



Quick Installation Guide
TM840 PoC-DMR Gateway

Kirisun Communication Co.,Ltd.

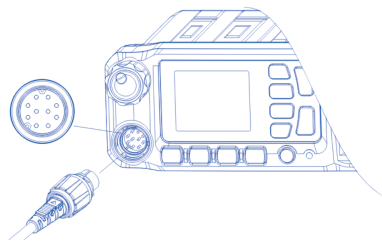


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supply (at a maximum supply voltage of 16V). Make sure the red wire is connected to the anode and the black wire to the cathode. Install the supplied fuse, and connect the power plug to the power interface at the rear of the main unit.

4. Connect the system antenna to the antenna feeder, and put the antenna at the top of the vehicle.



5. Plug the hand microphone (with direction sign at the top) into the corresponding interface of the radio, and rotate clockwise the cover lock on the plug. When the lock contacts the slot on the radio, press it slightly and continue to rotate until it is tightened.

Note:

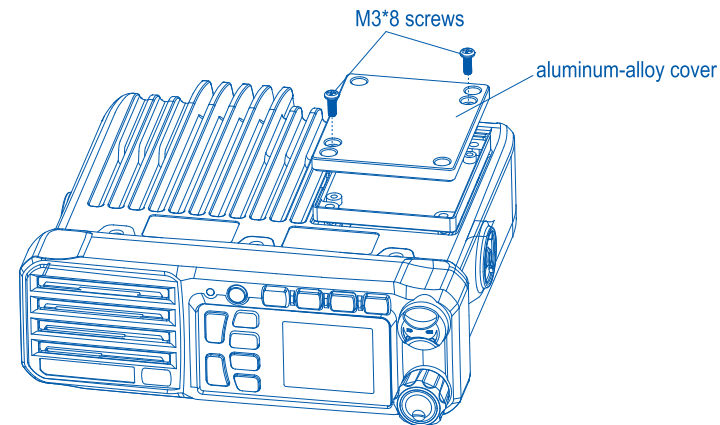
To detach the hand microphone, rotate counterclockwise the cover lock on the plug of the microphone.

6. Fix the microphone stand using the two ST4*16 self-tapping screws. Make sure you can operate the microphone conveniently and can drive safely. Mount the hand microphone onto the stand.

7. Install a SIM card. Before installation, remove the aluminum-alloy cover by unscrewing the two M3*8 screws using a Phillip-head screwdriver. After installing the card, put the cover back.

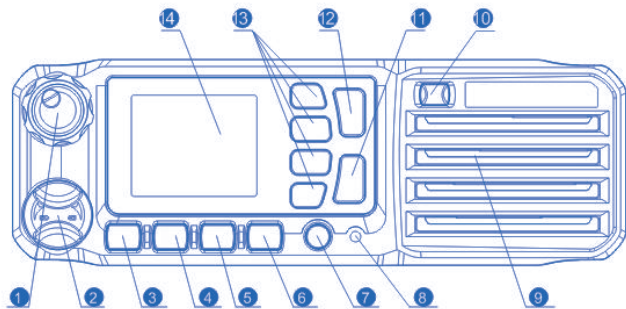
Note:

To take down a SIM card, unscrew the two M3*8 screws fastening the aluminum-alloy cover, remove the cover, take off the SIM card, and then install the cover.



3 External View

Front Panel



SN	Part Name	SN	Part Name
1	Volume Knob	8	LED Indicator
2	Hand Microphone/Programming Interface	9	Speaker
3	Menu/Confirm Key	10	Emergency Alarm Key
4	Up Key	11	On-Hook Key
5	Down Key	12	Off-Hook Key
6	Back Key	13	P1~P3 (Programmable Keys)
7	Power Key	14	LCD Screen

Programming Keys

To satisfy user preferences, programmable keys (P1, P2, P3) can be set as shortcut keys through programming by the dealer.

Note:


Press: Press down a key and release quickly.


Press and hold: Press down a key and hold for the duration programmed before release. (The duration can be set in programming settings.)

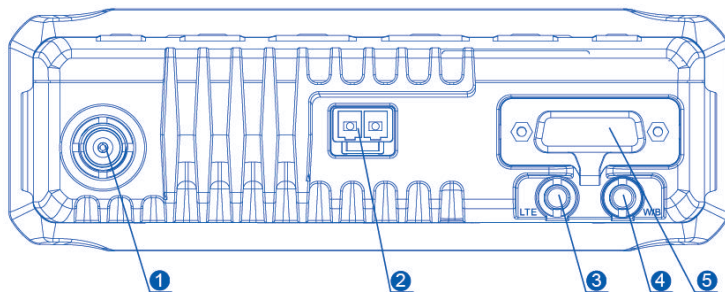
To turn on/off the speaker, press the P4 key.

You can program the keys P1~P3 to achieve the following functions when they are pressed.

SN	Programming Function	Function Description
1	Void	No function. The error alert will be heard when the key is pressed.
2	High/Low Power	Switch between high and low power.
3	Monitor	If signaling is transmitted on the current analogue channel, press the key to switch to carrier squelch mode (i.e. cancel signaling). Voice is output when the carrier is matched. Press the key again to go back to the previous state.
4	Squelch On/Off	Enable/disable squelch to receive weak signals on an analogue channel.
5	Squelch Level	Adjust signal strength required to receive signals.
6	Scan	Start/stop searching for the traffic on other channels.
7	Screen Brightness	Go to the Screen Brightness interface, and adjust brightness

SN	Programming Function	Function Description
		by pressing the Up or Down key.
8	LCD Backlight Type	Go to the Screen Backlight interface, and adjust the backlight duration.
9	Repeater/Talkaround	In a channel allowing relay, the radio can communicate with another radio directly or via a repeater. Press the key to switch between these two modes.
10	Select Zone	Press the key to switch to another zone. For details, see 7.1 Selecting a Zone.
11	Home Interface	Press the key to return to the home interface.
12	Spurious Emission Interference	While scanning channels, delete a channel from the scan list so as to remove spurious emission interference on this channel.
13	Scrambling/Encryption	Enable/disable encryption for a channel supporting scrambling/encryption.
14	Contact	Go to the Contact interface.
15	Short Message	Go to the Short Message interface.
16	Call Record	Go to the Call Record interface.
17	Monitoring	Enable/disable channel monitoring.  Note: Monitoring will be disabled when the PTT icon on the screen is held down.












SN	Programming Function	Function Description
18	Permanent Monitoring	Press the key to enable/disable permanent channel monitoring.  Note: Monitoring will be disabled when the PTT icon on the screen is held down.
19	Interrupt Emission	Interrupt calls on the current channel so that it becomes idle.

Rear Panel


SN	Part Name	SN	Part Name
1	DMR Antenna Interface	4	BT/Wi-Fi Antenna Interface
2	Power Interface	5	26-pin Data Interface
3	4G LTE Antenna interface		

4 Indications
Icons


Name	Icon	Gateway State
Signal Strength		No signal
		More bars for stronger signals
Short Message		New message received
		Inbox full (with icon flashing)
		State message received
Encryption or Scrambling		Analogue scrambling or digital encryption enabled
		Encryption enabled under trunking mode
Mute		Muted speaker (volume 0)
Transmitting Power		High TX power
		Low Tx power
Monitor Channel		Monitoring a channel
Talkaround		DMO mode enabled for current channel (Talkaround selected for current repeater-mode channel)
Emergency Alarm		In emergency alarm mode
Roam		In roaming mode

Name	Icon	Gateway State
Scan		Scanning (with icon rotating)
		Dwelling on prior channel 1 or 2
		Dwelling on normal channel
Accessory		External microphone/speaker connected
		USB cabled connected
Lone Worker		Lone Worker enabled
Call		Initiating a call
		Receiving a call
Channel Type		In individual call
		In group call
		In all call

LED Indicator for PoC Network State

Indicator State	Meaning
Red light on	- SIM card not installed or improperly installed - Wrong PIN code input
Green light on	In call
Yellow light on	- Standby (individual call) - Call set up
Red light flashing fast	- Failed to register to wireless network due to inactivated SIM card or insufficient balance - Registration failed due to poor network
Green light flashing slow	- Registration succeeded. Enter standby state
Yellow light flashing fast	- Registration in progress - Device undeployed in server, or validity period expired
Off	In idle or power-off state

5 Power-On/ Power-off

To power on the gateway, hold down the Power key . The startup interface will be displayed, backlight on, a voice prompt “di” output, the PoC unit turned on for network registration. When registration succeeds, green light will flash slowly.

To power off the gateway, hold down the Power key . The poweroff interface will be displayed and PoC unit turned off.

6 Setting DMR Unit

6.1 Selecting a Zone

A zone is a group of channels. After putting channels with the same property into one group, you can conveniently switch to different channel groups as needed. The radio supports up to 128 zones, each supporting up to 256 channels.

To select a zone, in the home interface press the Menu/Confirm key  to enter the menu, select Zone , and then select a zone.

6.2 Switching Channels or Groups

You can switch channels or groups by performing the followings.

- In Conventional Mode

In the home interface, press the Up key  and Down keys  to switch to another channel in the current zone.

- In Trunking Mode

In the home interface, press the Up key  and Down keys  to switch to another group.

 Note:

Every channel can operate as an analogue channel or a digital one. In analogue mode, some functions are disabled, for example, short messages, and corresponding menu items are hidden.

6.3 Adjusting Volume

To turn up the volume of the gateway, rotate the Volume Knob clockwise.

To turn down the volume of the gateway, rotate the Volume Knob counterclockwise.

To set the volume of the PoC unit and DMR unit, use the customer programming software.

 Note:

To receive a group call, the gateway must be set as a member of the group by your dealer using the customer programming software.

7 Setting PoC Unit

Setting PoC Unit

The PoC unit is built in the gateway and can be set using a mobile phone connected to the gateway via the BT antenna interface.

 Note:

The PoC unit contains a built-in BT module, which is by default enabled after powering on the gateway.

Take the following steps to set the PoC unit.

- (1) Install the Kirisun coding tool on your Android phone.
- (2) Turn on BT on the phone, search for the gateway "Kirisun GP700_XXXX", and then pair the gateway and the phone.
- (3) Run the coding tool, select the gateway and enter the configuration interface to set the PoC unit.

In the configuration interface, you can perform the following settings.

WLAN Setting

If a Wi-Fi network is available, the gateway connects to the Wi-Fi network prior to other network. To set up a WLAN connection, enable WLAN in the interface of the coding tool, select a Wi-Fi network, enter a password, and then connect.\

BT Setting

- To modify a BT connection name, click the BT device name.
- To switch to another BT connection, select another BT device. The gateway will be disconnected from the previous BT device (e.g. a mobile phone).

Max. Uplink Call Time

You can set a maximum uplink call duration of 30s, 45s, 60s, 120s or unlimited.

Key Setting

This is a reserved function. No setting is needed.

8 Setting Groups

Run the Kirisun PoC network management platform, and then set the PoC unit and a PoC device in the same group.

Run the Kirisun customer programming software, and set the same frequency for the DMR unit and for a DMR two-way radio.

9 Calling

After settings the DMR Unit, PoC unit and groups (see 7. Setting DMR Unit to 9. Setting Groups), a DMR two-way radio can communicate with a PoC two-way radio. No other setting on these radios is required.