

# **DMR User Manual**

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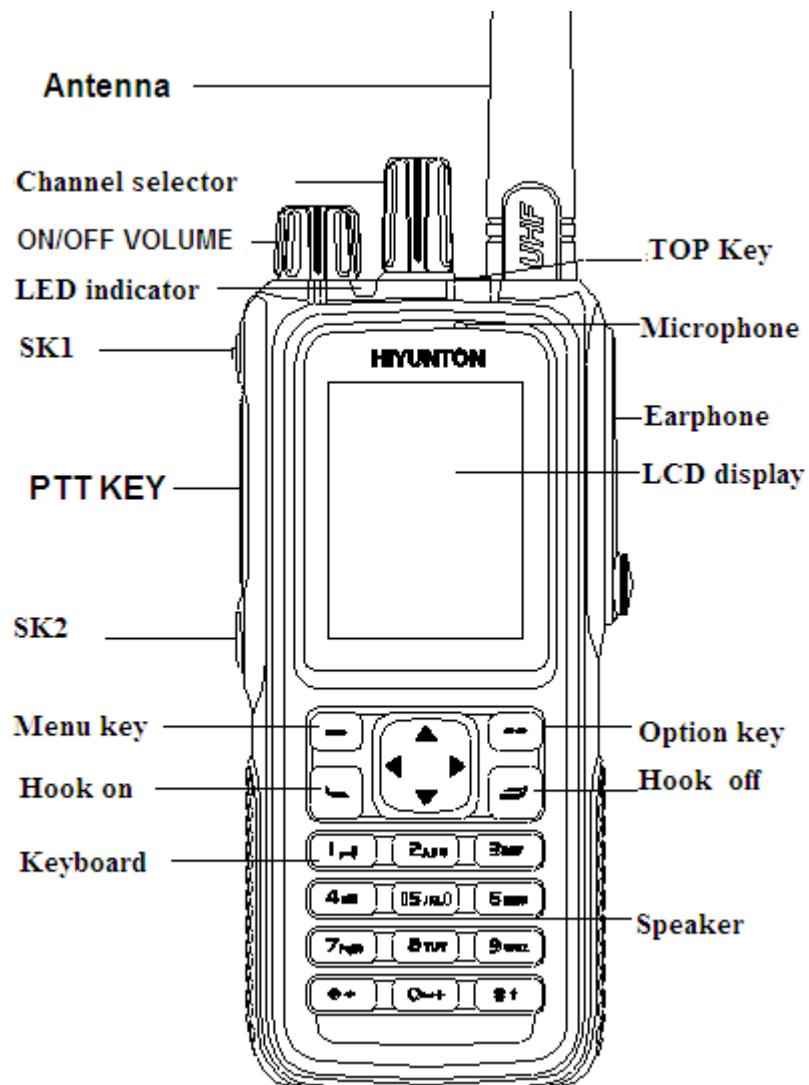
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## 1、Introduction

1.1 HD766 DMR Handle is applicable to DMR iconaling system. It has communication distance, voice clear, simple operation and so on; and its function is more complete in current DMR system. All the indexes of it meet the national standards and international standards.

1.2 HD766 DMR Handle outline drawing below



1.3 HD766 DMR Handle keyboard layout below



## 2 Device descriptions

### 2.1 Random configuration

- ① a handset antenna
- ② a handset battery
- ③ charger set
- ④ user manual

### 2.2 LCD display

The first line is symbol.

The second line is write frequency display information.

The third line is analog or digital working mode, it can display “data transmission”, “transit”, “open channel”, “DMR mode”, “automatic response” when digital mode.

The fourth line and fifth line display: 1. The current group name and group call number. 2. If an analog or open channel mode, it displays the channel name or frequency.

The sixth line displays the number of unread messages and calls missed.

The seventh and eighth line display the inputted number.

From the seventh to ninth line, display calling contents including user's number, user name, speech party information and so on.

The tenth line displays the volume.

The eleventh is the function key message.

Each symbol description on the LCD:

- 1)  Antenna icon, this symbol appears when the DMR Handle locks the Station.
- 2)      RSSI icon, respectively corresponding to the signal strength of 1 - 5
- 3)   Transmitting power level icon
- 4)  Voice control icon
- 5)  Encryption icon
- 6)    CTCSS effective icon, three icons represent effective transceiver, effective receiving, effective launch
- 7)      GPS signal strength, corresponding to 1 - 5 signal strength
- 8)     Speaker icon, corresponding to on-line calls, calling tone and transmitting status
- 9)  Earphone insertion icon, at this moment, PTT, MIC and Speaker switch to earphone unit.
- 10)      Battery icon, respectively corresponding to 0-4 battery power

## 2.3 Keypad

### 2.3.1 PTT key (Transmitting key)

Transmitting and Receiving conversion key, when transmitting, press this key and speak into the microphone; when receiving, release this key. Press this key to dial when the call number appears on LCD. Can press this key to dial or confirm when the call number appears in Menu.

### 2.3.2 Cancel key

Used to cancel current operation. cancel or refuse incoming calling and end the current voice call.

### 2.3.3 Off-hook key

Press this key to dial out the current phone number in contacts state or group call selection; in inputting phone number state, press this key to transmit a call. In standby mode, press this key to bring up the last dialed phone number for modifying and calling. This key can be used as confirming key when input.

### 2.3.4 On-hook key

End current calling or clear inputted number. Be used to end current conversation during call. Pressing this key can go back to standby interface in any state.

### 2.3.5 Menu / Selection confirming key

Used to activate menu mode, after enter menu, use this key to select each option in menu. Be

used to confirm in input method.

### **2.3.6 Escape key**

Used to return last menu, delete last key input when input; long pressing deletes all number. In standby mode, press this key to switch channels.

### **2.3.7 Shift key**

Up key: in standby mode, shift group call; in menu state, be used to shift menu option; in inputting and querying, be used to transfer to last option.

Down key: in standby mode, query calling record; in menu state, be used to shift menu option; in inputting and querying, be used to transfer to next option.

Left key: in standby mode, enter to send message menu; in menu state, be used to shift menu option; in inputting and querying, be used to transfer to previous line or previous page.

Right key: in standby mode, enter Contact; in menu state, be used to shift menu option; in inputting and querying, be used to transfer to next line or next page.

### **2.3.8 Power switch / Volume control knob**

Control startup & shutdown and conversation volume.

### **2.3.9 Encoding knob**

Used to shift channels.

### **2.3.10 Custom key**

Can use write frequency software to set this key as monitor, channel shifting, power shifting, etc.

### **2.3.11 Speed dial**

Long pressing digital key 1-9 can dial the 1<sup>st</sup> to 9<sup>th</sup> contact person's number in contact list.

### **2.3.12 Delete key**

With “\*” in common use, can be used as delete key when input character in input method.

### **2.3.13 Alarm key is used to Emergency Alarm. Pressing alarm key for 2 seconds can be used to initiate pre-programmed operation.**

## **2.4 Prompt tone**

### **2.4.1 Ring tone**

When the DMR Handle receive calling signal, it will continue to ring until the receiver or system automatically cut off.

### **2.4.2 Busy tone**

When the called party is answering phone or out of service or doesn't turn on the radio, the calling party will hear a busy tone.

### **2.4.3 Keypad tone**

When any key is press, the DMR Handle will make prompt tone. The prompt tone can be adjusted.

## **2.5 LED indication**

The common LED indicator lights include: transmit / receive indicator lights, incoming call / message indicator lights, breathing light and the battery low, etc.

### **2.5.1 Transmit indicator light**

Red light

### **2.5.2 Breathing light**

Green light

In standby mode, light 0.1 second every 3 seconds; light 1 second per 3 seconds in call status; when there is missed call and unread message, light 3 seconds、dark 3 seconds (slow flashing).

### **2.5.3 Channel activity indicator**

In digital mode, the indicator light flashes by 0.1 second frequency when receive signaling.

In analog mode, the indicator light flashes by 0.1 second frequency when squelch be opened.

### **2.5.4 Low power**

At this time breathing light turns yellow.

## **3Basic operations**

### **3.1 Turn the Radio On**

Rotate the radio volume control knob clockwise, a click is heard to turn the radio on, and the field strength signal appears at its left. When the radio is turned on, the LCD first displays the host number such as 123456, then displays “xxxx”, the “xxxx” is the current work-group waiting number. Pressing the "Up" key、 "Down" key can change the waiting group number (this number is written into handset by the programming software), then pressing PTT key can call this group (the people who is not in the waiting group will not be called).

When turned on, it may need to input power-on password according to the users' setting.

### **3.2 Turn the Radio Off**

Rotate the volume knob counter-clockwise to turn the radio off. At this moment the radio LCD is no longer displaying. If long time not used, need to remove the battery.

### **3.3 Basic function**

Refer to the briefly dial-up operation table in rear.

#### **3.3.1 Transmitting call**

The user can dial through key (0-9, \*, #) in the standby mode. Enter calling state after call successfully. Can limit the time of each call and each transmission during call (written by the programming software).

Pressing on-hook key can end the current calling or automatically end current call while no one speak for some time.

Transmitting private call, when the numbering is standard, will detect whether the called party is online or not. Only the called party is online, then can do on-line call.

### **3.3.2 Receiving a call**

Can choose if it sounds ring tone or not when answer call. When the caller transmit a group call, only the caller can initiative hang up the current speech.

### **3.3.3 SMS function**

In Message item of menu, can be toward one user, group users or all users send message.

### **3.3.4 State Message**

Inputting "# 0ss \* nn ..." and press the dial key (PTT key, off-hook key, # key), can be toward a user, a group, or all users to send state message. The value range of ss is from 0-99, nn is the called digit number 1-7.

## **3.4 Implementation of various calling features**

### **3.4.1 Wireless Private Call**

From 1-7 digits callsign + dial key, if the inputting number is less than seven digits, the lack of digits will be complemented to seven digits by the radio corresponding digit. For example, inputting the called number is "1", the radio number is 76602, then the dialed called number is 76601.

### **3.4.2 Wireless Group Call**

# 6 \* + 1-7 digit + dial key number, When numbering is the standard way, \* key in the low 4 digit number transmit a group call.

Example 1: input "# 6 \* 90", the radio number is 76602, then the called number is 76690.

Example 2: in standard numbering, input “\*”, the radio number is 76602, then the radio and the called number are 76600, 76601, 76602... 76609 users will be on-line to call. Input the called number "1 \*", the machine and the called number is 76610, 76611, 76612 ... 76,619 users will be on line to call.

### **3.4.3 Call PSTN number**

Beginning with 0 or 9 +7 to 20 number + dialing key.

### **3.4.4 Call PABX number**

Beginning with 8 +7 to 20 number + dialing key.

### **3.4.5 Call all Users**

7 pieces of \* + dialing key or call 16777215+ dial keys (hexadecimal number of 16777215 is 0xffffffff).

The dialing keys above in description are the PTT button, off-hook key or # key.

During a call, the LCD displays "Calling ...." and hear dial tone prompt. If display "system busy" word and hear busy tone, indicate the current channel is busy. If display "the user fails to turn on.", and hear a busy tone prompt, represent some reasons (for example, the other party 's radio is not turned on) leading this call failed. If display "input error.", and hear busy tone prompt, indicate that this call number is invalid. After the handset is received, need press the PTT key and speak to MIC, releasing the PTT key when listening.

### **3.5 Caller ID**

When there is an incoming call, the handset will ring (determined by the setting), and display "Caller ID xxxx", xxxx is the other party's number, if there is contact name, contact name will be displayed.

### **3.6 Current Group Call**

Press the "Up" key and "Down" key, can switch the waiting group. Pressing the "PTT" key can directly call the currently displayed group.

### **3.7 Redial function**

Double-click "#" key, can recall the last called number, or in the standby mode, press the off-hook key to bring up the last dialed number, this moment you can redial or dial after edit..

### **3.8 Clear wrong number**

Error type the destination number, press "Exit" key to clear last digital;press the key for more than 0.8 seconds to clear all of them.

### **3.9 Volume adjustment**

When turned on, clockwise rotation [Power switch / volume control knob] to increase the volume, counter-clockwise to decrease the volume.

### **3.10 On-hook**

Can press disconnect key to end the call when the communication is over, disconnect key is cancel key or on-hook key.

### **3.11 Emergency Call**

Press "# 9 \*" then input the called number to transmit an emergency call, emergency call can prevent others interrupted, for emergency use.

### **3.12 SMS**

Input the called number and message to send in menu; details as the message operation of menu.

### **3.13 State message transmission**

Press # 0ss \* nn ... + Call key to transmit state call; ss is 0 to 99, nn ... is the called number.

### **3.14 Data Transmission function**

In the call state, inter- computers can do fully transparent data transmission via connecting the serial port and terminal, serial port parameters is 1200BPS, 1 pc start bit, 1 pc stop bit, 8 pcs data bits, no parity bit.

### **3.15 Input Method**

Inputting function will automatically starts when input message content, contact name and other content. Inputting method can mix with inputting Chinese, English size letters, numbers and punctuation marks, pressing the # key to switch input method.

### **3.16 Keypad lock**

After press the "Menu" key, within 6 seconds to press the "\*" key can lock the keypad. Firstly press the "Menu" key then press the "\*" key to unlock when the keypad is locked. May need to input a power-on password according the settings when unlock the keyboard.

## **4 Menu Operations**

This radio provides a menu can be displayed / removed (write frequency write) by the user according to their need. In the turn on mode, press the Menu key to enter the menu item. In the menu operation, "Up" key "Down" key is used to move the menu items, press "1" - "9" to move current items to current 1-9 page; press "0" to move the menu item to start menu item; press "#" move menu time to the last item in menu; press the "Select" key to confirm;press "Exit" key to return to the previous menu or exit; press off -hook key or PTT key to send or call when appear available sending or calling message.

In the sub-menu options, the current efficient items are marked by colored lump.

When input contact information and send message, can shift inputting method through "#". This radio supports T9 Pinyin input/ uppercase and lowercase letters input / digital input / digital input.

### **4.1 Phone book**

Through this menu to see, edit and call the inputted phone number, the phone number can be private call, group call, all call and PSTN numbers, etc. 1-9 contacting people can dial out through quick dial way.

Phone book can store 100 contact people; including the contact's name can be inputted 20 byte, phone numbers 20-byte , notes 40 bytes.

Pressing Left-right key can check previous item or next item. Pressing Up-down key can quickly flip to the previous or latter 10<sup>th</sup> page.

#### **4.1.1 Call**

Call current phone number.

#### **4.1.2 Searching**

Search name containing inputted characters, phone number and notes and display out. If cannot search the relative notes, display the current note.

#### **4.1.3 Edit**

To edit current contact information.

#### **4.1.4 Delete**

To delete current contact information, automatically go to next contact after do it.

### **4.2 Message**

#### **4.2.1 New message**

You can create your desired text message with 100 characters or 50 Chinese characters. after input, press the "Menu / Select OK" to enter the number input screen; inputting the contact number can send message. If press the Return key to return in inputting process, the inputted information will be save in DraftBox; press the End key to exit, then the information will be save to the next input.

#### **4.2.2 Quick text :**

There are 10 quick text in total and each quick text has 16 bytes. While view the quick text, press 1-9 keys to see the corresponding serial number quick text; press # key to see the last one. When view or edit quick text, can press the PTT key or off-hook key to send current information.

#### **4.2.3 OutBox**

The OutBox can save up to 40 latest received message or state messages; the last received one will be saved in the front row. To press 1-9 key can view the recent 9 messages. To press "0" key can view the first message and press "#" key to view the last message.

When display the information of OutBox, the first line is called number; the second line is the called name; the third line is group call called number (when the called is group call); the fourth line is group call name; Start from the fifth line to display the received messages. If the message is too long and can't completely display, you can enter edit mode to view.

To press Selection key can choose edit, reply, call, delete ,delete all and so on. "Edit" is to edit current information and the content of the caller number so that send the message and so on; "Reply" is to input the new content and do reply; "Call" is to call the caller number. When do editing or replying operation, if press Back key to exit, will save the message into DraftBox.

#### **4.2.4 OutBox**

Outbox can save up to 40 recently sent messages or state messages; the last one message will be saved in the front row. To press 1-9 key can view the recent 9 messages. To press "0" key can view the first message and press "#" key to view the last message.

When display the information of OutBox, the first line is the called number; if the called number is group call, it displays "Group Call" ; when the called number is Private Call and the message is sent successfully, it displays "Send Successfully"; the second line displays the called name or group call instruction and so on; from the third line beginning, it displays the sending information.

To press Selection key can edit, re-send, call, delete, delete all and so on. " Edit" is to

edit current information and the content of called number so that send the message and so on. “Re-send” is to re-send current content; “Call” is to call the called number; When do editing or replying operation, if press Back key to exit, will save the message into DraftBox.

#### **4.2.5 DraftBox**

In the process of editing text messages, when press the Exit key to exit, the inputting content is stored in DraftBox. The DraftBox save recently edited 40 messages and the called numbers; the last inputted message will be put in the front. To press 1-9 key to view the latest 9 messages. To press "0" key can view the first message; To press "#" key can view the last message.

When display the message of DraftBox, the first line is the called number; the second line displays the called name or group call instructions and other information; starting from the third line, display the inputted message.

To press Selection key can edit, re-send, call, delete, delete all and so on. “Edit” is to edit current information and the content of called number so that send the message and so on. “Re-send” is to re-send current content; “Call” is to call the called number; When do editing or replying operation, if press Back key to exit, will save the message into DraftBox.

#### **4.3.1 Dialed Number**

Save the nearest 200 dialed numbers. When view, press "0" key to display the first note, press "#" key to display the last note Press 1-9 key to view the latest 9 dialed notes.

The first line is called number when the dialed number is displayed, the second line displays the dialed name or group call instructions and other information, the third line displays the called is "Private Call" or "Group Call", when the called is Private Call, contraption to the different calling result , the next line will has no displaying or display “Already call” or “Called on”. “Called on” means that it is tested to the called and get through the called in the standard numbering way. “Already Call” means the called has voice responses and do conversation.

#### **4.3.2 Received Call**

To save latest 100 received call, when view , press "0" key to display the 1<sup>st</sup> note, press "#" key to display the last note. Press 1-9 key to view the latest 9 received calls.

When it displays received calls, the first line is the calling number, the second line displays the caller name and other information, if the radio is called, the rear contents are blank. Otherwise, if the called is group call, the rear will display the group call number and related information.

#### **4.3.3 Missed Call**

To save the latest 100 missed calls, the missed call just saves the private call information. When view, press “0” to display the 1<sup>st</sup> note; press “#” to display the last note. Press 1-9 key to view the recent 9 notes.

Displaying the missed call, the 1<sup>st</sup> line is the caller number; the 2<sup>nd</sup> line displays the caller name and so on.

To enter this Menu can delete the missed call number in Home Screen.

#### **4.4 Backlight Selection**

To set if turn on the backlight or not, turning on backlight can light LCD and keypad so that the Users can still operate Radios without enough light. There are three options for choosing: backlight on/off/continue on.

**4.4.1:** "Backlight On" means "If this radio has not done any operation and also not received and transmitted any signal in pre-set time, this radio will automatically shut down backlight after surpass the pre-set time.

**4.4.2:** "Backlight Off" means shut up the Backlight.

**4.4.3:** "Backlight continue On" means Backlight is always on.

## **4.5 Transmitted Power**

Can set this Radio's transmitted power level as "High Power" or "Low Power" through this Menu. High power can expand this Radio's coverage area of transmitted signal, and can do communication with the far away radios. To choose proper transmitted power can prolong the communication time of power. When LCD displays  icon, means high power; displays  icon, means low power.

## **4.6 Channel Selection**

This item and the channel option of home screen is consistent. Can do selection among 32 channels. The parameters are written by programming software.

The Channels will not be displayed if not written frequency.

To input 1,2,3....9 directly switches to 1,2,3...9 channel.

## **4.7 Channel Parameter**

### **4.7.1 Selecting Channel Number**

To input the channel number needing to modify parameters.

### **4.7.2 Frequency Modification**

To modify transmitted frequency and received frequency.

### **4.7.3 Name Modification**

To modify channel name.

### **4.7.4 Infra-acoustic Frequency Modification**

This function is effective in analog channel.

Can choose to transmit-receive effect, transmitting effect, receiving effect and transmit-receive invalid, and choose the working analog infra-acoustic and digital infra-acoustic. Transmit-receive effect means check infra-acoustic when transmit and receive; transmitting effect means transmitting infra-acoustic, but when receive, don't check infra-acoustic; receiving effect means not transmitting infra-acoustic, but when receive, check infra-acoustic; transmit-receive invalid means no infra-acoustic frequency.

#### **4.7.5 Color Code Selection**

This function is effective in digital channel.

There are 16 kind of color codes in total for option. When the color code is 0, will not do test for color code.

#### **4.7.6 Digital / Analog Selection**

Can choose current channel as digital or analog working mode.

#### **4.7.7 VOX Function**

The VOX function is only effective in communication. When open the VOX function, make use of voice to automatically control PPT; no needing to press PTT key can do communication.

#### **4.7.8 Data Transmission Function**

Data Transmission function is used between two computers to do transparent data transmission through terminal. Channel one cannot be used to do data transmission function.

Firstly need to establish voice channel connection before data transmission function. Can do dial connection or automatic connection. Automatic connection sends the connective command: “#s\*nnnnnnn#”, among s=6,9,8.....so on, n is the called number such as 0076601; when data transmission is over, send “#X\*HookOnW# to end voice channel connection.

#### **4.7.9 Voice Encryption Function**

To choose if do encryption or not for voice, the LCD displays signal when voice encryption is effective.

#### **4.7.10 Forward Function**

To choose if open the forward function or not.

#### **4.7.11 Open Channel Function**

All the users in channels can hear the content of communication when open channel function is opened. The connecting characters are yellow when enter the open channel mode, prompting current communication is not private communication.

#### **4.7.12 Frequency Display Switch**

To choose if display current channel 's frequency or not in home screen.

### **4.8 Group Call Selection**

To shift current waiting groups is convenient for receiving or dialing.

To input 1,2,3...9, directly switch to the 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>...9th group.

### **4.9 Group Call Parameter**

To modify the parameter of group call.

#### **4.9.1 Group Call NO.**

To input the sequence number of Group Call.

#### **4.9.2 Group Call Number Modify**

To modify the ID number of Group Call.

#### **4.9.3 Group Call Name Modify**

To modify the name of Group Call.

#### **4.9.4 Implied Group**

To modify the ID of implied group.

### **4.10 Squelch Adjustment**

To adjust the squelch of Analog mode, the squelch is always open when minimum.

### **4.11 Start Password Switch**

Can choose if check password or not when start radio.

### **4.12 Start Password Modify**

The password length is 8 bits, needing to input current password can modify password.

### **4.13 Conversation Password Modify**

The length of conversation password is 32 bits, needing to input current password can modify conversation password.

### **4.14 Keypad Volume**

To choose the volume of pressing keypad, 16 levels volume in total, the minimum level is no sound.

### **4.15 Ring Volume**

To choose ring volume of ringing, 16 levels volume in total, the minimum level is no sound.

Can choose 16 kinds of ringing tone when be called.

### **4.17 Prompt Volume**

To choose the prompt volume of the DMR Handle giving out, 16 levels volume in total, the minimum level is no sound.

### **4.18 Ring-back Tone Kind**

Can choose two kind of ring-back tones.

### **4.19 Private Call Ring Switch**

Can choose to open private call ringing or automatically decide if ring or not.

Automatically: depending on the caller or system decides if ring or not.

Ringing open: always ring when private call is incoming.

### **4.20 Group Call Ringing Switch**

Can choose to open or shut down group call ringing.

#### **4.21 Display Brightness**

To adjust LCD brightness, can use “ Up” key and “Down” key to increase or decrease brightness. Support fourth level brightness adjustment.

#### **4.22 Scan Setting**

When Scan function is open, can do scanning for channels ( including digital or analog channels) in scanning channel table. Stop monitoring when there is voice signal in channels, this moment press PPT to speak; if no voice signal within the retentive time of channel, continue scanning.

#### **4.23 Auto Keypad Lock**

To choose if start auto keypad lock or not.

Through combination key to press “Menu / Selection confirmation” key and “\*”key, lock or unlock the keypad.

When auto keypad lock is open, if no any operation within pre-set time, auto lock keypad when reach the pre-set time. The pre-set time can be written by programming software or set by DMR Handle .

Keypad cannot auto lock when auto keypad lock is shut up, but can lock or unlock keypad through combination key above-mentioned.

The time of auto keypad lock uses second as unit.

#### **4.24 Vibration Function**

Can choose “Vibration on” or “Vibration off”. If set in “ Vibration on”, when there is incoming call or receiving message, the radio will vibrating prompt (no sound).

#### **4.25 GPS Function**

When check this radio’s GPS data or power provided by used programming software, need to open GPS function.

##### **4.25.1 Display GPS Information**

To display this radio’s GPS information including longitude, latitude, speed, direction ,time and so on.

##### **4. 25.2 Query GPS Information**

To query other terminal’s GPS information and display out.

#### **4.26 Auto Response Information**

When the auto response function is open, can auto use information to response refusing and not receiving the conversation for the incoming private call.

#### **4.27 Side Key Settings**

To set the function of upward key in side.

#### **4.28 Left Direction Key Settings**

To set the function of left direction key.

#### **4.29 Right Direction Key Settings**

To set the function of right direction key.

#### **4.30 Down Direction Key Settings**

To set the function of down direction key.

#### **4.31 Vibration Selection**

Can choose “ Vibration on” or “ Vibration off ”.If set in “ Vibration open”, when there is incoming call or receiving message, the radio will vibrating prompt (no sound).

#### **4.32 Wallpaper Selection**

Can choose “ Wallpaper on” or “Wallpaper off”. If set in “ Wallpaper on”, when choose the proper wallpaper, this radio will have background display.

#### **4.33 Language Selection**

To set displaying language, can choose “Chinese” and “English” ,two kind of languages.

#### **4.34 Equipment Information**

To display some relative information about this radio, displaying format and content is below:

This radio ID:

Another Name:

Serial No.:

Model name:

Frequency Range:

Version No.:

Version Date:

Written frequency:

### **5 Main Technical Indexes**

#### **5.1 Main Parameters**

5.1.1 frequency stability  $\leq 1.5$  PPM

5.1.2 working voltage :6.6~9.0V DC

5.1.3 working temperature: -25°C~+70°C

#### **5.2 Transmitting Portion**

5.2.1 transmitting power  $\geq 4$ W ( DC 7.4V)

5.2.2 maximum frequency deviation  $\leq 5$  KC

5.2.3 transmitting distortion  $\leq 5\%$

#### **5.3 Receiving Portion**

5.3.1 receive sensitivity  $\leq -117\text{dB}$  BER 5%

5.3.2 voice frequency max power  $\geq 1.0\text{ W}$

5.3.3 audio distortion  $\leq 5\%$

**Re: this Radio technical indexes are all accorded with DMR international standard.**

#### **5.4 Stochastic Allocation**

One antenna

One battery

One set of charger

User manual

#### **5.5 Optional Accessories**

Earphone line

Written frequency line

#### **5.6 Model Classify**

HD766 General digital radio

HD766G General digital radio adding GPS function

HD766T digital trunking radio

#### **5.7 Programming Software**

Programming software can be downloaded from below company website:  
<http://www.hiyunton.com/>

#### **5.8 Quality Guarantee and Service**

**5.8.1** Shenzhen Hiyunton Digital Communication CO.,Ltd promises that from the purchasing date beginning, all the HD766 portable Two Way Radios manufactured by us which have quality defects leaded by no usage under the normal use and maintenance, can have below free maintenance .

Host : 12 months

Accessories (antenna、battery、charger) : 6 months

**5.8.2** For maintenance and service, please go to our authorized dealers or authorized maintenance points ; according to purchasing proof (purchasing date and product serial number), send (or posted )the no damaged factory ID to above mentioned places or our company after-sale service department and obtain maintenance.

Company service hotline:

#### **5.8.3 Quality not guarantee including below:**

- a. Abnormal operation leading defects and damages.
- b. Incorrectly use,storage leading defects and damages.
- c. without authorized maintenance and dissemblance leading defects and damages.
- d. the serial number erased or cannot recognize the product

- e. the product of purchasing date not recognized
- f. use charger under the abnormal working voltage
- g. the normal abrasion in usage

#### HD766 DMR Handle briefly Dial Operation

Function	Dial
Wireless or Network Call	
Wireless Private Call	1—7 bits number + dial key ( the former of number is less than 7 bits, auto made up with this host number's corresponding place)
Wireless Group Call	#6 *+ 1—7 bits number + dial key or less than 4 bits number have * key + dial key (numbering method is standard method)
Call the user of some number beginning	n***** + dial key (6pcs*), such as 5***** + dial key, call the user with 5 beginning
Call all users	***** + dial key (7pcs *)
Cancel calling or hang up	take out stitches key
Re-dialed the last number	##
Special calling classify	
Call PSTN user	0 or 9+7—20 bits number + dial key
Call PABX user	8+7—20 bits number + dial key
Emergency call	#9*... + dial key
Priority call	#8*... + dial key
State call	#0ss*nn... + dial key(ss is from 0 to 99)
Send message	#2sss...(data)*nnn...(number) + dial key
Broadcast call	#1*... + dial key(Group Call)
Open channel voice communication	#5*nnn...
Transmitting Group Call	#6*nnn...
Call forwarding	
Call forwarding	#41*nnn...
Call forwarding cancel	#41#
Cancel entering forwarding	#45#
Other operation code	
Shift to open voice communication mode	#51#
Cancel open voice communication mode	#52#
Increase one group call number	#42*nnnnnnn#
Delete one group call number	#43*nnnnnnn#
Delete all group call number	#43#
Auto response message for incoming call	#46#
Cancel message auto response	#47#

Display host number	#48#
Display group call number list	#49#
Display current waiting network number and channel number	#58#
Shift to next network	#71#
Offline/cancel calling or refuse incoming calling	On-hook key
Keypad lock /unlock	Menu key + *

Re: 1. Dial key is PTT key, Off-hook key or # key. When private call, press off-hook key transmits call then check if the called is online or not.

2.Taking out stitches is cancel key or On-hook key. 3. When choose analog working method, no forward message function and frequency hopping function.

## **Appendix:malfuction and difficulty managing**

### **Field intensity signal strength is too weak:**

- 1.Check whether the antenna assembly is good.
2. Move handset's position and direction, pay attention to field intensity indicating grid number is increased or not.

Received signal strength is different with the location, different in anywhere. Sometimes only a foot or rotating an angle can vary greatly. Large obstacles such as buildings, hills, slopes,etc. Has a great influence for receiving the signal.

### **Radio working or LCD displays abnormal**

- 1.Shut down, wait for some seconds then start radio.
- 2.Power off, remove the battery, wait for some seconds then re-equipped the battery and start radio.
- 3.Replace the battery.

## **FCC RF EXPOSURE COMPLIANCE REQUIREMENTS FOR OCCUPATIONAL USE ONLY**

The Federal Communications Commission (FCC), with its action in General Docket 93-62, November 7, 1997, has adopted a safety standard for human exposure to Radio Frequency (RF) electromagnetic energy emitted by FCC regulated equipment. Proper operation of this radio will result in user exposure far below the Occupational Safety and Health Act (OSHA) and Federal Communications Commission limits.

DO NOT transmit for more than 50% of total radio use time (50% duty cycle). Transmitting more than 50% of the time can cause FCC RF exposure compliance requirements to be exceeded. This radio is NOT approved for use by the general population in an uncontrolled environment. This radio is restricted to occupational use, work related operations only where radio operator must have the knowledge to control the user's exposure conditions for satisfying the higher exposure limit allowed for occupational use.

When transmitting, hold the radio in a vertical position with its microphone 1 inch (2.5cm) away from your mouth. The radio is transmitting when the red LED on the front of the radio is illuminated. You can cause the radio to transmit by pressing the PTT bar on the radio.

These are required operating configurations for meeting FCC RF exposure compliance. Failure to observe these restrictions mean violation.

### **Federal Communications Commission Regulations**

Before it was marketed in the United States, the Digital portable radio was tested to ensure compliance with FCC RF energy exposure limits for two-way portable radios. When digital portable radios are used as a consequence of employment, the FCC requires users to be fully aware of and able to control their exposure to meet occupational requirements. Exposure awareness can be facilitated by the use of a label directing users to specific user awareness information. The radio has an RF exposure product label. Also, the Product Safety Manual and this

Operator's Manual include information and operating instructions required to control RF exposure and to satisfy compliance requirements.

### **Occupational Safety Guidelines And Safety Training Information**

To ensure bodily exposure to RF electromagnetic energy is within the FCC allowable limits for occupational use. Always adhere to the following basic guidelines:

- The push-to-talk button should only be depressed when intending to send a voice message.
- The radio should only be used for necessary work-related communications.
- The radio should only be used by authorized and trained personnel. It should never be operated by children.
- Do not attempt any unauthorized modification to the radio. Changes or modifications to the radio may cause harmful interference and/or cause it to exceed FCC RF exposure limits. Only qualified personnel should service the radio.
- Always use only authorized accessories (antennas, control heads, speakers/mics, etc.). Use of unauthorized accessories can cause the FCC RF exposure compliance requirements to be exceeded. The information listed above provides the user with information needed to make him or her aware of a RF exposure, and what to do to assure that this radio operates within the FCC exposure limits of this radio.

### **Caution**

1. Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.
2. Adapter shall be installed near the equipment and shall be easily accessible.
3. The plug considered as disconnect device of adapter.
4. The device complies with RF specifications when the device used at 0mm from your body.
5. Declaration of Conformity

Hereby, Shenzhen Hiyunton Digital Communication CO., LTD. declares that this DMR Two-way Radio product is in compliance with essential requirements and other relevant provisions of Directive 1999/5/EC.