VOLTCRAFT 8210

VOLTCRAFT 8210 Function Generator 10 MHz (max) 2 Channels Instruction Manual

Model: 8210 | Brand: VOLTCRAFT

1. Introduction

This manual provides detailed instructions for the safe and efficient operation of your VOLTCRAFT 8210 Function Generator. The 8210 is a versatile instrument combining a sweep function, function generator, pulse generator, and frequency counter into a single unit. It is designed for professional use, generating various waveforms with precision.

2. Safety Instructions

Please read these safety instructions carefully before operating the device to prevent injury and damage. Keep this manual for future reference.

- Always connect the device to a grounded power outlet.
- Do not operate the device in wet or damp conditions.
- Ensure proper ventilation to prevent overheating.
- Do not open the device casing; there are no user-serviceable parts inside. Refer servicing to qualified personnel.
- Disconnect power before cleaning or moving the unit.
- Avoid applying voltages exceeding the specified maximum input ratings.

3. Product Overview

The VOLTCRAFT 8210 is a versatile 4-in-1 instrument designed for various electronic testing and development applications. It integrates the functionalities of a sweep function generator, a standard function generator, a pulse generator, and a frequency counter.

Key Features:

- **Four-in-one functionality:** Sweep function, function generator, pulse generator, and frequency counter.
- **Frequency Range:** Generates signals from 0.1 Hz to 10 MHz.
- **Frequency Counter:** Measures frequencies from 2 Hz to 100 MHz.
- **Waveform Generation:** Produces professional-grade rectangular, triangular, and sawtooth signals.
- **Output Amplitude:** Maximum amplitude of 20 Vpp (10 Vpp into 50 ohms).

Product Images:

Figure 3.1: Front view of the VOLTCRAFT 8210 Function Generator, displaying the main controls, digital display, and various output connectors. This image highlights the user interface for frequency, amplitude, and waveform selection.

Figure 3.2: Angled perspective of the VOLTCRAFT 8210 Function Generator, providing a clearer view of the top-mounted controls and the front panel layout. This image helps in identifying the physical dimensions and overall design.

Figure 3.3: Side profile of the VOLTCRAFT 8210 Function Generator, illustrating its depth and connection ports on the side, if any. This

view emphasizes the unit's form factor.

Official Product Videos:

No official product videos from the seller are available for embedding at this time.

4. Setup

1. **Unpacking:** Carefully remove the function generator from its packaging. Inspect the unit for any signs of damage during transit. Retain the packaging for future storage or transport.
2. **Placement:** Place the unit on a stable, flat surface with adequate ventilation around it. Avoid placing it near heat sources or in direct sunlight.
3. **Power Connection:** Connect the provided power cord to the power input on the rear panel of the 8210 and then to a suitable grounded AC power outlet. Ensure the power switch is in the OFF position before connecting.
4. **Initial Power On:** Flip the power switch to the ON position. The display should illuminate, indicating the unit is receiving power.
5. **Output Connections:** Connect your test leads or cables to the appropriate output terminals (e.g., BNC connectors for main output, TTL output) on the front panel, depending on your application.

5. Operating Instructions

This section details the basic operation of the VOLTCRAFT 8210 for its primary functions.

5.1. Function Generator Mode

1. **Select Waveform:** Use the dedicated buttons (e.g., Sine, Square, Triangle) on the front panel to select the desired output waveform.
2. **Set Frequency:** Adjust the frequency using the frequency control knob and range buttons. The display will show the current frequency.
3. **Adjust Amplitude:** Use the amplitude knob to set the desired output voltage peak-to-peak (Vpp). Monitor the output with an oscilloscope for precise adjustment.
4. **DC Offset:** If available, use the DC offset control to add a DC bias to the output signal.
5. **Connect Output:** Connect the main output (e.g., BNC) to your circuit or device under test.

5.2. Sweep Function Mode

The sweep function allows the output frequency to vary automatically over a specified range.

1. **Activate Sweep:** Press the "Sweep" button to enable this mode.
2. **Set Start/Stop Frequencies:** Use the frequency controls to define the lower and upper limits of the sweep range.
3. **Adjust Sweep Rate:** Set the sweep duration or rate using the dedicated control.
4. **Monitor Output:** Observe the sweeping signal on an oscilloscope to verify the settings.

5.3. Frequency Counter Mode

The built-in frequency counter measures external signals.

1. **Select Counter Input:** Connect the external signal to the designated frequency counter input terminal.
2. **Activate Counter:** Press the "Counter" or "Freq. Meas." button to switch to frequency measurement mode.

3. **Read Frequency:** The display will show the frequency of the input signal.

6. Maintenance

Proper maintenance ensures the longevity and accuracy of your VOLTCRAFT 8210.

- **Cleaning:** Use a soft, dry cloth to clean the exterior of the unit. For stubborn dirt, a slightly damp cloth with mild detergent can be used, ensuring no liquid enters the device. Do not use abrasive cleaners or solvents.
- **Storage:** When not in use for extended periods, store the unit in a dry, dust-free environment, preferably in its original packaging.
- **Calibration:** Periodic calibration by qualified service personnel is recommended to maintain measurement accuracy, especially for critical applications.

7. Troubleshooting

If you encounter issues with your VOLTCRAFT 8210, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
No power/Display off	Power cord disconnected, power switch off, faulty outlet.	Check power cord connection, ensure power switch is ON, test outlet with another device.
No output signal	Output cable disconnected, amplitude set to zero, incorrect function selected.	Verify output cable connection, increase amplitude, ensure correct waveform/function is selected.
Incorrect frequency reading (counter)	Signal too weak, incorrect input range, noisy signal.	Ensure signal amplitude is sufficient, check input range settings, use shielded cables.

If the problem persists after trying these solutions, contact customer support.

8. Specifications

The following are the technical specifications for the VOLTCRAFT 8210 Function Generator:

- **Manufacturer:** VOLTCRAFT
- **Model Number:** 8210
- **Item Weight:** 3 kilograms
- **Number of items in package:** 1
- **Batteries Included:** No
- **Batteries Required:** No
- **ASIN:** B00EPLFP46
- **First Available Date on Amazon.fr:** 15 February 2014
- **Spare Parts Availability:** Information unavailable on spare parts

9. Warranty and Support

Information regarding specific warranty terms and conditions for the VOLTCRAFT 8210 Function Generator is not available in the provided product data. Please refer to the documentation included with your purchase or contact VOLTCRAFT customer support directly for warranty details and technical assistance.
For further support, visit the official VOLTCRAFT website or contact their authorized service centers.