

UAT-600 Series Underground Utilities Locator

Accurately and safely pinpoint underground utilities before you dig

Accidentally hitting a utility line during a project can lead to costly repairs and create hazardous public safety situations. Digging in the wrong place can also lead to unnecessary delays and costs for your project, and ultimately, your company. Avoid this disruption with the rugged and durable Amprobe UAT-600 Series, designed to accurately pinpoint underground utilities and buried services up to 20 feet deep.

Designed for electricians with a CAT IV 600 V rating, the locating kits come complete and ready for use with a Transmitter,

Receiver, test lead kit, batteries and additional fuses, all in a mobile, protective duffle bag. The UAT-620 kit also includes a Signal Clamp for transmitting a signal when it is not possible to make electrical contact with the cable to be traced. For applications where ground fault locating is required, use the UAT-600 Transmitter in combination with the optional A-Frame accessory.

Features and Highlights

- Multiple tracing modes allow you to locate and trace energized and de-energized utilities in a variety of applications
- The intuitive Transmitter automatically chooses the correct locating function based on the connected accessory and includes selectable 8/33 kHz frequencies
- The Receiver's high-contrast display allows for clear viewing in full sunlight and features an automatic backlight for shaded and dark areas
- Rated CAT IV 600 V, ensuring safety when working with energized cables
- Semi-automatic gain control quickly detects tracing signal and allows precise adjustment of the receiver sensitivity
- · Accurate depth measurement to 20 ft
- Rugged, durable construction: water and dust resistant to IP54 and drop proof to 3.28 ft (1 m)
- Use the Signal Clamp to induce a signal without making electrical contact (UAT-620)
- Ground fault locating with the optional A-Frame accessory
- Comes as a complete kit, ready for use

tested for safety, accuracy, reliability, and ruggedness in our state-of-the-art

test lab. In addition, Amprobe products that measure electricity are listed by a 3rd party safety lab, either UL or CSA. This system assures that Amprobe products meet or exceed safety regulations and will perform in a tough, professional environment for

many years to come.







AF-600 A-Frame

(Optional accessory not included in UAT-600 Series Kits)

The AF-600 A-Frame cable ground fault finder is specifically designed for the Amprobe UAT-600 series. In combination with the Transmitter, it will pinpoint the place where a cable metal conductor (either a sheath or a metallic conductor of the wire) touches the ground. It can also detect other conductors to ground faults such as pipeline coating defects.

| | A.F. 600 A. F. | |
|------------------------------------|--|--|
| | AF-600 A-Frame | |
| Tracing mode (de-energized) | 8 kHz | |
| Locating mode | Ground fault locating | |
| Sensitivity (typical) | Cable locate mode at 1 meter depth: 10 uA Fault locate mode: up to 2 $M\Omega$ fault | |
| Display backlight | Automatic | |
| Audio indication | Speaker indicates left/right by pulsed/ continuous tone | |
| Compatible transmitter | UAT-600-T Transmitter | |
| Display | 1.28 in, 128 x 128 BW outdoor LCD display with auto backlight | |
| Update rate | Instantaneous | |
| Operating temperature and humidity | -4 °F to 122 °F (-20 °C to 50 °C), ≤90% RH | |
| Storage temperature and humidity | -40 °F to 140 °F (-40 °C to 60 °C), ≤90% RH | |
| Operating altitude | < 6561 ft (< 2000 m) | |
| Pollution degree | 2 | |
| Water and dust resistance | IP54 | |
| Drop proof | 3.28 ft (1 m) | |
| Power supply | (6) 1.5 V AA alkaline batteries | |
| Auto power off | 15 minutes idle | |
| Battery life | Approx. 60 hours at 70 °F (21 °C) (Typical) | |
| Certifications | . @ :, (€ 💩 🖫 | |
| Safety compliance | IEC 61010-1, CSA/UL 61010-1 | |
| Size (H x W x L) | Approx. 14 x 9 x 4.7 in (355 x 230 x 120 mm) | |
| Weight | Approx. 4.2 lb (1.9 kg) (batteries installed) | |

*AF-600 A-Frame includes:

- A-Frame Receiver
- (6) 1.5 V AA (IEC LR6) Batteries
- Carrying Case
- User Manual



(included in the UAT-620 Kit only)

The Signal Clamp accessory provides an efficient and safe method of applying a locate signal to a cable, enabling the Transmitter to induce a signal through the insulation into the wires or pipes. The clamp works on low impedance closed circuits only.



Test Leads Kit

(included in both UAT-600 Series Kits)

| | UAT-600 Series |
|------------------------------------|--|
| Measurement category | CAT IV 600 V |
| Operating voltage and current | Test leads: 600 V, 10 A max. Clips : 600 V, 10 A max. |
| Leads length | 11.5 ft (3.5 m) |
| Compatible transmitter | UAT-600-T Transmitter |
| Operating temperature and humidity | -4 °F to 122 °F (-20 °C to 50 °C), ≤90% RH |
| Storage temperature and humidity | -40 °F to 140 °F (-40 °C to 60 °C), ≤90% RH |
| Operating altitude | < 6561 ft (< 2000 m) |
| Pollution degree | 2 |
| Water and dust resistance | IP54 |
| Drop proof | 3.28 ft (1 m) |
| Certifications | . © .; C € . △ . [6 |
| Safety compliance | IEC 61010-031 CSA/UL 61010-031 |
| Size (H x W x L) | Approx. 9 x 3.5 x 3.1 in (230 x 90 x 80 mm) |
| Weight | Approx. 1.1 lb (0.5 kg) |

*TL-UAT-600 Test Leads Kit includes:

- Black test lead with detachable black alligator clip
- Red test lead with permanently attached red alligator clip
- · Ground stake





Trace an individual utility by connecting the transmitter directly with the test leads

• Locate energized 50/60 Hz cables

utilities: pipes*, energized and

• **Trace** individual pipes* or cables

(energized or de-energized)

range of applications

• Passive radio mode (RF) using surrounding radio waves

(no Transmitter necessary)

to trace underground utilities

Active mode using UAT-600-T

• Passive power mode (50/60 Hz) -

tracing energized lines conducting

current (no Transmitter necessary)

· Identify the location of all metallic

*Tracing of non-metallic pipes and

Three testing modes for wide

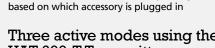
conduits is possible after inserting metal

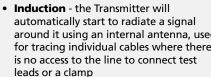
Main applications

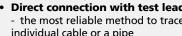
de-energized cables

fish tape or cable

carrying current









The Receiver's high contrast LED screen is easy to read in full sunlight

Three active modes using the **UAT-600-T Transmitter**

- around it using an internal antenna, used for tracing individual cables where there
- Direct connection with test leads - the most reliable method to trace individual cable or a pipe
- · Clamp (Included in the UAT-620 kit, optional for the UAT-610 kit) - provides an efficient and safe method of applying a locate signal to a cable, where it is not possible/safe to gain access to a cable for making an electrical contact

Special applications

- 2 frequency options: 8 kHz and 33 kHz
- Locate non-metallic pipes and sewer lines
- **Take depth** and current measurements
- Measure voltage, resistance and output current
- Advanced locating with two people
- Locate ground faults with the AF-600 A-Frame accessory

Customers who use Amprobe **Underground Locators**

- Commercial and Residential Construction Contractors
- Water, Gas and Electric Installation & **Repairs Crews**
- Pipe Laying Contractors
- Cable TV & Telecommunication Companies
- Electricians & General Contractors

Features

Transmitter

| | UAT-600-R Receiver | UAT-600-T Transmitter | SC-600 Signal Clamp |
|-----------------------------------|---|---|------------------------|
| Measurement category | CAT IV 600 V | CAT IV 600 V | CAT IV 600 V |
| Operating voltage/current | 0 to | 600 V | 0 to 600 V, 100 A max. |
| Operating frequency/tracing modes | Active tracing: 33 kHz and 8 kHz Passive tracing: 50/60 Hz and Radio | Energized circuit Induction mode: 33 kHz Direct connection modes: 8 kHz and 33 kHz Clamp mode: 8 kHz and 33 kHz De-Energized circuit Induction mode: 33 kHz Direct connection modes: 8 kHz, 33 kHz, A-Lo/A-Hi A-Frame: 8 kHz Clamp mode: 8 kHz and 33 kHz | 33 kHz and 8 kHz |
| Locating modes | _ | Peak and Null | - |
| Depth measurement and accuracy | Up to 20 ft 4 in to 10 ft: ± 3 % 10 ft to 20 ft: ± 5 % | - | - |
| Display backlight | Automatic | Yes | - |
| Audio indication | Increasing closer to the signal | Fast beeps showing the better signal is applied | - |



Specifications

| | UAT-600-R Receiver | UAT-600-T Transmitter | SC-600 Signal Clamp |
|---|--|---|--|
| Transmitting mode power output | - | Max. 3 watts | - |
| Output voltage | _ | Max. 50 V rms | - |
| Output current | - | Max. 250 mA rms, constant current in 5 steps | - |
| Signal voltage output (nominal) | - | - | 23 V rms at 8 kHz 30 V rms at 33 kHz |
| Mains voltage measurement | - | 0 V to 600 V, 50 Hz to 60 Hz Resolution: 1 V Accuracy: ± 10% | _ |
| Resistance measurement (De-energized circuit) | - | 0 Ω to 999 k Ω Range: 0 Ω to 999 Ω (resolution: 5 Ω) Range: 1 k Ω to 999 k Ω (resolution: 1 k Ω) Accuracy: ± 10% | - |
| Output hazardous voltage warning | _ | ≥ 30 V rms | _ |
| Mains hazardous voltage warning | _ | ≥ 30 V rms | _ |
| Sensitivity adjustment (gain control) | Yes | - | _ |
| Sensitivity at 1 m (typical) | Power: 2 mA Radio: 20 μA 8 kHz: 5 μA 33 kHz: 5 μA | - | - |
| Display | 4.3 in, 320 x 240 BW outdoor LCD display with auto backlight | LCD display (LED backlight) 2.4 in x 1.3 in | _ |
| Update rate | Instantaneous | Current (mA): 10 ms Voltage (V): 15 ms Resistance (Ω): 330 ms | - |
| Operating temperature and humidity | -4 °F to 122 °F (-20 °C to 50 °C), ≤90% RH | | |
| Storage temperature and humidity | | -40 °F to 140 °F (-40 °C to 60 °C), ≤90% RH | |
| Operating altitude | < 6561 ft (< 2000 m) | | |
| Pollution degree | 2 | | |
| Water and dust resistance | IP54 | | |
| Drop proof | | 3.28 ft (1 m) | , |
| Power supply | (6) 1.5 V AA alkaline batteries | (8) 1.5 V D cell alkaline batteries | - |
| Auto power off | 15 minutes idle | - | - |
| Battery life | Approx. 35 hours at 70 °F (21 °C) (Typical) | Approx. 16 hours at 70 °F (21 °C) (Typical) | - |
| Overload protection | - | 600 V rms Fuse FF 500 mA, 1000 V, IR 30 kA, 6.3×32 mm | - |
| Certifications | . © :. C € △ 🛭 | . ® :. C € △ 🛭 | . © :. C € △ 🛭 |
| Safety compliance | IEC 61010-1, IEC 61010-2-033 CSA/UL 61010-1, CSA/UL 61010-2-033 | IEC 61010-1, IEC 61010-2-033 CSA/UL 61010-1, CSA/UL 61010-2-033 IEC 61010-031, CSA/UL 61010-031 (test leads) | IEC 61010-1, IEC 61010-2-033 CSA/UL 61010-1, CSA/UL 61010-2-033 |
| Size (H x W x L) | Approx. 11.9 x 4.7 x 30.7 in (302 x 120 x 779 mm) | Approx. 14 x 9 x 4.7 in (355 x 230 x 120 mm) | Approx. 11.6 x 7.1 x 1.4 in (295 x 180 x 37 mm) |
| Weight | Approx. 4.2 lb (1.9 kg) (batteries installed) | Approx. 7.0 lb (3.2 kg) (batteries installed) | Approx. 1.9 lb (0.85 kg) |

Included in UAT-600 Series Kits

| | UAT-610 | UAT-620 |
|---|---------|---------|
| UAT-600-R Receiver | 1 | 1 |
| UAT-600-T Transmitter | 1 | 1 |
| CC-UAT-600 Carrying Case | 1 | 1 |
| TL-UAT-600 Test Leads Kit* | 1 | 1 |
| FP-UAT-600 Replacement Fuse | 2 | 2 |
| User Manual | 1 | 1 |
| Quick Reference Guide | 1 | 1 |
| 1.5 V AA (IEC LR6) Batteries (Receiver) | 6 | 6 |
| D-Cell Batteries (Transmitter) | 8 | 8 |
| SC-600 Signal Clamp | _ | 1 |

- *TL-UAT-600 Test Leads Kit includes:

 Black test lead with detachable black alligator clip
 Red test lead with permanently attached red alligator clip
- Ground stake

Optional Accessories

| | Description |
|-------------|--|
| AF-600* | A-Frame fault locator to pinpoint ground faults where current is leaking to ground |
| BR-600-R | Rechargeable battery for Receiver |
| BR-600-T | Rechargeable battery for Transmitter |
| EPS-600 | 2-port charger for Receiver and Transmitter batteries |
| TL-7000-25M | Extension test lead, 80' (25 m) |

*AF-600 A-Frame includes:

- A-Frame Receiver
- (6) 1.5 V AA (IEC LR6) Batteries
- Carrying CaseUser Manual

Mouser Electronics

Authorized Distributor

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