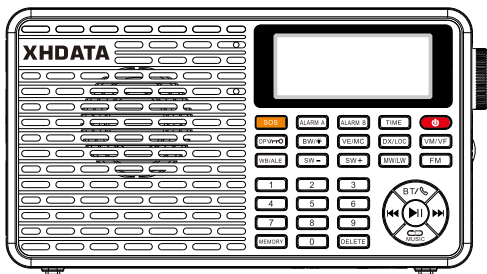


D-109WB**OPERATION MANUAL****FM/MW/LW/SW/NOAA
Global Band High Performance
Professional Radio**

WB/NOAA emergency weather warning radio
SOS emergency distress sound and light alarm
Wireless cell phone call

Operation manual →

<https://xhdata.com.cn/pages/xhdata-d-109-wb-manual>

Function indication

DPY/rrO: Key lock/display switch

- **VM/VF(SCAN)**: Store radio frequency selection button (VM) Manual tuning frequency of tuning knob (VF) SCAN: Long press for automatic frequency browsing mode
- **BW/**: AM bandwidth switching/LCD backlight permanently on and intelligent control switch
- **VE/MC**: Voice/Music Switch
- **DX/LOC**: Receive DX remote and LOC local proximity receive mode switching

WB/ALE: Manual tuning weather warning reception band / ALERT weather warning automatic scanning warning reminder reception mode+

- **SW-**: Shortwave meter band switching/ Automatic search of shortwave meter band
- **SW+**: Shortwave meter band switching/ Automatic search of shortwave meter band
- **MW/LW**: AMLW band selection/automatic tuning storage
- **FM**: FM/Automatic tuning storage


(SLEEP) POWER: Power switch/Sleep shutdown time setting

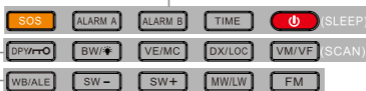
- **(SOS)**: Long press to turn on the emergency distress sound and light alarm function
- **ALARM B**: ALARM(B) setting/Alarm switch
- **ALARM A**: ALARM(A) setting/Alarm switch

Time: Time setting/display time

BT / : Bluetooth function/wireless phone call

- **⏪ ⏩**: Radio memory station selection/and frequency tuning/Select the previous next song when playing Bluetooth music
- **⏮ ⏭**: Play or pause selection

: TF card play and repeat mode selection
MUSIC



● **4 (ST)**: Long press 4 button to switch the FM stereo/mono

● **6 (BB)**: Long press 6 button to switch the BB sounds ON/OFF

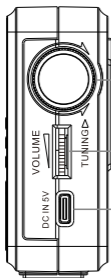
● **FM SET**: FM receiving frequency range switching

● **9/10K**: AM 9K/10K frequency step switching

— **12/24**: 12/24 time system switching

DELETE: Delete radio frequency

MEMORY: Memory radio frequency



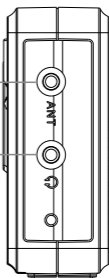
Tuning knob

Volume knob

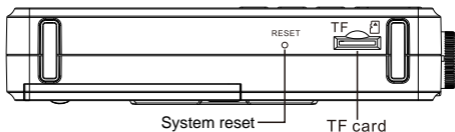
Type-c: DC IN 5V

FM/SW external antenna jack

Earphone jack



Function indication



DISPLAY

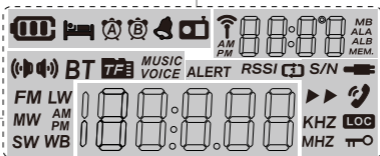
- Battery level display



- Sleep Scheduled Shutdown Start
- Radio Alarm
- Bb Sound Alarm
- Alarm A start icon
- Alarm B start icon

- Radio signal field strength
- AM/PM AM/PM time display
- MB SW meter wave display
- ALA Alarm A time display icon
- ALB Alarm B time display icon
- MEM. Memory station number display icon
- °C/°F Temperature display

Small display area



Main display area

Time/frequency/playback time display

- FM STEREO
- BT Bluetooth function symbol
- TF TF card icon
- Setting icon of radio station timing startup
- FM/MW/SW/LW : FM/MW/SW/LW band display icon
- AM/PM AM/PM time display
- MUSIC Suitable for playing music
- VOICE Suitable for voice listening, news and so on
- WB Weather warning reception bands

- ALERT NOAA Automatic scanning of reception status icons
- Battery charging display
- RSSI Radio signals strength scale
- S/N Radio Signal-to-noise ratio scale value
- Mobile phone call prompt symbol
- Single Repetition
- Radio search station frequency icon
- KHZ AM frequency unit
- MHZ FM frequency unit
- Disk locking symbol
- LOC Local proximity reception

Operation introduction

POWER

- Please correctly install the positive and negative electrodes of 3.7V(18650) lithium battery into the battery box
- External 5V Type-c charging socket power supply

POWER ON/OFF

- Power on: short press power button,display screen shows "ON"
- Power off: short press power button,display screen shows"OFF"

Radio Operation

● SET THE FREQUENCY COVERAGE

(It needs to be set in the power off state)

- Different countries, medium wave, FM frequency coverage is different, please set according to the situation of different countries
- Long press the number key (3), you can switch the time to 24 hours or 12 hours
- FM frequency range setting:
After press and hold the number key (1),by short pressing the number key(1),the screen will say 64,76,87,87.5,
Denote frequency coverage as:
64-108MHZ, 76-108MHZ, 87-108MHZ, 87.5-108MHZ
- MW frequency selection step interval Setting and temperature display synchronous switching : Long press the number key (2) for 3 seconds
- When it shows 9:the medium wave frequency will step to 9KHz. Frequency coverage range:522-1620KHz.
(suitable for Asia, Europe.Africa and Oceania)
- In this state, the temperature displays Celsius(°C)

- When it shows 10 :the medium wave frequency will step to 10KHz.
Frequency coverage range:520-1710KHz (suitable for North and South America)
- In this state, the temperature displays Fahrenheit($^{\circ}\text{F}$)
- Long press the(MW/LW)button,and the display(ON)indicates the open (LW)band Long press again Display (OFF) off

Enter radio mode

- Press (POWER) key to (ON)
Adjust the volume to the appropriate position

Select band

- Short press (FM) key, or (MW/LW or SW -/SW +)
- Switch short wave meter band: Repeated short press(SW -/SW +)
- When receiving FM and SW, you can choose to use pull rod antenna or external antenna. (Plug the external antenna into the ANT jack)
- Turn the fuselage angle when MW and LW are used to obtain the best receiving sensitivity

Search station frequency

▷ Tune the radio frequency

1. Manually tune the radio frequency (VF)
 - Short press (VM/VF) key
 - Turn the tuning knob slowly and quickly(TUNING)
2. Scanning frequency (VF)
 - Long press (SCAN) button to enter browsing. When the station is scanned, it will stop for 5 seconds.Short click (SCAN) to stop searching
3. Input the radio frequency with the number keys(VF)
 - The preferred current band radio frequency is entered directly with the numeric key

▷ Search for memory stations

1. Manual memory station(VF)

- Select the preferred band
- Select radio frequency to memory
- Short press (MEMORY) key, radio station code flashes in the upper right corner
- Press the (MEMORY) key again to remember

2. Fully automatic scanning memory

- Select band
- Long press the corresponding band key to automatically scan and memorize the radio frequency

Two modes of shortwave automatic search

- Long press the (SW -) key for 3 seconds for the full meter band search memory mode
- Long press the (SW +) key for 3 seconds as the current meter Band search memory mode

— Tips —

The radio signal will be affected by such factors as season/time period/weather, receiving environment, electromagnetic interference and receiving antenna angle and azimuth. Therefore, ATS memory should be updated frequently

▷ Access memory radio station(VM)

1. After the station search is completed, you can enter the memory Radio mode or press the (VM/VF) key briefly
2. Turn the (TUNING) button to switch the memory radio frequency
3. Input the frequency number of the memory station directly with the number keys

▷ Auto scan memory radio frequency(VM)

1. Select band, short press(VM/VF) key, press and hold the (VM/VF) key for 3 seconds to enter the automatic browse mode
2. Scan each memory radio station number for 5 seconds, and short press the SCAN key briefly to select listening. No action, continue to scan the address number of the next radio station

● Delete memory station method

▷ Select Delete Memory Station

1. Short press the (VM/VF) key to enter the state of retrieving memory station
2. Select band
3. Turn the (TUNING) button to select the radio station number frequency to be deleted
4. Long press (DELETE) key for 3 seconds to display [DEL], and short press again to confirm deletion

▷ Delete all memory stations of the current band

1. Short press the (VM/VF) key to enter the state of retrieving memory station(VM)
2. Select band
Press and hold the (DELETE) key until the sub display area display (ALL), release it and press it briefly again to confirm the deletion of all


▷ Delete all memory radio frequencies

1. Turn off a machine
2. Press and hold the (DELETE) key for 3 seconds until [DEL] and [ALL] flash, and then press and hold the (BT) key for 3 seconds to confirm the deletion

● Switch AM bandwidth

- Continuous short press (BW/☀) can switch AM bandwidth

● FM stereo switch

1. FM is mono radio mode when horn is used for radio reception
2. In the headset receiving FM station state, short press the (ST) key, stereo symbol () display. Short press the (ST) key again to show cancel, stereo off.

● Stereo Headphone Output

- This machine is equipped with FM and Bluetooth/MP3 stereo headset output. Use the 3.5 headphone jack.

● FM/SW external input jack

- The machine is equipped with FM/SW external antenna 3.5 headphone jack to improve the indoor reception sensitivity of FM/SW radio

— Tips —

Stereo will not be turned on when the radio station uses mono radio or the reception signal is weak.

SOS Signal Function Use

- In any state, long press (SOS) to turn on the sound and light synchronized distress signal. Press and hold again to turn it off.

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NOAA/WB Use of Emergency Weather Warning Bands

● Manually tuned to receive NOAA radio frequency signals

- Short press (Power) button to (ON)
- Short press (WB) button to enter NOAA radio band, turn (TUNING) button to search "NOAA".
There are 7 channels: 1. 162.400MHZ 2. 162.425MHZ 3. 162.450MHZ
4. 162.475MHZ 5. 162.500MHZ 6. 162.525MHZ 7. 162.550MHZ

● (ALERT) Automatic Scanning to Receive Radio Warning Signals

- Short press (Power) button to (ON)
- Long press (WB) button to enter NOAA radio band.
There are 7 channels: 1. 162.400MHZ 2. 162.425MHZ 3. 162.450MHZ
4. 162.475MHZ 5. 162.500MHZ 6. 162.525MHZ 7. 162.550MHZ
- When a "NOAA" weather warning radio channel sends out warning signals, the unit will automatically send out sound and light warning signals to remind users to receive weather warning information. Short press "WB/ALE" can enter to receive the radio warning voice information.

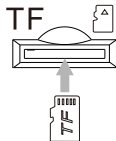
— NOTE —




The NOAA/WB Emergency Weather Warning radio band applies to the United States. When listening to NOAA/WB weather broadcasts, the user must verify that the weather broadcast channel frequency corresponds to the city or state in which the user is located. Reconfirm the weather channel frequency when leaving the city and state area.

Bluetooth/MP3 Playback Function

● TF Card MP3 player





1. Insert TF card with music file
2. Press the (MUSIC) key briefly to enter the TF card MP3 playing state
3. ⏮ ⏭ Short press these two keys to select the previous song and the next song [TUNING] can also select songs. Long press for fast rewind and fast forward functions
4. ⏩ Play/pause function button




5.  Long press and hold this key icon () to display, which is a single song cycle playback mode. Press and hold the icon () again to turn off, which is a cycle playback mode for all song areas.
6. **A/B point repeat function:**
When MP3 player is playing, press key (VM/VF) briefly to display (A), Press key (B) again to play again at point A/B.

Bluetooth function operation


▷ Music playing

1. Short press (BT/) key to enter Bluetooth playing status
2. Open the Bluetooth connection interface of the mobile phone, search the Bluetooth connection name (D-109WB) and connect, and the successful connection is displayed ()
3. Short press  or  key and turn the [TUNING] button to select a song or directly select songs on your mobile phone.


▷ Wireless call

- When there is a phone call in Bluetooth connection status, briefly press (BT/) to answer the call, and then briefly press once to end the call

▷ Bluetooth forced disconnection

- When Bluetooth is connected, long press button (BT/) for 3 seconds to disconnect the current device. Long press again to reconnect the device.

Display content switching


- When using the radio function: Short press the (DPY/) button repeatedly and briefly, the display area on the upper right corner can be switched to [signal strength/signal-to-noise ratio] value, (timed boot time) alarm A and alarm B, (local time) and memory radio frequency number.

● Display backlight switch

▷ Automatic backlight on


- Press any button in any state to light up for 5 seconds and then turn off.
Long bright mode

▷ Long bright mode

- Press and hold the (BW/ ) key for a long time to keep the backlight on, and then press and hold again to turn it off.

● Sleep timed shutdown mode

▷ Press the (POWER) key to (ON)

- Short press the (SLEEP) key briefly, the () icon flashes, press the (SLEEP) key continuously or turn the (TUNING) key to select the boot time [01-120] minutes, and then flash for 3 seconds for automatic confirmation.

▷ Cancel (SLEEP) shutdown function





- Select to turn (ON) the machine function again, and then turn off the sleep shutdown setting.

● Set clock

1. Under the shutdown state, long press the number (3) key to set the 12/24 time.
2. The time can be adjusted in the on/off state
3. Long press the (TIME) key, and the clock will flash.
4. Input (hour) and (minute) with the number keys or adjust them respectively with the [TUNING] button.

● Alarm and timed power on function

▷ Switch (ALARM)

1. Short press the (ALARM A) or (ALARM B) key, and the icon () () respectively displays the alarm enabled.
2. Short press (ALARM A) or (ALARM B), and the alarm will be turning off if the () or () icon is not displayed

▷ Set the alarm to start on time

1. Press (ALARM A) or (ALARM B) key for a long time, and the time in the sub display area at the upper right corner flashes.
2. Directly input the number to set the hour and minute, or rotate the [TUNING] key to adjust the time, and then press (ALARM A) or (ALARM B) briefly to confirm.
3. At this time, the main display area will adjust the alarm duration to flash, and turn the [TUNING] key to select within (0~60) minutes.
4. Short press (ALARM A) or (ALARM B) again to confirm that the ALARM is on, (🕒) or (🕒) icon is displayed, and the setting is completed.

▷ Set the way to open the machine regularly

1. Radio station alarm mode

- Power on, select the band and the radio frequency to be used as the alarm, and adjust the appropriate volume.
- Short press the (MEMORY) key, the frequency number flashes, and then short press the (ALARM A) or (ALARM B) key immediately.
- The icon (🕒) or (🕒) and radio icon (📻) flash together for 2 seconds for automatic confirmation.

2. Play music alarm

- Insert a music TF card and power on. Short press the (MUSIC) key to enter TF card play and adjust the appropriate volume.
- Short press the (MEMORY) key, and the song number in the upper right corner flashes.
- Press the (ALARM A) or (ALARM B) key for a short time, then the icon (🕒) or (🕒) will flash for 2 seconds at the same time with [📻], and then stop flashing. Confirm that the setting is complete.

3. (Beep) Wake up with an alarm

- Power on, press (BT) key briefly to switch to Bluetooth mode.
- Making the Bluetooth off.
- When Bluetooth is disconnected , briefly press the (MEMOR) key , the (🔊) icon will flash , then briefly press (ALARM A) or (ALARM B) once, and the icon (🔊) or (🔊) will flash for 3 seconds , then stop flashing for confirmation , and the setting is completed.

▷ Operation after turning on the alarm clock

After using the alarm clock to start the machine, it needs to be turned off.

- Short press (POWER) key twice in succession to shut down the machine.
- To cancel the radio alarm lock frequency and music alarm lock, press the (POWER) key briefly.

● Keyboard lock

- Long press (DPY/↔) to lock keyboard and (TUNING) button, icon(↔) display. Long press again unlock the keyboard and (TUNING) button.




System Reset

- In rare cases such as accidental interference, the system will press the keyboard, select button failure display disorder and other phenomena. Press the RESET key with a thin hard object to reset the system.



● Charging Operation

- When the power display (🔋) of the machine is low or the power is exhausted(🔋), please charge it immediately.

- Connect one end of the USB charging cable to the DC5V USB output adapter, and plug the other end into the local (TYPE-C) jack [the adapter output is DC5V($\geq 1A$)]to charge the machine. The display shows () charging symbol flashes.
- When the icon () is displayed, the charging symbol () does not flash, indicating that it is fully charged.

– Tips –

- In order to avoid interference and insufficient charging current during charging, which may cause automatic shutdown and longer charging time, please do not use the machine for radio and playback.

Safe use of lithium battery

1. The machine is powered by (18650 3.7V) rechargeable lithium battery. Only batteries of the same specification and equivalent shall be used. Improper use of lithium battery may cause explosion!
2. Do not charge the non rechargeable battery.
3. The battery shall not be placed in the hot and humid environment such as water, humidity, explosion and baking.
4. Do not disassemble, impact or knock the lithium battery. If the lithium battery is deformed or bulged, it can not be used.
5. Please use a safe and qualified adapter for charging.
6. In order to maintain the service life of the lithium battery, if the machine is not used for a long time, please place it for less charging every three months.

SPECIFICATION

- Radio frequency range

FM: 64-108 MHz / 76-108 MHz
87-108 MHz / 87.5-108 MHz

LW: 153-513 KHz(9K)

MW: 522-1620 KHz(9K) / 520-1710 KHz(10K)

SW: 1711-29999 KHz(5K)

- NOAA/WB Weather Warning Radio Frequency

1. 162.400MHZ 2. 162.425MHZ 3. 162.450MHZ
4. 162.475MHZ 5. 162.500MHZ 6. 162.525MHZ
7. 162.550MHZ

- Radio noise limiting sensitivity

FM: (S/N=30dB): $\geq 2\mu\text{V}$

LW: (S/N=26dB): $\geq 10\text{mV/m}$

MW: (S/N=26dB): $\geq 1\text{mV/m}$

SW: (S/N=26dB): $\geq 18\mu\text{V}$

- Memory radio frequency Radio Selectivity

FM: 100 pcs

FM: 60dB

LW: 100 pcs

LW: 60dB

MW: 100 pcs

MW: 60dB

SW: 300 pcs

SW: 60dB

- Maximum output power: 2.0W

- Headphone impedance: 16-32
 - Speaker specification:
40mm (dual NdFeB 16 core) 4 /5W
 - TF card: support 32G (Not Include)
 - Audio playback format:
MP3 / WMA / WAV /FLAC
 - Bluetooth transmission distance: 10M
 - DC: 3.7V (18650) 2000mAh
 - DC5V IN:DC5V / 1000mA
-

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