

Fault Finding Manual

Digital Locator

MPL-H11DX HP

MPL-H11DX-F-E

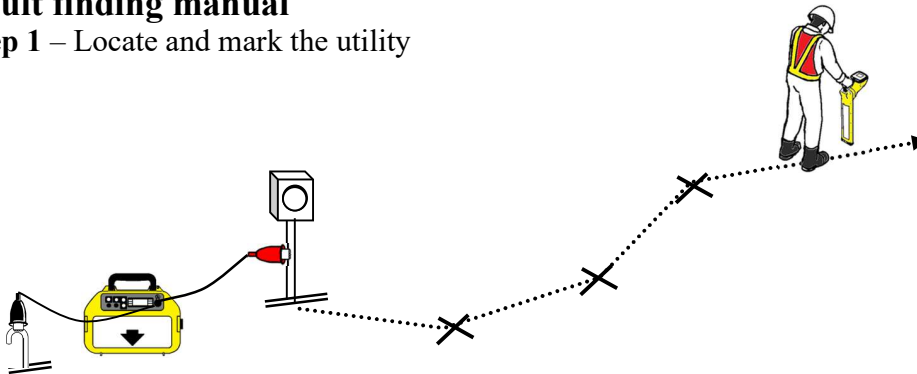
TAKACHIHO SANGYO CO., LTD.

OCT 08, 2024

839-079-1

Fault finding manual

Step 1 – Locate and mark the utility



TRANSMITTER

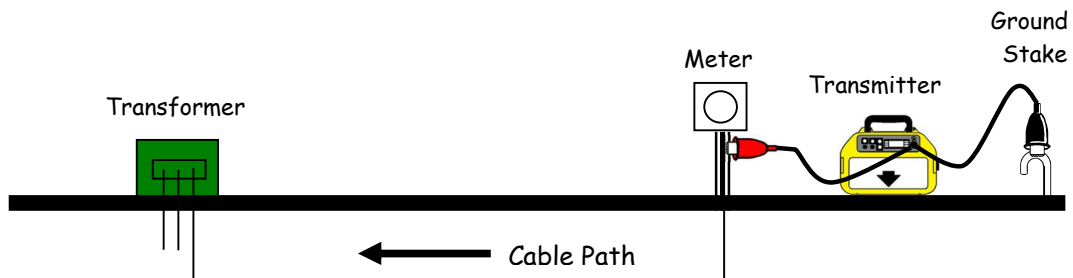
Step 2

CHECKING CABLE FOR VOLTAGE

Ground stake should be placed directly behind and in the opposite direction of the cable path.

Connect the black end of the direct connection cables to the ground stake.

Connect the red end of the direct connection cables on the cable to be checked.



Power on.



Press **FREQUENCY**, and select **FF**. *FF is Fault Find mode.



Voltage is indicated. When voltage is greater than 25 volts, alarm sounds.



Step 3

CHECKING CABLE RESISTANCE

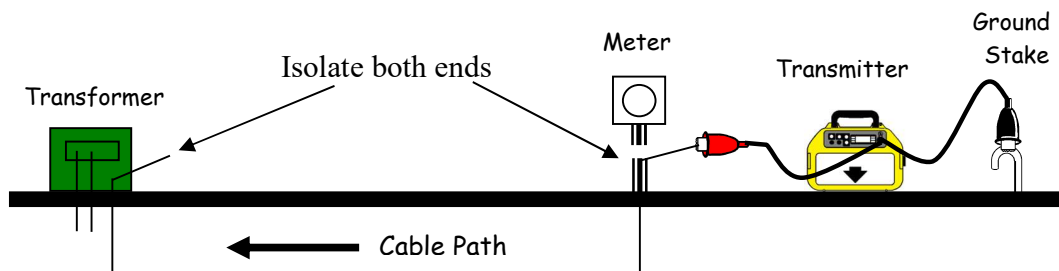
This feature is used to determine the quality of the fault.

Isolate both ends of the cable.

Ground stake should be placed directly behind and in the opposite direction of the cable path.

Connect the black end of the direct connection cables to the ground stake.

Connect the red end of the direct connection cables on the cable to be checked.



Power on. Press **FREQUENCY**, and select **FF**.

Press **ADJUST**.



Resistance is indicated by the numerical value and the bar graph.



Press **ADJUST** again, or wait 30 sec. for the display to return to the **FF**.

Step 4

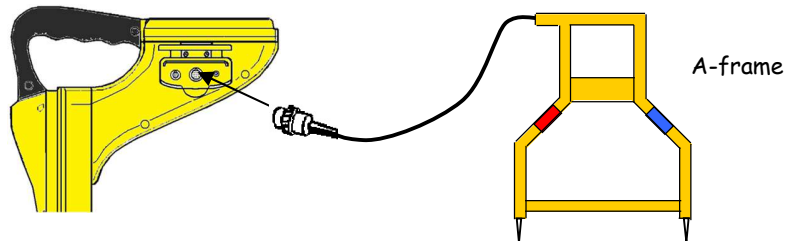
FAULT FINDING

After measurement of the resistance, fault finding power is adjusted automatically.

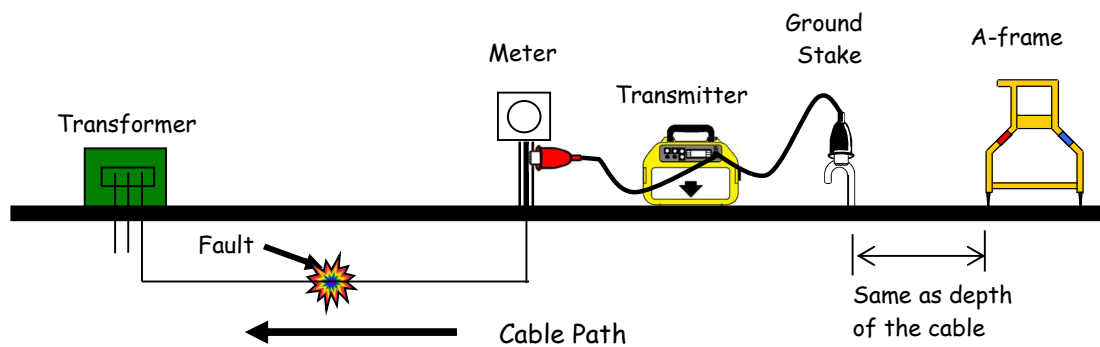


RECEIVER

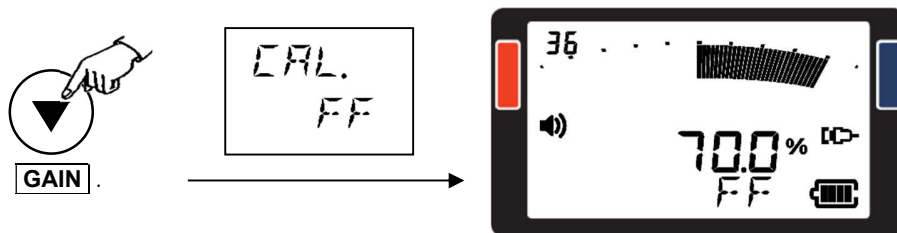
Connect the A-frame to the Receiver.



Place both legs of the A-frame in the earth with the red leg pointing at the ground stake. Distance from ground stake should be approximately the same as the suspected depth of the cable.



Press and hold the **GAIN** key for one second, this will adjust the sensitivity of the Receiver and display 70.0% +/-



Note: This will be a reference number if line has multiple faults.

If the Receiver displays **OVER**– manually reduce the output on the Transmitter until overload message is replaced with numbers.

Place the A-frame in the earth parallel along the path of the cable.

The Receiver will display an arrow on the LCD.

Arrow will point towards the red or blue indicator.

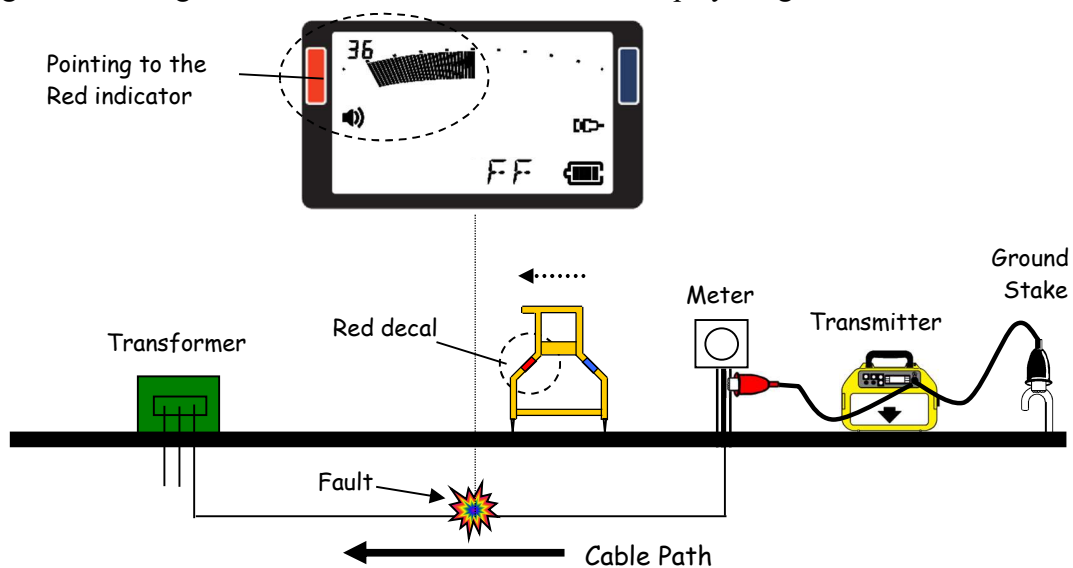
The A-frame legs will be marked with a red or blue decal.

Follow the direction the Receiver is showing (Example – if the LCD is pointing towards the red indicator and the red leg of the A-frame is pointing towards the front – walk forward.)

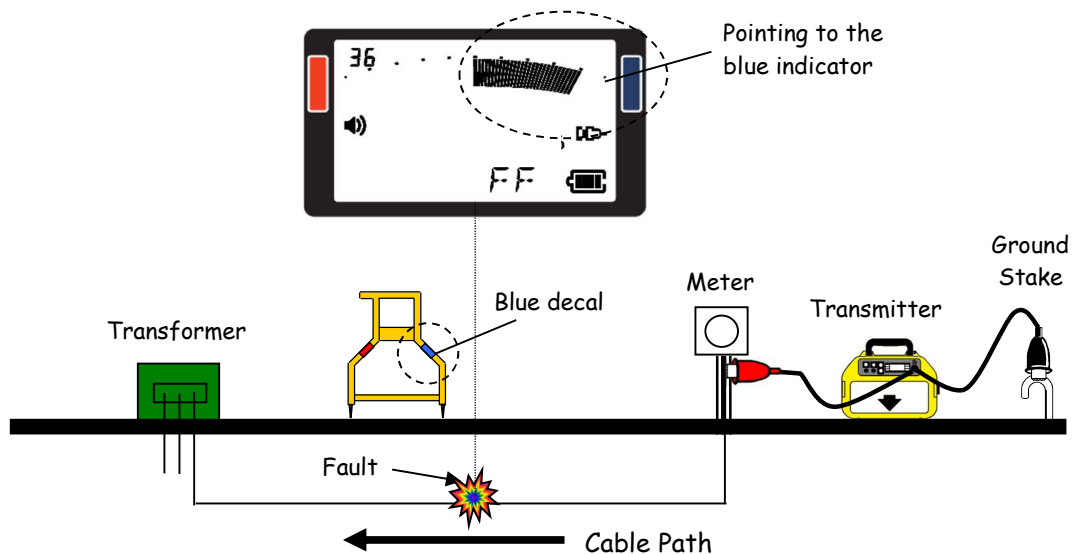
Walk in this direction placing the A-frame in the earth every five to ten feet (two to three meters).

Note: If LCD does not display arrow or signal strength A-frame is not reading signal.

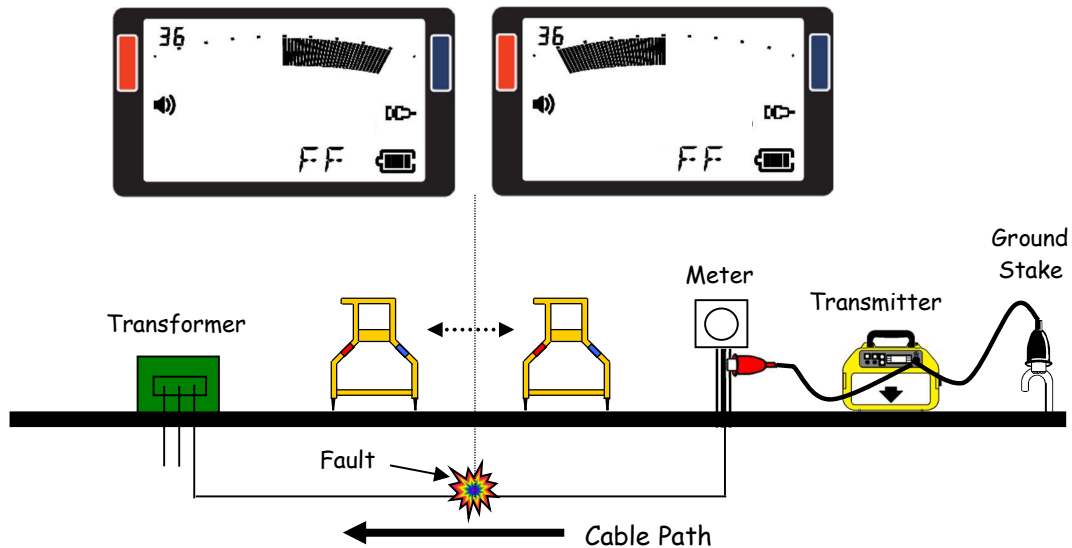
The A-frame may not be making contact with earth or signal is too weak due the distance from the fault point or cable path. Continue walking the cable path. When the A-frame begins to read signal the arrows and numbers will be displayed again.



When the arrow changes directions the operator has passed the fault.

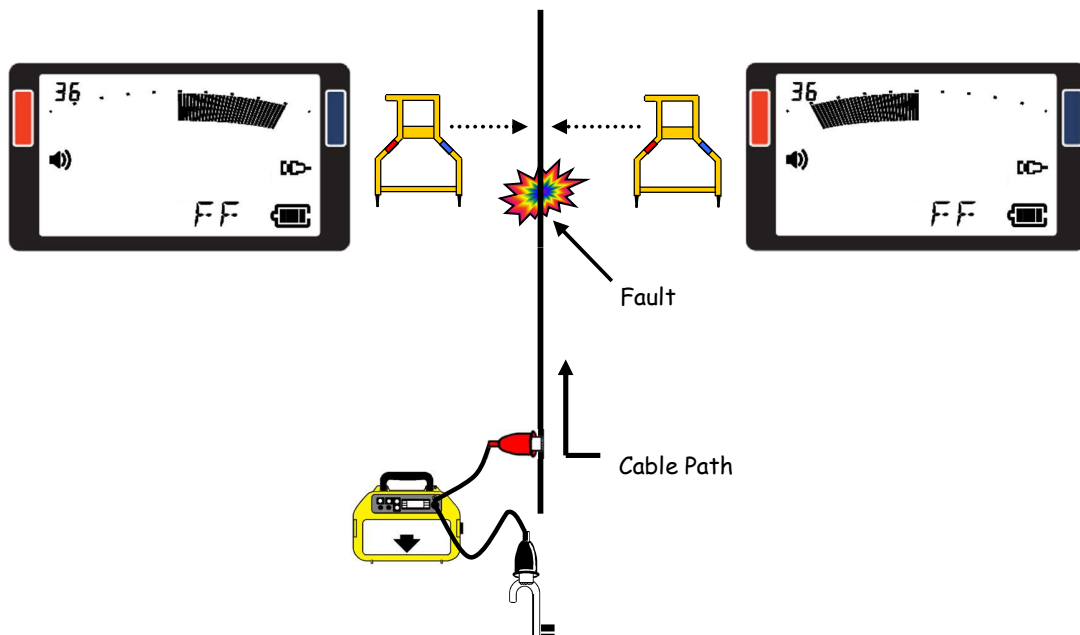


Move backwards placing the A-frame in the earth every few inches (centimeters) when the arrow changes direction again you have reached the area of the fault. The fault point will be in the center of the A-frame.

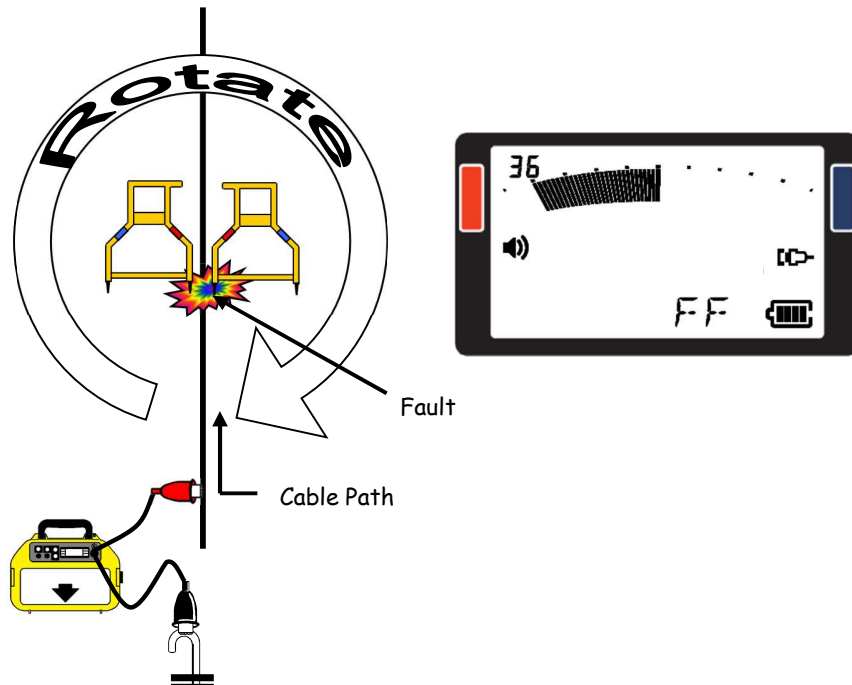


CONFIRM THE FAULT LOCATION

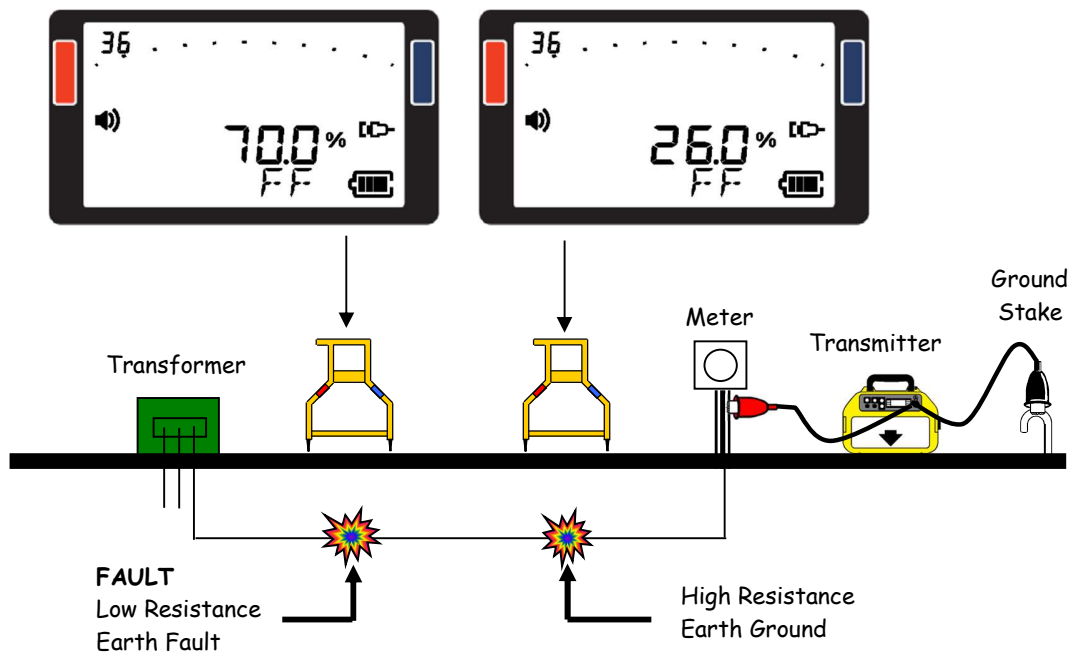
Turn the A-frame 90 degrees perpendicular to the cable path. Place the A-frame in the earth and follow the direction the arrows are showing on the LCD. When the Arrows change direction you are over the fault.



To confirm the fault place the red leg over the suspected faulted area. Pivot the A-frame in a 360-degree circle if the indicator continually shows Red then fault is beneath the red leg.

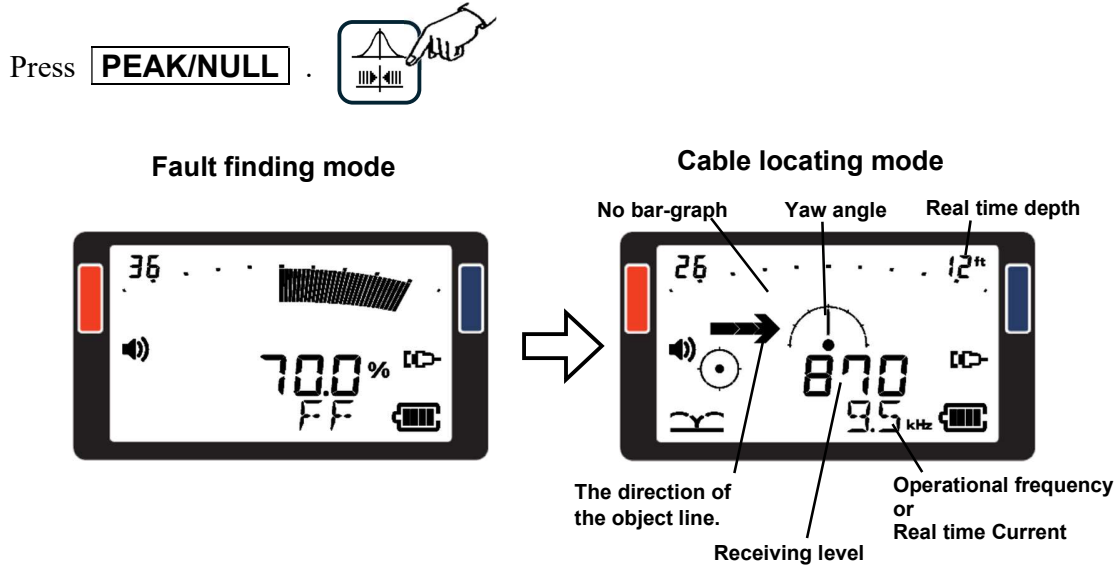


Multiple Faults –Place both legs of the A-frame in the ground with the red leg directly over the fault point. With a line that has multiple faults, the fault that registers the highest reading on the display is the fault. That needs to be repaired.

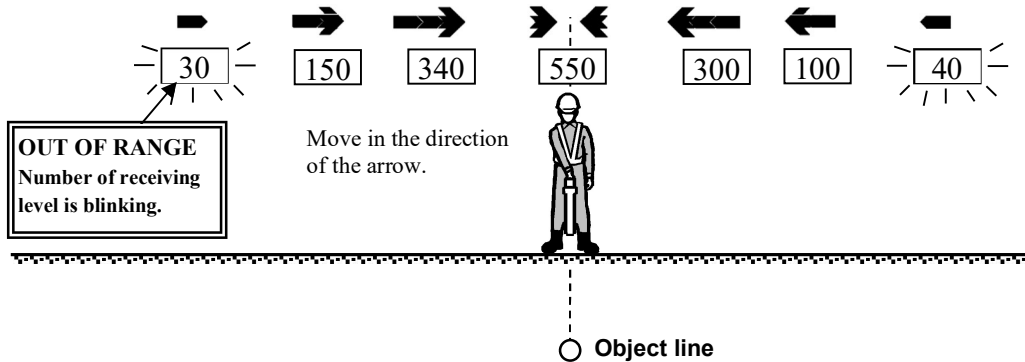


When doing the cable fault location work, the cable locating is possible.

Cable locating is possible even while the A-frame is connected by switching the mode to Cable locating mode.



Move to the direction of the arrow and measure the location of the cable.



When going back to Fault finding mode, press **PEAK/NULL** again.

