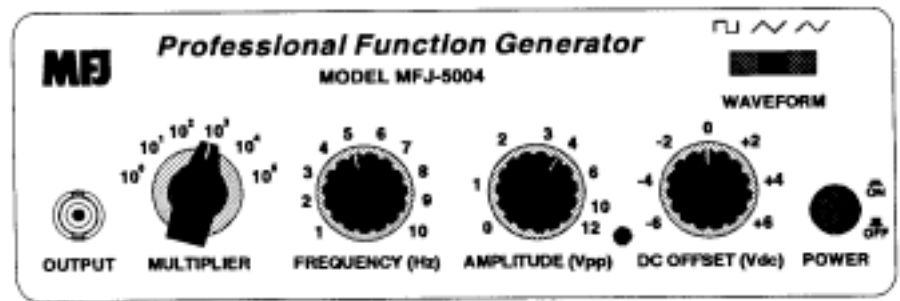


Introduction

Thank for your purchase of the MFJ-5004 Professional Function Generator. The MFJ-5004 provides precision sine, square, and triangle waveforms from 1 Hz to 1 MHz in six decade ranges. Waveform amplitude is continuously adjustable from 0 to 12 volts peak-to-peak. DC offset is adjustable from -6 to +6 VDC. Output impedance is 375 ohms, with short-circuit output protection.

Please read this instruction manual carefully before operating the MFJ-5004 Professional Function Generator!

Control Functions



Refer to the following diagram for location of each control.

Power Section

Power Adapter: A 12 VAC power adapter included with this unit for connecting to a 120 VAC 60 Hz wall outlet. The MFJ-5004 is designed to run from 12 VAC *only* and will not work with conventional 12 VDC power sources. Use only the wall-adapter transformer supplied or an equivalent AC source.

Power Switch: Used to turn the power on or off. When power is on, the red LED will illuminate.

PWR LED: Illuminates to indicate the power is on.

Function Generator

Multiplier Switch:	A rotary switch that selects one of six frequency ranges for the function generator.
Frequency Control:	A potentiometer that allows for the adjustment of the function generator frequency from 1 to 10 times the Multiplier switch setting.
Amplitude Control:	A potentiometer that allows for the adjustment of the waveform amplitude from 0 to 12 Vp-p (volts-peak-to-peak).
DC Offset Control:	A potentiometer that allows for the adjustment of the waveform D
Waveform Switch:	A slide switch that selects one of three function generator waveforms: square, triangle or sine waveform.
Output Connector:	BNC connection for the function generator output.

Operation

To perform the following operation, you need an oscilloscope.

1. Press the Power switch to the "OFF" position. Insert the 12 VAC adapter into the Power jack at the back panel of the MFJ-5004. Plug the adapter into a wall outlet and turn on the Power switch. The PWR LED should illuminate.
2. Set the Multiplier knob to the 10^2 position.
Set the Frequency knob to the 12 o'clock position. Set the Amplitude knob to maximum. Set the DC Offset knob to the 12 o'clock position. Set the Waveform switch to sine wave.
3. Connect the scope probe to the BNC Output connector and observe the output signal. Set the oscilloscope time base and input attenuator for proper display. A sine wave should be observed.
4. Adjust the Multiplier, Frequency, Amplitude, and/or DC Offset knob and observe the output signal. Adjusting the Multiplier or Frequency knob

should change the signal frequency. Adjusting the Amplitude knob should affect the peak-to-peak voltage of the waveform. Turning the DC Offset knob should set the DC level of the waveform.

5. Set the Waveform switch for a triangle wave. Next set for a square wave. Each waveform signal should be observed.

Troubleshooting

If your MFJ-5004 Professional Function Generator is not performing to your expectations, please try these simple steps. If you are still unable to resolve the problems, refer to the "Technical Assistance" section below.

Problem	Suggestion
No power.	<ul style="list-style-type: none"> • Check the power adapter.
Power LED won't come on when switch is placed in the ON position.	<ul style="list-style-type: none"> • Unplug the unit, then reinsert adapter into the AC outlet and switch the power on. <ul style="list-style-type: none"> • The power adapter is not plugged into the Power jack. • The Power switch is not in the ON position. • Make sure the power adapter is plugged into the wall outlet. • <u>Power LED may be defective.</u>

Technical Assistance

If you have any problem with this unit first check the appropriate section of this manual. If the manual does not reference your problem or your problem is not solved by reading the manual you may call *MFJ Technical Service* at 662-323-0549 or the *MFJ Factory* at **662-323-5869**. You will be best helped if you have your unit, manual and all information on your station handy so you can answer any questions the technicians may ask.

You can also send questions by mail to MFJ Enterprises, Inc., 300 Industrial Park Road, Starkville, MS 39759; by FAX to 662-323-6551; or by email to techinfo@mfjenterprises.com. Please include a complete description of the problem, an explanation of exactly how you are using the unit when the problem arises, and a complete description of any equipment you are using with this unit.

Schematic

