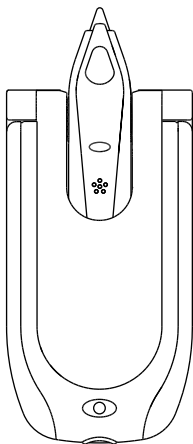


EM422A Wire Tracer

EM422B LAN Tracer

User Manual



Introduction

The Wire Tracer (EM422A) and LAN Tracer (EM422B) are designed to trace a variety of non-energized wires. Each unit consists of a transmitter and a receiver. Under ideal conditions, the receiver will function up to 30cm from the wire being traced. Results will vary depending on factors such as insulation type, distance to other bundled wire, etc. This is normal, and all wire tracing tools on the market are like this.

Working Temperature: $-10^{\circ}\text{C} \sim 40^{\circ}\text{C}$, relative humidity: $<85\%$

Size: 183×80×46mm

Weight: about 220g (including batteries)

Transmitter

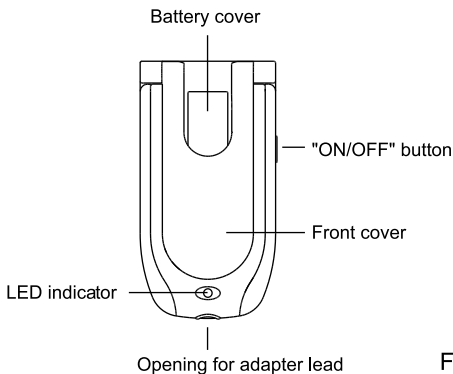


Figure 1

The transmitter contains five adapters for connection to common wirings.

Adapters of EM422A :

RJ-11 plug

Co-axial plug

Two alligator clips

Automotive fuse plug

Adapters of EM422B :

RJ-11 Plug

Co-axial plug

Two alligator clips

RJ-45 plug

To access the adapters, open the front cover of the transmitter. All five plugs are contained in slots.

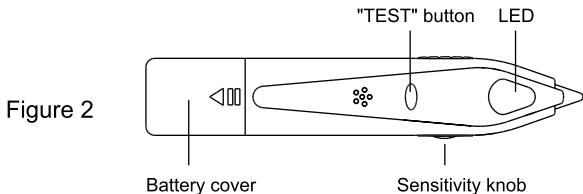
Before use, pull the desired plug out of the slot, and then close the front cover.

To activate the transmitter, press the **ON/OFF** button once. The LED will blink, indicating that a signal is being transmitted.

To turn off the transmitter, press the **ON/OFF** button again.

To conserve battery life, the transmitter will turn off automatically about 30 minutes later after it is turned on.

Receiver



For easy storage, you can place the receiver in the front slot of the transmitter.

To activate the receiver, press and hold down the **TEST** button, and the receiver starts sensing the signal produced by the transmitter. Move the receiver near the wire being traced. If this is the correct wire, an audible "warbling" sound will be heard and the LED's brightness will increase.

Turn the sensitivity knob to adjust the sensing range: Turn the knob forward to decrease the range, turn the knob backward to increase the range.

Tracing Wiring

Warning

1. **Only trace non-energized wiring.**
2. **Don't touch any live conductor with hand or skin to avoid electric shock .**
3. **Always disconnect power to the circuit to be traced before using the Wire Tracer or LAN Tracer.**

Open the transmitter's front cover and select the suitable plug or clip for the wiring to be traced.

Fold the plug or clip so that its lead will pass through the opening of the front cover (Figure 1), close the front cover. Connect the transmitter to the wiring to be traced and press the **ON/OFF** button once to activate the transmitter. Press and keep pressing the **TEST** button, move the receiver near the transmitter and check for the audible and visual signals. This verifies that both the receiver and the transmitter are functioning correctly.

Trace wiring by following the audible and visual signals which the receiver is producing.

Tracing Telephone Wiring

To avoid interference, disconnect the house line from the main telephone company service. To do it, first locate the junction box where the house is connected to the telephone company wiring, second remove any connections from the house to this box (make sure to note the exact location of each wire for later reconnection). Insert the RJ-11 (telephone) plug into a standard telephone jack. Trace the wiring as described above.

To enhance the signal strength and increase the operating range of the receiver, you may connect the black alligator clip to an external equipment ground. This will increase the receiver's functional range.

Tracing Co-axial Wiring

To avoid interference, disconnect the cable in the house from the cable company wiring. This connection can be found where the main cable enters the house. Insert the co-axial plug into any co-axial jack in the house. Trace the wiring as described above.

Tracing Automobile Wiring (EM422A only)

Warning

1. **Do not use on any component of the ignition system.**
2. **Before using this device, check the vehicle's electrical wiring and disconnect any component which is sensitive to voltage and current pulses, such as air bags, electronic control modules, etc. After you finish tracing, restore all the connections correctly.**
3. **Do not connect the transmitter to circuits for power-train, engine, transmission, ABS brakes or any other electronic control modules.**

Locate the automobile's fuse box. Remove the appropriate fuse for the wiring to be traced. This will also disconnect the power from the battery. Insert the fuse plug into the non-energized side of the fuse receptacle. Trace the wiring as described above. To enhance the signal, connect the black alligator clip to a suitable ground, such as the car frame.

Tracing Data/LAN Wiring (EM422B only)

To avoid interference, remove all connections from the data network to any outside source. Insert the RJ-45 (data) plug into a standard data/LAN jack. Trace the wiring as described above.

Note:

Because of the physical properties of the LAN cable, you should contact the tip of the receiver to the LAN wire while tracing, the audible and visual signals of the receiver may be stronger at one side of the wire and lower at the opposite side.

Tracing Other non-energized Wiring

Warning:

Make sure every wiring to be traced is disconnected from any power source.

To trace a single wire, connect the red alligator clip to the wire to be traced. To enhance the signal, connect the black alligator clip to a suitable ground.

You can trace two wires at the same time by connecting one alligator clip to one wire, the other alligator clip to another wire, but the signal will not be as strong as it is while tracing a single wire with the black alligator clip connected to ground.

Battery Replacement

The transmitter uses two AAA batteries. To replace batteries, Remove the battery cover (Figure 1) and replace the batteries, make sure that the polarity indication in the battery compartment is observed. Reinstall the battery cover.

The receiver uses four button cell batteries (LR44 or equivalent). To replace them, slide out the battery cover (Figure 2) . Replace the exhausted batteries with new batteries according to the polarity indication. Reinstall the battery cover.

DISPOSAL OF THIS ARTICLE

Dear Customer,

If you at some point intend to dispose of this article, then please keep in mind that many of its components consist of valuable materials, which can be recycled.

Please do not discharge it in the garbage bin, but check with your local council for recycling facilities in your area.

