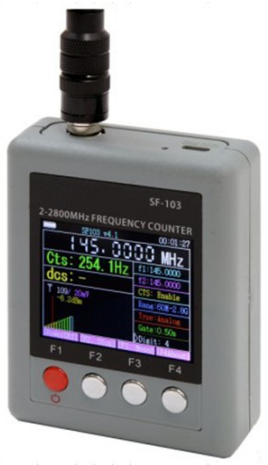
SF-103 HAND-HELD FREQUENCY COUNTER



Feature & Specification:

- •Frequency range : 2MHz-2800MHz•Cover for : VHF/UHF
- •CTCSS/DCS Decoder
- •DMR Frequency counter
- •Digital select digi 0.000 or 0.0000 or. 0.00000 (see table 1)
- •Work by TCXO (crystal)
- •Auto power off 1-9minutes
- •Frequency Response time: 0.1,0.25,0.5,1.0S,
- •Color Display 240x320 Pixels, LCD Dim level setting
- •Build-in 3.7V Li-ion battery
- •Net Weight: 113g
- •4 button for all funtion control
- •Charging battery LED indicator

2 Ch. Select:(A. 27-2.8GHz, B. 2MHz-200MHz)

USER'S MANUAL

Congratulations on your purchase of Frequency Counter.
Before Operating the frequency counter, please read this manual ,thoroughly .
Make sure that the following accessories are supplied,with your frequency counter:

UNPACKING AND CHECKING EQUIPMENTS:
"SF-103 (1), Antenna suit for VHF/UHF (1) ,AC Power Adapter (1),USB Charger ,Cable(1),User Manual (1)
Please contact the sales agent in case of accessory missing.

Product introduction
The frequency meter capable of measuring the parameters of the frequency of the continuous carrier signal walkie- talkie ,with signal strength indicator. it is the tool of choice for maintenance personnel, test frequency and signal strength of wireless enthusiasts. This portable frequency counter is designed for counting continuous wave signal comes from Two-way Radio. There are easy ranges for you to choose. The ranges cover most of the frequency of the two-ways-radios you want to measure. Its four-button control is easy to use and its small size allows you to carry it anywhere you like.Work by TCXO(Temperature Compensate X'tal (crystal) Oscillator) ,In the range of -25 ℃ ~ 55 ℃.

1.1 Power On/Off:

Power on ,press and Hold down the [Red key] by 3 second
Power off ,press and Hold down the [Red key] by 3 second of number count down to 0

1.2 Charging the battery :

Plug the power cord into adaptor , micro usb connect SF103
The Led indicating: *The RED light Charging * The Green light is Full

1.3 Setup the frequency Range :

Press[F2.stop] button ,[F3 -->] select function to "Rang"
Press the [F4 Ent] Select 27M-2.8G(27MHz-2800MHz) /<=200MHz (below 200MHz) ,
and then press[F2] to Run

1.4 Setup the time Gate :

Press[F2.stop] button ,[F3 --->] select Function to "Gate"
Press the [F4 Ent] select : 0.1s / 0.25s / 0.5s / 1.0s ,and then press [F2] to Run

1.5 Setup the Frequency counter digi :

Press[F2] botton ,[F3--->] select Function to "Gate"
Press[F4 Ent] Select : 3 / 4 / 5 / 6 , and then press [F2] to Run
! 27MHz-2.8GHz for 3 / 4 only , 2-200MHz for 3 / 4 / 5 / 6 , Detail Please see Table 1:

1.6 How to check Frequency of Digital DMR Radio

Press[F2] botton ,[F3 --->] select Function to" type" :Press [F4] select Analog / Digital(DMR) ,
and then Press [F2] to Run
!Note. Digital mode have 3 Decimal only.

1.7 How to ADJ. the Frequency mode of 27MHz -2.8GHz: (See PIC.2)

Press, [F3 MENU] , [F3 Down] / [F4 Up] to select the Gate to (0.1s/0.25s/0.5s/1.0s)
Press, [F2 Edit] / [F3 -] and [F4 +] to select the +/- 99
Press, [F1. Main] exit , and then press [F4 save] for save the setting .([F1] not save for

1.8 How to fine tune the Frequency mode of 2-200MHz: (See PIC.1)

Tune the PCB VR1 (Variable resistance)
(The factory has been set accurate, such as non-technical staff do not tune)

PIC.1

1.9 How to use [F3 menu] mode: (see PIC2)

Press, [F3 -] / [F4 +] select the function ,and then press [F2 edit] for edit mode ,
Press, [F3 -] / [F4 +] selecy for change the data .
Press, [F1. Main] exit , and then press [F4 save] for save the setting .
/([F1] not save for exit)

PIC.2

Caution:

1)Max. direct input signal 5Vp-p
2)Prohibit direct access to the radio antenna output,
resulting in damage to the frequency meter

Frequency Display Resolution / CTCSS ,DCS Decode frequency range

		Gate Time select (seconds)	Sample Display (100MHz)				CTCSS/DCS
			Digi				select A
SELECT A	27MHz-2.8GHz		3	4	5	6	Decode Range 132-173MHz 200-260MHz 400-519MHz
		0.10 s	100.000	100.0000			
		0.25 s	100.000	100.0000			
		0.50 s	100.000	100.0000			
		1.00 s	100.000	100.0000			
SELECT B	2MHz-200MHz	Gate Time select (seconds)	Sample Display (100MHz)				CTCSS/DCS
			Digi				select B
			3	4	5	6	Disable
		0.10 s	100.000	100.0000			
		0.25 s	100.000	100.0000			
		0.5 s	100.000	100.0000	100.00000	100.000000	
		1.00 s	100.000	100.0000	100.00000	100.000000	

* Supplier, the product will add functionality without having to give notice

Table1

SF-103 手持式频率计使用说明

特色 & 规格:

- •频率范围分2档：2MHz-2800MHz 包括：VHF / UHF 对讲机
- •CTCSS / DCS解码器
- •DMR频率计数器
- •数字选择数字0.000或0.0000或0.00000
- •由TCXO（温保晶振）
- •自动关机1-9分钟
- •频率响应时间：0.2-1秒。 （CTCSS / CDCSS> 0.5-1sec）
- •彩色显示240x320像素，液晶显示屏昏暗水平设置
- •内置3.7V锂离子电池
- •净重：113g
- •4个按钮所有功能控制
- •充电电池LED指示灯

恭喜您购买频率计数器。
操作频率计前，请仔细阅读本手册。使用频率计数器确保提供以下附件：
拆包和检查设备：
""SF-103（1），天线 VHF/UHF（1），交流电源适配器（1），USB充电缆（1），用户手册（1）
如果配件丢失，请联系销售代理。

产品介绍:

该频率计能够用信号强度指示器测量连续载波信号对讲机的频率参数。
它是维修人员的首选工具，无线爱好者的测试频率和信号强度。
这种便携式频率计数器设计用于计数来自双向无线电的连续波信号。
有很多选择范围。范围覆盖您要测量的双向无线电的大部分频率。
其四按钮控制使用方便，体积小巧，可随身携带。
TCXO（温度补偿X'tal（晶振）振荡器）工作，-25℃～-55℃范围。

1.1电源开/关:

打开电源，按住[红色键] 3秒钟
关闭电源，按住[红色键] 3秒钟的数字减少到0

1.2 电池充电:

将电源线插入适配器，Micro usb连接SF103
LED指示： *红灯亮充电 *绿灯亮充满

1.3设置频率范围:

按[F2]键一下，[F3 --->]选择功能“Rang”
按[F4 Ent]选择27M-2.8G(27MHz-2800MHz) /<=200MHz (200MHz 以下)，然后按[F2]运行.

1.4设置时间门：

按[F2]键，[F3 --->]选择功能“gate"
按[F4 Ent]选择：0.1s / 0.25s / 0.5s / 1.0s，然后按[F2]运行.

1.5设置频率计数器数字:

按[F2]键，[F3]选择功能到“Gate”
按[F4 Ent]选择：3/4/5/6，然后按[F2Run]运行
(*档A- 27Mhz-2.8GHz仅限 小數后 3 / 4，档B-2-200MHz为3/4/5/6，详情请参见Table1）

ANALOG mode of CTCSS（Hz）（P.S：无线电必须为模拟模式，频率为 FREQ. range:132-173MHz，200-260MHz，400-519MHz)

50.0	79.7	100	127.3	159.8	179.9	203.5	241.8
55.0	82.5	103.5	131.8	162.2	183.5	206.5	250.3
67.0	85.4	107.2	136.5	165.5	186.2	210.7	254.1
69.3	88.5	110.9	141.3	167.9	189.9	218.1	
71.9	91.5	114.8	146.2	171.3	192.8	225.7	
74.4	94.8	118.8	151.4	173.8	196.6	229.1	
77	97.4	123	156.7	177.3	199.5	233.6	

ANALOG mode of DCSS（仅限N个代码）（P.S：无线电必须为模拟模式，频率为 FREQ. range:132-173MHz，200-260MHz，400-519MHz)

Standard N	sf103	Standard N	sf103	Standard N	sf103	Standard N	sf103	Standard N	sf103	Standard N	sf103
23	23.0 N	115	115 N		212 N	306	306 N	431	431 N	632	632 N
25	25.0 N	116	116 N	223	223 N	311	311 N	432	432 N	654	654 N
26	26.0 N		122 N		225 N	315	315 N	445	445 N	662	662 N
31	31.0 N	125	125 N	226	226 N		325 N	464	464 N	664	664 N
32	32.0 N	131	131 N	243	243 N	331	331 N	465	465 N	703	703 N
	36.0 N	132	132 N	244	244 N		332 N	466	466 N	712	712 N
43	43.0 N	134	134 N	245	245 N	343	343 N	503	503 N	723	723 N
47	47.0 N	143	143 N		246 N	346	346 N	506	506 N	731	731 N
51	51.0 N		145 N	251	251 N	351	351 N	516	516 N	732	732 N
	53.0 N	152	152 N		252 N		356 N	532	532 N	734	734 N
54	54.0 N	155	155 N		255 N	364	364 N	546	546 N	743	743 N
65	65.0 N	156	156 N	261	261 N	365	365 N	565	565 N	754	754 N
71	71.0 N	162	162 N	263	263 N	371	371 N	606	606 N		
72	72.0 N	165	165 N	265	265 N	411	411 N	612	612 N		
73	73.0 N	172	172 N		266 N	412	412 N	624	624 N		
74	74.0 N	174	174 N	271	271 N	413	413 N	627	627 N		
114	114 N	205	205 N		274 N	423	423 N	631	631 N		

1.6如何检查数字DMR收音机的频率

按[F2 Stop]键，[F3--->]选择功能键入：通过[F4]将模式更改为模拟/数字(DMR)，然后按[F2 Run]运行
F1 [MENU 菜单]，F4[SAVE 保存]
！注意：数字模式(DMR)只有3个小数位

1.7如何微调计数器的档A- 27MHz-2.8GHz频率偏差： (看圖 PIC.2)

按[F3 MENU]，[F3向下]和[F4向上]选择门gate 0.1s / 0.25s / 0.5s / 1.0s）
按[F2 edit]，[F3]和[F4 +]选择微调+/- 99
按[F1menu]，然后按[F2] save,保存设置。

1.8如何微调计数器的档B- 2MHz-200MHz频率偏差： (看圖 PIC.1)

調整底板上 VR1（可變電阻）
(*出厂时已设定准确，如非技术人员请勿调教)

1.9如何使用[F3菜单]模式:(看圖PIC.2）

[F3-] [F4 +]选择功能，然后按[F2编辑]进行编辑，
[F3-] [F4 +]用于更改数据。
[F1]退出，然后按[F4保存]保存设置。 "

警告：
1. 最大值。直接输入信号5Vpp
2. 禁止直接接入对讲机输出，这会引致频率计损坏

*供应商，产品将添加功能，而无需通知