

MFJ

MFJ-886B Frequency Counter User Manual



MFJ Enterprises, Inc
Starkville, MS 39759 USA

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Introduction

Thank you for purchasing MFJ-886B Frequency Counter. Please read this manual carefully before use.

The MFJ-886B frequency counter is specially designed to be used for frequency measurements, testing and calibration of wireless devices between 300kHz and 2.8GHz in two ranges. A telescoping whip antenna Included is for easy reception of transmitting equipment within about 3M.

Features:

- ◆ The MFJ-886B is equipped with a $\angle 45^\circ$ LCD display screen showing legible characters in a large font.
- ◆ LCD backlight for use in low light conditions.
- ◆ Has a large-capacity lithium battery.
- ◆ Works continuously for up to 12 hours.
- ◆ It is provided with a telescopic receiving antenna.
- ◆ It can work while being charged.
- ◆ It is designed with wide frequency range of 0.3MHz ~ 2.8GHz.
- ◆ It is light and handy, easy to use and environmentally friendly.
- ◆ The case is made of ABS material, which is durable, abrasion proof, corrosion proof and shatter proof.
- ◆ It possesses high anti-interference performance.

Safety precautions:

Please keep the MFJ-886B and all the accessories out of the reach of children and pets in order to avoid injury as a result of swallowing its small parts and accessories.

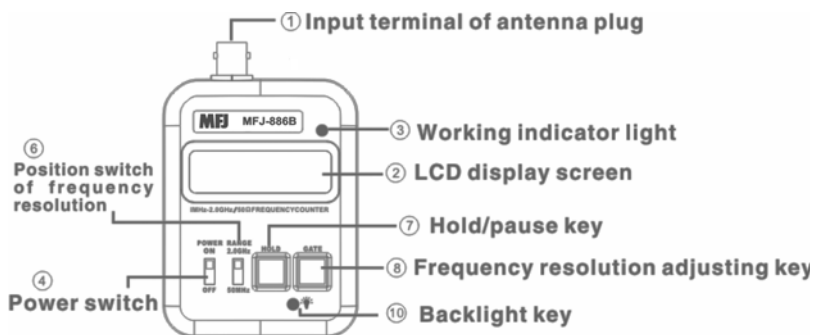
Do not place the MFJ-886B in extreme temperature environments to prevent the reduction of battery capacity and the shortening of service life of the unit.

DO NOT put the MFJ-886B into a fire. The batteries can explode if burnt.

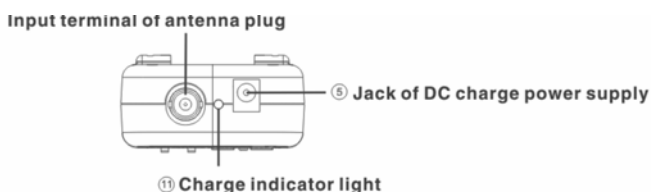
Packing list:

Packing List			
MFJ-886B Frequency Counter	1pcs	Power Adapter	1pcs
Telescopic rod antenna	1pcs	User Manual	1pcs

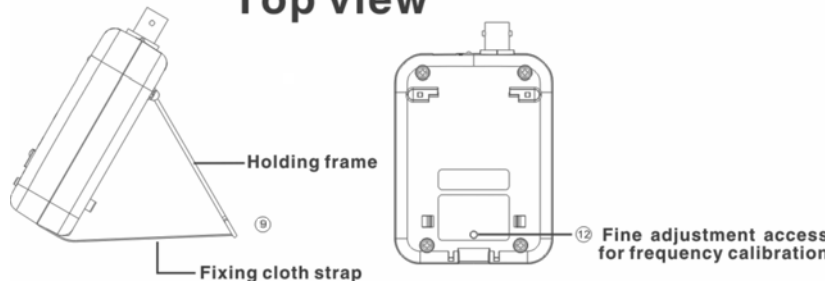
Functional description:



Front view










Top view





Side view




Back view

Functional Description of the Frequency Counter			
No.	Function	Icon	Description
1	Input terminal of antenna plug		Input impedance of the antenna is 50Ω.
2	LCD display screen		It shows the measured frequency.
3	Working indicator light		Sampling rate indication
4	Power switch		Set to the “OFF” position to switch off the frequency counter. Set to the “ON” position to switch on the frequency counter.
5	Jack of DC charge power supply		Input jack of charge power supply 12V—⊖—+12V
6	Position of the RANGE switch.		1. Set to the “50MHz” position for the 0.3MHz to 50MHz range. 2. Set to the “2.8 GHz” position for the 50MHz to 2.8 GHz range.
7	HOLD key		The function of holding the reading

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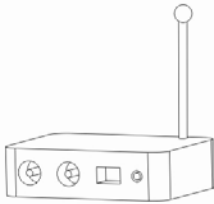
8	GATE key		<p>1. This is the frequency resolution key with four positions: Set it in the “1” position, the resolution will be 1KHz; Set it in the “2” position, the resolution will be 100Hz; Set it in the “3” position, the resolution will be 10Hz; Set it in the “4” position, the resolution will be 1Hz.</p> <p>2. The flashing rate of the LED working indicator shows the gate period position.</p>
9	Holding frame / Fixing cloth strap		<p>When needed, pull out the holding frame to stand the frequency counter at an angle of $\angle 45^\circ$.</p>

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10	Backlight key		<p>1. It is used to turn on and off the backlight of LCD display screen.</p> <p>2. Press it once and the backlight of LCD display screen will be on; press it once again and the backlight of LCD display screen will turn off.</p> <p>3. Press and hold it for 3s and the backlight of LCD display screen will be on for an extended period; press it once again and the backlight of LCD display screen will turn off.</p>
11	Charge indicator light		<p>1. Red light is on when the frequency counter is being charged;</p> <p>2. Green light is on when the frequency counter is fully charged.</p>
12	Fine adjustment access for frequency calibration		<p>This access port can be used for frequency calibration when needed to adjust for drift of the crystal over time due to aging. An accurate time base is required to adjust to the best frequency counter accuracy.</p>

Operation:

- ◆ Set the “POWER” switch in the “ON” position, the LCD display screen will light up and the Working Indicator light will flash.
- ◆ Attach the telescopic rod antenna provided or a test probe (not provided) into the antenna plug port.
- ◆ Bring the frequency counter to the wireless transmitting device under test (the device should be on and in the transmitting mode). Select the proper frequency range of transmitting device with the “RANGE” switch. The frequency counter will receive and show the frequency from the transmitting device on the LCD display screen (as shown in the figure below).



Transmitting device

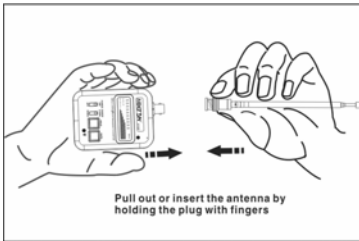


Frequency counter

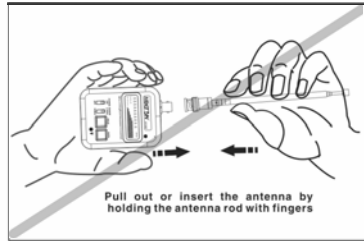
- ◆ Select frequency resolution needed by pressing the “GATE” key to adjust to the desired position. The Working Indicator flashes at the GATE rate.
- ◆ If no key is pressed in 20 minutes after the frequency counter is switched on the frequency counter will automatically enter the sleep mode where both the LCD display screen and the working indicator light will go out. To wake up the frequency counter from the sleep mode just press either “HOLD” or “GATE” key.

Operating precautions:

- ◆ If the transmitting power of transmitting device is higher than about 10W, make sure the distance between antennas of the transmitting device and the frequency counter are at least 30cm to prevent overload and damage to the internal parts from excessive signal.
- ◆ When testing with a test probe be careful to not overload the counter with high level signals or large DC voltages to prevent overload and damage to the internal parts from excessive signal.
- ◆ When installing and removing the frequency counter's antenna, hold the antenna by the connector not the whip to prevent damage to the plug and antenna (as shown in the figure below).



Correct



Wrong

- ◆ Do not dispose of this discarded electronic product together with domestic garbage. Recycle wherever possible. In some countries and regions, there are departments and services specializing in sorted collection and disposal of discarded electronic products. For more information, please consult local relevant department or recycling company.

Specifications:

Item	Specification
Adapter charger	Input:AC100-240V Output:DC12V 1,000MA
Operating voltage	DC7.4V
Operating temperature	-10°C~+40° C
Test frequency range in the 50MHz position	0.3MHz~50MHz
Test frequency range in the GHz position	50MHz~2.8GHz
Lithium battery	DC7.4V/800MA lithium battery and PCM (protection circuit module)
Charging time	3 ~ 4 hours
LCD viewing angle	∠45°
Working time	≥ 12 hours
Timing to sleep mode	20 minutes

12 MONTH LIMITED WARRANTY

MFJ Enterprises, Inc. Warrants to the original owner of this product, if manufactured by MFJ Enterprises, Inc. and purchased from an authorized dealer or directly from MFJ Enterprises, Inc. to be free from defects in material and workmanship for a period of 12 months from date of purchase provided the following terms of this warranty are satisfied.

The purchaser must retain the dated proof-of-purchase (bill of sale, canceled check, credit card or money order receipt, etc.) describing the product to establish the validity of the warranty claim and submit the original or machine reproduction of such proof-of-purchase to MFJ Enterprises, Inc. at the time of warranty service. MFJ Enterprises, Inc. shall have the discretion to deny warranty without dated proof-of-purchase. Any evidence of alteration, erasure, or forgery shall be cause to void any and all warranty terms immediately.

1. MFJ Enterprises, Inc. agrees to repair or replace at MFJ's option without charge to the original owner any defective product under warranty, provided the product is returned postage prepaid to MFJ Enterprises, Inc. with a personal check, cashiers check, or money order for \$12.00 covering postage and handling.
2. MFJ Enterprises, Inc. will supply replacement parts free of charge for any MFJ product under warranty upon request. A dated proof-of-purchase and a \$8.00 personal check, cashiers check, or money order must be provided to cover postage and handling.
3. This warranty is NOT void for owners who attempt to repair defective units. Technical consultation is available by calling (662) 323-5869.
4. This warranty does not apply to kits sold by or manufactured by MFJ Enterprises, Inc.
5. Wired and tested PC board products are covered by this warranty provided only the wired and tested PC board product is returned. Wired and tested PC boards installed in the owner's cabinet or connected to switches, jacks, or cables, etc. sent to MFJ Enterprises, Inc. will be returned at the owner's expense unrepaired.
6. Under no circumstances is MFJ Enterprises, Inc. liable for consequential damages to person or property by the use of any MFJ products.
7. Out-of-warranty Service: MFJ Enterprises, Inc. will repair any out-of-warranty product provided the unit is shipped prepaid. All repaired units will be shipped COD to the owner. Repair charges will be added to the COD fee unless other arrangements are made.

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8. This warranty is given in lieu of any other warranty expressed or implied.
9. MFJ Enterprises, Inc. reserves the right to make changes or improvements in design or manufacture without incurring any obligation to install such changes upon any of the products previously manufactured.
10. All MFJ products to be serviced in-warranty or out-of-warranty should be addressed to MFJ Enterprises, Inc., 300 Industrial Park Road, Starkville, Mississippi 39759, USA and must be accompanied by a letter describing the problem in detail along with a copy of your dated proof-of-purchase.
11. This warranty gives you specific rights, and you may also have other rights which vary from state to state.

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