User manual SURECOM SF-103

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 SF-103

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 "Range"

Press the [F4 Ent] Select 27 MHz -2.8 GHz (27 MHz – 2800 MHz) / <= 200 MHz (below 200 MHz),

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 / 1.0 s, and then press [F2] to Run

1.5 Setup the Frequency counter digital:

Press [F2] button, [F3--->] select Function to "Gate"

Press [F4 Ent] Select: 3 / 4 / 5 / 6, and then press [F2] to Run

27 MHz - 2.8 GHz for 3 / 4 only, 2 – 200 MHz for 3 / 4 / 5 / 6, Detail Please see Table 1.

1.6 How to check Frequency of Digital DMR Radio

Press [F2] button, [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 27 MHz - 2.8 GHz:

Press, [F3 MENU], [F3 Down] / [F4 Up] to select the Gate to (0.1 s / 0.25 s / 0.5 s / 1.0 s)

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 exit)

1.8 How to fine tune the Frequency mode of 2 – 200 MHz:

Tune the PCB VR1 (Variable resistance)

(The factory has been set accurate, such as non-technical staff do not tune)

1.9 How to use [F3 menu] mode:

Press, [F3 -] / [F4 +] select the function, and then press [F2 edit] for edit mode,

Press, [F3 -] / [F4 +] select for change the data.

Press, [F1 Main] exit, and then press [F4 save] for save the setting ([F1] not save for exit)

Caution:

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

Table 1: Frequency Display Resolution / CTCSS, DCS Decode frequency range

SELECT A	27 MHz - 2.8 GHz	Gate Time select (seconds)	Sample Display (100 MHz)				CTCSS/DCS
			Digital				select A
			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	2 MHz – 200 MHz	Gate Time select (seconds)	Sample Display (100 MHz)				CTCSS/DCS
			Digital				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	

How to check CTCSS/DCS code:

1. Radio must be 132-173 / 200 – 260 MHz / 400 – 519 MHz
2. Radio must be ANALOG

Table 2: CTCSS/DCS Decoder for ANALOG mode

CTCSS (Hz)			
50.0	97.4	151.4	192.8
55.0	100.0	156.7	196.6
67.0	103.5	159.8	199.5
69.3	107.2	162.2	203.5
71.9	110.9	165.5	206.5
74.4	114.8	167.9	210.7
77.0	118.8	171.3	218.1
79.7	123.0	173.8	225.7
82.5	127.3	177.3	229.1
85.4	131.8	179.9	233.6
88.5	136.5	183.5	241.8
91.5	141.3	186.2	250.3
94.8	146.2	189.9	254.1

Table 3: CDCSS for ANALOG mode (N code only)

Standard(N)	sf103 check	Standard(N)	sf103 check	Standard(N)	sf103 check	Standard(N)	sf103 check
23	23	143	143		266	465	465
25	25		145	271	271	466	466
26	26	152	152		274	503	503
31	31	155	155	306	306	506	506
32	32	156	156	311	311	516	516
	36	162	162	315	315	532	532
43	43	165	165		325	546	546
47	47	172	172	331	331	565	565
51	51	174	174		332	606	606
	53	205	205	343	343	612	612
54	54		212	346	346	624	624
65	65	223	223	351	351	627	627
71	71		225		356	631	631
72	72	226	226	364	364	632	632
73	73	243	243	365	365	654	654
74	74	244	244	371	371	662	662
114	114	245	245	411	411	664	664
115	115		246	412	412	703	703
116	116	251	251	413	413	712	712
	122		252	423	423	723	723
125	125		255	431	431	731	731
131	131	261	261	432	432	732	732
132	132	263	263	445	445	734	734
134	134	265	265	464	464	743	743
						754	754