

Section 1

Description and Specifications

1. General

1.1 This manual covers the description, use, care and maintenance of the Dynatel 573DL Cable Fault Locator (refer to Fig. 1-1). The 573DL is a portable instrument that measures and pinpoints sheath and conductor faults in buried or aerial cables and can also locate the path of buried cables. Four frequencies are available to accommodate varying factors such as distance, cable type, or soil conditions. A separate Tone function provides a powerful 577.5 Hz signal for identification. The instrument is also able to detect 60 Hz AC power signals. In depth measurement mode, the 573DL provides a direct digital readout of the estimated depth of buried cables, and a bar graph indication of the relative current in the cable.

2. Description

2.1 The 573DL Cable Fault Locator and accessories are shown below. Refer to the list of standard and optional accessories in Table 1.

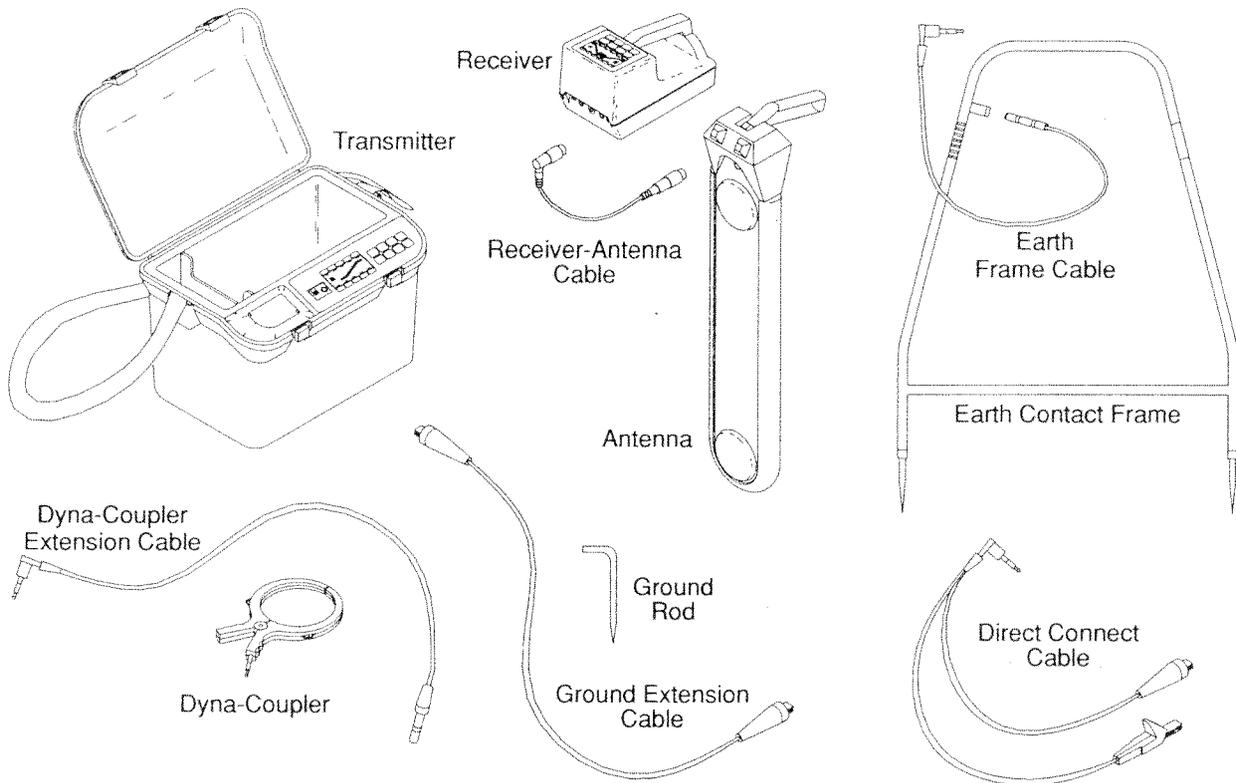


Fig. 1 -1 Dynatel 573DL Cable and Fault Locator

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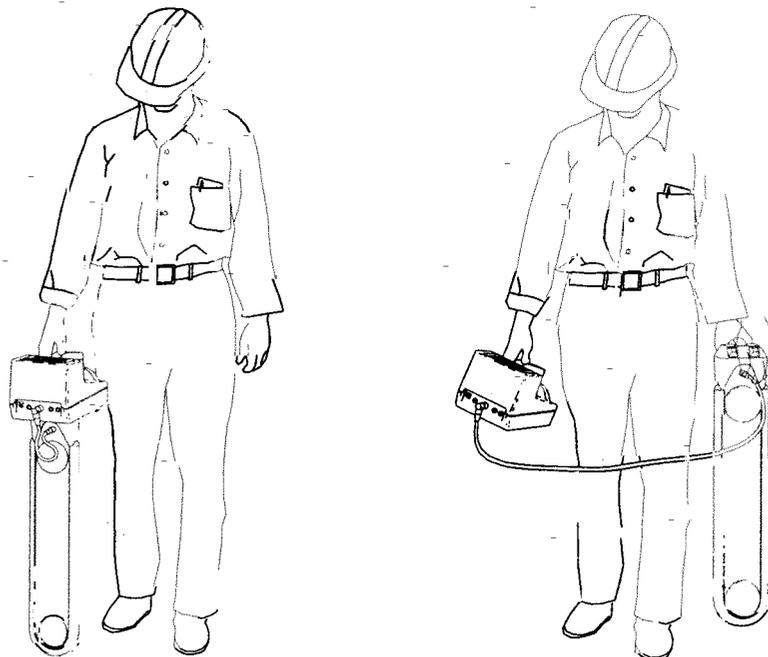


Fig. 1-5 Receiver-Antenna Configurations

2.5 To attach the antenna to the Receiver, place the top of the antenna in the cavity on the bottom of the Receiver. Snap the handle down flush with the blade of the antenna to lock the antenna and the Receiver together. Use the folding handle to direct the antenna when using it separately from the Receiver. Refer to Fig. 1-6.

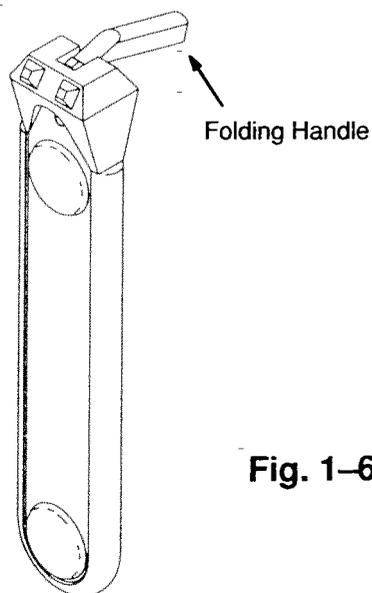


Fig. 1-6 Antenna

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3. Specifications

Transmitter Specifications

Modes of operation	Single: trace, fault, or tone Multiple: two trace frequencies or one trace frequency with fault locate signal.												
Signal application method	External: using direct connect cable, or Dyna-Coupler Internal: using internal induction coil												
Signal level control	Automatic signal level control selectable between normal or high												
Trace frequency	One of four preprogrammed user-selectable frequencies.												
Tone frequency	Preprogrammed to 577.5 Hz.												
Fault locate frequency	Preprogrammed to 15.625/31.25 Hz dual frequency.												
Output signal characteristics	Frequency: F1 - 577.5 Hz F2 - 8 kHz F3 - 33 kHz F4 - 200 kHz Voltage: Trace mode 0 to 25 Vrms Fault/Tone mode 0 to 100 Vrms Current: <table border="0" style="margin-left: 40px;"> <thead> <tr> <th></th> <th style="text-align: center;">Trace</th> <th style="text-align: center;">Fault Locate</th> <th style="text-align: center;">Tone</th> </tr> </thead> <tbody> <tr> <td>NORM.*</td> <td style="text-align: center;">10 mA (max)</td> <td style="text-align: center;">3 mA (max)</td> <td style="text-align: center;">3 mA (max)</td> </tr> <tr> <td>HIGH.**</td> <td style="text-align: center;">100 mA (max)</td> <td style="text-align: center;">10 mA (max)</td> <td style="text-align: center;">25 mA (max)</td> </tr> </tbody> </table> <p>* Limited to 0.5 watts out. ** Limited to 2 watts out for frequencies < 45 kHz, or to 1 watt for frequencies > 45 kHz. Output level is displayed as a relative measure.</p>		Trace	Fault Locate	Tone	NORM.*	10 mA (max)	3 mA (max)	3 mA (max)	HIGH.**	100 mA (max)	10 mA (max)	25 mA (max)
	Trace	Fault Locate	Tone										
NORM.*	10 mA (max)	3 mA (max)	3 mA (max)										
HIGH.**	100 mA (max)	10 mA (max)	25 mA (max)										
Volts function	0 to 250V average AC & DC voltage on the line. Display resolution 12.5V Maximum error: for 120 VAC RMS ... (-2.7 ± 4.5)V for 48 VDC (4.1 ± 3.9)V												
Ohms function	0 to 10 Mega Ohm, logarithmic indication with each decade linearly divided into 4 segments												
Battery	Six Ni-Cd or Alkaline D cells Typical battery life: Ni-Cds 30 hours between charges Alkaline 110 hours												
Charger	11 to 15 VDC input at 450 mA. 15-hour charge cycle from fully discharged.												
Temperature	Operating -4° F (-20° C) to 122° F (50° C) Storage --4° F (-20° C) to 122° F (50° C) Charging 50° F (10° C) to 104° F (40° C)												

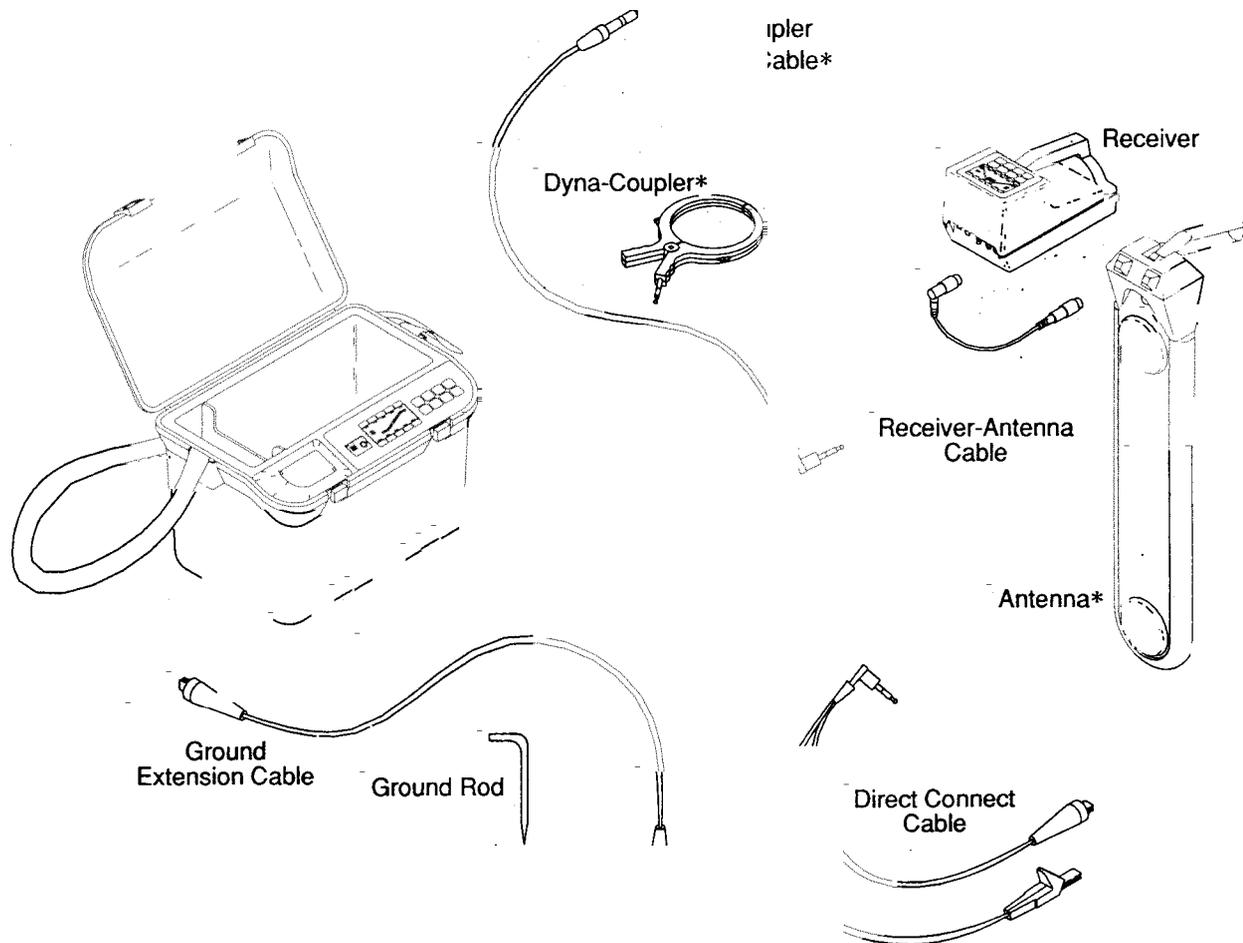
Receiver Specifications

Frequency	<u>ACTIVE</u>	<u>PASSIVE</u>
	F1 - 577.5 Hz	540 Hz (A71)
	F2 - 8 kHz	512 Hz (LF)
	F3 - 33 kHz	
	F4 - 200 kHz	
Sensitivity, Coupler/Probe jack	Maximum open circuit input voltage from 50 ohm source to obtain audio signal plus noise to noise ratio of 6 dB:	
	6-25 kHz	0.3 μ V
	25-200 kHz	0.5 μ V
Depth	inches option:	
	Range	0 to 100 inches
	Accuracy	\pm 10% of reading for 2 to 60 inches or \pm 1 inch, whichever is greater. \pm 15% of reading for 60 to 100 inches
Battery	Five Ni-Cd or Alkaline C cells	
	Typical battery life:	
	Ni-Cds	20 hours between charges
	Alkaline	50 hours
Charger	11 to 15 VDC input at 450 mA. 15-hour charge cycle from fully discharged.	
Audio	Internal speaker or external headphones.	
Temperature	Operating	-4° F (-20° C) to 122° F (50° C)
	Storage	-4° F (-20° C) to 122° F (50° C)
	Charging	50° F (10° C) to 104° F (40° C)

Getting Started
Section 2

2. Tracing

2.1 Tracing a buried cable requires these items:



** Optional for tracing.*

Fig. 2-6 Tracing Equipment