

# 69-Channel Personal FM Transceiver





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# 1. Controls









## 2.1 Squelch Level Representation



## 2.2 Battery Level Representation



# 3. Specification

General

Frequency Ranges:	433.075-434.775 MHz		
Channel Steps:	12.5/25KHz		
Channel:	69/137 Channel		
Frequency Stability:	±5 (-10°C - +50°C)		
Emission Types:	F3E		
Antenna Impedance:	50ohm		
Supply Voltage:	2xAA Battery (2.4V-3V)		
RF Power Output	<10dBm		
Maximum Deviation	±5KHz		

## 4. Operation

### 4.1 Power On/Off / Volume Control



Rotate the volume knob anti-clockwise until a tick sound is heard to power on the device. Rotate the knob further to volume up and vice versa.

#### 4.2 Beep On/Off



The transceiver beeps each time you press a key. The beep volume depends on the position of the volume control knob. The key tone can be toggle on/off by pressing [FUNCTION] key during power up.

#### 4.3 Channel Spacing



Either 25KHz channel spacing (69 channels) or 12.5KHz channel spacing (137 channels) can be selected by pressing [Monitor] key during power up. User can easily notify which system he is using from LCD.

Upon Power Up:



12.5KHz Channel Spacing

Channel No. Display:

25KHz Channel Spacing



12.5KHz Channel Spacing

#### 4.4 Channel No./Frequency Display







Either channel no. or channel frequency can be displayed on LCD. They can be toggle to each other form of display by pressing [DW] and [CALL] key together.

#### 4.5 MONITOR

The Monitor function unmutes the speaker in any situation. Use this function when received signals are too weak to recognize or when you want to adjust the volume while listening to background noise. Pressing this key can monitor the displaying channel and an icon "BUSY" will be displayed on LCD.



To make or answer a call, press and hold PTT key, then speak into the microphone in your normal speaking voice. An icon "TX" will be displayed on LCD and the unit will starts transmission.

#### 4.7 FUNCTION / LAMP



Press [FUNCTION] and any key to activate second function.

The lamp is used to illuminate the Liquid Crystal Display. You can toggle the lamp on/off by pressing the key more than 1second.

4.8 UP / SCAN



Press this key to enable UP control of channel numbers, memory channels, SQ level and VOX level setting.





The second function of this key is scan control. Press FUNC and then SCAN to start channel scan at normal mode or memory scan at memory mode. The function can be disabled by pressing FUNC and then SCAN again or any key of PTT, CALL and LOCK. User can temporary suspend the function and monitor the current channel by pressing [MONITOR] key and the function can be resumed after the key released.

#### 4.9 DOWN / APO





Press [DOWN] to enable down control of channel, memory channel, SQ level and VOX level.

Press [FUNCTION] and APO to activate APO (Automatic Power Off) function. The power will be automatically turned off after 1 hour elapse with no key entries. When the power is turned OFF by APO, the display clears and the "APO" icon starts blinking. To turn the power ON again, simply turn the device off and on again.

#### 4.10 MEM-L / MEM-S



M-L / M-S

Press the key can find one of five memorized address number and letter 'M' on the LCD display, which we call *memory load mode*. If any memory block is empty, the memory address will be blinking. Press UP or DOWN to change memory address. Press FUNCTION and then SCAN to scan memory address. Press MEM-L again to release memory load mode.

Press FUNCTION and then MEM-S can activate *memory save mode*. The letter 'M' will be blinking and one of the memory no. will be shown on the LCD. To save any channel frequency at one of five memory address, press UP or DOWN to select. If there is no blinking memory address, press MEM-S to erase the selected memorized address and press MEM-S again to save the current channel. To release memory save mode, simply press PTT, CALL, LOCK or FUNCTION and then MEM-S again.

#### 4.11 DW / SQ

Press DW key will enter into Dual Watch mode and an icon "DW" will be blinking. The original channel will be saved as one of the dual watch channel, named priority channel. User can press UP or DOWN key to select the other channel to be watching, named ordinary channel. Memorized channel no. can also be retrieved by pressing M-L key. Press DW again to confirm the selection and it will monitor both channels alternatively with icon "DW" shown on LCD. To release the DW mode, simply press DW, PTT, CALL or LOCK key. User can press MONITOR key to temporary suspend the dual watch mode and focus on monitoring single channel. User can also press UP or DOWN key to change ordinary channel at any time during alternatively watching. If ordinary channel is found busy, it will keep watching for 5 second and an icon "BUSY" will be shown on LCD. If priority channel is found busy, it will keep watching until the channel is free.

Press FUNCTION and SQ key to read the preset squelch level on LCD display. Press UP or DOWN key to adjust the squelch level. It will return to normal by pressing any key of Function and then SQ, PTT, CALL or LOCK.



#### 4.12 CALL / VOX







Pressing CALL key will transmit call tone continuously up to 5 second or until the key release.

Press FUNCTION and VOX to activate voice operate Tx selection menu and an icon "VOX" will be blinking. By pressing UP or DOWN, user can select VOXHI (high sensitivity), VOXLO (low sensitivity) or VOXOF (disable VOX). If transmission is triggered by voice, an icon "TX" will be shown on LCD. During selection, user can test the sensitivity at the same time. User can leave VOX selection menu by pressing FUNCTION+VOX, CALL, LOCK or PTT (if VOX not activated). In normal mode, if VOX is activated, an icon "VOX" will be shown on LCD.

#### 4.13 LOCK



changing any transceiver settings. Press LOCK to disable all the keys except PTT, CALL and MONITOR and an icon will be shown on LCD. Press LOCK again can unlock the device. In addition, if no keys are pressed for 10 seconds, it will LOCK automatically (AUTO LOCK).

This function locks most of the keys on the transceiver to prevent accidentally

# 5 Frequency Chart

69-	137-	Frequency (MHz)	69-	137-	Frequency
Channel	Channel		Channel	Channel	(MHz)
1	1	433.0750		2	433.0875
2	3	433.1000		4	433.1125
3	5	433.1250		6	433.1375
4	7	433.1500		8	433.1625
5	9	433.1750		10	433.1875
6	11	433.2000		12	433.2125
7	13	433.2250		14	433.2375
8	15	433.2500		16	433.2625
9	17	433.2750		18	433.2875
10	19	433.3000		20	433.3125
11	21	433.3250		22	433.3375
12	23	433.3500		24	433.3625
13	25	433.3750		26	433.3875
14	27	433.4000		28	433.4125
15	29	433.4250		30	433.4375
16	31	433.4500		32	433.4625
17	33	433.4750		34	433.4875
18	35	433.5000		36	433.5125
19	37	433.5250		38	433.5375
20	39	433.5500		40	433.5625
21	41	433.5750		42	433.5875
22	43	433.6000		44	433.6125
23	45	433.6250		46	433.6375
24	47	433.6500		48	433.6625
25	49	433.6750		50	433.6875
26	51	433.7000		52	433.7125
27	53	433.7250		54	433.7375
28	55	433.7500		56	433.7625
29	57	433.7750		58	433.7875
30	59	433.8000		60	433.8125
31	61	433.8250		62	433.8375
32	63	433.8500		64	433.8625
33	65	433.8750		66	433.8875
34	67	433.9000		68	433.9125
35	69	433.9250		70	433.9375
36	71	433.9500		72	433.9625
37	73	433.9750		74	433.9875
38	75	434.0000		76	434.0125
39	77	434.0250		78	434.0375
40	79	434.0500		80	434.0625
41	81	434.0750		82	434.0875
42	83	434.1000		84	434.1125
43	85	434.1250		86	434.1375
44	87	434.1500		88	434.1625
45	89	434.1750		90	434.1875

46	91	434.2000	92	434.2125
47	93	434.2250	94	434.2375
48	95	434.2500	96	434.2625
49	97	434.2750	98	434.2875
50	99	434.3000	100	434.3125
51	101	434.3250	102	434.3375
52	103	434.3500	104	434.3625
53	105	434.3750	106	434.3875
54	107	434.4000	108	434.4125
55	109	434.4250	110	434.4375
56	111	434.4500	112	434.4625
57	113	434.4750	114	434.4875
58	115	434.5000	116	434.5125
59	117	434.5250	118	434.5375
60	119	434.5500	120	434.5625
61	121	434.5750	122	434.5875
62	123	434.6000	124	434.6125
63	125	434.6250	126	434.6375
64	127	434.6500	128	434.6625
65	129	434.6750	130	434.6875
66	131	434.7000	132	434.7125
67	133	434.7250	134	434.7375
68	135	434.7500	136	434.7625
69	137	434.7750		