

# ARNETT INDUSTRIES

PRODUCT CATALOG 2024 V1





# Service Conductor/Neutral Testers

## CUSTOMER CALLS IN WITH POWER ISSUES?

Since 1971, Arnett's "Beast of Burden" products are trusted by 500+ electric utilities to troubleshoot service issues. Instantly tell whether the power issue is on the utility side (leading up to the customer's meter) or on the customer's property.

### 80 AMP: MEGA BEAST

(4) 20-amp switches apply up to 80 amp load to left or right conductor. Digital meter readout only. Tester indicates problems on secondary service. Quickly and accurately detects open neutrals. Meter verifies condition of secondary conductors and associated connections. The Mega Beast #HJA-900-D comes with only the 3 clip connection.

**Mega Beast Combo unit** HJA-900-D-COMBO includes both the plug-in meter base adapter (HJA-900-D-PLUG) and 3-clip connection adapter (HJA-900-D-CLIP), totaling 10' cable lead from tester box. 240V unit is also available; call Arnett for details.

**New PULSING feature** is available. Pulses (1) 20A load switch

Catalog #	Description
HJA-900-D	Mega Beast Tester (only)
HJA-900-DP	Mega Beast Pulse
HJA-900-D-COMBO	Mega Beast Combo
HJA-900-DP-COMBO	Mega Beast Pulse Combo
HJA-900-D-PLUG	Plug-in Meter Adapter
HJA-900-D-CLIP	Standard 3-clip connection

### UNLEASH THE BEAST



### 20 AMP: SUPER BEAST

Switch applies 20 amp load to either left or right conductor. Both digital and analog meter readouts available. Quickly and accurately detects open neutrals. Indicates problems on secondary service. Meter verifies condition of secondary conductors and associated connections.

**Combo unit is also available** for each model, featuring additional plug-in meter base adapter and padded carrying case.

**NEW- Super Beast-P**, has a 5 second ON/OFF/ON pulsing feature, allowing single user cable identification.

### 8 AMP: MINI-BEAST

2-WIRE, 120 VOLT SERVICE CONDUCTOR TESTER  
8 amp load applied by ON/OFF switch. Quickly verifies proper transformer/ballast installation.  
Checks for proper line connection, transformer functionality and power quality.  
Pulsing model available for cable identification.

Catalog#: HJA-469-M Mini Beast  
HJA-469-MP Mini Beast Pulse

**Instant Readings** ✓  
**Extremely Accurate** ✓  
**User-Friendly** ✓  
**Durable/Portable** ✓

Catalog #	Description
HJA-469-PSCO	Super Beast Pulse Combo
HJA-469-DSCO	Super Beast Digital Combo
HJA-469-SCO	Super Beast Analog Combo
HJA-469-P	Super Beast Pulse
HJA-469-D	Super Beast Digital
HJA-469-S	Super Beast Analog
HJA-469-500	Meter Base Adapter
HJA-469-501	Padded Carrying Case

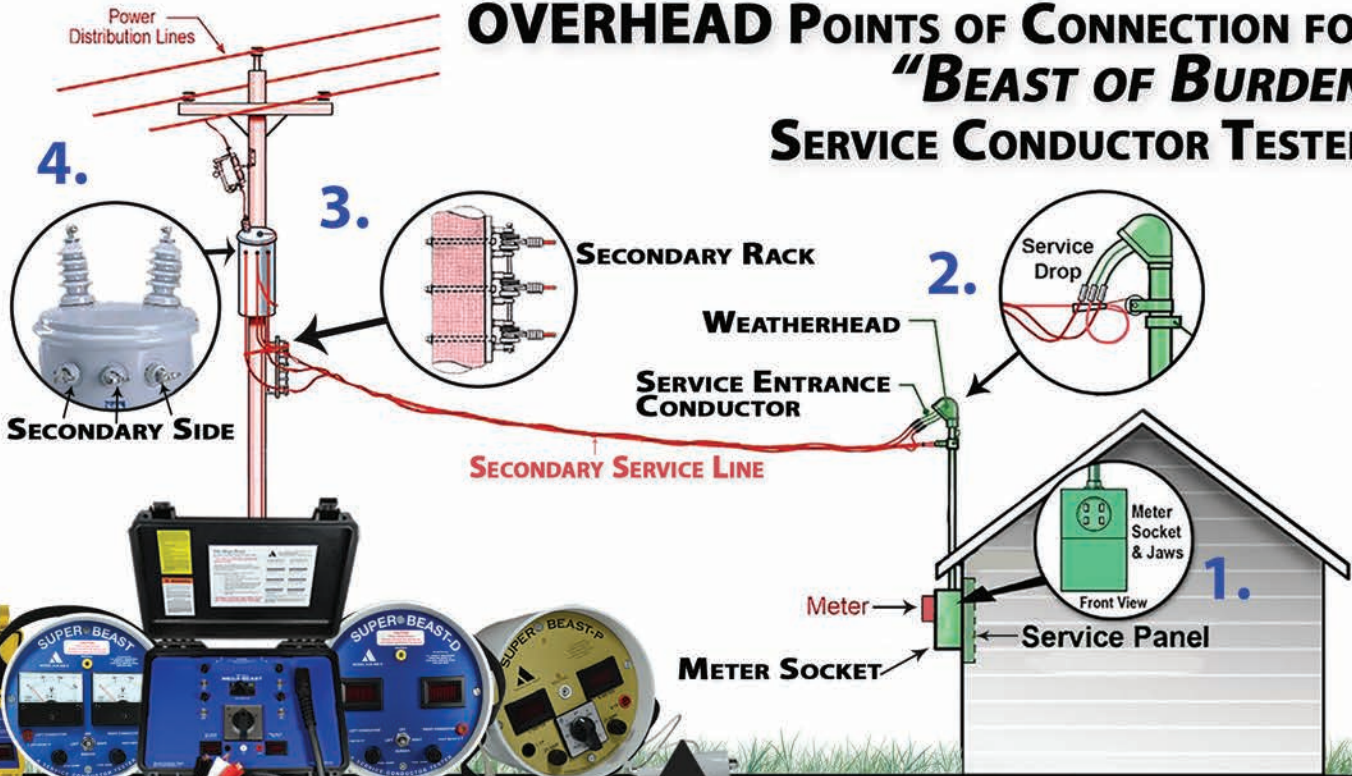
## NEUTRAL CONNECTION FEATURE:

The digital meters installed in units beginning 2022 may have the following results:

If the neutral connection is not connected through the meter base adapter or using the clip connection from the unit, or if there is a fully open neutral, the digital meter may flicker. This may occur when attempting to turn the load to right or left meter using middle toggle switch.



# OVERHEAD POINTS OF CONNECTION FOR "BEAST OF BURDEN" SERVICE CONDUCTOR TESTERS



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ARNETT  
INDUSTRIES

## Customer calls with complaints?

- Indicate problems on secondary service
- Detect open neutrals quickly & accurately
- Verify condition of secondary conductors

# UNDERGROUND POINTS OF CONNECTION FOR "BEAST OF BURDEN" SERVICE CONDUCTOR TESTERS

## 3. PAD-MOUNTED TRANSFORMER (SECONDARY SIDE)



## 2. SECONDARY PEDESTAL CONNECTORS



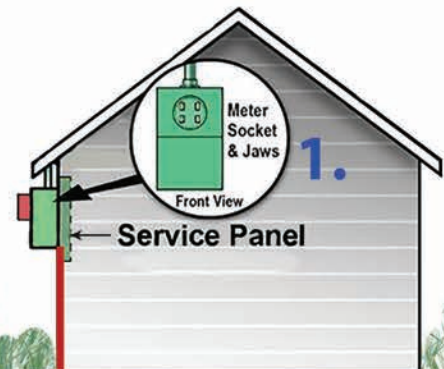
SECONDARY SERVICE LINE

SECONDARY SERVICE LINE

Instructions: Start testing at the service panel/meter.

If there is a service issue (see the readings chart) first check the connection points (crimps, etc) at the panel/meter. Retest with the "Beast", and if service issues are still present, move to the next connection point on the secondary service line (see diagram).

If good voltage readings are present, the service issue is the customer's responsibility (internal issue).



# Super Beast Voltage Readings

Service voltages and fluctuations may differ with each service location. Utilities are responsible for setting acceptable voltage drop standards. Accurate results may require neutral cable isolation (line side). For use on 120V service only! Many utilities use a 5-7 volt drop as indication as an indication of trouble. Each utility should set its own standard.

**Always wear safety protection while operating the Super Beast. Always follow your company's safety standards.**

## GOOD CONDUCTORS



**TEST: Flip Switch Left**

**Left Meter:** Less than 5% drop = good conductor  
**Right Meter:** Remains the same/±1V  
**Reading:** Good Left Conductor



**TEST: Flip Switch Right**

**Left Meter:** Remains the same/±1V  
**Right Meter:** Less than 5% drop = good conductor  
**Reading:** Good Right Conductor

## PARTIALLY OPEN CONDUCTORS



**TEST: Flip Switch Left**

**Left Meter:** 5-7% or Greater Voltage Drop  
**Right Meter:** Remains the same/±1V  
**Reading:** Partially Open Left Conductor



**TEST: Flip Switch Right**

**Left Meter:** Remains the same/±1V  
**Right Meter:** 5-7% or Greater Voltage Drop  
**Reading:** Partially Open Right Conductor



**Ex. UNIT CONNECTED TO METER BASE  
 SHOWING LIVE SERVICE VOLTAGE; NO LOAD**

## FULLY OPEN NEUTRALS



**TEST: Flip Switch Left**

**Left Meter:** Blank Reading, Nothing Shown  
**Right Meter:** Increases Significantly, +50V  
**Reading:** Fully Open Neutral



**TEST: Flip Switch Right**

**Left Meter:** Increases Significantly, +50V  
**Right Meter:** Blank Reading, Nothing Shown  
**Reading:** Fully Open Neutral

## OPEN CONDUCTORS



**TEST: Flip Switch Left**

**Left Meter:** Blank Reading, Nothing Shown  
**Right Meter:** Remains the same/±3V  
**Reading:** Open Left Conductor



**TEST: Flip Switch Right**

**Left Meter:** Remains the same, ±3V  
**Right Meter:** Blank Reading, Nothing Shown  
**Reading:** Open Right Conductor

## PARTIALLY OPEN NEUTRALS



**TEST: Flip Switch Left**

**Left Meter:** Drops significantly, +10V  
**Right Meter:** Increases significantly, +10V  
**Reading:** Partially Open Left Neutral



**TEST: Flip Switch Right**

**Left Meter:** Increases significantly, +10V  
**Right Meter:** Drops significantly, +10V  
**Reading:** Partially Open Right Neutral

# Mega Beast Voltage Readings

The Mega Beast allows troubleshooters to apply up to an **80 amp load** on conductors. To increase the load, simply flip a 20 amp switch (4 total switches). The more load that is applied, the easier it is to troubleshoot problems.

**Always wear safety protection while operating the Mega Beast. Always follow your company's safety standards.**

## WHY MORE AMPS?

**Below:** See how a **good** secondary service shows up on the Mega Beast meters, with different loads applied. In this example, the knob is turned left to test the left conductor only.

### Testing with 20 Amps: 1 Switch



### Testing with 40 Amps: 2 Switches



### Testing with 60 Amps: 3 Switches



### Testing with 80 Amps: 4 Switches



If there is a service problem (ex. loose connection at the transformer) it will be **more apparent** with more load:

## PARTIALLY OPEN CONDUCTORS

**Below:** One meter reading drops, and the other meter reading stays the same. The example below indicates a partially open left conductor, shown under load.

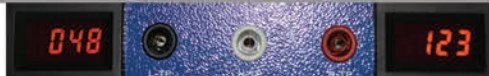
### Testing with 20 Amps: 1 Switch



### Testing with 40 Amps: 2 Switches



### Testing with 60 Amps: 3 Switches



### Testing with 80 Amps: 4 Switches



**EX. UNIT CONNECTED TO METER BASE  
SHOWING LIVE SERVICE VOLTAGE;  
NO LOAD APPLIED**

**Applying Load:** Turn the knob to the left to apply the load to the left conductor, and turn right to apply to the right conductor.

**Pro Tip:** There may be more than one service problem. After checking the crimps and connection points, retest with the Mega Beast.

## OPEN CONDUCTORS

**Below:** Open conductors will show up as a blank reading on the Mega Beast meters with **no load applied**.

If the left meter is blank, the left conductor is open. If the right meter is blank, the right conductor is open.

Check the connection points (crimps) & retest the service with the Mega Beast, under load.

**Left Meter: Blank Reading, Nothing Shown  
Right Meter: Normal voltage reading  
Reading: Open Left Conductor**



## FULLY OPEN NEUTRALS

**Below:** When connected to a service with a fully open neutral, the Mega Beast will show a drop in voltage on both meters with no load. When a load is applied, one meter will go blank, and the other meter will rise +50 volts.



**Above: Fully Open Neutral  
- No Load Applied (knob in middle)  
- Voltage drops on both meters**



**Test: Turn Knob Left  
Left Meter: Blank Reading, Nothing Shown  
Right Meter: Increases Significantly, +50V  
Reading: Fully Open Neutral**



**Test: Turn Knob Right  
Left Meter: Increases Significantly, +50V  
Right Meter: Blank Reading, Nothing Shown  
Reading: Fully Open Neutral**

## PARTIALLY OPEN NEUTRALS

**Below:** One meter reading will decrease significantly, and the other meter will increase by the same amount. There is a partial connection which makes the meter readings appear normal when there is no load, however when a load is applied (ex. customer turns on hairdryer) the voltage readings are inversely affected. Check the neutral connection and retest the service with the Mega Beast.

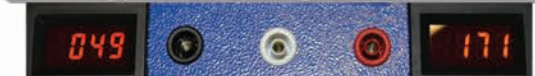
### Testing with 20 Amps: 1 Switch



### Testing with 40 Amps: 2 Switches



### Testing with 60 Amps: 3 Switches



### Testing with 80 Amps: 4 Switches





# Cable Fault Locators

## THE PINPOINTER

### UG Secondary Fault Locator

Utility industry's trusted fault finder for over 50 years. Quickly locates all faults in direct buried, unshielded cable. Takes you within inches of the fault...extremely accurate. Don't waste time with unnecessary digging. User-friendly.



PINPOINTER CASE



PINPOINTER DETECTOR



OPTIONAL: A-FRAME PROBE



PINPOINTER TRANSMITTER

**Competitive advantage:** Strong transmitter pulse (2500VDC) Minimize false readings and underground signal interference.

**Customers Say:** "I just wanted to let you know how impressed I am with the Pinpointer. I've located approx. 40 faulted conductors in 3 days, and have not wasted an ounce of fuel excavating these locations to find nothing. Most of my locates have been right on top of the fault. Once again Thank You!"

- Anderson & Wood Construction Co.

Catalog #	Description
HJA-471	UG Fault Locator
HJA-470-109	Rechargeable Battery Kit
HJA-470-210	A-Frame Detector

## THE DC SCOUT

### DC Ground Fault Locator

The D.C. Scout is used for locating resistive or non-resistive current paths from D.C. battery distribution systems to building ground, without de-energizing components or loads in the system.



DC SCOUT CASE



DC SCOUT DETECTOR



NORMAL & SKINNY CT PROBES



DC SCOUT TRANSMITTER

By placing the detector probes on different sections of the wire, the user is able to trace the pulse. When no pulse is detected, current is leaking to ground, and there is a fault in the wire.

TRANSMITTER PUTS OUT AS LITTLE AS 2 mA OF CURRENT.

**Customers Say:** "We had great success with the DC Scout test set. We were able to locate the ground on an energized 125VDC system. It ended up being a ground fault in conduit. No interruptions were initiated by the DC Scout even with solid state relays on the circuit. We found the fault in less than two hours."

The DC Scout is well worth it!"  
- Power Solution Associates

Catalog #	Description
HJA-2525	D.C. Scout Locator
HJA-2525-117	Skinny CT Probe

## 50+ YEARS OF SUCCESSFUL FAULT LOCATING

Since 1971, Arnett continues to produce the most reliable and effective locators available.

We commonly see locators 20+ years old in our repair shop.

We want all customers to receive great value from our equipment.

Call us with questions or ideas for improving fault locating and troubleshooting work.

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# Step & Touch Instrument

## WHAT IS STEP AND TOUCH POTENTIAL?

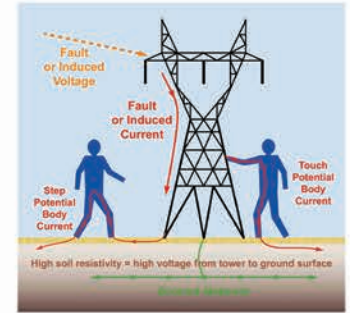
Awareness of step and touch potential, caused by ground potential rise, is important for anyone working on high-voltage power transmission systems. In a typical SNT application, the transmission line is de-energized and is bonded to the tower to be safe to work on.

However, the transmission line itself acts as a very large antenna, and can pick up large amounts of energy which must be shunted to earth ground. And if the tower ground is faulty, the ground potential may rise and a dangerous condition can result.

### SNT KIT SKU# D-SNT-A020

The SNT Kit contains everything you need to monitor step and touch potential, including:

- SNT instrument
- user guide
- carrying case
- battery charging adapters
- ground rod
- magnetic and clamp probe end



## SPECIFICATIONS

Full Scale Voltage 50 Hz to 60 Hz	999 Vrms sine wave with < 5% Total Harmonic Distortion
Absolute Max Probe Voltage	5000 Vrms
Step Voltage Response	95% rise time < 1 second. During probe check, step response may be up to 4.5 seconds.
Accuracy	1% typical for 500 V (3.5% from -30°C to +50°C)
Probe Impedance	20 MΩ
Voltages Displayed	10 to 999 Vrms
Standard Alarm Voltage Ranges (others can be programmed by the factory as an option)	0 to 100 — Green LEDs slow flash 101 to 499 — Yellow LEDs flash, beeps every second 500 plus — Red LEDs flash rapidly, beeps rapidly
Audio Alert	90 dB at 2 feet
Displays	<b>Voltage Display</b> 3 digit voltage using bright seven segment displays <b>Threshold Warning</b> Three high intensity Green LEDs Five high intensity Yellow LEDs Eight high intensity Red LEDs <b>Check Probe &amp; Battery Low</b> Blue LEDs
Probe Connection Check	Performed every 60 seconds. Duration is 3.5 seconds, during which time the probe voltage is not sampled.
Battery Life	60 hours typical. Low battery is indicated by LED, very low battery activates fault mode (flashing LEDs and audible alert).
Battery Type	Ni-MH, 500 charge cycles typical
Ingress Protection	Designed for IP64
Instrument Weight	907 grams (2 pounds)
Kit Weight	10K grams (22 pounds) includes instrument and case
Case Size (H × W × L)	19.1 cm × 39.6 cm × 50.2 cm (7.5 in × 15.6 in × 19.75 in)

## ALARM RANGES

The SNT provides audible and visual alarm warnings if the probe voltage is in a dangerous range. Each voltage range has a distinct pattern of bright flashing LEDs and audible 80 dB(A) alert. (The SNT also detects and warns of Lost Probe Connection and Low Battery).

Range	Instrument Actions
0 - 100V	
101 - 499V	
500V+	



# Arnett Industries

**SINCE 1971, OVER 50 YEARS OF MANUFACTURING IN AMERICA**

**Foundation:**

Herb J. Arnett founded the company in 1971 in Portland, Oregon.

A veteran with extensive electrical knowledge, Herb Arnett saw an opportunity to improve the lineworkers lives by inventing durable, easy-to-use troubleshooting equipment.

Arnett's first products — the Beast of Burden and the Pinpointer Underground Cable Fault Locator — paved the way for many more product innovations that are now in use worldwide.



**Working with Utilities:**

Arnett Industries offers utilities a full lineup of innovative, durable products that allow workers to operate efficiently and safely.

We continue to work closely with utility companies to develop products that help make utility field work safer and easier, and enable utility companies to operate more efficiently. We listen to customer feedback and encourage new ideas.

For example, our **NEW Mega Beast Pulse** was developed based on direct feedback from large utility companies. Customers liked the pulsing feature on the Super Beast, and requested we added the pulsing feature to the Mega Beast.

Please contact our sales department with any feedback or ideas for improving products, or new product ideas:  
Email "information@hjarnett.com" or call (503) 692-4600

**Repairs:**

If you need repair work done, please contact Arnett at (503) 692-4600 or email information@hjarnett.com and we will contact you promptly with instructions.



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