Jalzdieod Fosc21C1

Jalzdieod Fosc21C1 2-Channel USB PC Oscilloscope User Manual

Model: Fosc21C1

1. Introduction

The Jalzdieod Fosc21C1 is a compact, 2-channel USB PC oscilloscope designed for various electrical testing and MCU development applications. It features a 1MHz sampling rate and connects to a computer via a Micro-USB interface, allowing for waveform display, data analysis, and long-term data recording. This manual provides essential information for setting up, operating, and maintaining your Fosc21C1 oscilloscope.

2. Product Overview

The Fosc21C1 oscilloscope unit is a small, rectangular device with two BNC input connectors (CH1 and CH2) and a Micro-USB port for power and data communication with a host computer.

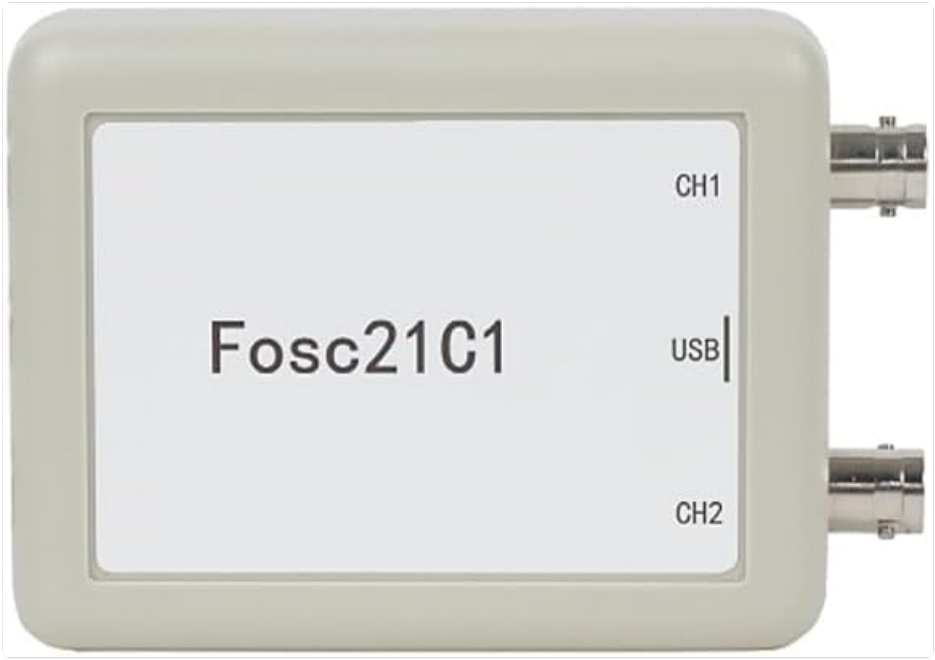

Figure 1: Top view of the Fosc21C1 oscilloscope, indicating Channel 1 (CH1), Channel 2 (CH2), and the USB connection point.

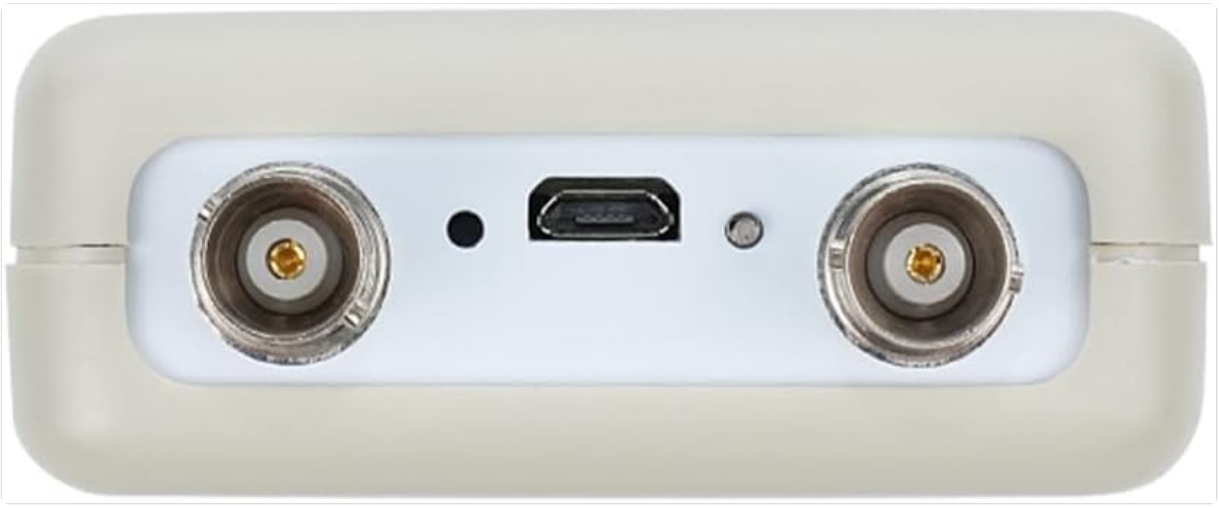

Figure 2: Rear view of the Fosc21C1 oscilloscope, highlighting the Micro-USB port in the center and the two BNC input connectors on either side.

Package Contents:

- 1 x Fosc21C1 Oscilloscope Unit
- 2 x BNC Connectors
- 1 x USB Data Cable

3. Setup

Follow these steps to set up your Fosc21C1 oscilloscope:

1. **Connect to Computer:** Use the provided USB data cable to connect the Micro-USB port on the Fosc21C1 oscilloscope to an available USB port on your computer. The device is powered via this USB connection.

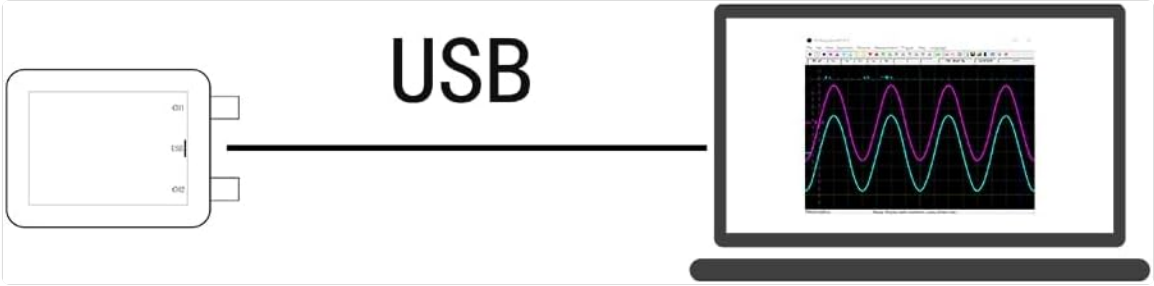

Figure 3: Connection diagram illustrating the Fosc21C1 oscilloscope linked to a computer via a USB cable for data transfer and power.

2. **Software Installation:** Install the dedicated software for the Fosc21C1 oscilloscope on your computer. Refer to the software's installation guide for detailed instructions. The software is essential for displaying and analyzing waveforms.
3. **Connect Probes:** Attach your oscilloscope probes (not included in the standard package, but BNC connectors are provided) to the BNC input interfaces (CH1 and CH2) on the Fosc21C1 unit. Ensure a secure connection.

4. Operating Instructions

Once the device is connected and the software is installed, you can begin using the Fosc21C1 for signal analysis.

Basic Operation:

- **Software Interface:** Launch the oscilloscope software on your computer. The software will display the waveforms from CH1 and CH2.
- **Channel Input:** The device supports 2-channel input, allowing for synchronous display of two different signals.
- **Amplitude Measurement:** The software provides automatic amplitude measurement with four selectable modes.
- **Time Domain Adjustment:** Adjust the time domain range from 10 uS/division to 10800 S/division within the software.
- **Signal Capture (Trigger):** Utilize the input capture function. Any channel can be set as a capture source. You can configure the trigger to activate on a rising or falling edge signal, and adjust the capture signal level.
- **Waveform Expansion/Compression:** The software allows you to lock signals and expand or compress waveforms for detailed analysis.

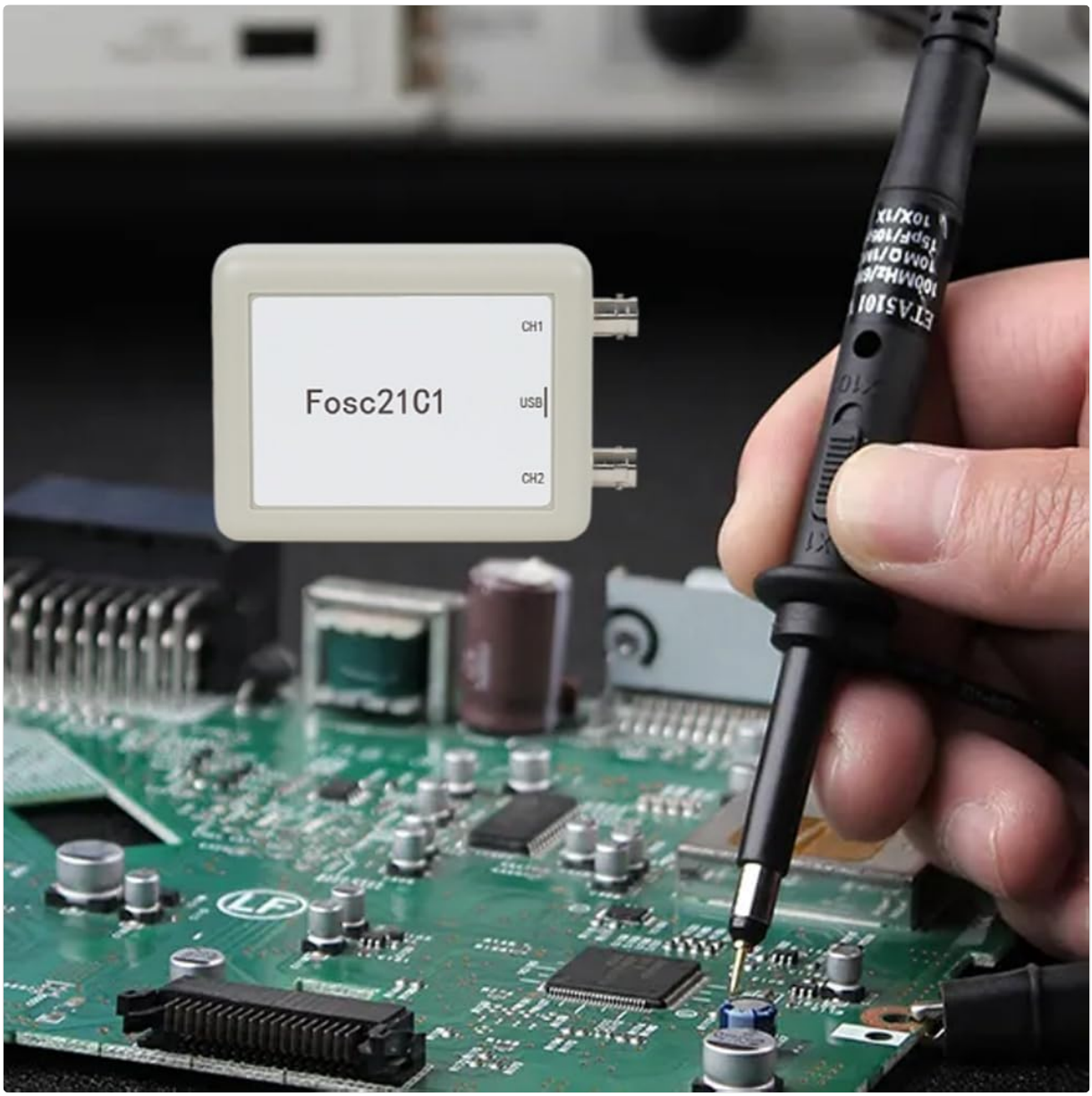

Figure 4: The Fosc21C1 oscilloscope in operation, with a probe connected to a circuit board, illustrating its application in electronic testing.

Data Recording and Storage:

- The Fosc21C1 supports data recording and storage with a depth of 8,388,608 x 5 data points.
- Maximum record and save data time is approximately 90 hours.
- Recorded data can be saved to your computer and automatically loaded when the software is restarted.
- Backup functionality allows for later viewing of saved waveform data.

5. Maintenance

To ensure the longevity and accurate performance of your Fosc21C1 oscilloscope, follow these maintenance guidelines:

- **Cleaning:** Use a soft, dry cloth to clean the exterior of the device. Avoid using abrasive cleaners or solvents, which can damage the plastic housing.

- **Storage:** Store the oscilloscope in a cool, dry place away from direct sunlight, extreme temperatures, and high humidity.
- **Handling:** Handle the device with care to prevent physical damage. Avoid dropping or subjecting it to strong impacts.
- **Cable Care:** Inspect the USB data cable and BNC connectors regularly for any signs of wear or damage. Replace damaged cables immediately to ensure reliable operation.

6. Troubleshooting

If you encounter issues with your Fosc21C1 oscilloscope, refer to the following common problems and solutions:

- **Device Not Recognized by Computer:**
  - Ensure the USB cable is securely connected to both the oscilloscope and the computer.
  - Try connecting to a different USB port on your computer.
  - Verify that the necessary drivers and software are correctly installed.
- **No Waveform Display:**
  - Check that the probes are correctly connected to the BNC inputs and the circuit under test.
  - Confirm that the oscilloscope software is running and configured to display the active channels.
  - Ensure the input signal is within the measurable voltage range of the device.
- **Inaccurate Readings:**
  - Verify probe compensation if using passive probes.
  - Check for proper grounding of the oscilloscope and the circuit.
  - Ensure the amplitude adjustment settings in the software are appropriate for the input signal.

7. Specifications

Technical parameters and specifications for the Jalzdieod Fosc21C1 2-Channel USB PC Oscilloscope:

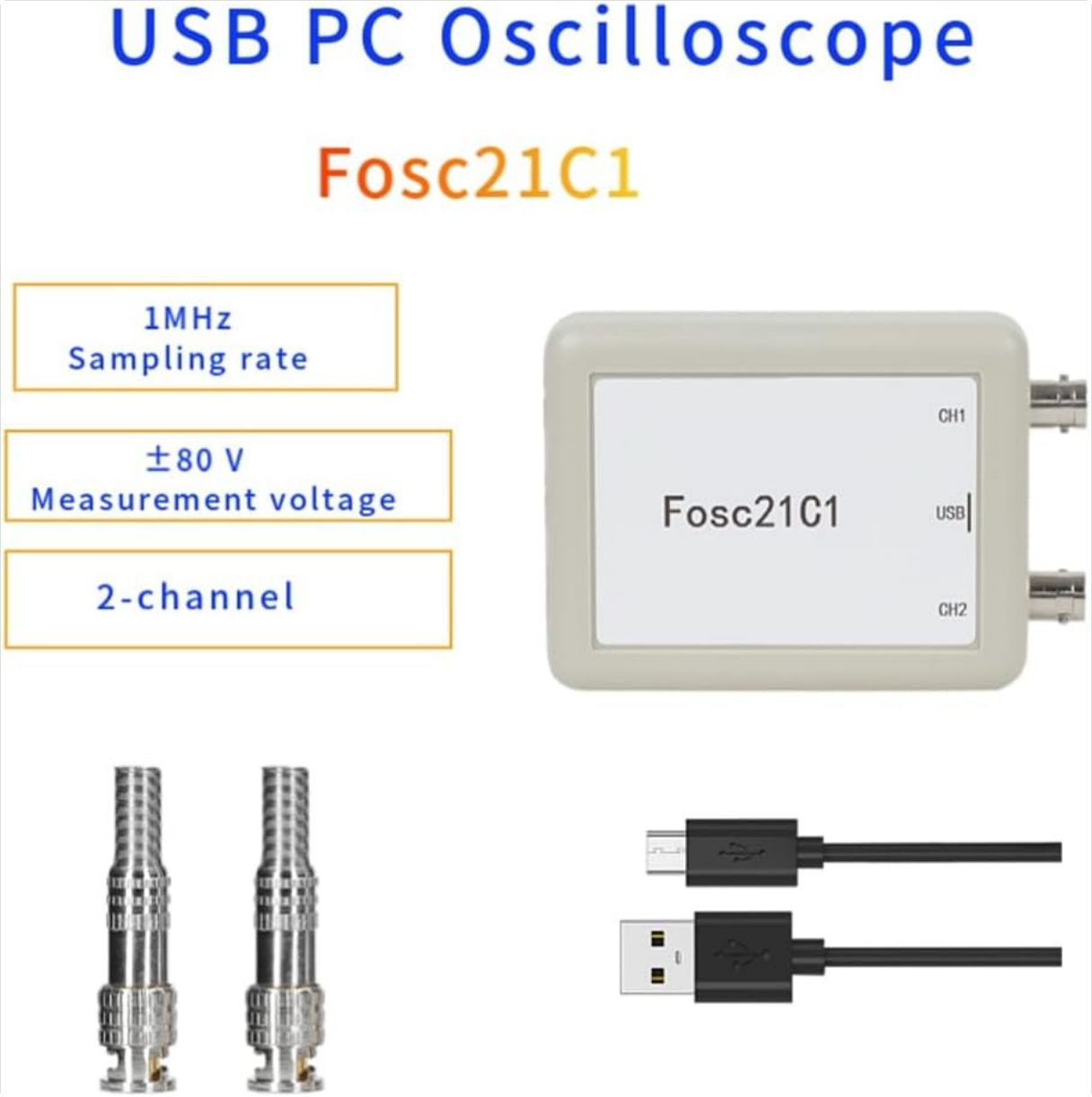

Figure 5: Overview of Fosc21C1 key specifications and included accessories.

Parameter	Value
Interface Type	Micro-USB 2.0
Signal Input Interface	BNC interface
Maximum Sampling Rate	1 MHz (2 x 1 MHz)
Operating Voltage	5 V (Micro-USB power supply)
Consumption Current	Less than 2 A
Measurable Frequency Range	0 Hz - 250 kHz
Amplitude Adjustment Range	2 mV, 5mV, 10mV, 20mV, 25mV, 40mV, 50mV, 80mV, 0.1V, 0.2V, 0.5V, 1V, 2V, 5V, 10V
Input Impedance	1 MΩ / 20 pF

Parameter	Value
Maximum Measurement Voltage	±80 V
Time Domain Range	10 uS/division - 10800 S/division
Data Recording Depth	8,388,608 x 5
Maximum Data Recording Time	90 hours
Host Dimensions (L x W x H)	115mm x 70mm x 29mm
Item Weight	6.1 ounces
Product Dimensions	5.91 x 4.33 x 1.97 inches
Model Number	500718430

8. Warranty and Support

For warranty information and technical support, please refer to the documentation provided with your purchase or contact Jalzdieod customer service. Keep your purchase receipt as proof of purchase for warranty claims.