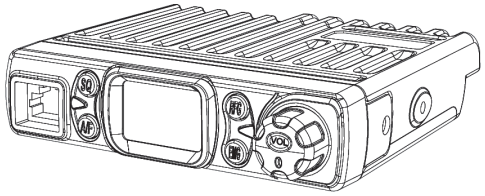
Radioddity
A Better Store

User Manual



CB radio

CB-27

www.radioddity.com

About Radioddity

“You, our friend and customer, are at the forefront of what we do.”
Nothing is more important than your time, and your money. When buying radios online, you face a dilemma: Save time and purchase from a reputable website at a high price, or try to save money by purchasing from an unreputable dealer at the cost of your time spent dealing with quality and service issues. At Radioddity.com, you don’t have to choose between low prices and a safe shopping experience. Whether you’re a first time buyer or a seasoned HAM, we hope you’ll find our products, prices, content and resources to be just what you need.

In the past several years, Radioddity has been better serving the needs of two-way radio buyers by creating a safe shopping experience. We do this by providing the highest quality products, at an affordable price, and backing that up with superior quality service. It sounds simple to us

That is our promise: to improve your buying experience.
Through strong partnerships which allow us to bring you the latest technology from our own brand Radioddity and on behalf of our caring and responsive Customer Support team, we strive to fulfill that promise and better meet your needs every day.

Along with this promise, we hope to give you more value. Be that by offering you the latest and greatest in DMR and analog radios, accessories and related products, by providing superior technical support, or by working with thought leaders in the Amateur Radio Industry to develop enriching content to entertain and assist you in your buying process including our Blog, FAQ, and Newsletter. Your concerns are our concerns.

We do all of this to help you find the highest quality of radios, for low prices, with as little headache to the consumer as possible. If we are failing you in this promise in any way, let us know via email:
support@radioddity.com

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Chapter 1 - Getting Started

• Safety Information

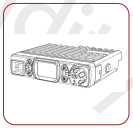
Please read the following brief instructions, non-compliance with these rules may cause danger or violate the law.

1. Refer to local government regulations before using this radio, improper use may violate the law.
2. Turn off the radio before getting close to flammable or explosive areas.
3. Turn off the radio before you get near explosive or ignition zones.
4. Do not use radio whose antenna is damaged, touching of damaged antenna will cause heat injury.
5. Do not attempt to open the radio; the maintenance work should be done by technical expert only.
6. To avoid troubles caused by electromagnetic interference or electromagnetic compatibility, please turn off the radio in places where have the banner "Do not use wireless equipment", such as hospital and other healthcare facilities.
7. In the car with an airbag, do not put the radio within the scope of the airbag deployment.
8. Do not store the radio under the direct sunshine or in hot areas. When you transmit with the radio, do keep away from its antenna for 5cm at least.
9. If the radio appears smelly or smokey, please shut off its power immediately and contact your local dealer.
10. Do not transmit too long due to possible heat build-up.

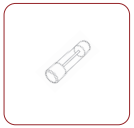
• What's in the box?

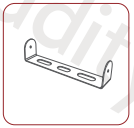
Thanks for choosing Radioddity CB radio. We recommend you to check the items listed in the following table before discarding the package.

Supplied accessories:


CB-27


Microphone


Fuse F5A220V


Bracket


Teeth Eashers


Srews for Bracket

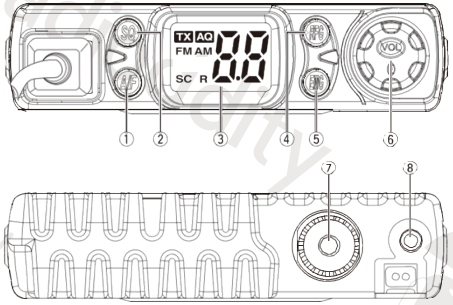

Mounting Screws

Users Manual

Note

The Radio is compatible with other accessories available on: https://www.radioddity.com/

Chapter 2 - Know about this radio



1. A/F Key: Channel Scan
2. SQ Key: SQ_ASQ/SQ_SQ
3. LC Display
4. RFG Key: Receive RF Gain control
5. ENG Key: Emergency channel witching/Keyboard lock
6. Power/Volume Knob
7. Antenna Jack (Type SO-239) for Plug Type PL-259
8. External speaker Jack (3,5mm)

• Power ON/OFF the Radio

1. Turn [VOL] switch clockwise to power on the radio, the LCD displays the Norms and then displays channel number.
2. Turn [VOL] switch counter-clock-wise until you hear a click. The radio is powered off.

• Adjusting the Volume

To turn up the volume, turn the volume clock-wise.
To turn the volume down, turn the volume counter-clock-wise. Be careful not to turn it too far, as you may inadvertently turn your radio off.

• Channel Selection

Use the channel selector keys [UP] and [DN] keys at the microphone for channel selection. The actual channel is displayed on the LCD. For communication, the same channel and the same modulation type AM/FM has to be selected.

1. Short press [UP] key to change CB channels. Channel will increase by 1;
   Long press [UP] key for a few seconds and release, channel will increase by 1 per second.
2. Likewise, short press [DN] key to decreased by 1;
   long press [DN] key for a few seconds and release, channel will decreased by 1 per second.

• Squelch Setting

SQ_SQ: Signal strength monitoring squelch setting

This function is used for squelch level setting, but it detects the strength of received signal, and better strength means a better signal. It is divided into 29 levels (0.F~2.8), 0.F is the lowest level, and 2.8 is the highest level. For example, when set to 2.8, the audio channel can only be turned on when the received signal reaches its maximum. (In an experiment, the noise adjustment range of SQ_SQ is obviously larger than SQ_AQ. We recommend using SQ_SQ as the first choice, as SQ-SQ and SQ-ASQ can't work at the same time. One will stop working when the other one is running.)

Operation instructions:

1. Enter: short press the SQ button, the screen displays "sq" for one second, and then display the current SQ level. At this time, the SQ level can be adjusted by pressing UP and DN.
2. Exit: After the adjustment is completed, you can press SQ again to exit the SQ setting mode, or you can automatically exit the SQ setting mode and enter the waiting mode. Keep it for a while without any operation will also exit the SQ setting..

SQ_ASQ: Noise monitoring squelch setting.

This function is also used for squelch level setting, but it detects the noise of received signal, and the smaller the noise, the better the signal. It is divided into 9 levels (A1~A9), A1 is the lowest level, and A9 is the highest level.

Operation instructions:

1. Enter: Long press the SQ button, the screen displays the AQ icon and the current ASQ level. Short press the SQ button or wait for a while, back to waiting mode, the AQ icon will still light up. When SQ_ASQ is in waiting mode, short press SQ will return to SQ_ASQ setting status.
2. Exit: When the SQ_ASQ function is on, long press SQ will exit.

• Modulation Selection

Depending on the selected frequency range and the selected channel, the device supports FM (Frequency Modulation) and AM (Amplitude Modulation) modes.

Long press [A/F] key to select AM mode and FM mode. However, such a change is only possible if the set channel is also allowed in the respective operating mode. This function is only available for European version.

The respective operating mode is indicated on the LC display with "AM" or "FM" to the left of the channel number.

• RF Gain Control Function

This function will affect the strength of signal reception.

1. Enter: short press [RFG] key to enter. After entering, the screen will display current RFG level, you can press [UP] and [DN] keys to adjust RFG level. The RFG level is not a continuous number but "6", "12", "18", "24", "30", "36", "42", "48" a total of 8 levels. When the RFG function is turned on, the signal reception intensity will be attenuated. The higher the level is, the

greater the attenuation. After completing the setup, wait for a while and the radio will automatically go to the waiting mode and display the “R” icon on the screen.

2) Exit: short press [RFG] key to enter RFG setting mode, and short press RFG again will exit the RFG function.

• Emergency Channel Switching

Operation: short press [EMG] key to switch between “the current channel”, “19th channel”, “9th channel”.

1. Short press EMG] key to switch 9th channel
2. Short press [EMG] key again to switch 19th channel.
3. Short press [EMG] key third time to return to last normal channel.

• Keyboard Lock

1. Enter: long press [EMG] button to enter the locked status. In locked status, nothing happens except for pressing the PTT button.
2. Exit: In the locked status, long press [EMG] again will exit the EMG_LC function.

• Scan function

1. In the waiting status, a short press of [A/F] key will enter the scan mode.
2. The CB radio will scan all channels of the mode in 2 channels per second. When the scanned channel has a signal and the signal strength reaches the SQ or ASQ setting, the speaker will

transmit the sound, automatically stop scanning, and maintain the current channel.

3. When the channel signal disappears or decreases to not meet SQ/ASQ requirements, the CB radio will continue to scan. Short Press [A/F] key again or press transmit will exit scan mode.

• Norm Selection

This CB radio supports multiple frequency bands. Depending on the country in which the device is operated, it may be necessary to choose a different frequency band. This function is only available for European version.

1. For changing the current norm, please hold [A/F] key while turning the radio on. The current norm appears in the display.
2. Use the channel selectors [UP] and [DN] keys of the microphone to set a different norm
3. Confirm your selection by turning the radio off and on again.
   For further frequency band information see Appendix C.

Regarding the permissions and restrictions of the individual norms in the various European countries, please check the radio passport, which is included in the scope of delivery. The user is solely responsible for the selection of the permissible norm in the country of operation.

• Install External Microphone

The microphone is fixed to the radio, it cannot be removed. It contains the PTT key, as well as the channel selectors [UP] and [DN] keys.

Align the microphone connector with the jack on the front of the radio. An external microphone with an impedance of 8Ω can be connected to the 3.5mm mono connector. This automatically turns off the built-in speaker.

Chapter 3 - Basic Operation

• Quick Start Guide

1. Open the box carefully and remove the radio, the cable and the microphone.
2. Connect the SO-239 socket of the radio to a corresponding antenna via a PL-259 plug. You will need to purchase an antenna to operate the radio.
3. Connect the power supply cable to an appropriate 12V DC power source. This should be able to supply at least 5A continuous current.
4. Turn ON/OFF switch clockwise and set the volume to a medium level.
5. Use the channel selector keys [UP] and [DN] at the microphone for channel selection. The actual channel is displayed on the LCD.
6. Press the [PTT] key and talk to her! If necessary, use VOL knob to adjust the volume of the built-in speaker.

The Radioddity CB-27 is a cost-effective CB analog radio. It can communicate with any other CB analog radio but without spending an exorbitant amount of money on it! You only need to make sure that you are on the same channels with the same modulation type.

Chapter 4 - Trouble Shooting Guide

Why can't this CB radio communicate with my other two way radios?
a) Make sure that the two radios are on the same channel.
b) Check if the same channel is set to receive the same type of modulation.
c) Check if the volume of the two radios is high enough
d) Check the correct installation of the antennas
e) Check the talking range of the radios.

Other often seen problems:

Troubles	Solution
The radio doesn't start.	1. The power source is not turned on. 2. The fuse has triggered. Replace them with the supplied replacement fuse
Others can't hear my transmission.	1. Set the volume control to the highest level. 2. The microphone may be damaged, send it to your local dealer for inspection.
There are constant noises to hear.	The radio is out of reception range. Turn on the radio at a short distance and try again.

Appendix A - RF Energy Exposure and Product Safety Guide for Portable Radios

• ATTENSION!

Before using this radio, read this guide which contains important operating instructions for safe usage and RF energy awareness and control of compliance with applicable standards and regulations.

This CB radio uses electromagnetic energy in the radio frequency (RF) spectrum to provide communications between two or more users over a distance. It uses radio frequency (RF) energy or radio waves to send and receive calls. RF energy is one form of electromagnetic energy. Other forms include, but are not limited to, sunlight and x-rays. RF energy, however, should not be confused with these other forms of electromagnetic energy, which when used improperly, can cause biological damage. Very high levels of x-rays, for example, can damage tissues and genetic material.

Experts in science,engineering,medicine,health,and industry work organizations to develop standards foe safe exposure to RF energy.These standards provide recommended levels of exposure for both workers and the general public.These recommended RF exposure levels include substantial margins of protection.

All Radioddity two-way radios are designed,manufactured,and tested to ensure they meet government established RF exposure levels.In addition,manufacturers also recommend specific

operating instrutions to users of two-way radios.These instructions are important because they inform users about RF energy exposure and provide simple procedures on how to control it.

Please refer to the following websites for more information on what RF energy exposure how to control your exposure to assure compliance with eastablished RF exposure limits:
http://www.who.int/en

• Radio License

Governments keep the radios in classification, most of the classified radios need to get local government license and operation is allowed. For this CB-27, the individual license is not required.

• Operating Instructions

Do not send more than the rated operating factor of 50% of the time. Press [PTT] key (Push to Talk) to transmit the signals. Release [PTT] key to receive signals. The transmission of 50% of the time or less is important because the radio will only produce a measurable RF energy load in the sense of conforming to the standard.

• Protect Your Hearing

1. Use the lowest volume you need for your work.
2. Increase the volume only when you are in a noisy environment.
3. Turn down the volume before connecting a headset or earphone.
4. Limit the time you use headsets or earphones at high volume.

5. If you are using the radio without headset or earphone, do not hold the radio's speaker directly to your ear.
6. Loud sounds from any source over a long period of time may affect your hearing temporarily or permanently. The louder the volume of the radio, the less time it will take for your hearing to be adversely affected. Hearing damage due to loud noise is sometimes initially unrecognizable and can have a cumulative effect.

Note

Loud noises from any source over a long period of time can temporarily or permanently affect your hearing. The louder the volume of the radio, the less time it take to negatively affect your hearing.

Hearing damage caused by loud noise is sometimes not visible at first and can have cumulative effects.

• Safety Operation

Forbidden

1. Do not use the radio outdoors or in a humid environment, but only in dry environments.
2. Do not disassemble the radio, otherwise there is a risk of electric shock or fire.
3. Do not operate the radio if it has been broken or damaged in any way.
4. Do not mount the radio above an airbag or in the airbag deployment area. In the event of a collision which triggers the airbag, the radio unit can be thrown at you with great force and cause serious injuries to the occupants of the vehicle when the airbag is inflated.

To Reduce The Risk

1. Pull the plug, not the cable when disconnecting the radio.
2. Disconnect the radio from the power supply before carrying out any maintenance or cleaning work.
3. Contact Radioddity for repair and service assistance.

Use of Communication Devices While Driving

1. Always check the laws and regulations for the use of radios in the countries and areas where you drive.
2. Pay full attention to driving.
3. If required by driving conditions or regulations, leave the road to park before making or receiving a call.

Appendix B - Technical Specification

General Specifications

Model number	CB-27
Frequency Range	26.965…27.405 MHz
Frequency Tolerance	±5.0 ppm
Frequency Control	PLL Synthesizer
Modulation Mode	AM(US) AM/FM(EU)
Input Voltage	13,8V, 1.5A
power consumption	Transimit: < 2A Receive: Squelched 0.3A VOL Max: 0.8A
Dimensions	109mm x 104mm x 24mm
Weight	432g
Operating Temperature Range	-20°C … +50°C
Antenna Impedance	50Ω
Antenna Connector	27MHz, SO-239
Mode of Operation	Simplex

Transmitter

Power Output	4W
FM frequency deviation	< 1,9 kHz
AM modulation depth	< 90 %
Transmission interference	< 4nW (-54dBm)
Frequency Response	300-3000Hz
Modulated signal distortion	inferior to 5%
Adjacent Channel Rejection	60dB

Sender

Sensitivity	< 1µV bei 10dB (S+N)/N
Adjacent Channel Rejection	60dB
Image Rejection	70dB
IF Frequencies	1. ZF 10.695MHz
	2. ZF 455KHz
Squelch	< 1µV
Audio Output Power	1 Watt
Audio Impedanz	8Ω
Frequency Response	300-3000 Hz

Note

The specifications will be revised due to technical improvements without prior notice.

Thanks for understanding.

Appendix C - built-in frequencies table

US							
AM (4W, 40Channel)							
1	26.965	11	27.085	21	27.215	31	27.315
2	26.975	12	27.105	22	27.225	32	27.325
3	26.985	13	27.115	23	27.255	33	27.335
4	27.005	14	27.125	24	27.235	34	27.345
5	27.015	15	27.135	25	27.245	35	27.355
6	27.025	16	27.155	26	27.265	36	27.365
7	27.035	17	27.165	27	27.275	37	27.375
8	27.055	18	27.175	28	27.285	38	27.385
9	27.065	19	27.185	29	27.295	39	27.395
10	27.075	20	27.205	30	27.305	40	27.405