connection can not be used.



### Ground Return Probe

(Use with the 8852 and 8856)

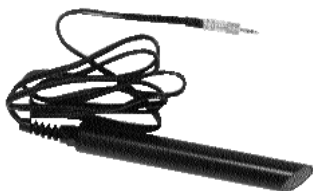
An A frame used to locate ground faults when connected to a Receiver.



### Cable Identifier

(Use with the 8852 and 8856)

A thin, cylinder shaped device connected to the Receiver through the Accessory Jack and is used to locate cable within a bundle of cables.



### Cable Pair Identifier

(Use with the 8852 and 8856)

A cable with an insulated clip and a pen shaped tester on one end that connects into the Accessory Jack on the Receiver. This device is used to locate a cable pair within the pedestal.



# Factory Service

RYCOM, Instruments, Inc. Products are Made in the USA

The **RYCOM** Path Finder family locators were designed for dependable operation with recommended yearly adjustment or calibration. If, however, your Path Finder is not working properly, return it to the factory for repair. Send it prepaid to:

RYCOM Instruments, Inc.  
9351 E. 59th Street  
Raytown, MO 64133 USA  
Telephone: 816-353-2100 or 1-800-851-7347  
Fax: 816-353-5050

We will repair and ship the instrument back within 10 working days, or advise you if the instrument is unrepairable.

\*NOTE There is a minimum charge for repair and handling.

When shipping your Path Finder for service, be sure to include:

- a) the name, address, and phone number of your contact
- b) a brief description of the trouble
- c) the return shipping address and department mail address, along with any special shipping instruction
- d) or contact us for a Return for Service Form

## Packing Instruction

Remove all batteries, and place the Receiver in the Transmitter case. Use the original shipping carton, or equivalent sturdy container. Add packing material around all sides of the unit. Seal the shipping container with strong tape. Mark the shipping container:

FRAGILE ELECTRONIC EQUIPMENT

# Warranty

This instrument is under warranty for one year from date of delivery against defects in material and workmanship ( EXCEPT BATTERIES ). We will repair or replace products that prove to be defective during the warranty period.

This warranty is void if, after having received the instrument in good condition, it is subjected to abuse, unauthorized alterations or casual repair .

NO OTHER WARRANTY IS EXPRESSED OR IMPLIED. THE WARRANTY DESCRIBED IN THIS PARAGRAPH SHALL BE IN LIEU OF ANY OTHER WARRANTY, INCLUDING BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. WE ARE NOT LIABLE FOR CONSEQUENTIAL DAMAGES.



9351 East 59th Street

Raytown, Missouri 64133

(816) 353-2100 or (800) 851-7347

Fax: (816) 353-5050

[www.rycominstruments.com](http://www.rycominstruments.com) • [rycom@rycominstruments.com](mailto:rycom@rycominstruments.com)