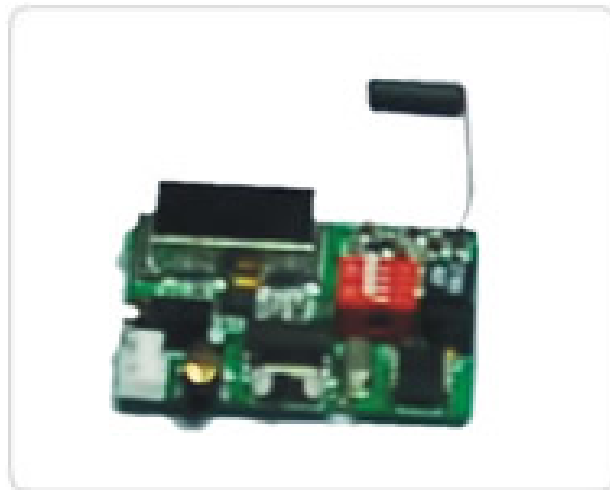


FC-302R Micro 16 Frequency Audio Receiver Module With CTCSS

USER MANUAL



SHENZHEN FRIENDCOM TECHNOLOGY DEVELOPMENT CO. , LTD

**Address: 2/F, Multifunction Building, Dongpeng Industrial Park, Wuhao Road,
North Section of Hi-tech Park, Shenzhen 518057 China**

Tel: +86-755-86026603 +86-755-29926100

Fax: +86-755-86026300

E-mail: faq@friendcom.com

Website: <http://www.friendcom.cn>

TABLE OF CONTENTS

TABLE OF CONTENTS-----	1
GENERAL OVERVIEW-----	2
HOW TO USE FC-302-----	2
BLOCK DIAGRAM-----	2
TECHNICAL SPECIFICATION-----	3
INTERFACE AND OPERATION DESCRIPTION-----	3
TROUBLESHOOTING AND MAINTAIN-----	4
DEFAULT SETTING-----	4

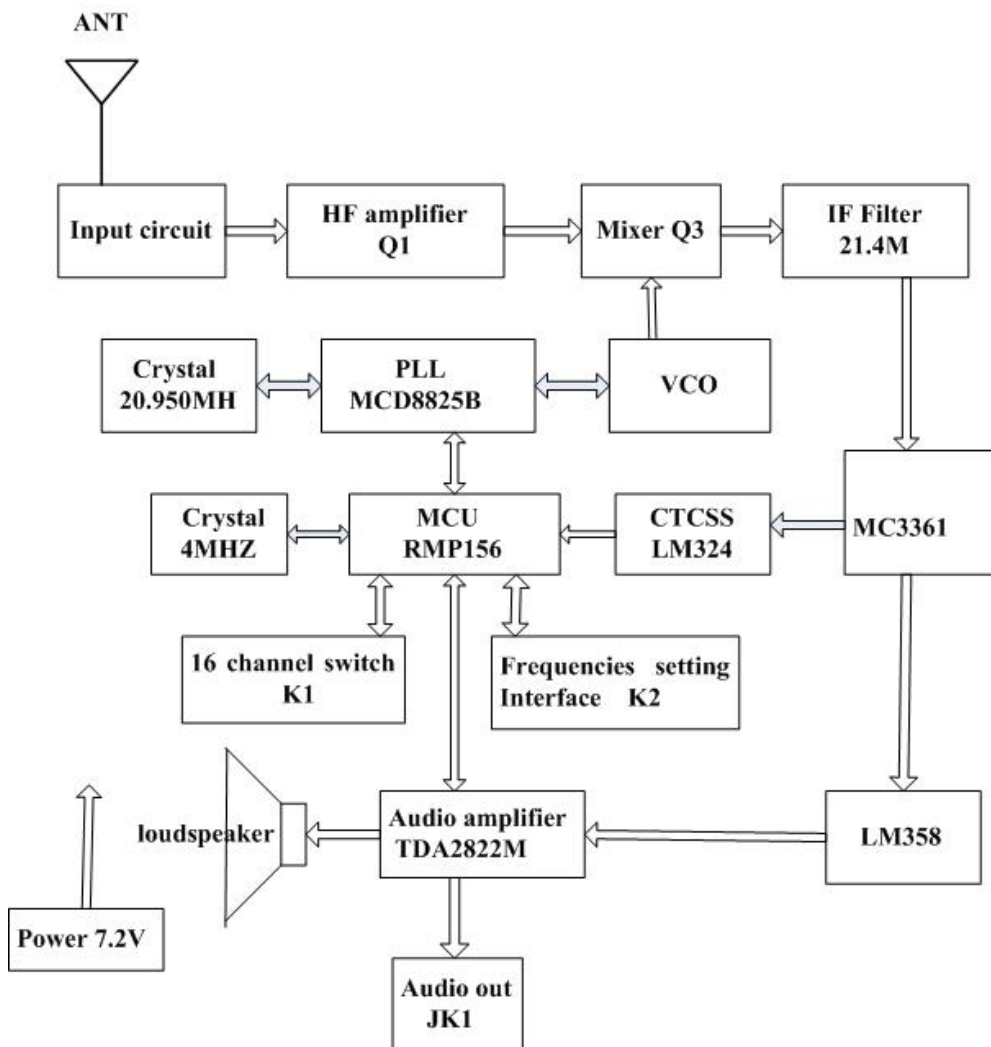
I . General overview

FC-302 series wireless audio receive module adopts advanced micro processing technology and software radio principle. This one-way audio module is designed with wireless radio frequency technology and voice processing. It has characteristics such as low-power consumption and clear voice and so on. The module is stable and reliable for it adopts SMT and high-quality components.

II.How to use the module and its application

This product can be used with portable radio, mobile radio and fixed radio. It is applied in united action which has multi-people to participate in the complex environment to receive the speech or instructions from the person in charge of the action. It can be also used in traveling to receive the information of the sceneries. It can also be applied in noisy environment to receive instructions from remote distance to carry out a certain operation, etc.

III. Block Diagram



IV. Technical specifications

1. ● General specifications:

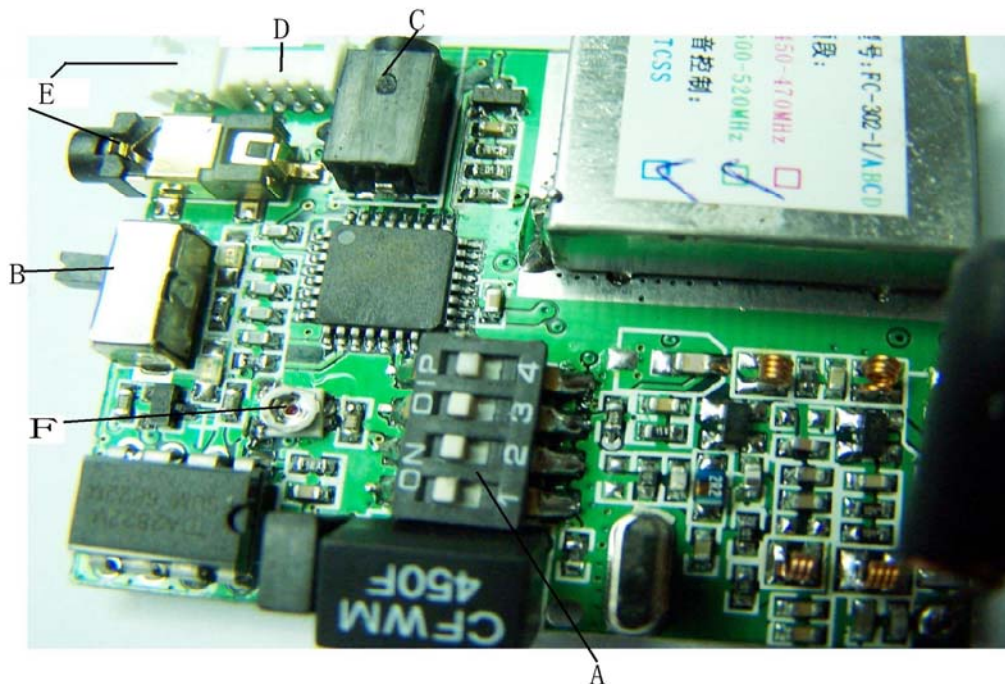
Frequency range: 223~235MHz, 430~450MHz, 450~470MHz, 500~520MHz, 600~620MHz etc. (It can be custom-made for user' s special requirements)
 Channel spacing: N*5 KHz (It can be set by user)
 Frequency stability: 5ppm
 Modulation mode: FM
 Channel number: 16
 Antenna impedance: 50Ω
 Temperature: 0~40° C
 Humidity: 10%-90% RH, non-condensing
 Weight: 16g
 Size: 45mm×38mm×7mm

● Specifications of receiver

Receiving sensitivity: $\leq 0.35 \mu V$ (12dB SINAD)
 Adjacent channel selectivity: $\geq 55dB$
 Spurious and images rejection: $\geq 50dB$
 Intermodulation rejection: $\geq 60dB$
 Audio distortion $\leq 5\%$

V. Interface and Operation Description

The picture of the product is shown as the following:



A—Channel-selection DIP, B-- Power switch, C-- Freq-write port, D--Power input port(DC4-8V), E-- Audio output port, F-- volume-tune Potentiometer

Connect the battery box conformed to voltage standard, connect audio coil or the earphone, choose the corresponding channel and CTCSS to be same with the master station, turns on the power switch, then the receive module will work.

VI. Troubleshooting and Maintain

1. Silent

First check whether the connection is good or not, Then check whether the IC2822 is broken.

2. The transmitting range is short

Check whether the antenna is too close to VCO, if yes, move away the antenna. Check whether the receive sensitivity is too low, if yes, improve the sensitivity accordingly.

3. Big noise

First check whether the receive sensitivity is too low, if yes, improve the sensitivity accordingly. You can also raise the SQ value a little bit.

VII. Default setting

EXW Default settings		Accessory	
Channel	CH1	Service manual	one
Power	off		
CTCSS			