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> [Vikye T3100 X100 100MHz High Voltage Oscilloscope Probe User Manual](#)

Vikye T3100 X100

Vikye T3100 X100 100MHz High Voltage Oscilloscope Probe User Manual

Model: T3100 X100

INTRODUCTION

This manual provides essential information for the safe and effective use of the Vikye T3100 X100 100MHz High Voltage Oscilloscope Probe. Please read these instructions thoroughly before operating the device to ensure proper functionality and user safety.

SAFETY INFORMATION

Warning: This probe is designed for high voltage measurements. Improper use can result in electric shock, injury, or damage to equipment. Always adhere to the following safety guidelines:

- Ensure the oscilloscope is properly grounded before connecting the probe.
- Do not exceed the maximum input voltage rating of the probe (refer to Specifications).
- Always connect the ground lead of the probe to the circuit's ground before connecting the probe tip to the measurement point.
- Avoid touching the probe tip or exposed conductors when the probe is connected to a live circuit.
- Inspect the probe and its accessories for any damage before each use. Do not use if damaged.
- Use the probe only with oscilloscopes that have a 1 M Ω input impedance.

PRODUCT OVERVIEW

The Vikye T3100 X100 is a high-voltage oscilloscope probe designed for measuring signals up to 100 MHz with an attenuation ratio of 100:1. It features a robust design suitable for various electrical testing applications.



Figure 1: Overall view of the Vikye T3100 X100 High Voltage Oscilloscope Probe, showing the probe body, cable, and BNC connector.

Components:

- **Probe Tip:** The point of contact for signal measurement.
- **Ground Lead with Alligator Clip:** Connects the probe to the circuit's ground reference.
- **Probe Body:** Contains the attenuation network and provides insulation.
- **Compensation Adjustment Screw:** Used to match the probe's capacitance to the oscilloscope's input capacitance for accurate waveform display.
- **Coaxial Cable:** Transmits the signal to the oscilloscope.
- **BNC Connector:** Connects the probe to the oscilloscope's input channel.



Figure 2: Close-up view of the probe tip, showing its pointed design for precise contact.



Figure 3: Close-up view of the BNC connector, which securely attaches to the oscilloscope input.

SETUP

1. **Connect to Oscilloscope:** Align the BNC connector of the probe with the input channel of your oscilloscope. Push and twist clockwise until it locks securely.
2. **Connect Ground Lead:** Attach the alligator clip of the probe's ground lead to a reliable ground point on the circuit under test. Ensure a solid electrical connection.
3. **Compensation Adjustment:**
 - Connect the probe tip to the oscilloscope's probe compensation output (usually a square wave signal).
 - Observe the square wave on the oscilloscope screen.
 - Using a non-metallic adjustment tool (often included with oscilloscopes), carefully turn the compensation adjustment screw on the probe body until the square wave appears flat-topped, without overshoot or undershoot. This ensures accurate signal reproduction.



Figure 4: Illustration of the probe connected to an oscilloscope and a circuit board for measurement.

OPERATING INSTRUCTIONS

1. **Select Oscilloscope Channel:** Choose the appropriate input channel on your oscilloscope.
2. **Set Attenuation:** Ensure your oscilloscope's channel input setting is set to **X100** to match the probe's attenuation ratio. If your oscilloscope does not have an X100 setting, you will need to manually multiply the displayed voltage by 100.
3. **Connect Probe Tip:** Carefully touch the probe tip to the desired test point on the circuit.
4. **Observe Waveform:** Adjust the oscilloscope's vertical (Volts/Div) and horizontal (Time/Div) settings to obtain a stable and clear waveform display.
5. **Interpret Readings:** Remember that the voltage displayed on the oscilloscope screen is 1/100th of the actual voltage at the probe tip due to the X100 attenuation.

MAINTENANCE

- **Cleaning:** Disconnect the probe from all power sources and circuits before cleaning. Use a soft, dry cloth to wipe the probe body and cable. Do not use abrasive cleaners or solvents.
- **Storage:** Store the probe in a clean, dry environment, away from direct sunlight and extreme temperatures.

Avoid bending the cable sharply.

- **Inspection:** Regularly inspect the probe cable, connectors, and tip for any signs of wear, cuts, or damage. Replace the probe if any damage is found to prevent safety hazards or inaccurate measurements.

TROUBLESHOOTING

- **No Signal or Weak Signal:**

- Check if the BNC connector is securely attached to the oscilloscope.
- Ensure the ground lead is properly connected to the circuit's ground.
- Verify that the oscilloscope channel is enabled and the vertical sensitivity (Volts/Div) is set appropriately.
- Confirm the probe tip is making good contact with the test point.

- **Distorted Waveform (e.g., rounded or spiked square wave):**

- Perform the probe compensation adjustment as described in the "Setup" section.
- Ensure the oscilloscope's input impedance is set to 1 M Ω .

- **Incorrect Voltage Readings:**

- Verify that the oscilloscope's channel attenuation setting matches the probe's X100 ratio.
- If manual calculation is used, ensure the displayed voltage is correctly multiplied by 100.

SPECIFICATIONS

Parameter	Value
Model	T3100 X100
Brand	Vikye
Attenuation Ratio	X100 (100:1)
Bandwidth	100 MHz
Input Resistance (typical)	100 M Ω (when connected to 1 M Ω oscilloscope input)
Input Capacitance (typical)	3.5 pF
Maximum Input Voltage (typical)	2000 V (DC + Peak AC)
Cable Length	120 cm

Note: Typical specifications are provided for general guidance. Actual performance may vary.

WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the documentation provided at the time of purchase or contact your retailer. Keep your purchase receipt as proof of purchase.