

INTEK®

MX-8000V

136-174 MHz VHF FM / 8CH / 5W-25W
PROFESSIONAL MOBILE RADIO
PC PROGRAMMABLE

MX-8000U

438-490 MHz UHF FM / 8CH / 5W-25W
PROFESSIONAL MOBILE RADIO
PC PROGRAMMABLE



INSTRUCTION MANUAL

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MX-81000V / MX-8000U

VHF / UHF PROFESSIONAL MOBILE RADIO

MANDATORY SAFETY INSTRUCTIONS TO INSTALLERS AND USERS

- Use Only manufacturer or dealer supplied antennas.
- Antenna minimum safe distance: 108 cm.
- Antennas used for this transmitter must not exceed an antenna gain of 3 dBi.
- Antenna mounting: The antenna supplied by the manufacturer or radio dealer must not be mounted at a location such that during radio transmission, any person can come Closer than the above indicated minimum safe distance to the antenna (i.e. 108cm).

- Vehicle installation: The antenna can be mounted at the center of a vehicle metal roof or trunk lid if the minimum safe distance is observed.
- Antenna substitution: Don't substitute any antenna for the one supplied or recommended by the manufacturer or radio dealer. You may be exposing person(s) to excessive radio frequency radiation. You may contact your radio dealer or the manufacturer for further instructions.

WARNING !

- Maintain a separation distance from the antenna to person(s) at least 108cm.

NOTICE !

It is recommended to carefully read this owner's manual before using the product. This will also help the user to prevent using the radio in violation of the regulations valid in the country where the product is used, as well as to avoid any possible interferences with others services.

NOTICE !

This transceiver has been factory pre-programmed, in order for the user to test it right after purchase. It is the user's responsibility to re-program the radio, in accordance with the specifications for the frequency channels assigned by the local authority.

NOTICE !

This transceiver is programmable via PC, using the dedicated software and the PC interface cable (optional items). Any programming or modification of the original default setting must be made by a specialised technician or by an authorised service centre. Some functions of this transceiver might be programmed in violation of the technical rules in force for the use of the VHF and UHF FM bands. It is the user's responsibility to check that any modification to the programming will be done in compliance with the current regulations. Any modification to the product, alteration of the internal circuit, of the external structure of the radio or any programming in violation of the current regulations will automatically void the product certification and your right to use the product. INTEK S.R.L. declines any responsibility concerning any modification of the product, made by the user or by a third party, after delivery of the product.

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1. Package-opened Inspection and Installing

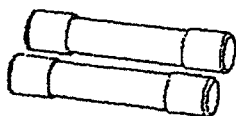
Please check the host in the package and the supplied accessories in the following table before using. Any articles are found lost or damaged, please contact the distributor without delay.

1.1 Supplied Accessories

Accessories	Quantity
Fixed bracket	1
Power Cable	1
Hand Microphone	1
Microphone Hanger	1
M4*10 Combination Screw	4
M4*16 Self-tapping Screw	2
M5*16 Self-tapping Screw	4
Instruction Manual	1
Protective tube	2



Microphone
Hanger



protective
tube



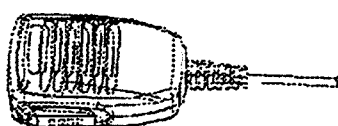
M4x10
Combination
Screw



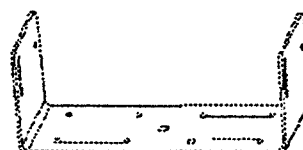
M5x16 / M4x16
Self-tapping
Screw



Power Cable



Hand Microphone



Fixed bracket

1.2 Preparation

1.2.1 Connection of Power Cable

First of all, please check whether there is a hole for the power cable on the insulating board. If no, please bore the board with the suitable drill bit and fix a rubber grommet on it.

Afterwards, please have the cable pass through the insulating board and lead from the car into the car engine. Connect the red conductor to the positive terminal of the accumulator and the black conductor to the negative terminal.

At last, ring the remained conductor and fix it.

Note: Please maintain the sufficient relaxation of the power cable to make it convenient to dismantle the radio in the state of power connection.

1.2.2 Radio Installing

Warning: For passengers' safety, please fix the radio firmly on the fixed bracket so that the radio will not be loosened in case of collision.

- The fixed bracket is taken as an example. Draw the position and drill a hole on the instrument panel first, and then install the fixed bracket with 4 M5*16 self-tapping screws. (Note: please fix the radio at the position convenient for operation and control, and leave an enough space for fixation and connection of the cable.)
- Slide the radio into the fixed bracket and fix it with 4 M4*10 combination screws (plus plain washer and spring washer).
- (Different combinations of fixing holes are selectable to adjust the radio to the proper height and visual angle.)

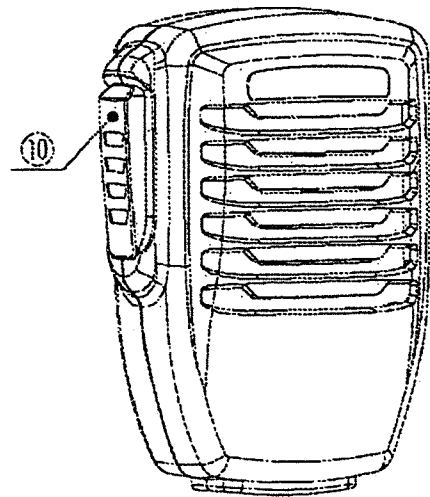
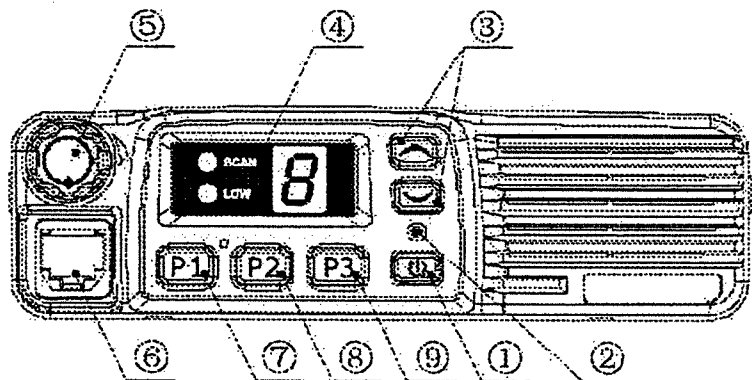
- Connect the antenna and the power cable to the radio.
- Install the microphone hanger at the position easy to use, with 2 M4*16 self-tapping screws. (The microphone and its cable should be fixed at the position not affecting safe driving.)
- Connect the microphone to the microphone jack on the front panel of the radio and put it on the hanger.

Note: When replacing the protective tube for the power cable, please use the one of the same specification without fail. It is not allowed to change it into the tube of higher capacity.

2 Radio Overview

2.1 Description of External View

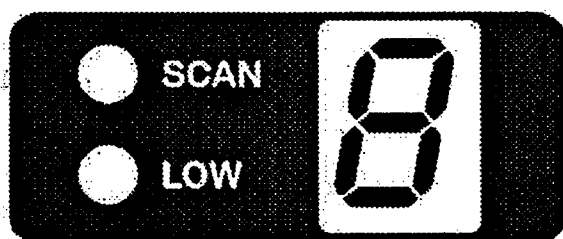
1.  power button
Press this button for a long time (more than 1.5 seconds) to switch The radio on/off.
2. LED indicator
The red indicator will light while transmitting; the green indicator Will light when it receives the carrier.
3.  /  button (programmable button)
4. Display screen
For details, see Display .
5. Volume Control knob
To be used to adjust volume.
6. Microphone/Programming Interface

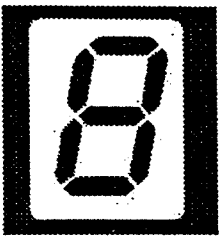


7. P1button (programmable button)
8. P2 button (programmable button)
9. P3button (programmable button)
10. PTT button (on the hand microphone)

Press the PTT button first, and then speak to the microphone to transmit the voice to the other. Loosen to receive.

2.2 Display Screen

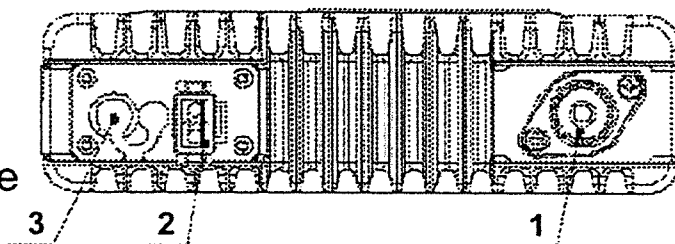


Display	Description
SCAN indicator	Scan indication: on when scan is enabled.
LOW indicator	Power level indication: on when in low power.
	Indicates the current channel in normal use, ranging from 1~8. Indicates the current squelch level when squelch selection is enabled, ranging from 0.~9. Displays "B " when Public Address is enabled. Displays "-" when the radio has no channel. Displays "U " when the radio is in the remote stun status. Displays "h " when the radio is in the remote kill status.

Display	Description
	Displays "P " when the radio enters the PC Programming Mode.
	Displays "t " when the radio enters the PC Adjustment Mode.
	Displays "C " when the radio enters the Wired Clone Mode

2.3 Rear Panel

1. Antenna Interface
2. Power Interface
3. External Speaker Interface



3. Basic Operation

1. Startup:
Press the red POWER button for a long time (at least 1.5 seconds) to switch the radio on/off
2. Volume:
Press the MONITOR or Squelch Off button to listen to the background noise first, and then adjust the volume by turning the volume control knob.
3. Channel
The radio can provide 8 general channels. Press the CHANNEL UP or CHANNEL DOWN button to select the channel.(Refre to P7 4 Programmable Button Function)
4. Transmission:
To send a call, press the PTT button and speak to the microphone

in the normal voice. Please keep the microphone about 3 or 4 cm far from your mouth. After speaking, please loosen the PTT button.

5. Receive:

The radio will return to the receiving state after you loosen the PTT button. The distributor may have set the CTCSS/DCS signaling in your radio. On the channels with CTCSS/DCS are set, you can only hear the call from other radio with the same CTCSS/DCS.

4. Programmable Button Function

P1, P2, P3  can be programmed as one of the following functions.

0. None	No function
1.Channel Up	Select the next channel
2.Channel Down	Select the previous channel
3.Talk-around	Switch the radio mode between talk-around and repeater.
4.Call Button1	Sends the DTMF/2Tone code assigned to call 1 button.
5.Call Button2	Sends the DTMF/2Tone code assigned to call 2 button.
6.Lone worker	Enables Lone worker function
7.Emergency Alarm	Press the button programmed as “Emergency Alarm” to set alarm tone according to the programming software or send your own ID or background voice to your partner or the system.
8.Emergency Alarm Off	Press this button to quit the Emergency Alarm mode.
9.Scan	Start/end the scanning function of system.
10.Nuisance Delete	Press this button Nuisance Delete when the radio enables
11.Hi-Low Power Switch	the scan function and stays at the noise channel. Press to switch between high and low power of the sending power of the radio, when the “LOW” is on the display,

	the current sending power is low.
12.Monitor momentary	Hold to disable CTCSS/DCS signaling according to the setting to resume normal operation.
13.Monitor	Press to disable CTCSS/DCS signaling to receive signals that cannot be heard in normal operation, press again to resume normal operation.
14.Squelch off momentary	Hold to enable squelch and loosen to resume normal operation.
15.Squelch off	Press this button to open the squelch. Press it again to return to the normal operation. Press this button in the selective call state to quit such a state.
16.Lone worker reset	After enabling the Lone worker, press this button to reset the Lone worker timer and the timing resumes.
17 .Public Address	Start/end the public address function. Press this button and the function will be activated. Press the PTT button and speak to the micro-phone so that you can hear your voice through the external speaker.Press this button once again and return to the normal user mode.
18.Squelch Level Selection	Press this button to enter the Squelch Level Adjustment Mode first, and then press the / button to adjust the level. Press the PTT button to save the selected squelch level and quit this mode. Press any other button to quit without saving.

5. Radio call

- A. Press the button programmed as "call Button 1" or "call Button 2" to send the preset code .
- B. Press "PTT" and talk with the microphone in the normal voice. Please keep the microphone about 3-4cm away from your lips. When finish talking, release "PTT".

6. Talk-around

In the communication network, you can expand communication range through the repeater, but when the mobile radio is out of the communication range, you can connect with other radio in the talk-around method.

Switch the talk-around or repeater mode through "Talk-around" button.

7. Scan

The radio can be programmed to scan multiple channels to receive signals.

7.1 Start/End Scan Function

Press the button programmed for "Scan" to enable scanning. When the scan function is enabled, the "SCAN" indicator is on and the channels being scanned are also displayed. Press the "Scan" button again to disable scanning and the "SCAN" indicator will be out.

7.2 Nuisance Delete

If a channel continuously generates noise or interference, press the button to remove this channel from the scan list temporarily.

Note: the priority channel can't be removed and the last one in the scan list, either. Quit the Scan mode and enter it again, the deleted channel will be added to the scan list again.

8. Public Address

Press the button programmed for "Public Address", "b" will be displayed. Press the PTT button, the voice from the MIC of the radio will be directly sent to the external speakers through the interface on the back.

Press the "Public Address" button again to disable the public address function.

9. Lone worker

If Lone worker is set to be enabled, press the button "Lone worker" to enable the Lone Worker Mode. Start the Lone worker timer and when the preset Lone worker time is reached, the radio will alarm, after the alarm time, the radio will enter the Emergency Alarm Mode.

In the Lone worker Mode, press the "Lone worker" button again to quit the Lone worker mode.

In the Lone worker Mode, press the button programmed for "Lone worker reset" the specific button to select lone worker reset mode or any button (any button to select lone worker reset mode), the Lone worker timer will reset and start timing again.

10. Emergency Alarm

Press the button programmed for "Emergency Alarm" (the time of pressing must be longer than the de-bounce time of the emergency alarm switch) to enter the Emergency Alarm mode. "E" will be displayed. You can set alarm tone according to the programming

software or send Your own ID or background voice to your partner or the system.

In the Emergency Alarm Mode, press the button "Emergency Alarm Off" to quit the Emergency Alarm Mode and disable the alarm tone or stop sending it and resume normal operation.

11. REMOTE KILL, stun activate and revive

If the radio received DTMF code programmed as remote stun, the radio will enter the remote stun status, after replying according to the setting, "u" will be displayed. The radio can only receive signals and cannot send signals. If the radio received DTMP code programmed as remote un-stun, the radio will quit the remote stun status and enter normal operation.

If the radio received DTMF code programmed as remote kill, the radio will enter the remote kill status, after replying according to the setting, "h" will be displayed. The radio cannot send or receive signals. If the radio received DTMP code is programmed as revive, the radio will quit the remote kill status and enter normal operation.

12. Wired Clone Mode

If the wired clone function is enabled, the radio will not quit after entering the wired clone mode. To return to normal user mode, the user needs to restart the machine.

The operating steps go as follows:

1. Press [P1] buttons for power-on until show "C" and enter the

clone mode. If the function is disabled, it will enter the user mode.

2. Connect the slave radio with the wired clone cable first, and then turn on.
3. Press button [P2] on the master radio for starting clone. During transmitting the data, the master radio lightens red, and the slave radio lightens green and indicates "P". After the slave radio receiving all the data, the red light on the master radio is off, and the slave radio restarts.
4. You can keep cloning according to step 3 above.

13. Trouble Shooting Guide

NO.	Problem	Solution
1	Power on Failure	A. The power cable is not connected with the accumulator or the host reliably. Please connect the power cable reliably. B. The protective tube of power cable is burnt out. Please change it. C. The power button is of poor contact. Please change the silica gel button or PCB button. D. The rechargeable battery is out of power. Please recharge or change a new one. E. CPU is broken, Please change the IC.
2	Phase lock loop unlocked (Beeping)	A. Channel frequency beyond the range, reset channel data. B. The crystal X1 of phase lock loop is broken. Please change it. C. The oscillator tube is broken. Please change it. D. The IC3 of phase lock loop is broken. Please change IC.
3	No talkback	A. The frequency is not right. Please reselect the channel of the same frequency. B. The CTCSS/DCS code is not the same. Please reset it. C. It is out of the effective communication range.
4	No receiving signal	A. The antenna is not in good contact. Please fasten the antenna head.

NO.	Problem	Solution
		B. The high-frequency amplifying tube Q18 is broken. Please change it. C. The squelch level is set to high Please reset the squelch level. D. The mixed tube Q19 is broken. Please change it. E. The FM IC6 is broken. Please change IC.
5	The red transmission Indicator lights but no sound is heard.	A. Power module IC1 damaged, no power output, please change the module. B. MIC damaged, please change it.
6	The green receiving indicator lights but no sound is heard.	A. The speaker is broken. Please change it. B. The audio power amplifier IC7 is broken. Please change IC.

14. Major Specifications

Frequency Range:	136MHz~174MHz 438MHz~490MHz
Channel Number:	8
Channel Spacing:	25kHz (wide band) 12.5kHz (narrow band)
Operating Voltage:	13.6V Dc $\pm$ 10%
Operating Temperature:	-25° C / -+55° C
Dimension:	150 x 53 x 130 mm
Weight:	1030g

Declaration of Conformity MX-8000V

EC Certificate of Conformity
(to EC Directive 2006/95, 2004/108, 99/5)

DECLARATION OF CONFORMITY

With the present declaration, we certify that the following products :

INTEK MX-8000V

comply with all the technical regulations applicable to the above mentioned products in accordance with the EC Directives 2006/95/EC, 2004/108/EC, 99/5/EC.

Type of product :	VHF PMR Transceiver
Details of applied standards :	EN 300 086 -1/-2, EN 301 489-1-5 EN 60950-1
Manufacturer :	INTEK S.R.L. Via G. Marconi, 16 20090 Segrate, Italy Tel. 39-02-26950451 / Fax. 39-02-26952185 E-mail : intek.com@intek-com.it
Notified Body :	EMCCert Dr. Rasek Boelwiese 5, 91320 Ebermannstadt Germany Identification Number : 0678
Contact Reference :	Armando Zanni Tel. 39-02-26950451 / Fax. 39-02-26952185 E-mail : intek.com@intek-com.it

Segrate, 13/11/2009

dr. Vittorio Zanetti
(General Manager)

CE 0678 



RoHS
2002/95/EC

Declaration of Conformity MX-8000U

EC Certificate of Conformity
(to EC Directive 2006/95, 2004/108, 99/5)

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Details of applied standards :	EN 300 086 -1/-2, EN 301 489-1-5 EN 60950-1
Manufacturer :	INTEK S.R.L. Via G. Marconi, 16 20090 Segrate, Italy Tel. 39-02-26950451 / Fax. 39-02-26952185 E-mail : intek.com@intek-com.it
Notified Body :	EMCCert Dr. Rasek Boelwiese 5, 91320 Ebermannstadt Germany Identification Number : 0678
Contact Reference :	Armando Zanni Tel. 39-02-26950451 / Fax. 39-02-26952185 E-mail : intek.com@intek-com.it

Segrate, 13/11/2009

dr. Vittorio Zanetti
(General Manager)