FC-302 PC Software

Instructions

(Version: 1.4, November 25, 2016)

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1. Introduction

Functions of PC (Personal Computer) software, hereafter called "FC-302ConfigToolInstaller", will be illustrated. Main goal of this instruction is to save time for user by supporting exact usage of the software, at the same time, give a help to user who wants to utilize the radio for another applications. This programming software enables the various parameters of FC-302 to be read or modified.

2. Hardware Installation

To apply PC software to radio application, FC-302ConfigToolInstaller, AC to DC power supply, programming board and PC are needed. In this chapter, instruction for connection of the equipment will be illustrated.



2.1 Interface Description of Programming board

No.	Description	Note			
1	power supply terminals, 12V DC, pay attention to positive and negative electrodes	1 and 2 are used for power			
2	DC socket, 12V DC, 5*2.1mm	based on your situation			
3	Power switch				
4	DB9 female, for connection to PC serial port				
5	DB15 male connector , used for connecting DB15 female connector of FC-302	To connect different connectors of FC-302, pay attention to the			
6	DB15 female connector , used for connecting DB15 male connector of FC-302 (previous version)	radio configuration, select the appropriate jumper method.			

2.2 The jumper and connection methods

Data Radio with **DB15 female connector**, there are two cases:

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 Data radio with FSK Modem or without Modem, at this moment you could operate data radio parameters setting or radio program upgrading, the serial port data rate is fixed: 19200bps, data format: 8N1, the jumper and connection method is as below:



2) Data radio with GMSK Modem or 4FSK Modem, at this moment you could operate data radio parameters setting, MODEM parameters setting, MODEM program upgrading or used for data radio's data transmission test, the serial port data rate is the same as embedded Modem rate (9600bps or 19200bps).



3. Software Installation

Software name(Before unzip)	FC-302ConfigToolInstaller v1.4.7z
Software name(After unzip)	302ConfigToolInstaller.exe
Operating system requirement	Microsoft Windows XP & Windows 7 & Windows 10

Unzip the "FC-302ConfigTooIInstaller v1.4.7z" on your hard drive. Please double-click "302ConfigTooIInstaller.exe" to install the application, clicking "next" to complete the installation. After the installation is complete, initially click on the shortcut of PC software and then the following window shows up:



🕒 FC-302 Config	📴 FC-302 Config Tool 📃 🗖 🗖							
File Device S	File Device Serial Port Language Help							
Load Config S	Bave Config	Rea	d Device	Sort Co	mfig			
Model:			Firmwar	e Version	.:	Freq	quency Range: SI	N :
User Parameter	7							
CH RX (MHz) TX	(MHz) Po	wer(W):	Bandwidth	SQ Level	CTCSS/DCS	Scan	- Tx Protect	AVDIO_OVT Output
1 000.00000 00	00.00000 1	•	Narrow 🔻	m - 01	Disable	ON	🔹 Tx Timeout: 0 🌩 s	💿 Squarewave 💿 Sinewave
2 000.00000 00	00.00000 1	•	Narrow 🔻		Disable	- ON	 Stop When Timeout: 0 (a) s 	
3 000.00000 00	00.00000 1	•	Narrow 🔻	10 •	Disable	- ON	•	Read Set
4 000.00000 00	00.00000 1	•	Narrow 🔻	™ •	Disable	- ON	•	
5 000.00000 00	00.00000 1	•	Narrow 🔻	™ •	Disable	- ON	▼ Nead Set	Sidetone
6 000.00000 00	00.00000 1	•	Narrow -	L0 -	Disable	ON	▼	🔘 Enable 💿 Disable
7 000.00000 00	00.00000 1	•	Narrow -	ω •	Disable	ON	- Volume	Read Set
8 000.00000 00	00.00000 1	•	Narrow -	ω •	Disable	ON	▼ (0 - 9)	
9 000.00000 00	00.00000 1	•	Narrow 🔻	ັ ມ 🔻	Disable	ON	•	RSSI
10 000.00000 00	00.00000 1	•	Narrow 🔻	ມ •	Disable	 ON 	▼ Read Set	dBuV Read
11 000.00000 00	00.00000 1	•	Narrow 🔻	ມ •	Disable	 ON 	Power Sere Mede	
12 000.00000 00	00.00000 1	•	Narrow -	ω •	Disable	ON		Channel Scan
13 000.00000 00	00.00000 1	•	Narrow -	ω •	Disable	ON	- Chable Disable	Mode: Mode 0 🔻
14 000.00000 00	00.00000 1	•	Narrow 🔻	ب س	Disable	ON	▼ Read Set	Paul Cat
15 000.00000 00	00.00000 1	•	Narrow 🔻	ັ ນ 🔻	Disable	 ON 	•	head Set
16 000.00000 00	00.00000 1	•	Narrow 🔻	ມ •	Disable	 ON 	 Power Saving Time 	Others
		P		· · · ·	1		Sleep: 0 🚔 x20 ms	Stop Wirthol Sorial Port
		vegq		Set			Standby: 0 🚔 v40 ms	Stop fillear Seriar fore
-Channel Control	l Mode		Ch	annel				
🔘 by DIP Switch	h 🗌	Read	i 🔽 :	Save Char	ige 🗌	Read		
🔘 by Program	The by Program Set Channel: 1 - Set							
FC-302 v1.4								Tx: 0 Rx: 0 • • •

4. Connecting to Data Radio

Communication Port	One available serial communication port			
	Programming board			
Hardware Accessories	Serial port cable			
	AC to DC power supply (Input: 12V@2A)			
	USB to RS232 cable (If the computer does not have a serial port)			

Connection between the PC and the radio for parameter setting, the programming kit is used for connection as shown below.



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5. Explanation of Operations

Detailed instruction for channel data and system options is described. Especially, in input channel data, data input method for RX or TX frequency; channel option such as Power, Bandwidth, SQ Level, CTCSS / DCS and scan is explained specifically. In addition, system option such as channel control mode, data value setting for power saving mode, TX time out time and scan option is detailed.

5.1 Overview

First of all, open the serial port. The baud rate of serial port is 9600bps or 19200bps (please refer to 2.2 about baud rate.), 8N1 and click "Open Port" as picture shows.

🕒 FC-302 Cor	nfig Tool						
File Device	Serial Port Language He	elp					
iand Copfig	Sava Capfig Read Device	Revt Config					1.Click here, it opens
Model:	Firmus	Version:	Frequen	av Rongo	SN		senar port setting pop-
model.	111073	ne version.	IIequen	cy mange.	54		up window.
User Paramet	er			Tu Pustant		AUDTO OUT Output	1
CH RX (MHz)	TX (MHz) Power (W) Bandwidtl	h SQ Level CTCSS/DCS	Scan	-IX frotect		Kobio_001 Output	
1 000.00000	000.00000 1 • Narrow	▼ LO ▼ Disable	• ON •	Tx Timeout:	0 🌩 s	🔘 Squarewave 🔘 Sinewave	
2 000.00000 3 000.00000	000.00000 1 • Narrow	▼ 単 😳 Serial Port ! ▼ ロ	Setting 📃 🗖		meout: 0 🌻 s	Read Set	
4 000 00000	000 00000 1 Varrow	• II .	[
F 000.00000	000.00000 1 - Nurrow	Port:	COM1		l Set	Sidetone	2.To choose according to
6 000.00000	000.00000 1 · Marrow	Baudrate:	9600	-		🔘 Enable 💿 Disable	the actual situation.
7 000 00000	000.00000 1 V Narrow	▼ Data Bits:	8				
8 000 00000	000.00000 1 • Narrow	Parity:	None		(n - 9)	Kead Set	
0 000.00000	000.00000 1 · Marrow	Stop Bits:	1	•		DOCT	3.Always this choice.
10 000 00000	000.00000 1 · Marrow	Flow Control	None		1 Set	K551	
11 000.00000	000.00000 1 · Marrow					dBuV Read	
12 000.00000	000.00000 1 · Marrow		💶 Open Port		Mode	Channel Scan	4.Clicking to open the
13 000.00000	000.00000 1 • Narrow				🔘 Disable	Mode: Mode 0 🔻	serial port.
14 000.00000	000.00000 1 - Narrow	▼ L0 ▼ Disable	▼ ON ▼	Rea	1 Set		
15 000.00000	000.00000 1 - Narrow	▼ LO ▼ Disable	• ON •	lice		Read Set	
16 000.00000	000.00000 1 · Narrow	▼ LO ▼ Disable	• ON •	-Power Savin	g Time	Others	
		2		Sleen' O	×20 ms		
	Kead	Set		0. N . 0	40	Stop Virtual Serial Fort	
-Channel Cont	rol Mode	Channel		Standby: U	🛫 X4U ms		
🔘 by DIP Swi	itch Read	/ Save Change	Read	Rea	d Set		
🔘 by Program	n Set Ch	hannel: 1 🚔	Set				
FC-302 v1.4						Tx: 0 Rx: 0 • • •	

Remark:

- 1. There are several "Read" and "Set" buttons in the software. To click on "Read" button for reading corresponding parameter of FC-302. If users need to modify the parameters, to click the corresponding "Set" button after modifying the parameters.
- 2. Users can export yourself parameters to a json file by "Save Config" button, and import it by "Load Config" button when next time operation.

5.2 Read Device

Power on the radio, click on the "Read Device", Radio information can be read. As the following picture:



Θ	FC-302 Con	fig Tool							
Fil	e Device	Serial Port	Langua	ge Help					
		11		-					
Lo	ad Config	Save Config	Read	Device P	ort Confi	e			
Mo	del:			Firmware V	/ersion:		Frequenc	y Range: S.	N:
F	C-302 VO			V2.0.4			400 MHz	- 440 MHz 0	16090010001
U:	ser Paramete	r							
Сн	RX (MHz)	TX (MHz)	Power (W)	Bandwidth	SQ Level	CTCSS/DCS	Scan	Tx Protect	AUDIO_OUT Output
1	000.00000	000.00000	1 -	Narrow 🔻		Disable	• ON •	Tx Timeout: 0 🚔	5 🔘 Squarewave 🔘 Sinewave
2	000.00000	000.00000	1 -	Narrow 🔻	• u	Disable	• ON •	Stop When Timeout: 0 🚔	5
3	000.00000	000.00000	1 -	Narrow 🔻	- u	Disable	• ON •		Read Set
4	000.00000	000.00000	1 -	Narrow 🔻	• u	Disable	• ON •	Read Set	Sidatana
5	000.00000	000.00000	1 -	Narrow 🔻	• u	Disable	• ON •	head Sec	Bruth Dirahla
6	000.00000	000.00000	1 -	Narrow 🔻		Disable	• ON •		C fuable C Disable
7	000.00000	000.00000	1 -	Narrow -	- u	Disable	• ON •	Volume	Read Set
8	000.00000	000.00000	1 -	Narrow 🔻	• u	Disable	• ON •	0 🔶 (0 - 9)	
9	000.00000	000.00000	1 -	Narrow 🔻	™	Disable	• ON •		RSSI
10	000.00000	000.00000	1 •	Narrow 🔻	- u	Disable	• ON •	Read Set	dBuV Read
11	000.00000	000.00000	1 -	Narrow 🔻		Disable	• ON •	Pomor Sono Hede	
12	000.00000	000.00000	1 •	Narrow 🔻	- u	Disable	• ON •	Tower Save mode	Channel Scan
13	000.00000	000.00000	1 -	Narrow 🔻	1 0 -	Disable	• ON •	U Enable U Disable	Mode: Mode O 🔻
14	000.00000	000.00000	1 -	Narrow 🔻	• u	Disable	• ON •	Read Set	Read Set
15	000.00000	000.00000	1 -	Narrow 🔻	n •	Disable	• ON •		head bet
16	000.00000	000.00000	1 -	Narrow 🔻	• u	Disable	• ON •	Power Saving Time	Others
			Read		Set			Sleep: 0 🚔 x20 ms	Stop Virtual Serial Port
			neau		Jet			Standby: 0 🚔 x40 ms	
- C	hannel Contr	ol Mode		Chan	nel	_			
0	by DIP Swi	tch	Read	📝 Sa	ave Chang	e	Read	P1 C	
0	💿 by Frogram Set Channel: 1 🌲 Set					Set	Veag Set		
FC-	302 v1.4							<u>л</u>	Tx: 41 Rx: 35 • • •

5.3 Input Channel Data

5.3.1 TX and RX frequency

In this option part, users can input TX and RX frequency for channel 1 to 16, and choose output power, Bandwidth, SQ Level, CTCSS / DCS, and SCAN list for each channel. To click "Read" button for reading above parameters.

File Device Serial Port Language Help	😔 FC-302 Con	fig Tool						
Load Config Save Config Read Davice Part Config Modal: Firmware Version: Frequency Range: SI: Verer Val. 400 MHz - 440 MHz C1600010001 Verer Val. 400 MHz - 440 MHz C1600010001 Verer Verer Verer C16 M20 MHz C1600010001 Verer Verer Narcow Do Disable ON 000.00000 000.00000 I Narcow Do Disable ON 10 000.00000 I Narcow Do Disable ON 10 000.00000 I Narcow Do Disable <td>File Device</td> <td>Serial Port</td> <td>language Hel</td> <td>р</td> <td></td> <td></td> <td></td> <td></td>	File Device	Serial Port	language Hel	р				
Lead Config Save Config Read Device Port Config Model: Fireware Version: Frequency Range: SN: Port 2010 V2.0.4 400 MHz 61000000001 Vers Farameter It (0011) Power (N) Bandridth SQ Leva (CCSS/RCS Scam 1 000.00000 1.0 Narrow V L0 Disable 000 2 000.00000 1.0 Narrow V L0 Disable 000 3 000.00000 1.0 Narrow V L0 Disable 000 4 000.00000 000.00000 1.0 Narrow V L0 Disable 000 0 000.00000 1.0 Narrow V L0 Disable 000 00.0 Squaresave Siseble 0 0.000000 000.00000 1.0 Narrow V L0 Disable 000 0.0 9) 0 0.000000 000.00000 1.0 Narrow V L0 Disable 000 0.0 9) 0 0.000000 000.00000 1.0 Narrow V L0 Disable 000 0.0 9) 10 000.00000 <td>2</td> <td>11</td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td>	2	11	1					
Model: Fireware Varian: Frequency Range: SN: PC-302 U0 V2.0.4 400 MHz - 440 MHz C16090010001 Ver Parameter Image: Stress	Load Config	Save Config	Read Device	Port Conf	ïg			
FC-302 V0 V2.0.4 400 HHz - 440 HHz C16090010001 User Farmeter CH RX (Mir) TX (Mir) FX (Mir)	Model:		Firmwa	are Version:	:	Frequency	Range:	SN:
User Parameter CH EX 00h2 TX 000.0000 000.00000 1 × Narrow D × Disable ON × 1 000.0000 000.00000 1 × Narrow D × Disable ON × 2 000.0000 000.00000 1 × Narrow D × Disable ON × 3 000.0000 000.00000 1 × Narrow D × Disable ON × 5 000.00000 000.00000 1 × Narrow D × Disable ON × 6 000.00000 1 × Narrow D × Disable ON × 7 000.00000 1 × Narrow D × Disable ON × 8 000.00000 1 × Narrow D × Disable ON × 9 000.00000 1 × Narrow D × Disable ON × 10 000.00000 1 × Narrow D × Disable ON × 10 000.00000 1 × Narrow D × Disable ON × 10 000.00000 1 × Narrow D × Disable ON × 10 000.00000 1 × Narrow D × Disable ON × 10 000.00000 000.00000 1 × Narrow	FC-302 VO		V2.0.	4		400 MHz -	440 MHz	C16090010001
CH RX (MHz) TX (MHz) Power (M) Bandwidth SQ Level CTCSS/BCS Scan Tx Frotect ANDL0_00T Output 1 000.00000 100.00000 1 V Harrow V D V Disable V ON V Tx Timeout: 0 S s Squarewave Sinewave 2 000.00000 10 Narrow V D V Disable V ON V Stop When Timeout: 0 S s Read Set 3 000.00000 10 Narrow V D V Disable V ON V Stop When Timeout: 0 S s Sidetone 5 000.00000 000.00000 1 V Harrow V D V Disable V ON V Volume Null Sidetone Eaable Disable ON V 7 000.00000 000.00000 1 V Harrow V D V Disable V ON V Volume Read Set Sidetone Eaable Disable ON V 7 000.00000 000.00000 1 V Harrow V D V Disable V ON V Volume Eaable Disable ON V 10 000.00000 100.00000 1 V Harrow V D V Disable V ON V N Eaad Set Channel Scan 10 000.00000 100.00000 1000.00000 N Narrow V D V Disable V ON V N Nde: Read Set Nde: Read	User Paramete	er						
1 000.0000 000.0000 1 ▼ Bisable 0 N Tr. Tiseout: 0 5 a Squarewave Sinewave 2 000.0000 000.0000 1 ▼ Bisable 0 N N Stop Whan Timeout: 0 5 sinewave Read Set 3 000.0000 000.0000 1 ▼ Bisable 0 N N N Stop Whan Timeout: 0 5 Sidetone 5 000.00000 000.00000 1 ♥ Bisable 0 N N<	CH RX (MHz)	TX (MHz)	Power (W) Band	width SQ L	evel CTCSS/DCS	Scan	-Tx Protect	AUDIO_OUT Output
2 000.00000 10 Narrow LD Disable ON Stop When Timeout: Image: Stop With Timeout: Image: Stop When Timeout: Image: Stop With Timeout:	1 000.00000	000.00000	1 - Nar:	row 🔻 🔟	▼ Disable	• ON •	Tx Timeout: 0 📑	5 🔘 Squarewave 🔘 Sinewave
3 000.0000 000.0000 1 ▼ Narrov ▼ L0 ♥ Disable ♥ ON ♥ 5 000.0000 000.0000 1 ♥ Narrov ♥ L0 ♥ Disable ♥ ON ♥ 6 000.0000 000.0000 1 ♥ Narrov ♥ L0 ♥ Disable ♥ ON ♥ 8 000.0000 000.0000 1 ♥ Narrov ♥ L0 ♥ Disable ♥ ON ♥ 9 000.0000 000.0000 1 ♥ Narrov ♥ L0 ♥ Disable ♥ ON ♥ 10 000.0000 000.0000 1 ♥ Narrov ♥ L0 ♥ Disable ♥ ON ♥ 10 000.0000 000.0000 1 ♥ Narrov ♥ L0 ♥ Disable ♥ ON ♥ 10 000.0000 000.0000 1 ♥ Narrov ♥ L0 ♥ Disable ♥ ON ♥ 10 000.0000 000.0000 1 ♥ Narrov ♥ L0 ♥ Disable ♥ ON ♥ 12 000.0000 000.0000 1 ♥ Narrov ♥ L0 ♥ Disable ♥ ON ♥ 13 000.0000 000.0000 1 ♥ Narrov ♥ L0 ♥ Disable ♥ ON ♥ 14 000.0000 000.0000 1 ♥ Narrov ♥ L0 ♥ Disable ♥ ON ♥ 15 000.0000 000.0000 1 ♥ Narrov ♥ L0 ♥ Disable ♥ ON ♥ 16 000.0000 000.0000 1 ♥ Narrov ♥ L0 ♥ Disable ♥ ON ♥ 16 000.0000 000.0000 1 ♥ Narrov ♥ L0 ♥ Disable ♥ ON ♥ 16 000.0000 000.0000 1 ♥ Narrov ♥ L0 ♥ Disable ♥ ON ♥ 16 000.0000 000.0000 1 ♥ Narrov ♥ L0 ♥ Disable ♥ ON ♥ 16 000.0000 000.0000 1 ♥ Narrov ♥ L0 ♥ Disable ♥ ON ♥ 16 000.0000 000.0000 1 ♥ Narrov ♥ L0 ♥ Disable ♥ ON ♥ 17 000.0000 000.0000 1 ♥ Narrov ♥ L0 ♥ Disable ♥ ON ♥ 18 000.0000 000.0000 1 ♥ Narrov ♥ L0 ♥ Disable ♥ ON ♥ 19 DIP Switch Read Ø Set • Darnel Control Mode • by DIP Switch Read Ø Save Change Read • by DIP Switch Read Ø Save Change Read • by Program Set Channel: 1 ♥ Set	2 000.00000	000.00000	1 - Nar:	row 🔻 🔟	▼ Disable	• ON •	Stop When Timeout: 0 📑	s D C
4 000.0000 000.0000 1 → Narrow ↓ L0 → Disable → ON → 5 000.0000 000.0000 1 → Narrow ↓ L0 → Disable → ON → 7 000.0000 000.0000 1 → Narrow ↓ L0 → Disable → ON → 9 000.0000 000.0000 1 → Narrow ↓ L0 → Disable → ON → 10 000.0000 000.0000 1 → Narrow ↓ L0 → Disable → ON → 11 000.0000 000.0000 1 → Narrow ↓ L0 → Disable → ON → 12 000.0000 000.0000 1 → Narrow ↓ L0 → Disable → ON → 13 000.0000 000.0000 1 → Narrow ↓ L0 → Disable → ON → 14 000.0000 000.0000 1 → Narrow ↓ L0 → Disable → ON → 15 000.0000 000.0000 1 → Narrow ↓ L0 → Disable → ON → 16 000.0000 000.0000 1 → Narrow ↓ L0 → Disable → ON → 16 000.0000 000.0000 1 → Narrow ↓ L0 → Disable → ON → 16 000.0000 000.0000 1 → Narrow ↓ L0 → Disable → ON → 16 000.0000 000.0000 1 → Narrow ↓ L0 → Disable → ON → 16 000.0000 000.0000 1 → Narrow ↓ L0 → Disable → ON → 16 000.0000 000.0000 1 → Narrow ↓ L0 → Disable → ON → 17 Channel Control Mode → Channel • by DIP Switch Read ♥ Save Change Read • by DIP Switch Read ♥ Save Change Read • by Program Set Channel: 1 ♥ Set ♥ DI ↓ Disable ↓ ON → FC-302 v14	3 000.00000	000.00000	1 - Nar:	row 🕶 🔟	▼ Disable	• ON •		Kead Set
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6 000.0000 000.0000 1 ▼ Narrow ▼ LD ▼ Disable ♥ ON ♥ 7 000.0000 000.0000 1 ♥ Narrow ▼ LD ♥ Disable ♥ ON ♥ 9 000.0000 000.00000 1 ♥ Narrow ▼ LD ♥ Disable ♥ ON ♥ 10 000.00000 000.00000 1 ♥ Narrow ▼ LD ♥ Disable ♥ ON ♥ 11 000.00000 000.00000 1 ♥ Narrow ▼ LD ♥ Disable ♥ ON ♥ 12 000.00000 000.00000 1 ♥ Narrow ▼ LD ♥ Disable ♥ ON ♥ 13 000.00000 000.00000 1 ♥ Narrow ▼ LD ♥ Disable ♥ ON ♥ 14 000.00000 000.00000 1 ♥ Narrow ▼ LD ♥ Disable ♥ ON ♥ 15 000.00000 000.00000 1 ♥ Narrow ▼ LD ♥ Disable ♥ ON ♥ 15 000.00000 000.00000 1 ♥ Narrow ▼ LD ♥ Disable ♥ ON ♥ 15 000.00000 000.00000 1 ♥ Narrow ▼ LD ♥ Disable ♥ ON ♥ 16 000.00000 000.00000 1 ♥ Narrow ▼ LD ♥ Disable ♥ ON ♥ 16 000.00000 000.00000 1 ♥ Narrow ▼ LD ♥ Disable ♥ ON ♥ 16 000.00000 000.00000 1 ♥ Narrow ▼ LD ♥ Disable ♥ ON ♥ 16 000.00000 000.00000 1 ♥ Narrow ▼ LD ♥ Disable ♥ ON ♥ 16 000.00000 000.00000 1 ♥ Narrow ♥ LD ♥ Disable ♥ ON ♥ 17 000.00000 000.00000 1 ♥ Narrow ♥ LD ♥ Disable ♥ ON ♥ 18 control Mode Channel ● by DIP Switch Read Ø Save Change Read ● by Program Set Channel: 1 ♥ Set Narrow ♥ DE € Save Change Read ● by Program Set Channel: 1 ♥ Set Narrow ♥ DE € Save Change Read ● by Program Set Channel: 1 ♥ Set Narrow ♥ DE € Save Change Read ● by Program Set Channel: 1 ♥ Set Narrow ♥ DE € Save Change Read ● by Program Set Channel: 1 ♥ Set Narrow ♥ DE € Save Change Read Example FC-302 v14	5 000.00000	000.00000	1 • Nar:	row 🔻 🔟	▼ Disable	• ON •		Enable Disable
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6 000.0000 1 Narrow LD Disable 0N 0 <td>7 000.00000</td> <td>000.00000</td> <td>1 Var:</td> <td>row 🔻 🔟</td> <td>▼ Disable</td> <td>▼ ON ▼</td> <td>Volume</td> <td>Read Set</td>	7 000.00000	000.00000	1 Var:	row 🔻 🔟	▼ Disable	▼ ON ▼	Volume	Read Set
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10 000.00000 1 Narrow LD Disable ON Image: Channel Scan 11 000.00000 1 Narrow LD Disable ON Power Save Mode Channel Scan 12 000.00000 1 Narrow LD Disable ON Power Save Mode Channel Scan 13 000.00000 1 Narrow LD Disable ON Note: Mode: Mode: Mode: Mode: Mode: Mode: Mode: Note: No	9 000.00000	000.00000	1 Var	row 🔻 🔟	▼ Disable	V ON V	Read Set	RSSI
11 000.00000 1 ▼ Narrow ▼ LD ▼ Disable ▼ 0N ▼ 12 000.00000 1 ▼ Narrow ▼ LD ▼ Disable ▼ 0N ▼ 13 000.00000 1 ▼ Narrow ▼ LD ♥ Disable ♥ 0N ▼ 14 000.00000 000.00000 1 ♥ Narrow ▼ LD ♥ Disable ♥ 0N ▼ 15 000.00000 000.00000 1 ♥ Narrow ▼ LD ♥ Disable ♥ 0N ♥ 16 000.00000 000.00000 1 ♥ Narrow ▼ LD ♥ Disable ♥ 0N ♥ 16 000.00000 000.00000 1 ♥ Narrow ▼ LD ♥ Disable ♥ 0N ♥ 16 000.00000 000.00000 1 ♥ Narrow ▼ LD ♥ Disable ♥ 0N ♥ 16 000.00000 000.00000 1 ♥ Narrow ♥ LD ♥ Disable ♥ 0N ♥ 18 000.00000 000.00000 1 ♥ Narrow ♥ LD ♥ Disable ♥ 0N ♥ 19 Dires Stendby: 0 ♥ x20 ms 5 tep Virtual Serial Port 5 tendby: 0 ♥ x40 ms FC-302 v14 FC-302 v14 Tx:41 Rx:35 ♥ ♥	10 000.00000	000.00000	1 Var	row 🔻 LO	▼ Disable	• ON •	neau Dec	dBuV Read
12 000.00000 1 Narrow LD Disable ON 13 000.00000 1 Narrow LD Disable ON Enable Disable Mode: Enable 000 000.0000 1 Narrow LD Nisable ON Enable Disable No Enable Enable No Enable No Enable Enable No Enable Enable No Enable	11 000.00000	000.00000	1 Var	row 🔻 LO	▼ Disable	• ON •	-Power Save Mode	Channel Scan
13 000.00000 1 ▼ Narrow ▼ LD ▼ Disable ▼ ON ▼ Read Set Read Set Read Set Others Others Others Stanby: 0 x40 ms Stanby: 0 x40 ms Set	12 000.00000	000.00000	1 Var	row 🔻 🔟	▼ Disable	- ON -	🔘 Enable 🛛 Disable	
14 000.00000 1 V Narrow V LD V Disable V ON V Read Set Read Set 15 000.00000 1000.00000 1 Narrow V LD V Disable V ON V Power Saving Time Others 16 000.00000 1 Narrow V LD V Disable V ON V Power Saving Time Others Channel Channel Channel Standby: 0 2 x40 ms Standby: Standby: 0 2 x40 ms by DIP Switch Read Ø Save Change Read Read Set Tx: 41 Rx: 35 0 0 000	13 000.00000	000.00000	1 Var	row 🔻 LD	▼ Disable	• ON •		mode. Mode U V
15 000.00000 000.00000 1 ▼ Narrow ▼ LD ▼ Disable ▼ 0N ▼ 16 000.00000 1 ▼ Narrow ▼ LD ▼ Disable ▼ 0N ▼ Read Set Standby: 0 ☆ x20 ms Standby: 0 ☆ x40 ms by DIP Switch Read Ø Save Channel: 1 ☆ Set Read Read Channel: 1 ☆ Set Tx: 41 Rx: 35 ● ●	14 000.00000	000.00000	1 V Nar:	row 🔻 LD	▼ Disable	V ON V	Read Set	Read Set
16 000.00000 1 V Narrow V LD V Disable ONV Power Saving Time Others Read Set Set Seep: 0 x20 ms Standby: 0 x40 ms by DIP Switch Read Ø Save Change Read Read Set Set Set FC-302 v1.4 Tx: 41 Rx: 35 0	15 000.00000	000.00000	1 V Nar:	row 🔻 LD	▼ Disable	- ON -		
Read Set Sleep: 0 # x20 ms -Channel Channel Standby: 0 x40 ms • by DIP Switch Read Save Change Read • by Program Set Channel: 1	16 000.00000	000.00000	1 Var	row 🔻 LO	▼ Disable	• ON •	-Power Saving Time	Others
Channel Control Mode by DIP Switch by Program FC-302 v14 Channel: 1 Channel:			Read	Set			Sleep: 0 🚔 x20 ms	Stop Virtual Serial Port
● by DIP Switch Read ✓ Save Change Read ● by Program Set Channel: 1 중 Set	-Channel Contr	ol Mode		Channel			Standby: 0 🗦 x40 ms	
O by Drogram Set Channel: 1 Set FC-302 v1.4 Tx: 41 Rx: 35 0 0	A La DTP Cont	1	Prod			D - 1		
O by Program Set Channel: 1 Set FC-302 v1.4 Tx: 41 Rx: 35 ● ● ●	© by UIF Switch Read IV Save Change Read Read					Read Set		
FC-302 v1.4 Tx: 41 Rx: 35	🔘 by Program	[Set	Channel: 1	×	Set		
	EC-302 v1.4							Tx: 41 Bx: 35



5.3.2 TX and RX frequency

Users can read or set the TX and RX frequency for each channel.

Please note that the frequency should meet two conditions:

- 1. within the limits of the radio frequency range.
- 2. It can be exact division by 6.25 KHz.

СН	RX (MHz)	TX(MHz)
1	000.00000	000.00000
2	000.00000	000.00000
3	000.00000	000.00000
4	000.00000	000.00000
5	000.00000	000.00000
6	000.00000	000.00000
7	000.00000	000.00000
8	000.00000	000.00000
9	000.00000	000.00000
10	000.00000	000.00000
11	000.00000	000.00000
12	000.00000	000.00000
13	000.00000	000.00000
14	000.00000	000.00000
15	000.00000	000.00000
16	000.00000	000.00000

5.3.3 Power

1-5W output power can be programmable for each channel.

Powe	r(W)
1	-
1	
2	
3	
4	
5	

5.3.4 Bandwidth

Users can decide the channel spacing in this feature with optional 12.5KHz (Narrow) or 25KHz (Wide) channel spacing.



5.3.5 SQ level

Five SQ levels can be select in our radio. Level 0 is for fully open mute.

The audio signal will continuously transmit. Other levels with corresponding strength are shown as below:



L1:	0.15uV
L2:	0.25uV
L3:	0.35uV
L4:	0.45uV
L5:	0.55uV

SQL	evel
ហ	-
ມ	
L1	
12	
L3	
L4	
LS	

5.3.6 CTCSS/DCS

Users can encode tones with CTCSS/DCS according to options shown in the picture. The feature is not available for high speed data transmission.

CTCSS/DCS	
Disable	-
71.9Hz 74.4Hz 77.0Hz 79.7Hz	
82.5Hz	
85.47z 88.5Hz 91.5Hz	
94.8Hz 97.4Hz	-

5.3.7 Scan

This feature allow user to decide scan mode and establish channel scan list. Radio will start to detect channels and stay on each channel for at least 200ms according to the established scan sequence. If a signal or conversation is detected on any channels in scan list, the radio will stop on that channel and you will monitor the signal or hear the conversation. When the signal or conversation is disappeared, the radio continues to scan.



6 System Options

6.1 Channel Control Mode

Radio's channel can be selected by inner Dip(4) switch(HW) or serial command inputted from our PC software(SW). Only in SW control mode, channel can be selected in "Channel" column.

-Channel Control Mode	
🔘 by DIP Switch	Read
) by Program	Set

6.2 Working Channel

In this column, user select current channel for working.

Channel	
📝 Save Change	Read
Channel: 1 🚔	Set

6.3 Second Column Features

6.3.1 TX Protection

This feature, when enabled, limit the amount of time that user can continuously transmit. The time can be set from 1 second to 60 seconds. When timeout, radio will release PTT pin. If users want to transmit again, he or she have to wait delay time (set by "stop when timeout") after the radio released PTT.

Tx Protect		
Tx Timeout:	0	÷ s
Stop When Timeout:	0	Ş
Read	t	

6.3.2 Volume

FC-302 radio output voice via SPK Pin with 10 levels volume (0-9). User is able to select appropriate volume for the connected external speaker in this feature.

Volum)e
0	(0 - 9)
	Read Set

6.3.3 Power save Mode

Here, you can enable Power save mode or disable. When enabled, radio will automatically switch between Sleep and Standby to lower power consumption. The time of Sleep and Standby can be set in "Power save time".

However, for supporting fast attack time between TX and RX, the radio will keep in RX mode and the PLL keep working even in power save mode. Only the intermediate frequency circuit is off.

-Power Save Mo	de
🔘 Enable	🔘 Disable
Read	Set



6.3.4 Power Saving Time

When Power save is enable, sleep time can be programmed from 20 to 500 ms in 20ms increment with 1~25 optional values. That means 1 equals to 20 ms, 2 equals to 40ms 25 equal to 500ms Standby time can also be programmed from 40 to 600 ms in 40ms increment with 1 to 15 optional values. That means 1 equals to 40ms, 2 equals to 80, and 15 equals to 600ms.

-Power Saving Time			
Sleep:	1	🚖 x20 ms	
Standby:	1	🚖 x40 ms	
Read Set			

6.4 Third Column Features

6.4.1 AUDIO-OUT output

Output wave for" AUDIO-OUT output" can be selected as square wave or sin wave.

AUDIO_OUT Outp	out
🔘 Squarewave	🔘 Sinewave
Read	Set

6.4.2. Side Tone

When enabled, user can hear his own voice while transmitting voice. The side tone volume is fixed at level 2 volume.

Sidetone —	
🔘 Enable	🔘 Disable
Read	Set

6.4.3 RSSI

RCCT

To detect the air signal strength over the air (Unit: dBuv).

1221		
	dBuV	Read

6.4.4 Channel Scan

Scan modes are set up in "Option" and shown as below

- 0 -----normal scan with carry only
- 1 -----normal scan, carry with tone
- 2 -----priority scan, carry only
- 3 -----priority scan, carry with tone

If normal scan is enabled, radio will scan from initial channel to channel 16 sequentially. If priority scan is enabled, radio will scan the prioritized channel with more times. Prioritized channel is the working channel before the scan. For example, if prioritized channel is CH10 and initial channel is

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CH8, then the scan sequence is CH8, CH10, CH9, CH10, CH10, CH10, CH11, CH10.....CH16, CH10.

Channel	Scan
Mode:	Mode 0 🔻
(Read Set

6.4.5 Others

This item is reserved; it is compatible for the previous versions.

Others	
--------	--

Stop Virtual Serial Port

