

EN

Original Instructions
Version 1
April 2024



6 - 42V DC

CIRCUIT TRACER AND DETECTOR

24702



User Manual for: Circuit Tracer And Detector

Stock No: 24702

Part No: ETCT

Read this manual in full before using this product and retain it for future use. Always use the latest version of the manual.

Please visit drapertools.com/manuals for the latest version.

2. Product Introduction

2.1 Intended Use

This product is designed to quickly & effortlessly detects short & open circuits without damaging the wire insulation. Equipped with a sensitivity controller & flexible probe for restricted areas. Suitable for automotive fault finding & repairs on direct currents.

Any other application beyond the conditions established for use will be considered misuse. Draper Tools accepts no responsibility for improper use of this product.

This product is suitable for use by enthusiasts and tradespersons alike.

2.2 Specification

Stock No.	24702
Part No.	ETCT
Voltage Range:	6 - 42V DC
Power Supply:	2 x PP3 9V (batteries not supplied)
Net Weight:	186g
Detector Dimensions (L X W X H):	192 X 51 X 34mm
Sender Dimensions (L X W X H):	69 X 63 X 28mm
Flexible Probe Length:	172mm
Flexible Probe Diameter:	5mm
Positive Lead Length:	90mm
Negative Lead Length:	90mm

Important: Read all the Health and Safety instructions before attempting to operate, maintain or repair this product. Failure to follow these instructions may result in injury or damage to the user, the product or the workpiece.

- **ALWAYS** follow the instructions and procedures listed in the vehicle's service manual before using this device.
- Exceeding the limits listed in this manual may cause physical injury or permanent damage to the device, part and circuits being tested.
- Only for testing DC voltage. **NEVER** connect to circuits exceeding DC 42 voltage.
- **DO NOT** use on AC voltage.
- **DO NOT** apply to any circuits which directly or indirectly connect to AC lines or other AC power sources.
- **DO NOT** use on ignition system components or circuits.
- Before using this device check the vehicle's wiring. Disconnect any part of the system such as air bags, electronic control modules etc, which are sensitive to voltage or current pulses.

- After checking the vehicle, ensure that all the disconnected connections are correctly restored.



WARNING! DO NOT attempt to repair or service unless qualified to do so.

- **DO NOT** allow water inside the case.
- **DO NOT** use this device if the tester, leads or probe are damaged in any way or if there is evidence of battery leakage.
- The battery must be replaced with one with the same specification.
- When replacing the battery check that it is fitted in the correct +/- orientation.
- **DO NOT** attempt to repair this device; it contains no user-serviceable parts.
- Remove the battery when storing the tester for extended periods.
- **DO NOT** store in a place of high temperature or humidity.

4. Symbols



Read the instruction manual



Warning!



Do not incinerate or throw onto fire



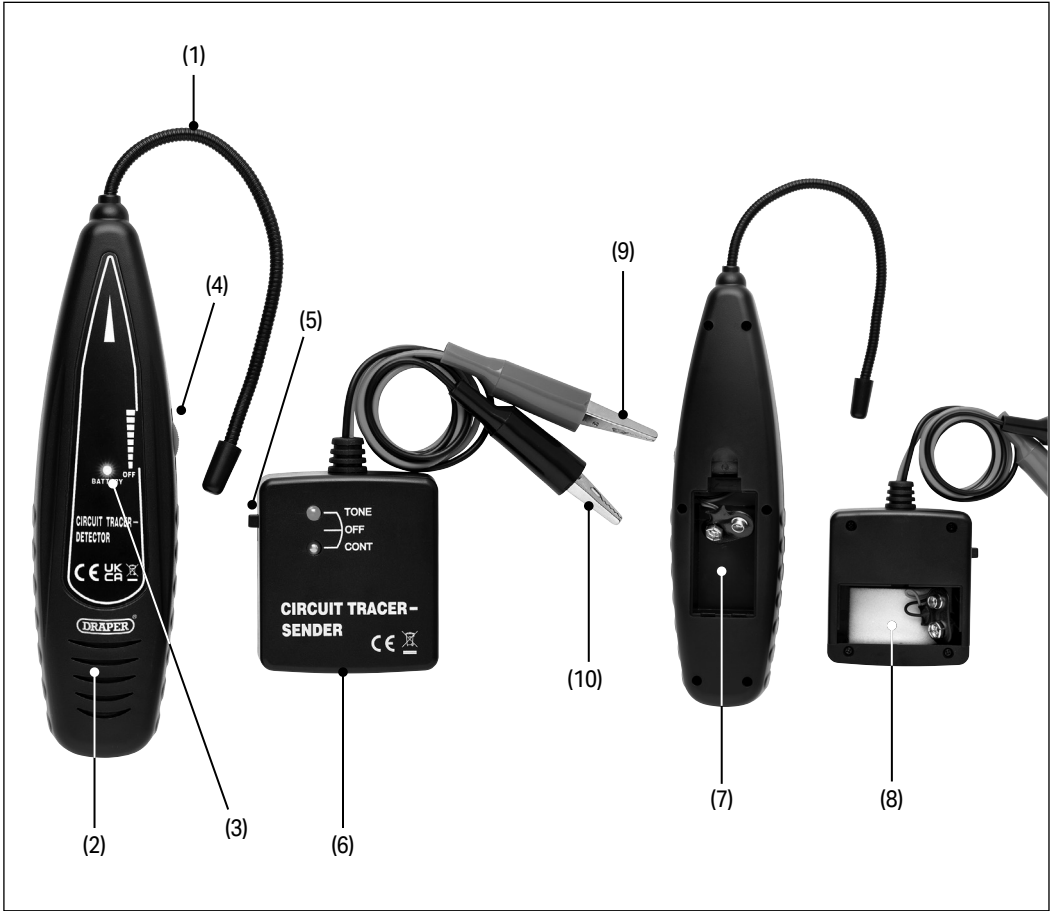
WEEE – Waste Electrical & Electronic Equipment

Do not dispose of Waste Electrical & Electronic Equipment in with domestic rubbish.

5. Identification

Carefully remove the product from the packaging and examine it for any signs of damage that may have occurred during shipment. If any part is damaged or missing, do not attempt to use the product.

Please contact the Draper Helpline; contact details can be found at the back of this manual.



- | | |
|-----------------------------|--|
| (1) Receiver probe | (6) Circuit tracer sender |
| (2) Circuit tester detector | (7) Detector battery compartment |
| (3) Battery light | (8) Sender Battery compartment |
| (4) ON/OFF switch | (9) (+) Positive (red) lead and clamp |
| (5) Sender switch | (10) (-) Negative (black) lead and clamp |

Please visit drapertools.com for our full range of accessories and consumables.

6. Installing the battery

1. To fit or replace the battery unclip the battery compartment (7) for the detector and (8) for the sender.
2. Fit 1 X 9V battery – ensuring that the battery is fitted in the correct +/- orientation.
3. Clip the cover back on.



Fig. 1

7. Operation

7.1 Detector Self-Check

Important: Before operating this product, read and understand all the safety instructions listed in this manual. Ensure that the product is fully assembled and correctly prepared for use.

1. Before using the detector carry out the self checking procedure.

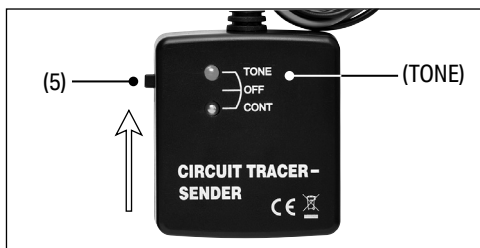


Fig. 2

2. Push the Sender switch (5) up to the 'TONE' position - the red light will come on.

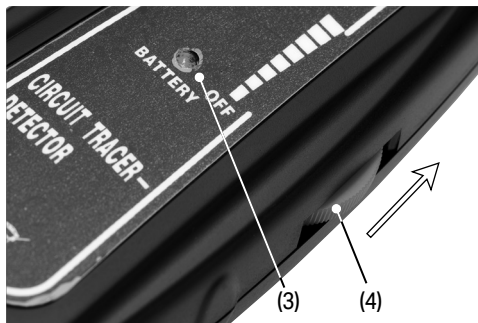


Fig. 3

3. Then turn the **ON/OFF** thumb wheel (4) to switch on the detector (2) – the red battery light (3) will come on.
 - If the indicator lights do not come on check and replace the battery.
4. Bring the receiver to the sender and the detector will produce an audible signal to indicate both are functioning correctly.

7.2 Using the Probe



Fig. 4

- The receiver probe (1) is made of coiled steel and can be bent as required to reach difficult areas.
1. Depending on the circuit characteristic and the receiver sensitivity setting the probe will pick up the wire signal without direct contact.
 2. However, it is recommended to achieve the best detecting range that the probe (1) tip touches the wire being traced either below or above it.

7.3 Wire Tracing

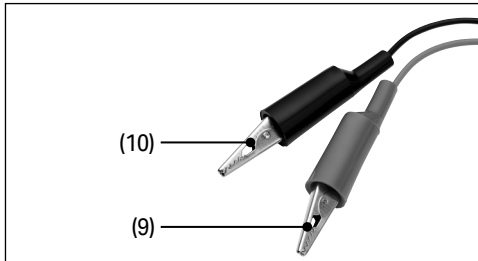


Fig. 5

1. Connect the black clip (10) to the ground and the red clip (9) to the traced wire. (If a series connection is required, connect the black clip to the battery positive terminal and red clip to the traced wire).

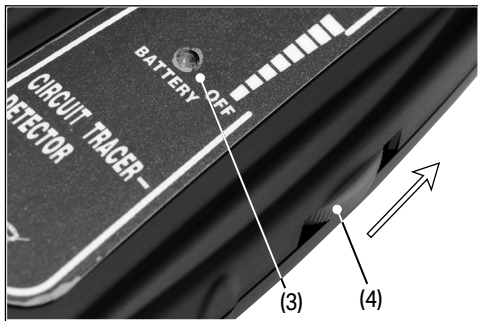


Fig. 6

2. Turn the **ON/OFF** thumb wheel (4) to tune the sensitivity until an audible signal can be heard.

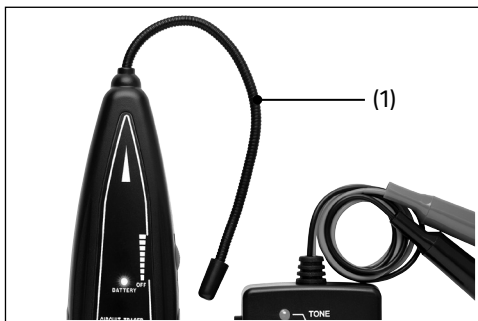


Fig. 7

3. Move the receiver probe (1) as close as possible to the wire to be traced and follow the audible signal.

- If the audible signal decreases or disappears there is an open circuit or bad connection.
- If the audible signal is difficult to pick up increase the sensitivity of the receiver.

7.4 Checking for Short Circuits

1. Disconnect the power and remove all loads to the wire to be checked.

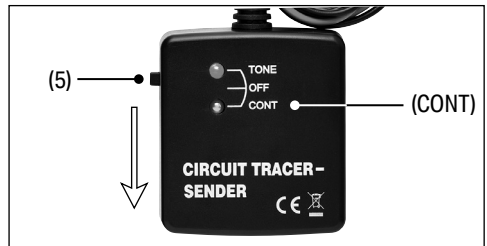


Fig. 8

2. Move the sender switch (5) down to the '**CONT**' position.

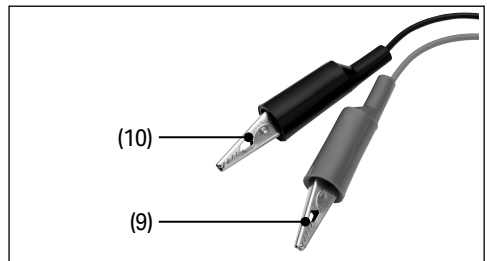


Fig. 9

3. Connect the test leads to the wires to be checked.
4. If the resistance is less than 10k ohm the '**CONT**' light will be green. With no load the green light indicates that wires are short circuited.

8. Maintenance, Storage and Disposal

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WARNING! Do not attempt to repair or service this product. Any servicing or repairs must be carried out by a qualified person.

- Wipe the case with a damp cloth and a mild detergent. **DO NOT** use solvents or abrasives to clean the tester.
- Turn both the receiver and sender off when not in use and remove the batteries if stored for a long period of time.
- At the end of its working life, dispose of the product responsibly and in line with local regulations. Recycle where possible.
- **DO NOT** burn or mutilate batteries; this may release toxic or corrosive substances.



- **DO NOT** dispose of this product with domestic waste; most local authorities provide appropriate recycling facilities.



9. Warranty

24 months

Visit [drapertools.com/warranty](https://www.drapertools.com/warranty) for full details.

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