

# Arc Chaser™

## USER MANUAL

The 21st Century Dual Mode TDR for Testing and Monitoring Energized and Unenergized Cables



**AC120**

# **Arc Chaser™**

## **Touch-Screen Dual Mode Cable Testing for Arc Faults, Shorts, and Opens**

### **User Manual**

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## ABOUT THE ARC CHASER

The Arc Chaser's patented Spread Spectrum Time Domain Reflectometry (SSTDR) technology is a revolutionary way to locate a fault on cables. It can test energized or unenergized cables, in real time, for shorts and opens and determines the fault location and length. The Arc Chaser can conduct a Fault Location (static) test or Live IFD Intermittent Fault Location (dynamic) tests, monitoring for intermittent faults (shorts, open, arcs).

Feature	Function
Works on both energized and unenergized cables	Discover cable events which can only be shown under load
Monitors cable for intermittent faults	Records intermittent faults such as those caused by vibration or flexing of the cable
Shows results in graphical or text format	Clear and simple view of faults
Saves reports, transferrable to PCs for storage and printing	Maintain test result history in PDF or CSV
Cable fault finding	Easily verify quality of entire cable length
Tone generation	Signal tracing of cables
Cable test setup	Walks users through cable test setup
No calibration needed	No metrology calibration required
English or metric measurements	International applications
600V Category II	Meets international requirements for working on energized cables
Rechargeable Lithium-ion battery pack	8–10 hours of battery power
Sleep Mode	Extends battery life

# Features & Benefits

Arc Chaser has a combination of soft keys and touch screen icons for easy navigation across screens. It is designed with both an SD card and USB connection to save results on your computer.

Physical Features	Benefits
Color touch-screen display	Easy to navigate in all lighting environments
Compact form factor	Usable in tight spaces and weighs less than 2 lbs
3rd generation rechargeable Lithium-ion batteries	8–10 hours of continuous use
Bench-top, handheld, or hung up	Easy to use for field flight line and production work
Modular connector interface	Banana style connector and modular
Waterproof/shock resistant transport case	Keeps equipment protected in harsh conditions
SD card and USB connection for data file transfer of cable tests	Easy-to-maintain report files, save for later viewing
Upgradeable firmware	Stay up-to-date with cable settings, features, and enhanced software upgrades

# Arc Chaser

The Arc Chaser comes in one kit that will cover all your needs.




Part Number	Description
AC120	<ul style="list-style-type: none"><li>▪ Arc Chaser main unit</li><li>▪ T3 Leader Cable 5ft 600V CAT II</li><li>▪ Flanged Crocodile Clips: red and black 600V CAT II UL/CSA</li><li>▪ Dual banana to BNC female</li><li>▪ Adapter: BNC male to F female</li><li>▪ Power Supply</li><li>▪ SD Card</li><li>▪ Micro USB Cable</li><li>▪ Carabiner Strap</li><li>▪ Protective Arc Chaser Case</li></ul>

## Optional Accessories

Part Number	Description
AD006	Multi-pin Adapters 600V Cat II
CA009	Cable Assembly, Power cord to 3 banana plugs 300V

## Safety Information

To ensure safe operations of the Arc Chaser, follow instructions carefully and observe warning and caution messages in this manual. Failure to observe warnings can result in severe injury or death and can damage the equipment.

Notification	Definition
	Warning/caution: potential for personal injury or damage to equipment
<b>Voltage!</b>	Warning: hazards could cause harm or death
	Conformité Européenne. Conforms to European Economic Area directives.
	Disposal information

- Do not use the Arc Chaser or Arc Chaser accessories if they appear damaged or if the Arc Chaser is not working properly.
- Do not use with voltages higher than the Arc Chaser's rated voltage (600V).
- Use with caution with voltages greater than 30 V AC RMS, 42 V AC peak, or 60 V DC.
- Do not use around explosive or flammable gas.
- Use only test leads approved by a safety agency and that have at least the same voltage and category as the Arc Chaser.
- Before opening the battery door, remove leader cables or BNC to dual banana connector.
- Always wear personal protective equipment when working with the Arc Chaser.
- Use caution when handling the probes and cable connections on the Power Prowler when the Voltage! icon is present.

## Arc Chaser Description

Arc Chaser  
Module



— Touch screen  
QVGA Display  
Easy to navigate in all  
lighting environments.

### Power Cable Port



Micro  
USB  
Port

Removable  
SD Card

## Banana Jacks



# Arc Chaser Description

**Soft** keys for operation shown in display

*NOTE: **Soft** keys may have different functions depending on the screen displayed.*





## General Operations


### On/Off

- Turn Arc Chaser on by pressing the red **Power** button.
- Press the red power button to put the Arc Chaser in sleep mode.
- Press and hold the red power button until the screen turns off and release.

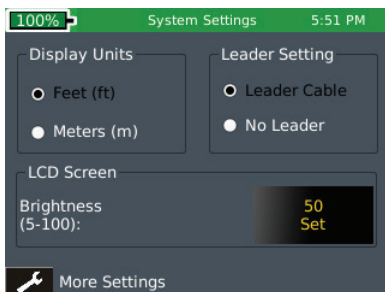
### Automatic Power Down




- The Arc Chaser automatically enters sleep mode to conserve battery power if no input or activity is performed on the device. See **System Settings** to adjust the length of time before the automatic power down occurs.

## System Settings

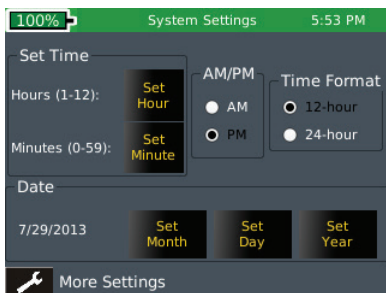
The Arc Chaser Setup consists of five screens to configure the unit to the user's preference. Use the settings button  to navigate through the settings screens.







### First System Settings Screen



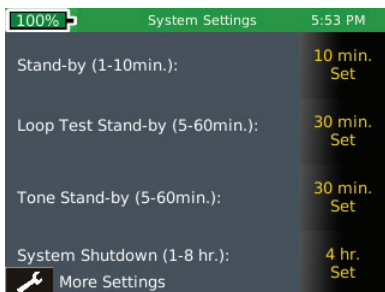
- Turn the Arc Chaser on by pressing the red **Power** button.
- Select **System Settings** on the home screen .
- Length settings:
  - Under Display Units, select either **Feet** or **Meters**.
  - Under Leader Setting, select either **Leader Cable** or **No Leader**.
    - Leader should be selected unless the dual banana to BNC (F) is used.
- LCD screen brightness:
  - To the right of Brightness, select **Set**.
  - Enter a number between 5 and 100 then select **OK**. To cancel, press the **Back** button .
- To continue, select **More Settings** by pressing the **Settings** button .


## Second System Settings Screen







- To set time/clock/date:
  - Under Time Format, select either 12-hour or 24-hour format.
  - To the right of Hours (1–12), select **Set Hour**. Enter the hour you wish to display then select **OK**. To cancel, press the **Back** button .
  - To the right of Minutes (0-59), select **Set Minute**. Enter the numbers of the minutes you wish to display then select **OK**. To cancel, press the **Back** button .
  - Under AM/PM, select AM or PM on the screen.
  - Under Date, set the month, day, and year:
    - Select **Set Month**. Enter the number of the month, and then select **OK**. To cancel, press the **Back** button .
    - Select **Set Day**. Enter the number of the day, and then select **OK**. To cancel, press the **Back** button .
    - Select **Set Year**. Enter the year (all four digits), then select **OK**. To cancel, press the **Back** button .
- To continue, select **More Settings** by pressing the **Settings** button .

## Third System Settings Screen

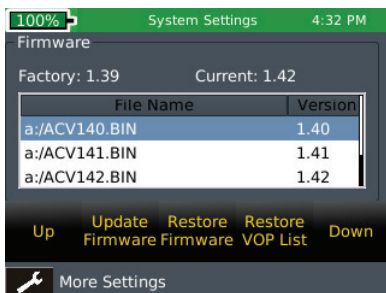


- To get Standby power down:
  - Select **10 min. Set** to the right of Stand-by.
  - Enter a whole number from 1-10 for the number of minutes then select **OK**. To cancel, press the **Back** button .

*NOTE: If a Live IFD test is in progress, the timeout will put the screen to sleep mode.*

- To set Loop Test Stand-by:
  - Select **30 min. Set** to the right of Loop Test Stand-by.
  - Enter a number between 5 and 60 for the number of minutes then select **OK**. To cancel, press the **Back** button .
- To set Tone Stand-by:
  - Select **30 min. Set** to the right of Tone Stand-by.
  - Select the number between 5 and 60 for the time of the tone then select **OK**. To cancel, press the **Back** button .
- To set System Shutdown Time:
  - Select **4 hr. Set** to the right of System Shutdown.
  - Select the number between 1 and 8 for the hours before system shutdown then select **OK**. To cancel, press the **Back** button .
- To continue, select **More Settings** by pressing the **Settings** button .

## Fourth System Settings Screen (Firmware)



You can have more than one version of firmware on the SD card – all firmware files on the SD Card will be displayed on this screen.

- The factory installed firmware revision (default firmware) is displayed above the firmware file table.
- The current firmware revision that is being used is displayed above the firmware file table **Current x.xx**.

### How to update the Arc Chaser Firmware:

*Warning! Do not update the firmware if the battery charge is less than 50%, unless the Arc Chaser is plugged in to A/C power.*

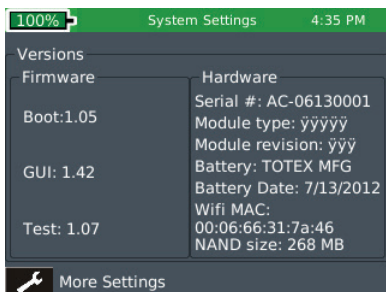
- Go to [www.t3innovation.com/arcchaser](http://www.t3innovation.com/arcchaser) to download the latest software revision.
- To save the firmware update to your Arc Chaser:
  - Remove the SD Card (located on the left side of Arc Chaser) and insert it into your computer. Your computer will recognize the SD Card as a removable drive. Open the removable drive folder and copy the firmware file from your computer to the removable drive window. Re-insert the SD Card into the Arc Chaser. Proceed to the instructions below for updating the firmware.

*Note: When installing SD Card with firmware update refresh the firmware table by exiting and then reentering the firmware screen.*

- Update by selecting the firmware file in the firmware table then select **Update Firmware** on the screen. A new screen will appear, confirming that you are updating firmware. Select **OK** to continue or **Cancel**. Another window will appear: Updating firmware.  
*System will reboot after update. Please make sure battery is not low.* Press **OK** to continue or **Cancel**.
- To reset to the factory firmware, select the **Restore Firmware** icon. A new screen will appear, confirming that you are deleting the firmware update and restoring to factory default. You will be prompted to select **OK** to continue or **Cancel** to cancel. Arc Chaser will then restart.
- To reset to the factory VOP list, select the **Restore VOP List** icon. A new screen will appear, confirming that you are restoring factory VOP list. You will be prompted to select **OK** to continue or **Cancel** to cancel.

## Fifth System Settings Screen

This screen will display which versions of firmware and hardware are in your Arc Chaser.





### Firmware

- Boot (initializes hardware, loads, and executes operating system)
- GUI (graphical user interface)
- Test

### Hardware

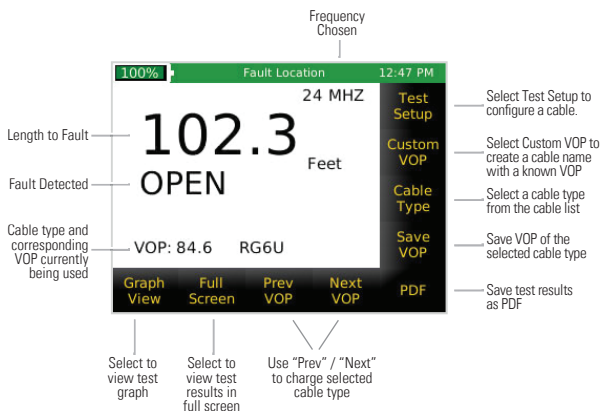
- Serial Number (for your Arc Chaser)
- Module revision (number of your updated module)
- Battery (type of battery)
- Battery Date (provides date of battery manufacture)
- Wi-fi MAC (Media Access Control network address)
- NAND size (flash memory in megabytes)

### You're done!

Press the **More Settings** soft key  to return to the first System Settings screen or press the Home button  to save the system settings and return to the **Home** Screen.

## Fault Location Mode

The Arc Chaser is designed to conduct tests for fault location and intermittent faults.




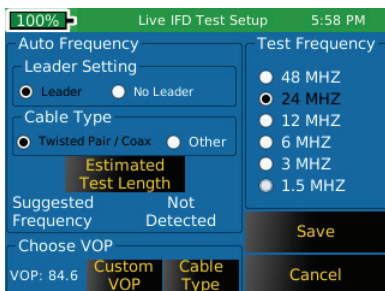
Cable Fault	Description
Open	Wire connection is not continuous throughout cable length
Short	Two or more wires in a cable are connected (short circuit)
No Fault	No fault found

This test mode identifies a cable fault as Short or Open and will provide a length measurement to the fault. The Fault Location mode is also useful for determining cable characteristics, such as VOP (velocity of propagation) and test frequency. A characteristic frequency for the length of the cable is displayed on the upper right of the screen.



## Test Setup

- Turn Arc Chaser on by pressing the red **Power** button.
- On the Home Screen, select the **Fault Location** icon .
- Connect the leader cable or dual banana to BNC adapter to the Arc Chaser.
- Connect a cable to the leader cable or dual banana/BNC adapter.



100% Live IFD Test Setup 5:58 PM

Auto Frequency

Leader Setting

☒ Leader ☐ No Leader

Cable Type

☒ Twisted Pair / Coax ☐ Other

Estimated Test Length

Suggested Frequency Not Detected

Choose VOP

VOP: 84.6 Custom VOP Cable Type

Test Frequency

☐ 48 MHz

☒ 24 MHz

☐ 12 MHz

☐ 6 MHz


☐ 3 MHz


☐ 1.5 MHz

Save

Cancel



Configure Cable Characteristics

- Select **Test Setup** from the Fault Location screen.
  - Select **Leader** or **No Leader** (use **Leader** unless you are using the dual banana plug to female BNC adapter).
  - Under Cable Type, select **Twisted Pair/Coax** or **Other**.
    - **Twisted Pair/Coax** should only be used on those cables with low-loss.
    - **Other** should only be used with high-loss cable (e.g. Romex).
  - Use ONE of three velocity of propagation (VOP) options below to select your test VOP
    - Select **Custom VOP**.
      - Enter your VOP value and select OK.
      - To cancel, press the **Back** button .
    - Select **Cable Type**, and a preset list of common cable types will appear.
      - Press **Up** or **Down** to view cable type options on the screen.
      - Highlight the desired cable type with a finger touch.
      - Select the **Select** icon.
      - Edit the cable type by selecting the **Edit** icon.
      - Enter the revised name of the cable type and select **OK**.

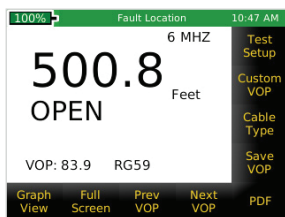
- To cancel, press the **Back** button .
- To delete a cable type, select **Delete**.
- Select **Discover VOP** to find the VOP of your test cable.
  - Enter the length of the cable
  - Select **OK**.
- Select **Save** to return to the **Fault Location** screen.

## Fault Location Options

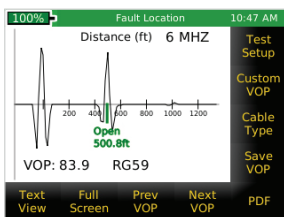
In the Fault Location screen there are three VOP options:

1. Select **Prev VOP** or **Next VOP** to scroll through the preset cable types of VOP. If the cable type is not listed with the desired VOP, follow the instructions below to edit the VOP.
2. From the Fault Location screen select **Cable Type**; a preset list of common cable types will appear.
  - Press **Up** or **Down** to view cable type options on the screen.
  - Highlight the desired cable type with a finger touch.
  - Select the **Select** icon.
  - Edit the cable type by selecting the **Edit** icon.
  - Enter the revised name of the cable type and select **OK**.
  - To cancel, press the **Back** button .
  - To delete a cable, select **Delete**.
3. To create a new cable type with a known VOP, select **Custom VOP** to enter a VOP of the test cable.
  - Enter the VOP and select **OK**.
  - To cancel, press the **Back** button .
  - Select **Save VOP** and enter a cable type.
  - Select the **OK** to save.

## Fault Location Testing



Text



Graph

In the Fault Location screen there are three VOP options:

- Press the green test button to perform a test.
- The default view of the test result appears in the Text View showing the length of the cable, Open or Short, cable name, and VOP, the cables characteristic frequency, and feet or meters.
- Select **Full Screen** to expand your view to the full screen. Press the Back button to exit full screen.
- Select **Graph View** or **Text View** on the screen to toggle between a graphical view of your test or a text display.
- In Graph View and Full Screen selected, **Zoom +** and **Zoom -** allows for the expansion or contraction of the scale. The graph can also be moved by dragging with a finger.

## Saving Test as a PDF

In the Fault Location screen there are three VOP options:

- Press **PDF** on the **Fault Location** screen.
- Enter the desired file name for your test and select **OK** to save the file name.
- A new screen will appear with space to enter optional comments. Enter comments and select **OK**.
- Arc Chaser will save the PDF under your new file name.
- A **Saving PDF** Dialog Box will appear.

**\*\* DO NOT REMOVE SD CARD UNTIL DIALOG BOX DISAPPEARS\*\***

*Note: Maximum PDF that will show in the File Manager screen is 510. The tests will continue to save; but, they will not be visible on the screen.*

## Live/Intermittent Fault Detection (Live IFD) Mode


T3 Innovation's SSTDR technology allows for live measurements taken in real time on energized or unenergized cable. The Arc Chaser can monitor intermittent faults such as arcs, shorts, or vibration faults.

### Live IFD Test Frequency Details

Test Frequency	Minimum Test Distance	Maximum Test Distance (at 70.0 VOP)	Accuracy
48 MHZ	0 feet (0 meters)	125 feet (40 meters)	+/- 2.5 feet (.75 meters)
24 MHZ	0 feet (0 meters)	250 feet (80 meters)	+/- 5 feet (1.5 meters)
12 MHZ	25 feet (7.5 meters)	500 feet (160 meters)	+/- 10 feet (3 meters)
6 MHZ	50 feet (15 meters)	1000 feet (320 meters)	+/- 20 feet (6 meters)
3 MHZ	125 feet (40 meters)	2000 feet (640 meters)	+/- 40 feet (12 meters)
1.5 MHZ	250 feet (75 meters)	4000 feet (1280 meters)	+/- 80 feet (24 meters)

*Note: Maximum test length will vary depending on cable VOP and attenuation/loss.*

## Test Setup

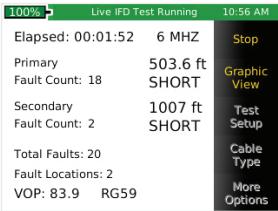
- Turn Arc Chaser on by pressing the red **Power** button.
- On the Home Screen, select the **Live IFD** icon .
- Connect the leader cable or dual banana to BNC adapter to the Arc Chaser.
- Connect a cable to the leader cable or dual banana/BNC adapter.
- Configure the System for Live Intermittent Fault Detection by selecting **Test Setup**.
  - A. Select **Leader** or **No Leader** (use Leader Cable unless you are using the dual banana plug to female BNC adapter).
  - B. Use ONE of two Test Frequency options below to select your Test Frequency:

1. Manually select Test Frequency by selecting one of the radio buttons (Using Live IFD Test Frequency Details Table).
2. To discover the appropriate Test Frequency:
  - Under Cable Type, select **Twisted Pair/Coax** or **Other**.
    - Twisted Pair/Coax should only be used on those cables or cables with low-loss.
    - **Other** should only be used with high-loss cable (e.g. Romex).
  - Select **Estimated Test Length**. Use the keypad to enter the length of the cable under test then select OK.
- C. Use ONE of two velocity of propagation (VOP) options below to select your test VOP:
  1. Select **Custom VOP**, to enter a known VOP value then select OK.
  2. Select **Cable Type** to choose from the saved cable type list.
    - Enter the revised name of the cable type and select **OK**.
    - To scroll through the list, select the **Up** and **Down** icons.
    - Select the desired **Cable Name**.
    - Select the **Select** icon to use the highlighted cable type.
    - To edit or delete a cable type, select **Edit** or **Delete**.
- D. Select **Save** to return to the **Live IFD** screen or **Cancel** to exit without saving any changes.

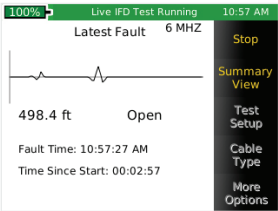
## Live IFD Options

- Select the **Start** icon to start and stop a test. The green test button can also be used to start and stop a test.
- Select **Graphic View** to cycle through the optional test result screens.
- Select **Test Setup** to configure the Live IDF test.
- Select **Cable Type** to choose the cable type and associated VOP to be tested (also in Test Setup).
- Select **More Options** to display additional options.
- Select **PDF** or **CSV** to save your test results.
- Select **Custom VOP** to enter a known VOP value (also in Test Setup).


# Live IFD Testing



Text



Graph

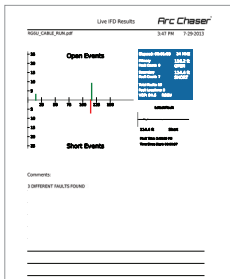
- Select the **Start** icon on the touch screen or press the **Test** button  to start a test. Elapsed time will begin at the top of the screen.
- The Arc Chaser Live IFD testing remains in progress even as the user selects different viewing options. While the test is running, the inactive options will be greyed out on the screen.
- Fault types and distances will be displayed by number of occurrences. The Primary Fault location has the most number of occurrences. The Secondary Fault location will be displayed as well.
- Select **Graphic View** to view a graphical representation of the faults. The graph will show open events in green (above the x axis), and short events in red (below the x axis).
- Select **Graph Scale** to select the desired dimensions (10 to 500 feet or auto-scale), then press **Save** or **Cancel** to return to the Live IFD Test Screen.
- Selecting **Current View** displays the SSTDR waveform, Time of Latest Fault, and Elapsed Time for the latest fault. The test frequency appears in the upper right corner of the display.
- Press the **Summary View** to return to the default Live IFD screen.
- To stop the test select **Stop** or press the **Test** button. When the test is stopped, the Arc Chaser will automatically save the test results to flash memory in case the unit runs out of battery or the unit is accidentally powered off. The last test result will be saved in the internal flash memory until a new test is started. It is strongly RECOMMENDED to manually save the test as a PDF or CSV to the SD card.

*Note: Test will auto stop when testing time reaches 24 hours, 500 faults in one location or 1000 total faults.*

## Saving test as a PDF file

To save an overview of the test, select the **PDF** icon. Both PDF and CSV features can be used independently of each other.

- To save results, if PDF button is not visible, select **More Options**.
- Select **PDF** to create a PDF file of your test.
- Enter the name of your file and select **OK**.
- Enter comments to be printed on the test results (optional).
- A saving PDF dialog box will appear.



**\*\* DO NOT REMOVE SD CARD UNTIL DIALOG BOX DISAPPEARS\*\***

## Saving test as a CSV file

To save an extensive report of the test, select the **CSV** icon. Both PDF and CSV features can be used independently of each other.




- To save results, if CSV button is not visible, select **More Options**.
- Select **CSV** to save as a CSV (convertible to a Microsoft Excel file).
- Enter the name of your file and select OK.
- Enter comments to be printed on the test results (optional).
- A saving **CSV** dialog box will appear.

**\*\* DO NOT REMOVE  
SD CARD UNTIL DIALOG BOX  
DISAPPEARS\*\***

VOP Name	VOP	Test Started	Test Duration	Total Faults
RG6U	84.6	3:43:22 PM	0:01:03	19
Primary Fault		Secondary Fault		
116.2 ft	OPEN	114.4 ft	SHORT	
Distance	Fault	Time	Time Since Start	
114.4	Short	3:43:27 PM	00:05.9	
114.4	Short	3:43:31 PM	00:09.5	
114.4	Short	3:43:42 PM	00:21.0	
114.4	Short	3:43:43 PM	00:21.7	
114.3	Short	3:44:14 PM	00:52.4	
114.4	Short	3:44:17 PM	00:55.9	
114.4	Short	3:44:19 PM	00:57.2	
14.5	Open	3:43:35 PM	00:13.8	
14.6	Open	3:43:37 PM	00:15.9	
14.6	Open	3:44:03 PM	00:41.7	
116.3	Open	3:43:49 PM	00:27.9	
116.2	Open	3:43:50 PM	00:28.3	
116.5	Open	3:43:50 PM	00:28.8	
116.7	Open	3:43:52 PM	00:30.1	
116.6	Open	3:43:53 PM	00:31.4	
116	Open	3:43:53 PM	00:31.7	
115.8	Open	3:43:56 PM	00:34.9	
115.9	Open	3:43:57 PM	00:35.3	
115.7	Open	3:43:57 PM	00:35.6	




## Tone

- Turn Arc Chaser on by pressing the red **Power** Button.
- On the Home Screen, select the **Tone** icon .
- Connect the leader cable or dual banana to BNC adapter.
- Connect a cable to the leader cable or dual banana/BNC adapter.
- Select **Tone** on the Home Screen .
- Under **Tone Selection**, one of four tones can be selected:
  - **Low** (lowest frequency)
  - **High** (highest frequency)
  - **Melody #1** (a three-tone jingle)
  - **Melody #2** (a four-tone jingle)
- Select **Start** (SYMBOL) to transmit the tone output to the cable under test. The icon and message Sending Tone will appear.
- A tone probe placed along-side or at the end of the cable will produce an audible tone.
- Select **Stop** icon or press the green key  to halt tone output.

## File Manager

You can rename files in preparation for saving to your computer, or delete them from your file list, using the File Manager function.

- Select **File Manager** . A screen will appear with a list of Fault Location files and type of test displayed above the file list.
- Fault location files are displayed first.
- Select the **Up** or **Down** icons to go to the last or first selection on the list.
- Select the **file name** on the screen to select a file.
- To rename the file, select **Rename**.
- After creating the file name, select **OK**.
- To delete a file, select a file on the screen then press **Delete**. A dialog box will appear to confirm.
- Select either **OK** or **Cancel**.

## Managing IFD files


- To manage Live IFD files, select the **Show IFD** icon on the screen to show Live IFD files.
- Select **Up** or **Down** to go to the first or last selection on the list.
- Select the file name on the screen.

- To rename the file, select **Rename**.
- After creating the file name, select **OK**.
- To delete a file, select a file on the screen then press **Delete**. A screen will appear to confirm.
- Select either **OK** or **Cancel**.

## Saving Results to Your Computer

You can copy test files with results to your computer using the SD card or the micro USB cable (included). Where and how your files will appear on your computer may vary with each computer's configuration.

## USB

- Connect the Arc Chaser from the USB port found on the left side of the unit to your computer using the included micro USB cable.
- From the Home Screen, select **USB** .
- If a micro USB cable is not connected, a confirmation screen will appear to connect a micro USB cable. Select **OK** or **Cancel**.
- A removable drive window will appear on your computer (If a removable drive window does not appear, open **Computer** and look for the removable drive, then double click on it). Double click on the Fault Location folder or the Live IFD folder to view your test files.
- Copy the files onto your computer's hard drive or other preferred location.

## SD Card

- Remove the SD card from the Arc Chaser.
- Insert the SD card into a computer or through an SD card - USB adapter.
- A removable drive window will appear on your computer. (If a removable drive window does not appear, open **Computer** and look for the removable drive, then double click on it).
- Open the **Reports** folder and inside open either the Fault Location (**FLT\_LOC**) folder or the Live IFD (**LIVE\_IFD**) folder to view your test files.
- Copy the files onto your computer's hard drive or other preferred location.

## MAINTENANCE

### Batteries

- The Arc Chaser is powered by a rechargeable Lithium ion battery.
- To charge the battery, plug the charger into the side port and then plug the charger into the power source.
- Arc Chaser battery is not user serviceable. If the event you need to remove the battery, unscrew the back panel of the Arc Chaser and unplug the battery from the Arc Chaser. Be sure to remove all the leads connecting the battery to the device.

NOTE: The advanced Lithium ion battery is designed to last the life of the unit and should not have to be replaced.

Lithium ion batteries are hazardous waste and should be disposed of in compliance with local, state, and federal hazardous waste regulations.

### Cleaning

- Use a clean, damp cloth to clean the Arc Chaser.
- Before cleaning, disconnect all cables from the Arc Chaser. Failing to disconnect cables can damage the device and cause personal injury.
- Do not use harsh cleaners, abrasives, or solvents.

### Storage

- When not in use, store the Arc Chaser in the included protective case.
- Do not expose the Arc Chaser to high temperatures (above 80°C) or humidity. See the specifications section for temperature limits.

## CUSTOMER SERVICE

For technical information, visit [www.t3innovation.com](http://www.t3innovation.com). For customer service, email [support@t3innovation.com](mailto:support@t3innovation.com).

**Contact Numbers:** Phone: 805-233-3390  
Fax: 805-383-4507

**Address:** 808 Calle Plano  
Camarillo, CA 93012  
USA

## SPECIFICATIONS

<b>Measurement Technology</b>	Spread Spectrum Time Domain Reflectometry U.S. Patents and Patents Pending
<b>Power</b>	Wall power voltage input Range: 10->28V, 20W Arc Chaser will run with wall power down to 4V, however batteries will not charge unless input voltage is greater than 10V. Totex battery pack, with four LIO Rechargeable Cells. Full screen brightness, dynamic test, 7.8V battery: 335mA. 0->100% brightness, @7.8V: 90mA Typical battery current: 185mA Low power mode (or timed out): 70mA; Off mode: 420 $\mu$ A board (+500uA battery pack circuitry.)
<b>Maximum Range</b>	12,000 ft (3,657m) at .999 VOP Maximum testable cable length varies with VOP and cable type. VOP (%) with 3 digit precision ranging from 20.0% to 99.9%
<b>Output Connector</b>	Banana Jacks 600V CAT II
<b>Leader Cable</b>	Leader Cable, Cable Assembly, 5 ft. (1.5m) 600 Volt CAT II, 95 Ohm
<b>Battery Life</b>	Battery Pack, initial 5200 mA-hr (typical): Operating at static screen or occasional static test: 185mA (assuming 65% LCD brightness) Dynamic Operation: 280mA (assuming 65% LCD brightness) Low power: 70mA, assuming full charge of 5000mAH, 71 hours. Off : 420 $\mu$ A board (+500uA battery pack circuitry)
<b>Altitude</b>	6,500 ft (2,000 m)
<b>Temperature</b>	Operating: (-10 if standard crystal) -20 to 50°C; Storage: (-30 to 80°C)
<b>Humidity</b>	10 to 90% non-condensing
<b>Enclosure</b>	Operating: (-10 if standard crystal) -20 to 70°C; Storage: (-30 to 80°C)
<b>Size</b>	2.41H x 4.18W x 9.03L (6.12 x 10.61 x 22.94 cm)
<b>Weight</b>	With batteries: 1 lb 9 oz (862 g)
<b>Safety Compliances</b>	Complies with ANSI/ISA 82.02.01 (61010-1) 2004, CAN/CSA-C22.2 No 61010-1-04, UL 6101B (2003) and IEC/EN 61010-1 2nd Edition for measurement Category II, 600 V, EMC EN61326-1

## **PATENTS/INTELLECTUAL PROPERTY**

T3 Innovation product: Arc Chaser may be covered by one or more of the following patents: US Patent No. 6868357, US Patent No. 6937944, US Patent No. 7069163, US Patent No. 7215126, US Patent No. 7250772, US Patent No. 7271596, US Patent No. 7165200, US Patent No. 7495450, US Patent No. 7075309, US Patent No. 7282922, US Patent No. 7634012, US Patent No. 7622931, US Patent No. 7548071.

## Warranty Information

T3 Innovation guarantees that its products will be free of all defects in material and workmanship. This warranty extends for a period of 12 months for the T3 Innovation test equipment from the date of manufacture or proof-of-purchase.

All products deemed defective under this warranty will be repaired or replaced at T3 Innovation's discretion. No further warranties either implied or expressed will apply, nor will responsibility for operation of this device be assumed by T3 Innovation.

## Product Registration

Registering your Arc Chaser allows you to access support information and receive product updates. Register your products on the T3 Innovation website: [www.t3innovation.com/warranty](http://www.t3innovation.com/warranty).

## Disposal



WEEE Compliant: Prior to disposal of this product, please contact T3 Innovation for proper disposal options.

## Returns

Prior to returning any product to T3 Innovation, you must first request a Return Merchandise Authorization Number by contacting the Customer Service Department at 805-233-3390 or by emailing [support@t3innovation.com](mailto:support@t3innovation.com).

**Note:** *Shipments will not be accepted without this number, which must be clearly marked on the shipping label.*

1. Prior to packing, include a copy of the sales receipt if available. Otherwise the date of manufacturer will be used to calculate warranty date.
2. Provide a description of the operational problem with the product(s) being returned.
3. Include a contact name, phone number, and e-mail address.
4. Pack items securely to prevent damage during shipping.
5. Ship prepaid to: T3 Innovation  
808 Calle Plano  
Camarillo, CA 93012  
USA

# *Arc Chaser™*

The 21st Century Dual Mode TDR for Testing and  
Monitoring Energized and Unenergized Cables

## **User Manual**



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