

# SAMCOM FT-18

Go for colorful fun



► Instruction Manual



# Introduction

Thank you for purchasing our products. Combined the latest technology along with a sturdy mechanical frame, our radios provide cost-effective communications for the people who need to stay in touch with the working team such as retail stores, restaurants, campuses and schools, construction sites, manufacturing, shows and trade fairs, property and hotel management and more, they are the perfect communication solutions for all of today's fast-paced industries.

We sincerely appreciate your interest on our products, and strongly suggest you to read the instruction carefully. Please read through the manual in order to get familiar with the device and learn the features of this model.

## Main Features

- Compact, lightweight but rugged design
- Wide LCD display with backlight
- 38 CTCSS tones & 83 DCS codes in TX and RX
- Buttons for the channel selection
- Knob for volume adjustment
- CALL key with 10 tones selectable
- Built-in LED flashlight
- Squelch tail elimination
- VOX for hands-free communications
- Vocal prompt, monitor, channel scan
- Keypad lock, roger beep, battery save
- Fast charger and battery life up to 25 hours
- 2 pin jack for external microphone & speaker
- Standard micro USB port to recharge the battery

# FCC Statement

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and

on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

## RF Exposure Information (SAR):

This device meets the government's requirements for exposure to radio waves. This device is designed and manufactured not to exceed the emission limits for exposure to radio frequency (RF) energy set by the Federal Communications Commission of the U.S. Government.

The exposure standard for wireless devices employs a unit of measurement known as the Specific Absorption Rate, or SAR. The SAR limit set by the FCC is 1.6 W/kg. \*Tests for SAR are conducted using standard operating positions accepted by the FCC with the device transmitting at its highest certified power level in all tested frequency bands.

Although the SAR is determined at the highest certified power level, the actual SAR level of the device while operating can be well below the maximum value. This is because the device is designed to operate at multiple power levels so as to use only the power required to reach the network. In general, the closer you are to a wireless base station antenna, the lower the power output.

The highest SAR value for the device as reported to the FCC when tested for face up is 0.68W/kg and when worn on the body, as described in this user guide, is 0.56W/kg (Body worn measurements differ among devices, depending upon available enhancements and FCC requirements.) While there may be differences between the SAR levels of various devices and at various positions, they all meet the government requirement. The FCC has granted an Equipment Authorization for this device with all reported SAR levels evaluated as in compliance with the FCC RF exposure guidelines. SAR information on this device is on file with the FCC and can be found under the Display Grant section of <http://www.fcc.gov/oet/fccid> after searching on FCC ID: 2AGPQ-FRS18.

For body worn operation, this device has been tested and meets the FCC RF exposure guidelines for use with an accessory that contains no metal and the positions the handset a minimum of 25mm from the face. Use of other enhancements may not ensure compliance with FCC RF exposure guidelines. If you do not use a body-worn accessory and are not holding the phone at the ear, position the handset a minimum of 25mm from your head when the device is switched on at its highest certified power level in all tested frequency bands.

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# Safety Information

Please read this information before using your radio. Failure to do so could result in personal injury, death, and/or damage to your radio, accessories and/or other property.

## Radio Care

### Caution

- Do not disassemble or modify the radio for any reason.
- Do not transmit while touching the antenna terminal or any exposed metallic parts of the aerial as this may result in burn.
- Please check and observe regulation in your country with regards to use whilst driving.

### End of Life Disposal

- When the radio reaches the end of its useful life, please ensure that the unit is disposed of in an environmentally friendly way.

## Battery Care

### Precautions

- Turn the radio OFF before charging.
- Charge the battery pack before use.
- Do not recharge the battery pack if it is already fully charged as this will use one of its charge cycles and may shorten its life.
- Charge the battery in accordance with the instructions enclosed with your charger.
- Do not charge the radio and/or battery pack if they are wet.

The battery pack includes potentially hazardous components. Please:

- Do not disassemble or reconstruct battery.
- Do not short-circuit the battery.
- Do not incinerate or apply heat to the battery.
- Do not immerse the battery in water or get it wet by other means.
- Do not charge the battery near fires or under direct sunlight.
- Use only the specified charger and observe charging requirements.
- Do not pierce the battery with any object or strike it with an instrument.
- Do not use the battery pack if it is damaged in any way.
- Do not reverse-charge or reverse-connect the battery.
- Do not touch a ruptured or leaking battery.

If liquids from the battery get on your skin or into your eyes, immediately:

- Wash your eyes out with fresh water avoiding rubbing them.
- Seek medical treatment.

**Notes:**

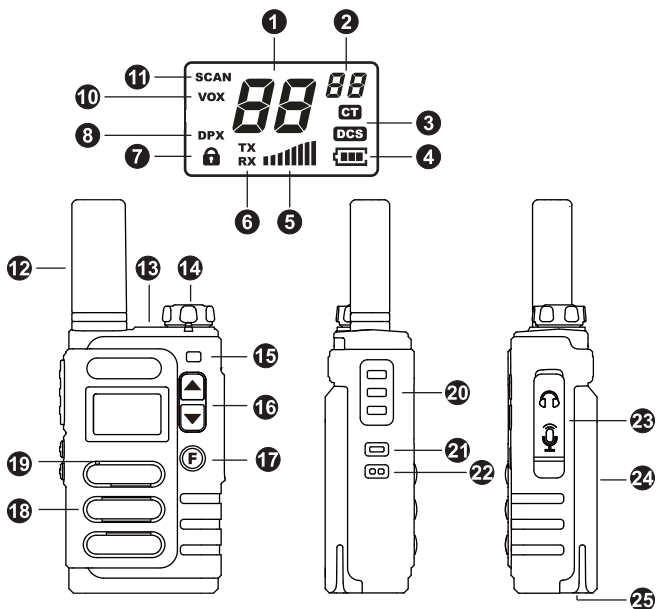
- If a battery is not to be used for an extended period of time (several months) remove the battery pack from the equipment and store in a cool and dry location part charged. Do not fully discharge the battery before storage.
- Each charge cycle reduces the battery's life. Minimize the number of times you charge your battery especially in hotter environments which further shorten a battery's life.

# Radio Overview

## Package Includes

- 2 x transceivers
- 2 x Li-ion battery packs
- 2 x AC adapters
- 2 x USB charging cables
- 2 x desktop chargers
- 2 x belt clips
- 2 x hand straps

## At a Glance





## LCD Display

1. Selected channel
2. Selected code of CTCSS or DCS  
(CTCSS: 1-38 / DCS: 1-83)
3. **CT/DCS**: type of sub-audio tone selected
4. Battery status indicator
5. **RSSI**: TX/RX signal strength
6. **RX**: radio in receive mode (busy channel)  
**TX**: radio in transmission (PTT pressed)
7. Keypad lock activated
8. Duplex mode
10. **VOX** function activated
11. **SCAN** function activated

## Radio Part

12. **Antenna**
13. Built-in LED flashlight
14. **On/Off/Volume Knob**: turn the radio ON or OFF and to adjust the radio's volume
15. **LED Indicator**: solid red during transmission and solid green in reception
16. **▲/▼ keys**: to change the channel and settings in the menu
17. **Function key**: short press this key to enter the radio's menu; long press it for about 3 seconds to activate the keypad lock
18. Built-in speaker
19. Built-in microphone
20. **PTT**: press and hold down this key to transmit and talk, release it to receive and listen.
21. **Up CALL / MON key**: short press this key to send a call to the selected channel; long press it for about 2 seconds to activate Monitor function, that temporarily cuts off the squelch (for weak signals). This key can be disabled by programming software.

22. **Down Flashlight / SCAN key:** short press this key to activate the flashlight; long press it for about 2 seconds to activate the SCAN function. This key can be disabled by programming software.
23. **Audio Accessory Jack** (Kenwood 2 Pin Connector)  
Connect compatible audio accessories, such as microphones, earpieces, etc
24. Rechargeable Li-ion **battery pack**
25. **USB port** for the recharge of the battery pack

## Basic Operations

### Turning On/Off

To turn on the radio, turn the **ON/OFF/VOLUME** knob clockwise until you hear it clicks, the LCD display will light up and the radio will play power up audio and channel number (if voice prompt feature is activated).

To turn off the radio, turn the knob counter-clockwise until you hear another click.

### Volume Control

Turn the **VOLUME** knob to about half way and adjust it to a comfortable level as soon as you receive a signal. If you do not receive a signal you can use the up side **MON** key.

### Channel Selection

Press the **▲/▼** keys to scroll up or down the channels till you select the desired channel.

### Transmission and Reception

To transmit:

1. Make sure that no one else is currently talking on the selected channel.
2. Keep **PTT** button firmly pressed. **TX** and **RSSI** icon will appear on the display.

3. Speak normally in the direction of the microphone.
4. When you have finished, release the **PTT. TX** and **RSSI** icon will disappear from the display.
5. When the radio is in reception mode (**PTT** not pressed) you will automatically receive any communication.

Note: during transmission and reception, as far as possible, try to keep the antenna in vertical position and to avoid obstacles towards the direction of the other party.

## Monitor

The Monitor feature is for temporarily opening the squelch in order to listen to signals that are too weak to open the squelch. By opening the squelch you will listen the communication “chopped” by the squelch. In order to activate the Monitor function, so as to listen to all traffic on the selected channel, keep pressed the up side **CALL / MON** key for about 2 seconds. Keep pressed it again for about 2 seconds to disable this function.

## Scanning All Channels

The radio can automatically search for signals throughout the bands by scanning, i.e. selecting the channels in sequence.


Long press the down side **Flashlight / SCAN** key for about 2 seconds to start scanning. When a signal is detected, the scanning pauses on that channel and you can transmit by pressing **PTT**. The **▲/▼** keys allow you to change the direction of scanning (from lower channels to higher ones or vice versa) and therefore to skip communications which are of no interest.

If you want to stop it, long press the down side **Flashlight / SCAN** key for about 2 seconds again. The radio will go back to the channel from which the scanning originally started.

## LED Flashlight

Shortly press the down side **Flashlight / SCAN** key to turn on/off the flashlight at the top of the radio.

## Keypad Lock

Keep press **Function** key for about 3 seconds to activate keypad lock function and  will be displayed as confirmation. Only **PTT** key remain active. To disable this function, keep pressed again **Function** key for 3 seconds approx.

## Battery Save

The battery saving feature enables a reduction in the consumption of up to 50%. Battery saving comes on automatically when the radio does not receive any signal for more than 5 seconds. When the batteries are discharged, replace the batteries or recharge the battery pack.

# Menu Operations

## CTCSS Tones / DCS Codes Selection

The radio can receive in two modes:

- Open traffic: in this case you will hear any communication transmitted on the selected channel.
- Group mode with CTCSS/DCS: CTCSS tones and DCS codes are access keys that allow you to receive only messages coming from parties using the same channel and code. The speaker will remain muted until the correct tone is received.

To activate one of different 38 CTCSS tones & 83 DCS codes in RX and TX:

1. Select the desired channel.
2. Press the **Function** key once and the display shows “OF, CT & DCS” blinking.
3. By pushing the **▲/▼** keys the display will show CTCSS

(*CT* blinking) or *DCS* (*dn* blinking); press **PTT** to confirm the selection.

4. Press the **PTT** key again or wait for approximately 3 seconds to exit.

## VOX Function

The radio enables hands free conversations through VOX function. You can enable it with or without accessories. The VOX sensitivity can be set in 9 different levels:

1 = high sensitivity (normal voice with no background noise)  
9 = low sensitivity (useful in very noisy areas or if you talk loudly)

To activate VOX function:

1. Press the **Function** key till VOX will appear on the display.
2. Use the **▲/▼** keys to select the desired level.
3. Press **PTT** to confirm the selection.

To disable the VOX function, follow the instructions above and select option “OF”.

## CALL Function

FT-18 can send 10 different call tones. To send this audio signal to other users, press the up side **CALL / MON** key.

To select the desired call tone:

1. Press the **Function** key until the display shows “CA 1”.
2. By pushing **▲/▼** keys you will hear the 10 pre-set melodies.
3. Confirm by pressing the **PTT** key.

Now, each time the radio sends out a tone call, it will beep with the selected melody.

## Roger Beep

When your transmission is finished (**PTT** released), the radio gives out a sound that indicates to the other party that s/he can start talking. This function is enabled by default.

To deactivate it:

1. Press the **Function** key until the display shows “*rb 2*” blinking;
2. Using the ▲/▼ keys select “*of*” and “*rb of*” will be displayed;
3. Press **PTT** button to confirm roger beep deactivation.

## Keypad Beep

To deactivate the keypad beep, follow these steps:

1. Press the **Function** key until the display shows “*bP on*” blinking.
2. Use the ▲/▼ keys until the display shows “*bP of*”.
3. Confirm by pressing the **PTT** key.

Now you won't hear any beep at the pressure of any keys.

# Troubleshooting

Problem	Possible Reasons and Potential Solutions
No Power	Recharge or replace the battery pack; Extreme operating temperatures may affect battery life.
Hearing other noises or conversation on a channel	Confirm CTCSS/DCS is set; Frequency or CTCSS/DCS may be in use; Change settings: either change frequencies or CTCSS/DCS on all radios; Make sure the radio is at the right frequency and privacy code when transmitting.
Audio quality not good enough	Radio settings might not be matching up correctly. Double check frequencies, CTCSS/DCS and bandwidths to make sure they are identical in all radios.
Limited talk range	Steel and/or concrete structures, heavy foliage, buildings or vehicles decrease range. Check for clear line of sight to improve transmission; Wearing radio close to body such as in a pocket or on a belt decreases range; Change location of radio. UHF radios provide great coverage in industrial and commercial buildings. Increasing power provides greater signal range and increases penetration through obstructions.
Can not transmitted or received	Make sure the <b>PTT</b> button is completely pressed when transmitting; Confirm that the radios have the same channel, frequency, private code and bandwidth settings; Recharge, replace and/or reposition batteries; Obstructions and operating indoors, or in vehicles, may interfere, change location; Verify that the radio is not in Scan.
Heavy static or interference	Radios are too close, they must be at least seven feet apart; Radios are too far apart or obstacles are interfering with transmission.
Low battery	Recharge or replace the battery pack; Extreme operating temperatures affect battery life.
Desktop Charger LED light does not blink	Check that the radio/battery is properly inserted and check the battery/charger contacts to ensure that they are clean and charging pin is inserted correctly.
Cannot activate VOX	VOX feature might be set to OFF; Accessory not working or not compatible.
Battery does not charge	Check desktop charger is properly connected and correspond to a compatible AC adapter; Check the charger's LED indicators to see if the battery has a problem.

# Specifications

## General

Frequency Range	462.5500 – 467.7125MHz
Channel Capacity	22 Channels
Channel Bandwidth	12.5KHz
Operating Voltage	3.7V DC
Dimensions (H x W x D)	90 x 52 x 30mm
Weight with battery	140g

## Transmitter

RF Power	0.5W
Frequency Stability	±1.5ppm
Spurious & Harmonics	-36dBm < 1GHz, -30dBm > 1GHz
FM Hum & Noise	≥ 36dB
Modulation Deviation	≤ 2.5KHz
Adjacent Channel Power	≥ 60dBC
Audio Frequency Response	+1 ~ -3dB
Audio Distortion	< 5%

## Receiver

Sensitivity (12 dB SINAD)	≤ 0.3μV
Adjacent Channel Selectivity	≥ 60dBC
Audio Distortion	< 5%
Radiated Spurious Emissions	< -54dBm
Intermodulation Rejection	70 dB
Audio Output	1W @ 8 ohms

Hereby, we declare that our radio is in compliance with the essential requirements and other relevant provisions of RE Directive 2014/53/EU.



# Warranty Information

## Warranty Period

Radio Body: 12 months from date of purchase.

Battery Pack: 6 months from date of purchase.

**Note:** Please retain your receipt as your proof of purchase will be required to valid warranty claim.

## Warranty Exclusions

This warranty will not apply in relation to:

- Failure to provide a proof of purchase
- Product has been modified, changed or serial number has been removed
- If any damage is caused by the use of non approved accessories
- Product that has been replaced by an unauthorized person
- Product failure due to customer misuse, abuse or abnormal use
- Failure by the customer to take reasonable care
- Failure due to not using the product in accordance with instructions stated in the manufacture's user guide.
- Product failure due to recommended installation procedures not being followed as stated in the manufacture's user guide.




More warranty relative information please read our warranty policy.

# **SAMCOM**

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