



CP300

DMR Handheld Transceiver

User Manual



1. 概述

CP300 數字對講機設計優良，性能良好，簡單易用。

- 內置 16 個區 32 個頻道（1 個區可選 32 個頻道）
- 512 個頻道選擇
- 可進行英文和中文選擇
- 高低功率選擇
- 短信發送和接收功能（最多 40 個字符）
- 加密模式
- 單獨工作模式
- 頻道掃描
- 5 級聲控發射
- 繁忙信道鎖定
- 發射限時功能
- 緊急呼叫功能
- 內置手電筒
- 震動功能
- 錄音和播放功能
- 5 級靜噪水平（模擬模式下）
- 1W 音頻功率輸出
- 點陣液晶顯示（可同時顯示 3 行文字）
- 鋁金屬框體
- 3.7V 2200mAh 大容量鋰電池

2. 詳述

一般資料

頻率範圍	P: 380-420MHz U1: 410-450MHz U3: 440-470MHz
頻率誤差	±1ppm(-30°C~+60°C)
頻道數	16 區×32 頻道
頻道間隔	12.5KHz
數字聲碼器	AMBE++
尺寸	99mm (高) x 51mm (寬) x 21mm(厚)
重量	160g
電源	3.7V 2200mAh
放電電流 (最大)	接收模式音頻輸出 320mA (最大音量時) 發射模式 1700mA 待機模式 120mA

接收機

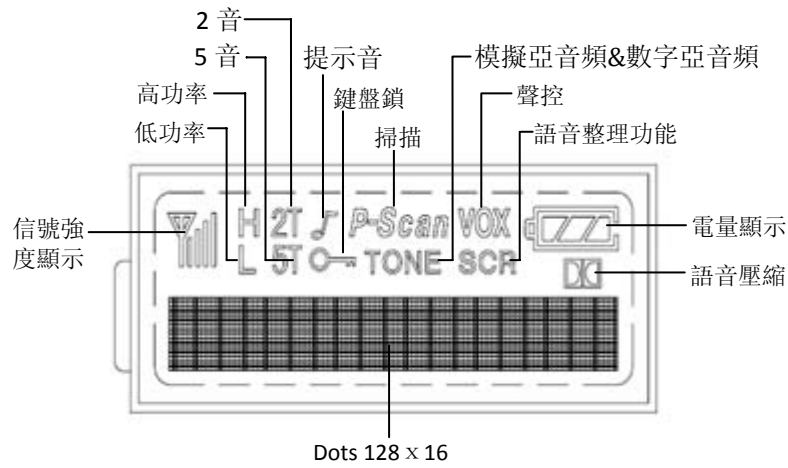
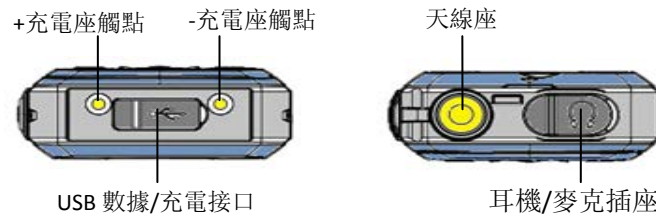
靈敏度	0.25uV 12dB SINAD
靜噪靈敏度	0.22uV 10dB SINAD
鄰道選擇性	65dB(12.5KHz)
雜散和諧波抑制	75dB
哼聲和噪聲比	40dB(12.5KHz)
音頻輸出	1W/16Ω
音頻失真	<3% (額定音頻輸出)
音頻響應	+1, -3dB (300Hz 至 3KHz 6dB/oct 的加重特性)
輸入阻抗	50 歐姆

發射機

發射功率	3-1W
雜波輻射	70 dB
哼聲和噪聲比	40 dB
諧波失真	≤3% (1KHz 音頻調製)
音頻響應	+1, -3dB (300Hz 至 3KHz 6dB/oct 的去加重特性)
輸出阻抗	50 歐姆

3. 外觀及顯示說明





4. 安裝和拆卸

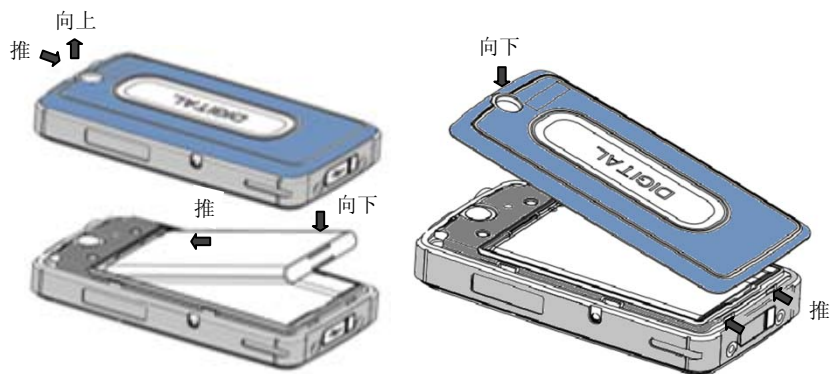
天線安裝和拆卸

裝配天線時，對準天線座並順時針擰緊天線；逆時針旋轉天線可拆下天線。



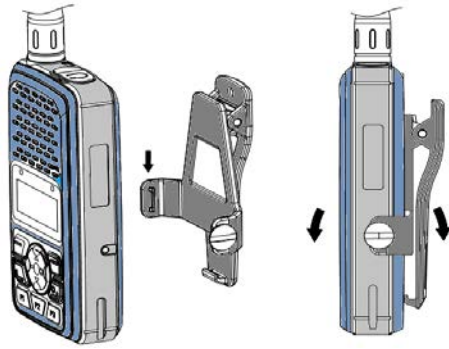
電池安裝和拆卸

拆卸電池將後蓋沿頂部方向撬開並打開後蓋，取出或裝配上電池，裝上後蓋。



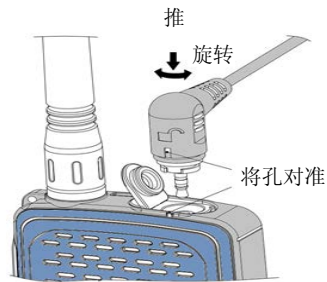
背夾安裝和拆卸

把皮帶夾對準對講機的帶夾孔，並順時針擰緊螺絲反之逆時針鬆開螺絲，皮帶夾與對講機分離。



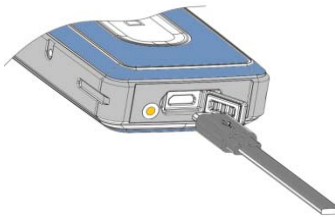
配件的連接

打開耳機蓋，將耳機孔與機身孔對齊插入並旋轉耳機。要拆耳機時旋轉耳機將耳機孔與機身孔對齊並撥出耳機。

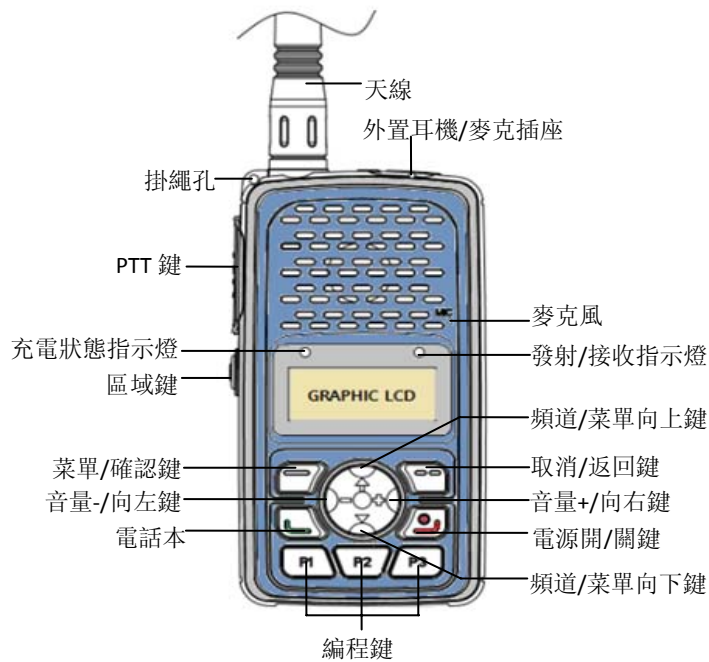


充電連接

打開 USB 蓋並連接 USB 充電適配器，充電時 LED 燈顯示紅色。充電完成後，LED 燈顯示綠色。



5. 對講機操作



1. 電源開/關鍵

持續按下電源開/關鍵 3 秒開啟對講機，將啟動開機音並顯示“CPS”。
再次持續按下電源開/關鍵 3 秒，發出“再見”聲音並關機。

2. PTT 鍵

按下 PTT 鍵進入發射模式，鬆開 PTT 鍵進入待機模式。建議距離麥克風 5-10 厘米說話以保證更好的通訊品質。

3. 菜單/確認鍵

按下菜單/確認鍵，進入菜單選擇，可以通過右鍵或左鍵選擇需要的菜單。

4. 區域鍵（寫頻預置）

按下區域鍵，可以切換程序預設的區域並通過上/下鍵選擇該區域的信道。

5. 音量/左右鍵

待機狀態下，按“音量 -”鍵調整聲音變小，按“音量+”鍵調整聲音變大。

短按時，聲音增加或減小一級。長按時，持續增加或減小音量。

在菜單模式下，左右選擇功能菜單。

6. 頻道/菜單上下鍵

待機狀態下，選擇頻道。在菜單模式下，上下選擇相應的菜單。

7. 聯繫人按鍵

按下聯繫人按鍵，進入電話本菜單。

8. P1 P2 P3 編程鍵

P 鍵有短按和長按 2 種功能，按住 P 鍵超過 2 秒為長按功能。

P 鍵	短按	長按
P1	可編程	鍵盤鎖開/關
P2	可編程	手電筒開/關
P3	可編程	震動開/關

9. 耳機/麥克插座

用於連接外置揚聲器和麥克風。

10. USB 接口

USB 接口可用於 1) 充電 2) 讀寫頻 3) 程序升級。

11. 發射/接收 LED 狀態顯示

TX	紅燈亮
RX	綠燈亮
綠燈閃	收到相同頻率信號，但色碼不匹配
低電量	紅燈閃並發出“BEEP”聲響

12. 充電 LED 狀態顯示

電池充電狀態指示，紅燈亮表示充電中，綠燈亮表示電池已充滿。

6. 電池充電

1. 安全注意事項

- 1) CP-300 對講機電源選用高性能的鋰離子電池 (CB300)。CB300 電池是安全可靠的，可以支持快速充電。
- 2) 在使用對講機之前，請先對電池進行充電，以獲得最佳性能。
- 3) 電池帶機充電時，請先對講機關閉，再對機器內部電池進行充電。

2. 充電時間

低電量使用可能會導致通話距離和性能變差，請在出現下列情況時，對電池及時充電：

- 1) 當你認為對講機性能變差。
- 2) 在發射或接收時紅色 LED 燈閃 (間隔 0.5 秒)。
- 3) LCD 電池圖標閃爍。
- 4) 對講機在使用時發出“BEEP”聲響。



3. 充電方法

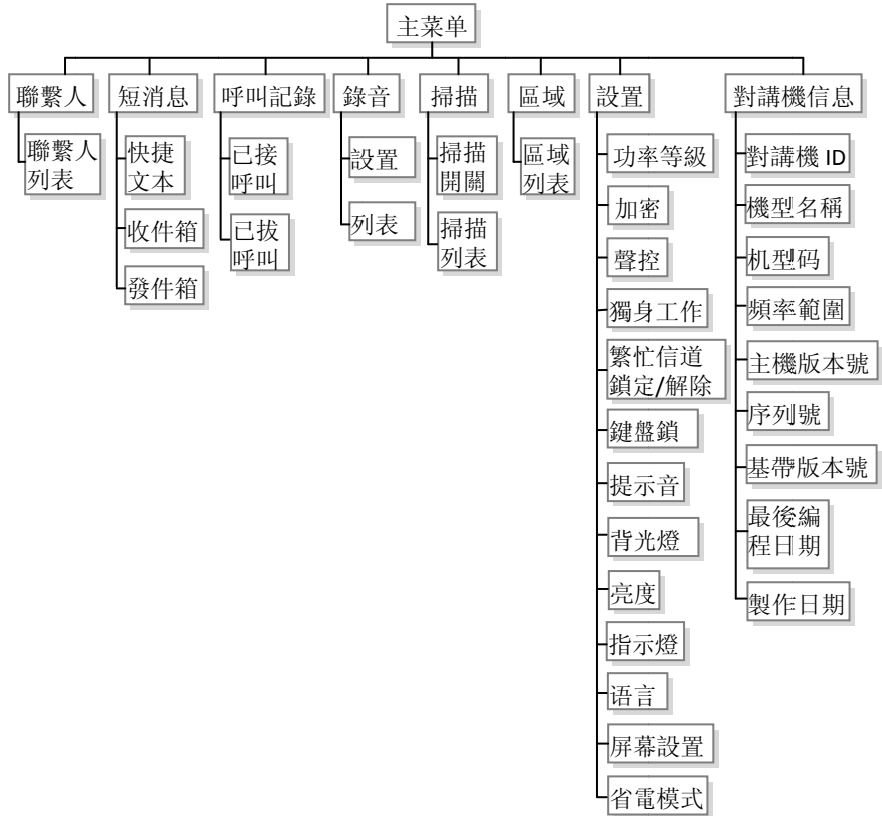
- 1) 分別將電源適配器連接交流 220V 電源及 CS300 充電座。
- 2) 當電池和對講機一起充電時，請關閉對講機。
- 3) 即使充電完成 (綠色指示燈亮)，請再繼續充電 30 分鐘，可將電池完全充滿。

状态	LED 指示灯	状态	LED 指示灯
充电	红灯亮	检测错误	红灯闪
充电完成	绿灯亮	继续充电	绿灯亮

7. CP-300 的使用

按下  進入菜單模式。




進入菜單模式後有八個菜單可選擇，可根據應用和需要設置，以方便使用。



1. 聯繫人列表菜單

設置聯繫人列表（寫頻預置），按 PTT 鍵來調用。如果要呼叫其中的一個聯繫人，在列表中選擇並按下 PTT 鍵。在列表菜單中的聯繫人，可通過寫頻軟件增加/刪除聯繫人。進入聯繫人菜單時顯示個人選呼、組呼或全呼聯繫人列表。




● 圖標

-  個人聯繫列表（個人選呼叫列表，發送個人信息）
-  組聯繫列表（組呼，發送組信息）
-  總列表（呼叫或發送信息到所有工作在相同頻道上的對講機）

2. 短消息菜單

當接收到新短消息時，在接收模式下 LCD 將會顯示，如果在其它模式下收到新短消息將有未讀消息顯示。短消息菜單有快捷文本、收件箱、發件箱三個子菜單。

1) 快捷文本

使用寫頻軟件可以預置 10 條短消息，每條短消息可支持 40 個字符。進入快捷文本，選擇預置的短消息，按下  可以看到短消息的內容，再按下  可以選擇發送短消息的聯繫人，最後按下  發送短消息。

2) 收件箱

進入收件箱列表中，選擇列表中的短消息，可以看到接收到的短消息內容。收件箱最多可以存儲 10 條收件短消息，當接收到的短消息超過 10 條時，將會刪除最早收到的短消息，以保存新的短消息。可以選擇全部刪除以清空收件箱。

3) 發件箱

進入發件箱列表中，選擇列表中的短消息，可以看到發送出去的短消息。發件箱最多可以存儲 10 條發送短消息，當發送的短消息超過 10 條時，將會刪除最早發送出去的短消息，以保存新的短消息。可以選擇全部刪除以清空發件箱。

3. 呼叫記錄菜單

呼叫記錄菜單只保存個人呼叫記錄，組呼或全呼記錄不保存。呼叫記錄是保存在已接呼叫列表/已撥呼叫列表裡。

1) 已接呼叫

可以存儲 10 條呼入的信息並看到對方的 ID。當已接呼叫列表超過 10 條信息時，將會刪除最早的呼入信息，以保存新的呼入信息。可以選擇全部刪除以清空已接呼叫記錄。

2) 已撥呼叫

可以存儲 10 條呼出的信息並看到對方的 ID。當已撥呼叫列表超過 10 條信息時，將會刪除最早的呼出信息，以保存新的呼出信息。可以選擇全部刪除以清空已撥呼叫記錄。

4. 通話錄音菜單

通話錄音功能可以在錄音菜單中設置開/關，錄音功能可以保存發送和接收的通話內容。可以選擇全部刪除清空錄音記錄。錄音功能可以記錄 63 條錄音，每條錄音時長 2 分 30 秒。

5. 掃描菜單

打開掃描時，對講機進入掃描模式並檢查預置頻道，掃描時指示 LED 紅綠燈閃爍。如果在掃描期間接收到信號，對講機將暫時停止掃描。

1) 掃描開/關

在掃描菜單中選擇掃描的開和關。

2) 掃描列表

可以通過寫頻軟件預置掃描列表。

6. 區域菜單

可以通過寫頻軟件設置。最多可支持 16 個區，每個區可支持 32 個頻道。

7. 設置菜單

1) 功率等級

發射高/低功率設置。

2) 加密

在數字頻道下開啟該功能，接收和發送的語音將會進行加密。

通過寫頻軟件可以設置 0 到 65535 任意一個數字做為密鑰。

使用相同密鑰並開啟加密功能的機器才能正常語音通話。

3) 聲控 (VOX)

通過寫頻軟件設置聲控靈敏度等級 1~5 級。開啟聲控功能後，無需按 PTT 鍵即可通過語音觸發機器發送。

- 4) 單獨工作模式
開啟該功能後，機器在預設時間內若無發送操作，在快要到達預置時間前會發出提示音。如仍無發送操作，機器在提示音結束後將自動呼出緊急報警，獨身工作時間可設置為 1~100 分鐘。
 - 5) 繁忙信道鎖定/解除 (BCL/BCLO)
如果當前使用信道上有一個用戶正在使用，對講機禁止發送，以免干擾。
 - 6) 鍵盤鎖
鍵盤鎖功能開啟後，除 PTT、緊急鍵、電源開/關鍵和臨時解鎖鍵可以使用外，其餘按鍵都不可以使用。按下 **PTT** 2 秒（臨時解鎖鍵）或 PTT 鍵可以臨時解鎖，臨時解鎖狀態下，如 25 秒內無任何操作，鍵盤自動鎖定。
 - 7) 提示音
菜單只提供提示音的開/關設置。詳細的提示音設置可通過寫頻軟件設置。
 - 8) 背光燈
設置 LCD 背光燈的開/關。
 - 9) 亮度
調節 LCD 亮度等級為 1~7。
 - 10) 指示燈
設置指示 LED 燈的開/關。詳細設置可通過寫頻軟件設置。
 - 11) 語言
設置顯示中文或英文字體。
 - 12) 屏幕設置
有兩種顯示方式（待機）可選擇設置。
 - 13) 省電模式
省電模式可設置關和省電等級 1:1、1:2、1:4。
- 8. 對講機信息**
顯示此對講機的信息。

1. Features

The CP300 Digital Radio was developed to be user-friendly with compact design and easy to use features

- 16 Zones and 32 Channels are selectable.
(1zone = Max 32 Channels)
- 512 CH can be set.
- English and Chinese Language Setting.
- RF Power setting.
- Short (up to 40 characters) message sending and reception functions.
- Encryption mode 16 bit
- Lone Worker mode
- Normal scan
- 5-step VOX (Voice Operated Transmit) can be set
- Busy Channel Lock (BCL) function
- Time-Out Timer (TOT) function
- Emergency / Siren function
- Built in Flash Lamp
- Etiquette (Vibration) function
- Voice recording and playback
- 5-step S.Q can be set (Analog support).
- 1 Watt Audio Output
- 3 Lines Mono LCD Display
- Aluminum metal Frame Body
- DC+3.7V 2,200mAH high capacity Battery

2. Specification

General

Frequency Range	P:380-420MHz U1:410-450MHz U3:440-470MHz
Frequency Stability	±1ppm(-30°C~+60°C)
Channels	16 Zones / 32 Channels
Channel Spacing	12.5KHz
Digital Vocoder	AMBE++
Dimensions	99mm(H) x 51mm(W) x 21mm(D)
Weight	160g
Power Source	3.7V 2200mAh
Current Drain (maximum)	Receive mode, rated audio out – 320 (Audio Max) Transmit mode –1,700mA Standby mode – 120mA

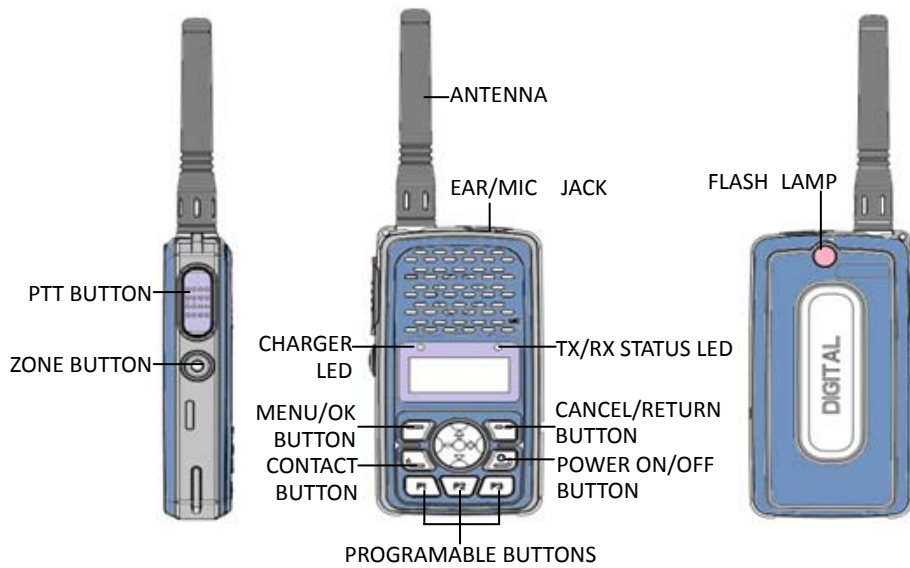
Receiver

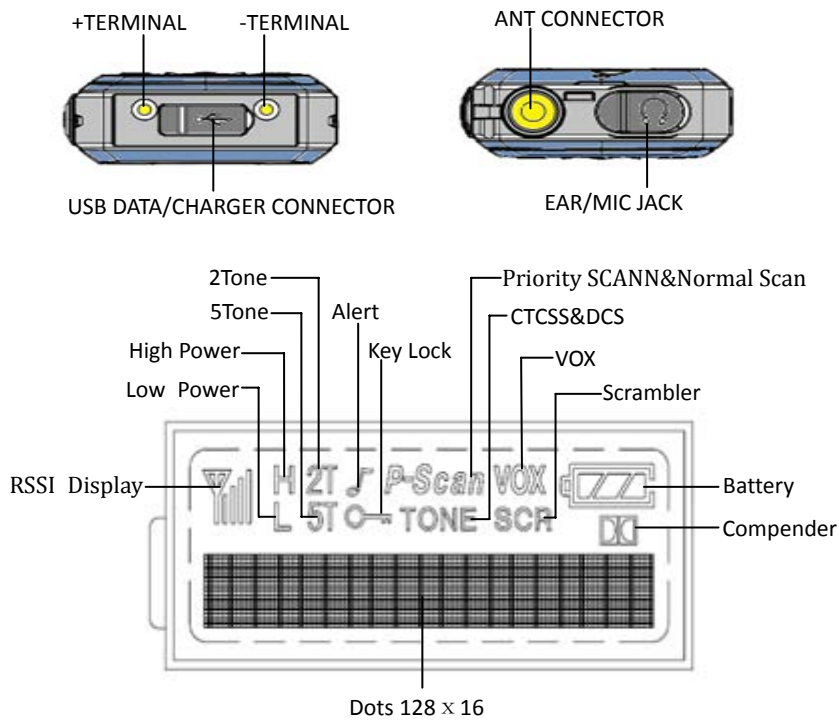
Sensitivity	0.25uV 12dB SINAD
Squelch Sensitivity	0.22uV 10dB SINAD
Selectivity	65dB (12.5KHz)
Spurious and Harmonic Rejection	75dB
FM Hum and Noise	40dB (12.5KHz)
Audio Output Power	1W/16Ω
Audio Distortion	Less than 3% at rated output
Audio Response	+1, -3 dB from 6dB per octave de-emphasis Characteristic
Input Impedance	50 ohms

Transmitter

RF Power Output	3-1W
Spurious and Harmonic	70 dB
FM Hum and Noise	40 dB
Audio Distortion	3% maximum with 1KHz modulation
Audio Frequency Response	+1, -3dB from 6dB per octave pre-emphasis Characteristic
Output Impedance	From 300 ~ 3000Hz 50 ohm

3. Appearance





4. Installation and Removal

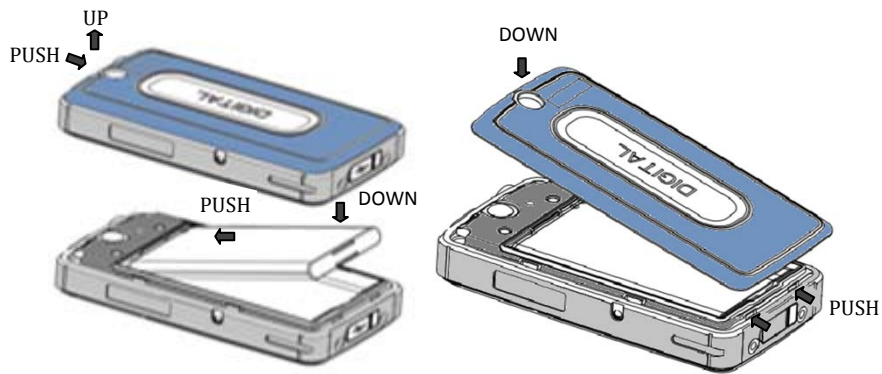
Antenna Installation and Removal

To install the antenna, insert the antenna into antenna connector and screw the antenna clockwise. To remove the antenna, screw the antenna counter clockwise.



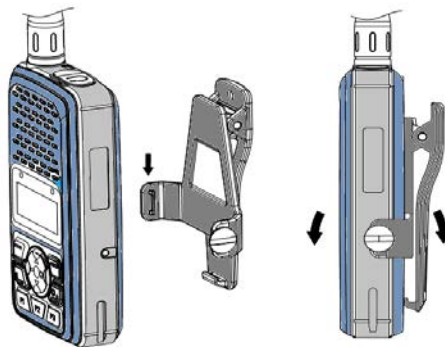
Battery Installation and Removal

Slide the rear cover in the direction of the top and open the cover. And then remove the battery. Slide and hold down, the battery is inserted. Insert the back cover to the below hole and press the cover, then the cover will be equipped.



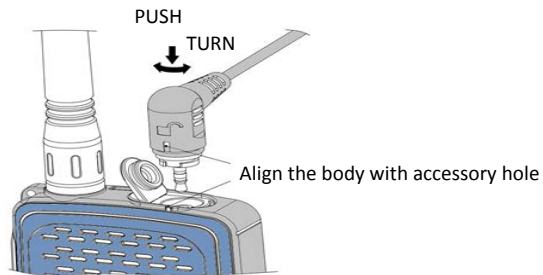
Belt clip Installation and Removal

Put the belt clip to belt clip's hole of the radio and tighten the screws. Conversely loosen the screws, the belt clip is separated with radio.



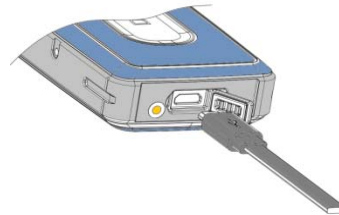
External Accessory Connection

Align the body with accessory hole and push and tighten the screws. To remove the accessory, loosen the screw and pull out.

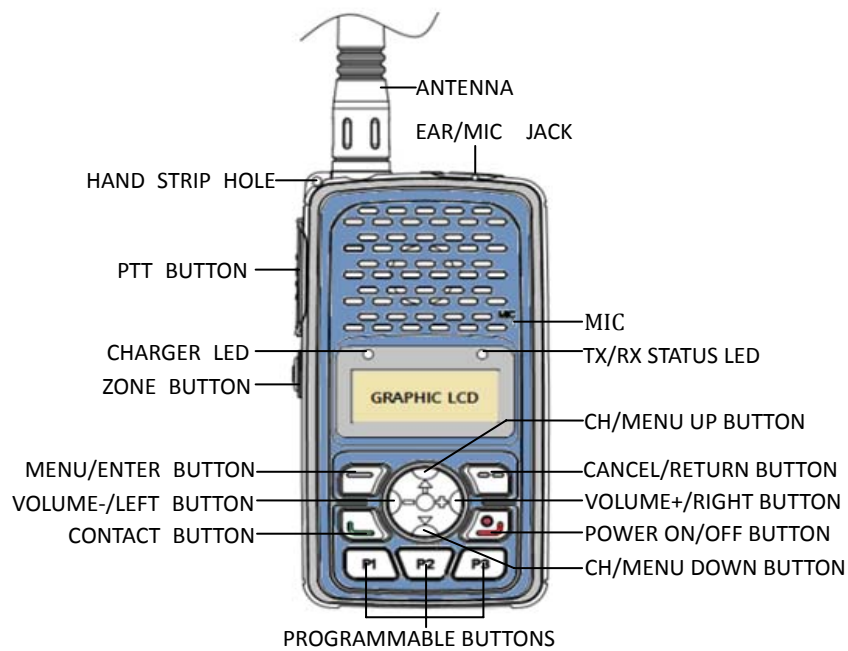


Charging USB

Open the USB cover and connect the micro USB charging adaptor. And the LED will turn on the red color. When charging is completed, the charging LED will turn green.



5. Radio operation



1. Power ON/OFF Button

When the power ON / OFF button pressed for more than 3 seconds, start-up sound occurs with company logo and the radio turns ON.

Push again power ON/OFF button while the radio power is ON, the power is OFF with "Good bye" sound

2. PTT Button

Pressing PTT button, the radio mode is transmission and releasing the button, it is receiving mode. It is recommended to talk 5~10cm away from the microphone for the best voice communication

3. MENU/ENTER Button

When you press the MENU / ENTER button, currently programmed menu is displayed and you can select a desired menu using by VOLUME + / LEFT button or VOLUME- / RIGHT button.

4. ZONE Button (Program settings)

When you press the ZONE button, the registered ZONE which registered by program is changed to a step-by-step and can be select your request channel use by UP / DOWN buttons.

5. Volume Button

The size of volume is a total 16 steps.

Push button of " Volume - ", the sound getting smaller. And push button of " Volume + ", the sound getting bigger. When you push Short key, increased or decreased by one step, push and hold Long key, the sound immediately increase or decrease. In the menu operation mode, you can use Left Button and Right button.

6. CH/Menu UP/Down Button

" CH / MENU UP" and "CH / MENU Down" are to change channels and in the menu entry mode, it is select the UP / Down of the Menu.

7. Contact Button

When you push contact button, to go directly to the phonebook menu.

8. P1, P2, P3 Programmable Button

If you push the P button for more than 2 seconds, the P button has two functions of Short Key and Long Key. The Short Key is set by PC program and Long Key is defined in the body.

P Key	Short Key	Long Key
P1	Programmable	Key Lock ON/OFF
P2	Programmable	Flash Light ON/OFF
P3	Programmable	Vibration mode ON/OFF

9. EAR/MIC Jack

This jack is used to connect external speaker Mic, and headset, etc.

10. Micro USB Jack

Features of the micro-USB jack: 1) charging 2) PC Program Function 3) Radio Firmware UP function.

11. LED indication Status

TX	Red Lamp
RX	Green Lamp
Green blinks	when the frequency is the same but the color code does not match.
Low Battery	Red Lamp blinks with "beep" sound.

11. Charging status LED

The LED indicates the battery charge.

6. Charging the Battery

1. Safety Notes

1) The radio of CP-300 series receives power from high-performance Li-ion battery (CB300). CB300 Battery is safe of high performance and highly reliable, and could be charged very fast.

- 2) Please charge the battery before using the radio for best performance and safety.
- 3) When you charge the battery that is installed in the Radio, please turn off the radio first to charge the battery.

2 . Charging time

Low battery voltage maybe cause to reduce communication coverage and also make the performance worse. Please charge the battery in case of following:

- 1) When you think that the performance of the radio has degradation.
- 2) The red lamp on RX/TX LED blinks. (every 0.5 second), during transmission or reception.
- 3) When the battery icon is blinks
- 4) While the radio is in use, “beep” sounds.




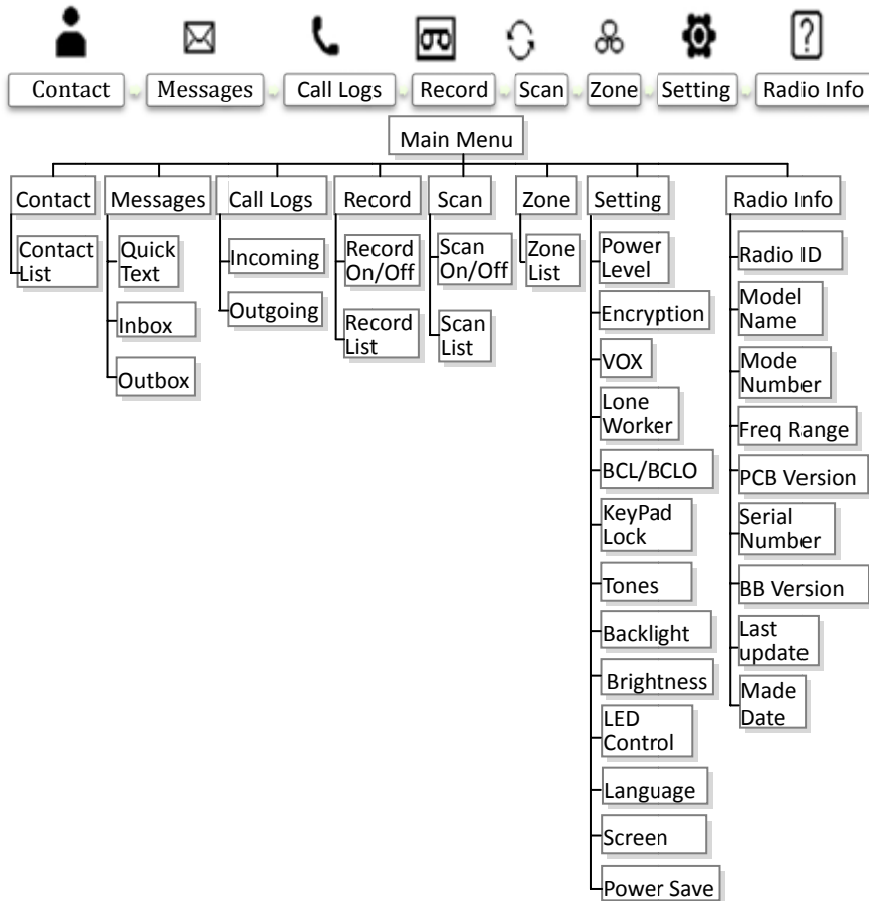
3 How to charge

- 1) Plug the adapter of the CS300 charger in general power AC220V power outlet.
- 2) When charging the battery that is equipped with radio, please turn off the power of the Radio and plug the Radio in the charger.
- 4) Even if charging is completed (green lamp lights), please charge
- 5) more for about 30 minutes for a full charge.

Status	LED indication	Status	LED indication
Charging	Red LED lights	Detecting error	Red LED is flicker
Complete charging	Green LED lights	Keep charging	Green LED lights

7. Using the CP-300


Press the  button on the front to enter the menu mode. In the menu mode, there are eight of the main menus, and set and used according to the application and the environment, it can be more convenient to use.





1 . Contact List

Set a contact list (set to CPS program) and will be pressing the PTT button to call. If you want to call with another registered contact, after you select a contact from the contact list and press the PTT button, it will be the call. The list of contacts in the menus can be registered / deleted using the CPS (Customer Programing Software) program. When you enter in the contact menu, the individual, group and All Call contact list is displayed.

- ICON

-  Individual Contact List (individual Call , Sending individual message)

-  Group Contact List (Group Call , Sending group message)

-  All Contact List (All call, Sending Message to terminal which has same channel and same color)

2. Message



When a new message arrives, the contents will be display on LCD in receive mode. And if you are in other mode, it will be seen in the ICON form when a new message arrives. Message menu has a simple message, inbox, outbox, three kinds of menu.

1) Simple Message

Using the CPS program can create a total of 10 messages and

One message can be edit up to 40 characters.

If you select a simple message menu you can view the registered message.

Select the message you want to send, and press the  button, you can see the contents of the message. When you press the  button again, the message will be sent to the registered terminal.

2) Inbox

It is possible to store up to 10 incoming messages.

When you choose contents stored in the list, you can see the received messages.

When the received message is more than 10, the earliest incoming message is cleared first and it is registered.

If you want to delete incoming messages, it can be deleted by selecting delete all menu.

3) Outbox

It is possible to store up to 10 outgoing messages.

When you choose contents stored in the list, you can see the outgoing messages.

When the outgoing message is more than 10, the earliest outgoing message is cleared first and it is registered.

If you want to delete outgoing messages, it can be deleted by selecting delete all menu

3. Call Log

This is the menu to save only individual call log.

Group and All call logs do not save. The message content is managed in the in/outbox messages.

1) Inbox

It is possible to store up to 10 inbox record and it can see the opponent ID. When the inbox is more than 10, the earliest inbox record is cleared first and it is registered. If you want to delete inbox record it can be deleted by selecting delete all menu.

2) Outbox

It is possible to store up to 10 outbox record and it can see the opponent ID. When outbox is more than 10, the earliest outbox record is cleared first and it is registered. If you want to delete outbox record it can be deleted by selecting delete all menu.

4. Call Recording

This function is used to save the outgoing and incoming calls content. If the recorded content is not required, it can be completely deleted.

Calls list can store up to 63 and one call list will be limited to 2 minutes and 30 seconds.

If you want to use the call recording function, you can select in the settings.

5. Scan

When turning ON the scan operation, to start the scan in the order of the channel that has been set in the scan list. If there is a channel used during the scan, you will receive the contents stops at that channel.

If you want to call, you can use the settings to suit your needs by the CPS program.

1) Scan ON/OFF

Select the scan settings or scan release at the scan of menu and go to receive mode.

2) Scan list

Scan list can be set using the CPS program

6 . ZONE

ZONE can create up to 16 and it can be registered to 32 channels per ZONE. How to specify the ZONE is to use the CPS program.

7 . Setting

This is the menu to set various functions of the radio. The settings are transmission power, voice encryption, VOX, Lone walker, BCL / BLCO, Keypad lock, Sounds, Backlight, Contrast, LED settings, and Language.

1) Transmission power

Set the high and low of the transmission power.

2) Voice Encryption

This is a feature to encrypt the incoming and outgoing voice.

Voice Encryption function can be set for each channel from all of

the digital channels. The setting of voice encryption code is using the CPS program, the total number of encryption can be set from 0 to 65535.

- 3) VOX
VOX function is transmitted by detecting a voice level without using the PTT button. VOX sensitivity level is 1 - 5 steps, you can set using the CPS program.
- 4) Lone worker
It is a function to inform others about your safety within the time set in the menu. Setting time supports up to 1-100 minutes.
- 5) BCL/BCLO
If another user is on the currently used channel, it is the ability to limit the transmission so as not to interfere. BCL: If the current channel is busy, the transmission prohibition BCLO: The ability to send regardless of the user of the current channel
- 6) Button Lock
With the exception of the minimum of buttons necessary for the user to prevent unwanted terminal operation, it is the ability to limit the operation. When the button lock is on, all buttons are locked except the PTT button, the emergency button and power ON / OFF button. When you press the **F1** key (button lock temporary release key) for a few seconds, you can use a button. After 25 seconds from you pressing the last button, it returns to the button again locked.
- 7) Sound
This is a sound setting function. The main menu is available only ON / OFF. The detailed sound can be set using the CPS program.
- 8) LCD BACKLIGHT
This feature is LCD backlight ON / OFF.

9) LCD Contrast

The function is to adjust the brightness. The brightness can be set from 1 to 7 step. LED Status display setting. The feature is to set the LED status display. It can be set detailed using the CPS program.

10) LED Control

This function is to set the enable or disable the radio status LED. The LED status can be set using the CPS program.

11) Language

The feature is to select the language for the menus.

12) Screen Setting

This function allows the ability to change between Screen 1 for Numeric or Screen 2 for Alphanumeric. The information display edis set using the CPS program. Contact your Authorized Dealer for futher information.

13) Power Saving Mode

This function allows the radio to enter a power saving mode to extend battery usage time. Off is full power, 1/1 is 50% on/50% off; 1/2 is 33% on/67% off; 1/4 is 25% on/75% off. Note: When sending and receiving text messages, turn off the power saving mode.

8. Radio Information

A menu that shows the information in this device.



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