

## Irfora ET828PRO

# ET828PRO 2-in-1 Oscilloscope Multimeter User Manual

Model: ET828PRO | Brand: Irfora

## 1. INTRODUCTION AND OVERVIEW

The Irfora ET828PRO is an innovative 2-in-1 device that seamlessly integrates the functionalities of a digital oscilloscope and a professional multimeter. Designed for portability and ease of use, it is an ideal tool for on-site debugging, electronic circuit testing, and general electrical measurements. Its compact form factor and intuitive interface make it suitable for a wide range of users, from hobbyists to experienced technicians.

Key features include a high-speed sampling rate of 50 Msps, an analog bandwidth of 10 MHz, and a clear 2.4-inch color display. The multimeter function offers 6000 counts and supports a comprehensive array of measurements. Built-in safety features, such as a 10A double fuse and overload protection, ensure reliable operation.

MULTIMETER AND OSCILLOSCOPE 2 IN 1

# ADJUSTABLE WAVEFORM

IMPROVE YOUR WORK EFFICIENCY

**50** MSPS

**10** MHZ

**6000** CODE  
MULTIMETER

**2.4** INCH



Figure 1.1: The ET828PRO device showcasing its 2-in-1 functionality, 50 Mps sampling rate, 10 MHz bandwidth, 6000 counts, and 2.4-inch color display.

# EIGHT ADVANTAGES

IMPROVE YOUR WORK EFFICIENCY



## 2 IN 1

OSCILLOSCOPE  
MULTIMETER

## SET

TIME BASE, AMPLITUDE  
ADJUSTABLE

## SCREEN

320\*240 CLEARCOLOR  
SCREEN

## SAFETY

DOUBLE FUSE  
AUTO RANGE

## AUTO

WAVEFORM  
AUTO CAPTURE

## MODE

3 TRIGGER MODES

## REL+MAX

RELATIVE VALUE  
MAX/MIN TEST

## SAVE

100 SETS OF DATAS  
10 WAVEFORMS

Figure 1.2: Overview of the ET828PRO's eight key advantages, including 2-in-1 design, adjustable time base/amplitude, 320x240 color screen, double fuse safety, auto waveform capture, three trigger modes, relative value/MAX/MIN test, and storage for 100 data sets/10 waveforms.

## 2. PACKING LIST

Please verify the contents of your package upon receipt:

- 1 x ET828PRO 2-in-1 Oscilloscope Multimeter Unit
- 1 x Pair of Test Leads (Red and Black)
- 1 x Cloth Carrying Bag
- 1 x Instruction Manual (this document)





Figure 2.1: The ET828PRO device along with its standard accessories: test leads and a protective cloth bag.

### 3. SETUP

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The ET828PRO is designed for immediate use. Follow these steps for initial setup:

1. **Power On:** Press and hold the power button (usually integrated with the rotary switch) to turn on the device. The 2.4-inch color display will illuminate.
2. **Connect Test Leads:** Insert the red test lead into the 'V $\Omega$ C $\approx$ ' input jack and the black test lead into the 'COM' input jack for most voltage, resistance, and capacitance measurements. For current measurements, use the 'mA' or '10A' input jacks as appropriate. Ensure connections are secure.
3. **Initial Check:** The device will typically power on in multimeter mode. You can switch between modes as described in the Operating Instructions section.

### 4. OPERATING INSTRUCTIONS

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## 4.1. Oscilloscope Function

The oscilloscope mode allows for the visualization and analysis of electrical waveforms. The ET828PRO features a 50 Msp/s sampling rate and 10 MHz analog bandwidth for accurate waveform capture.

- **Entering Oscilloscope Mode:** From the multimeter interface, long press the 'R' key to switch to oscilloscope mode.
- **Automatic Waveform Capture:** The device includes a one-touch automatic waveform capture function, simplifying the process of acquiring stable waveforms.
- **Waveform Scanning Modes:** Three scanning modes are available:
  - **Automatic Mode:** Automatically adjusts settings to display a stable waveform.
  - **Normal Mode:** Captures a waveform when a trigger signal is detected.
  - **Single Mode:** Captures a single waveform when a trigger signal is detected and then stops.
- **Parameter Adjustment:** Waveform parameters such as time base and amplitude can be set independently using the function keys (F1-F4) and rotary switch.

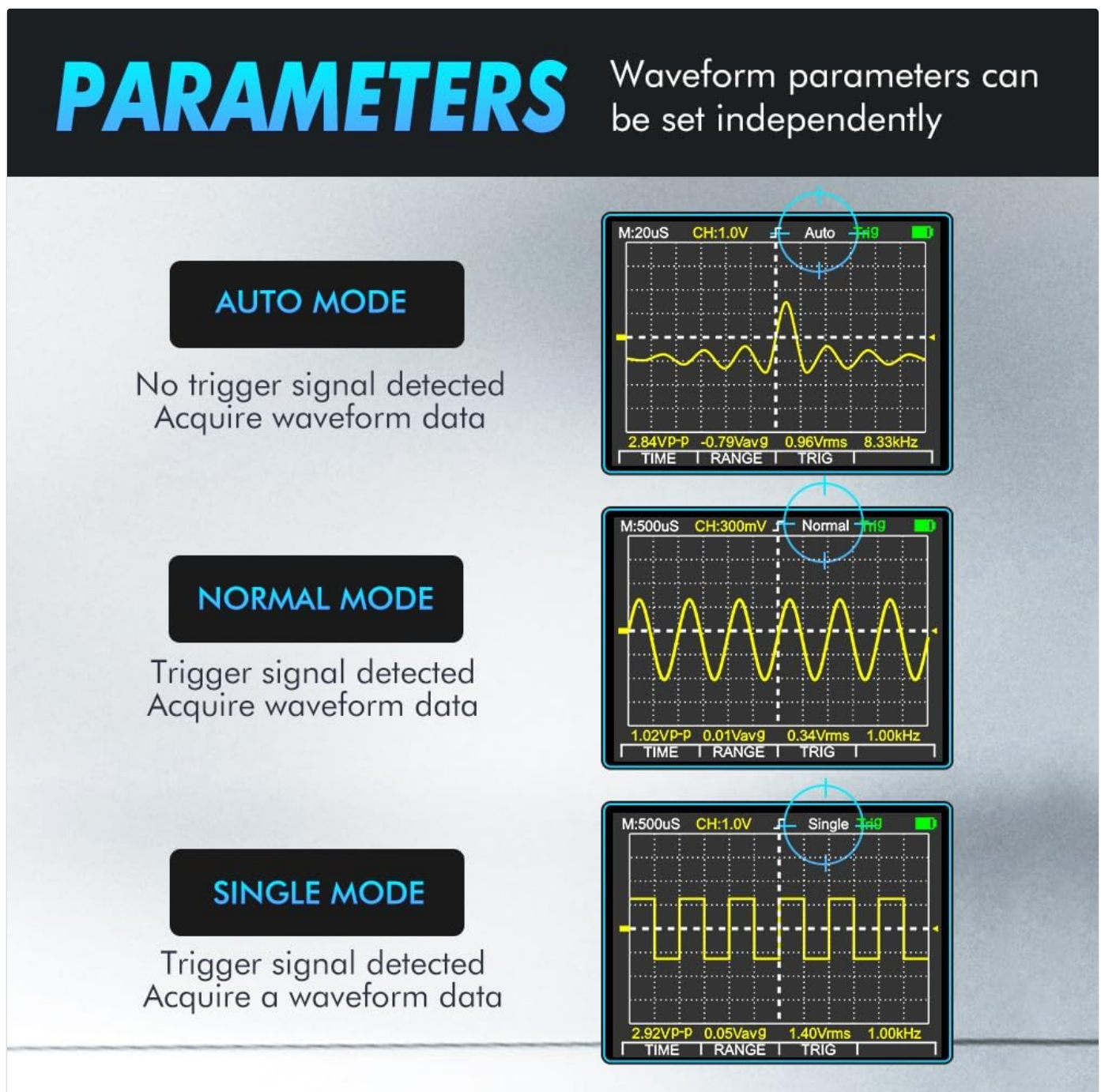


Figure 4.1: The ET828PRO in oscilloscope mode, indicating that a long press of the 'R' key is required to enter this function.

# AUTO-CAPTURE

One-touch automatic waveform capture function

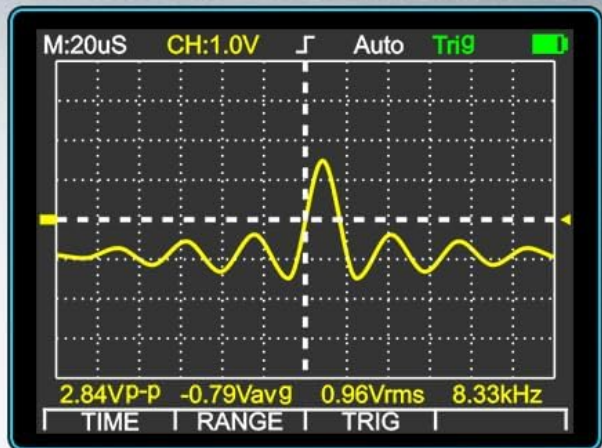
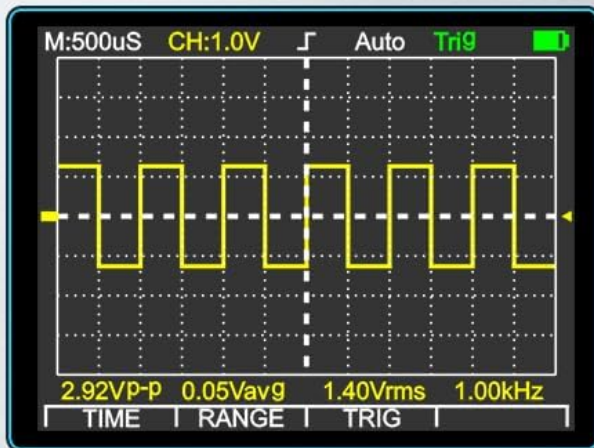
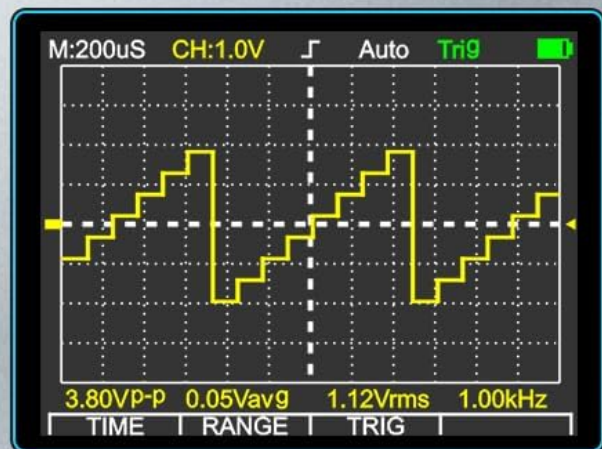
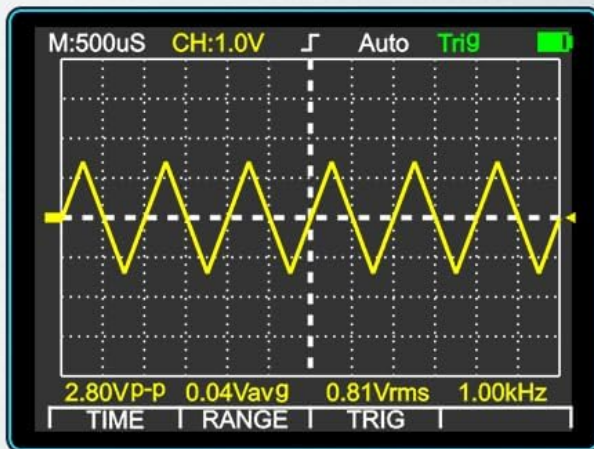


Figure 4.2: Examples of waveforms captured using the Auto, Normal, and Single trigger modes in oscilloscope function.



# **SAME SCREEN** Historical data and real-time data displayed on the same screen

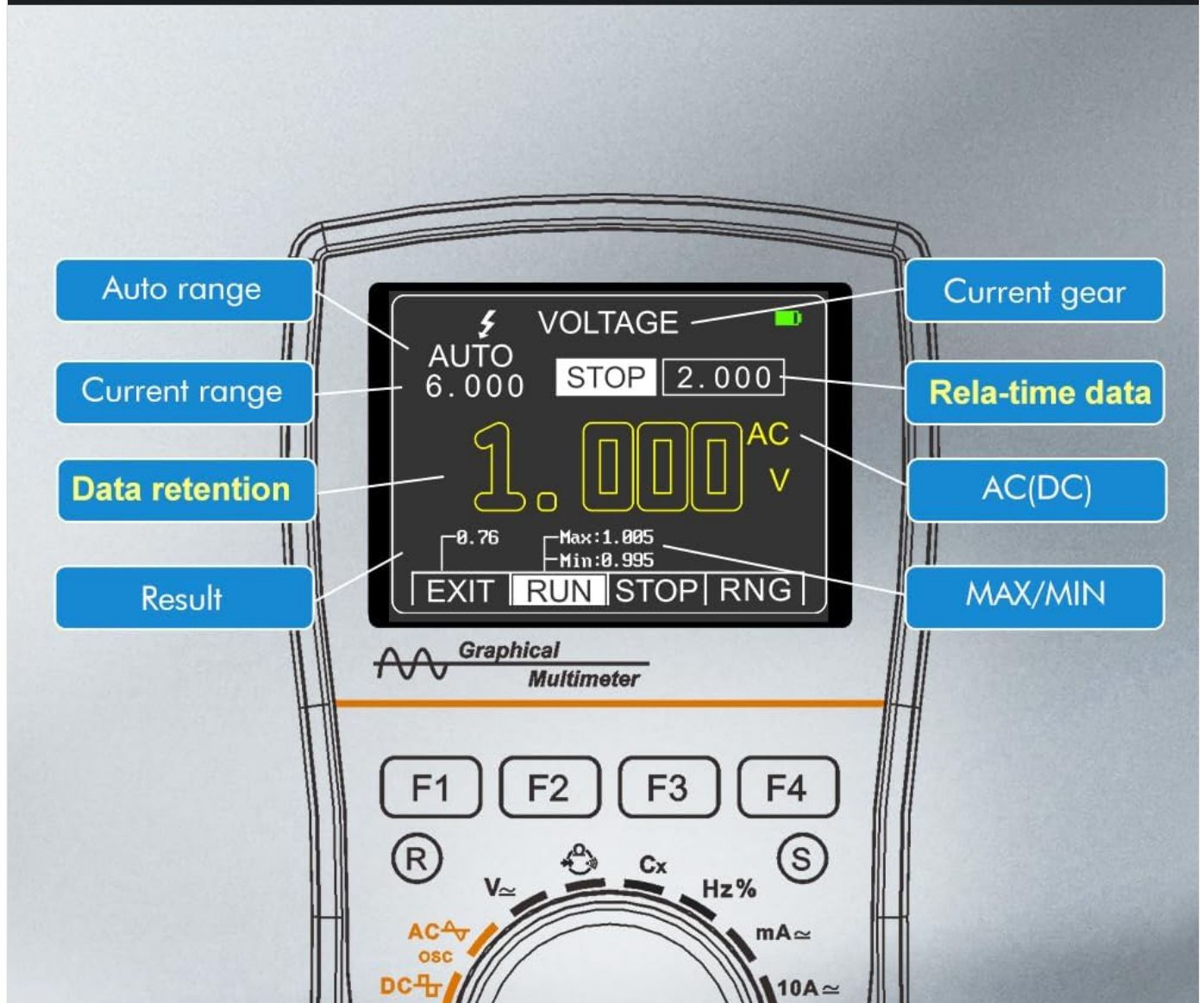


Figure 4.3: Demonstrations of various waveforms automatically captured by the ET828PRO's oscilloscope function.

## 4.2. Multimeter Function

The multimeter function provides precise measurements of various electrical parameters. It supports both automatic and manual range switching.

- **Measurement Types:** The ET828PRO can measure:

- AC and DC Voltage
- AC and DC Current (mA, 10A ranges)
- Resistance
- Capacitance
- Frequency
- Duty Cycle
- Diode Detection
- Continuity (On/Off Test)

- **Data Display:** Real-time measurement data and stored data can be displayed simultaneously on the screen.
- **Data Hold:** Use the data hold function to freeze the current reading on the display for easier recording.

# SAFETY

Auto range prevents wrong range selection  
+500mA/250V;10A/250V double fuse



Figure 4.4: The ET828PRO's multimeter display, illustrating how historical and real-time data are shown on the same screen, along with indicators for auto range, current gear, data retention, and MAX/MIN values.

## 5. MAINTENANCE

Proper maintenance ensures the longevity and accuracy of your ET828PRO device.

- **Cleaning:** Use a soft, dry cloth to clean the device. Do not use abrasive cleaners or solvents. Ensure the device is powered off before cleaning.
- **Storage:** Store the device in a cool, dry place, away from direct sunlight and extreme temperatures. Use the provided cloth bag for protection when not in use.
- **Fuse Replacement:** The ET828PRO is equipped with a 10A double fuse for protection. If the device fails to measure current or shows incorrect readings in current mode, the fuse may need replacement. Refer to a qualified technician for fuse replacement to ensure proper safety and functionality.



## 6. TROUBLESHOOTING

If you encounter issues with your ET828PRO, refer to the following common troubleshooting steps:

- **Device Not Powering On:** Ensure the rotary switch is in an 'ON' position. If the device has a rechargeable battery, ensure it is sufficiently charged.
- **No Reading or Incorrect Reading:**
  - Check that the test leads are securely connected to the correct input jacks for the desired measurement.
  - Verify that the rotary switch is set to the appropriate measurement function.
  - For current measurements, check if the fuse needs replacement (see Maintenance section).
  - Ensure the circuit being tested is within the device's specified measurement range.
- **Display Issues:** If the display is dim or flickering, the battery may be low. Recharge the device if applicable.
- **Overload Protection:** The device has built-in overload protection. If an overload occurs, the device may temporarily stop functioning or display an error. Remove the overload condition and restart the device.

## 7. SPECIFICATIONS

The following table details the technical specifications of the Irfora ET828PRO 2-in-1 Oscilloscope Multimeter:

Table 7.1: ET828PRO Technical Specifications

Attribute	Specification
Brand	Irfora
Model Number	ET828PRO
Power Source	Battery Powered
Color	Multicolor
Item Dimensions (L x W x H)	7.48 x 5.51 x 1.77 inches
Item Weight	13.8 ounces
Measurement Type	Multimeter
Oscilloscope Sampling Rate	50 Msps
Oscilloscope Bandwidth	10 MHz
Multimeter Display Counts	6000 Counts
Display Type	2.4-inch Color Display
Manufacturer	Irfora
Part Number	LAKUSE25678
ASIN	B0DBY6WG86
Date First Available	August 2, 2024

# ADJUSTABLE WAVEFORM



**ET828Pro**



**ET828**

Sampling  
rate

50Msps



2.5Msps

Analogue  
bandwidth

10MHz



1MHz

Maximum  
display

6000



3999

Maximum  
capacitance

100mF



10mF

RMS



Figure 7.1: A comparative overview of key specifications between the ET828PRO and the ET828 models, highlighting improvements in sampling rate, bandwidth, display counts, and capacitance.

## 8. WARRANTY AND SUPPORT

Warranty information for the Irfora ET828PRO is typically provided with the product packaging or can be obtained directly from the manufacturer or authorized reseller. Please retain your proof of purchase for warranty claims.

For technical support, troubleshooting assistance beyond this manual, or service inquiries, please contact Irfora customer support through their official website or the point of purchase. Always refer to the latest contact information provided by the manufacturer.