



# Bluetooth Module

Bluetooth Transmission Adapter BTM-510 Manual

藍牙收發機BTM-510說明書

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## 1. Package Contents

Congratulations on your purchase of BTM-510 Bluetooth Transmission Adapter. This manual is provided to help you understand the correct operation and obtain optimal performance, please read carefully before use.

BTM-510 Bluetooth adapter built with our fundamental design concepts for high quality, free of movement, convenient portability, easy to use and low radio interference. Combining advanced Bluetooth technology, BTM-510 is a general wireless audio platform for dynamic and condenser microphones with an appealing appearance.

Please make sure the following items shown below are included in the package.

### 1.1 BTM-510BR + BTM-510BC Package

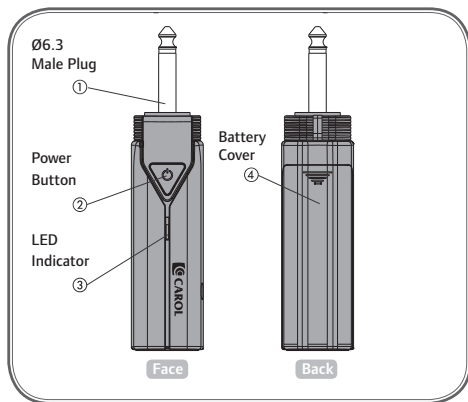
- ① Ø6.3 male plug receiver
- ② Ø3.5 female phone jack transmitter (Compatible with condenser microphone)
- ③ Manual

### 1.2 BTM-510BR + BTM-510BD Package

- ① Ø6.3 male plug receiver
- ② XLR female plug transmitter (Compatible with dynamic microphone)
- ③ Manual

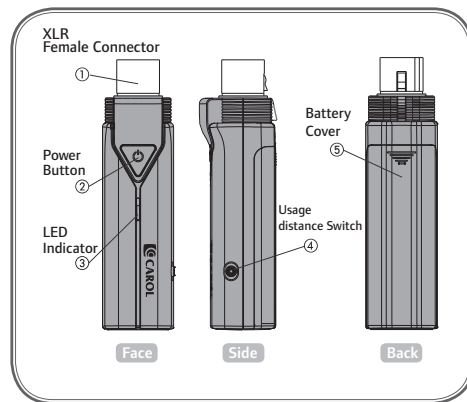
## 2. Getting to know the BTM-510 Bluetooth Transmission Adapter

### 2.1 Receiver (RX) adapter BTM-510BR



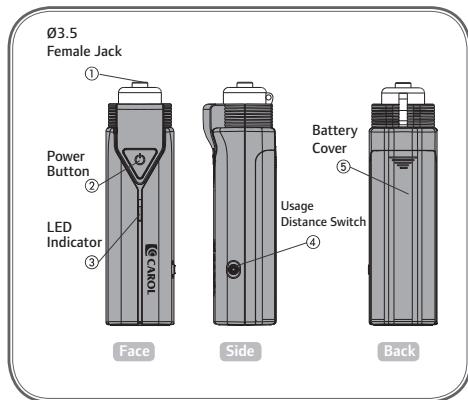
1. For connecting amplifier or output device
2. For switching power ON/OFF and functional operation
3. For indicating operating status
4. For protecting battery

### 2.2 XLR transmitter (TX) adapter BTM-510BD



1. For connecting microphone with XLR male plug output
2. For switching power ON/OFF and functional operation
3. For indicating operating status
4. Adjust the usage distance of the microphone.
5. For protecting battery

### 2.3 Ø 3.5 transmitter (TX) adapter BTM-510BC



1. For connecting microphone with Ø3.5 male plug output
2. For indicating operating status and functional operation
3. For switching power ON/OFF and functional operation
4. For protecting battery

## 3. Operating Instructions

### 3.1 Use of Product

#### 3.1.1

Use one receiver (RX) adapter and one transmitter (TX) adapter, users will be able to transmit the sound from dynamic (XLR Connector) or condenser (Ø3.5 Phone Plug) microphone to amplifier through Bluetooth wireless adapter.

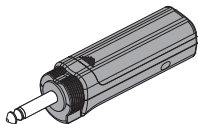
### 3.2 LED Status

Mode	LED Description
Power On	Green light glow.
Automatic Connection	Red light and green light flash alternately.
Sound Transmissoin	Green light flashes once every 3 seconds.
Power off	Red light glow.
Low Batter Power	Red light and green light flash once every 2 seconds.

### 3.3 Operating Instruction

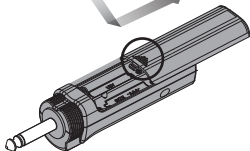
#### ■ 3.3.1 Install and replace battery

1



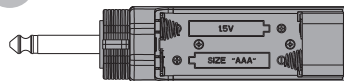
Flip Bluetooth receiver (transmitter) for battery cover to face up.

2



Slide the battery cover backward while pressing the ribbed part (as shown inside the circle) of the cover.

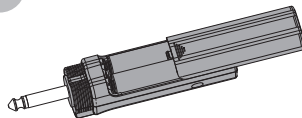
3



Install or replace two "AAA" size batteries that + (positive) and - (negative) match the polarities indicated on the battery compartment.

\*Recommended to use rechargeable batteries (Ni-MH batteries)

4



Put the battery cover back in place, make sure to lock latches into the battery compartment.

### ■ 3.3.2 Power On the adapter.

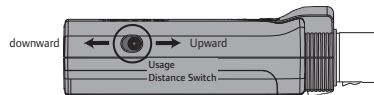
- (1) Put batteries in Bluetooth receiver (transmitter).
- (2) Press the button for 2 seconds to turn on Bluetooth receiver (transmitter).
- (3) Green light will glow while the power is on. Then you can leave button.
- (4) Bluetooth receiver (transmitter) will go into automatic connection mode.

### ■ 3.3.3 Automatic Connection

- (1) After power is on, the adapter is in automatic connection mode.
- (2) Bluetooth receiver (transmitter) will search for nearby Bluetooth devices while the red light and green light flash alternately.
- (3) If the devices have not been paired, short press the button 5 times, the device will flash red light 5 times. After then, the red and green lights flash alternately to enter the automatic pairing mode again.

### ■ 3.3.4 Sound Transmission

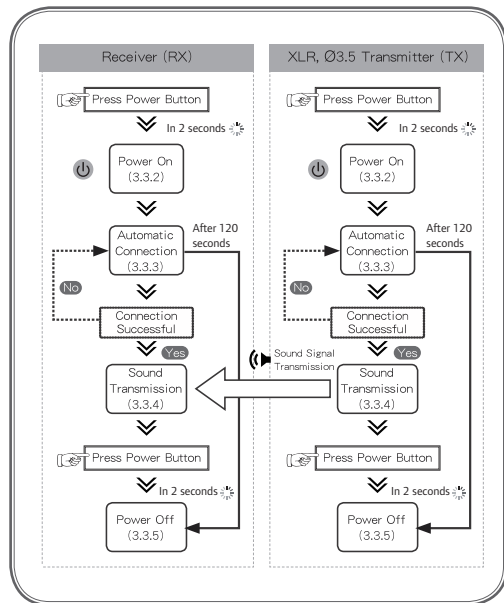
- (1) When the Bluetooth receiver (transmitter) is in automatic connection mode, finds Bluetooth device for sound transmission, Bluetooth receiver (transmitter) will automatically be in sound transmission mode.
- (2) In sound transmission mode, transmitter (TX) can transmit sound signal to receiver (RX). Green light will flash once every three seconds.
- (3) During use, the distance adjustment switch on the side can be used to adjust the appropriate power consumption and transmission distance. Upward is long transmission distance (high power consumption), and downward is short transmission distance (low power consumption).



### ■ 3.3.5 Power Off the adapter (Low power warning)

- (1) When Bluetooth receiver (transmitter) is on, press the button for 2 seconds to turn it off (red light will glow still you leave button).
- (2) When Bluetooth receiver (transmitter) detects low battery power, red light and green light will flash once every 2 seconds, batteries should be replaced soon. If the batteries are not been replaced, the adapter will cut the power.

## 3.3.7 Operating Procedures



## 4. Troubleshooting

Problem	Solution
Adapter cannot be turned on.	<ol style="list-style-type: none"> <li>1. Make sure that battery power is sufficient.</li> <li>2. If power still cannot be turned on, please remove all batteries and re-install them after 10 seconds, then press the power button again for 2 seconds to power on the Bluetooth receiver (transmitter).</li> </ol>
Unable to connect	<ol style="list-style-type: none"> <li>1. Turn on receiver (RX) first, transmitter (TX) later.</li> <li>2. Except receiver (RX) and transmitter (TX), turn off all unrelated Bluetooth devices within effective distance.</li> <li>3. short press the button 5 times. the device will flash red light 5 times and to repaired. Repaired is required for receiver (RX) and transmitter (TX)</li> </ol>

## 5. Specifications

- 5.1** Bluetooth Standard: BLE (Bluetooth Low Energy) 5.1
- 5.2** Output Power: Class 1
- 5.3** Transmission Distance: 20 meters (Unobstructed line of sight)
- 5.4** Battery: AAA size 4pcs (TX 2pcs , RX 2pcs)
- 5.5** Battery Life: Approximately 8 hours
- 5.6** BTM-510BR Receiver (RX) is equipped with Ø6.3 Phone Plug
- 5.7** BTM-510BD Transmitter (TX) is equipped with XLR Connector, compatible with dynamic microphone
- 5.8** BTM-510BC Transmitter (TX) is equipped with Ø3.5 Phone Jack, compatible with condenser microphone
- 5.9** Carrier Band Frequency: ISM band 2.400~2.480GHz
- 5.10** Transmit Power: +10dBm
- 5.11** Receive Sensitivity: -94dBm
- 5.12** Maximum Output Voltage: 900mVpp
- 5.13** Maximum Current Consumption: 80mA
- 5.13** Frequency Response: 16~22KHz(BTM-510BC)  
16~22KHz(BTM-510BD)

## 6. Special Notes

- 6.1** Do not mix new and old batteries or different Kinds of batteries.  
The old battery (or low power batter) will hinder most power supply and reduce the life of a new battery, and could even cause leakage or explosion.
- 6.2** Receiver (RX) can only receive sound signal from one transmitter(TX) and cannot receive signals simultaneously from two or more transmitters (TX)
- 6.3** Equipped with are chargeable batteries (Ni-MH batteries) or others of similar specification, Bluetooth receiver (transmitter) can operate for approximately 8 hours.



Brand : CAROL

Name : BLE True Sound low Latency Audio Transmission Adapter

Model : BTM-510BR / BTM-510BD/ BTM-510BC

FCC ID : G4RBTM-510B

#### FCC Statement

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
  - Increase the separation between the equipment and receiver.
  - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
  - Consult the dealer or an experienced radio/TV technician for help.
- Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

ⓘ This device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.

感謝您選用 BTM-510 藍牙收發機，使用前請詳閱本說明書，以瞭解正確的操作方法，並獲得最佳的使用效果。

BTM-510 藍牙收發機，為本公司以適合高品質、無移動限制、攜帶方便、使用容易、低干擾為基本設計理念，應用最新藍牙傳輸技術，所研發出分別適合動圈式、電容式麥克風的無線傳輸平台，外觀造形曲線優美，質感精緻。

## 1.BTM-510 藍牙收發機配件表

### 1.1 BTM-510BR + BTM-510BC

- ① Ø6.3 公插頭接收機( RX )
- ② Ø3.5 母插座發射機( TX )，適用於電容式麥克風
- ③ 說明書

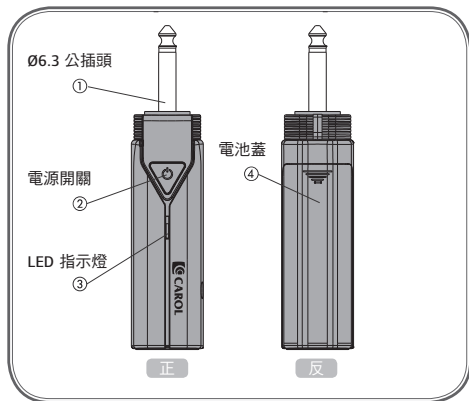
### 1.2 BTM-510BR + BTM-510BD

- ① Ø6.3 公插頭接收機( RX )
- ② XLR 母插座發射機( TX )，適用於動圈式麥克風
- ③ 說明書

## 2. 各部名稱及功能簡介

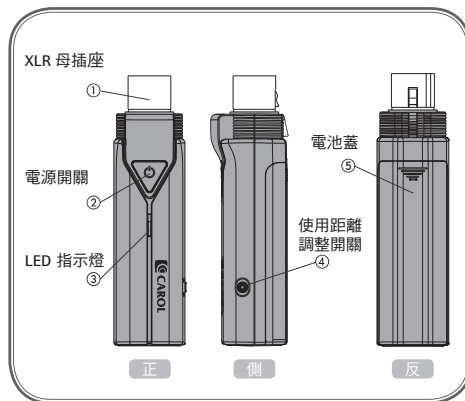
一套藍牙收發機，包括一台接收機( RX )，一台發射機( TX )。

### 2.1 Ø6.3 接收機( RX )BTM-510BR



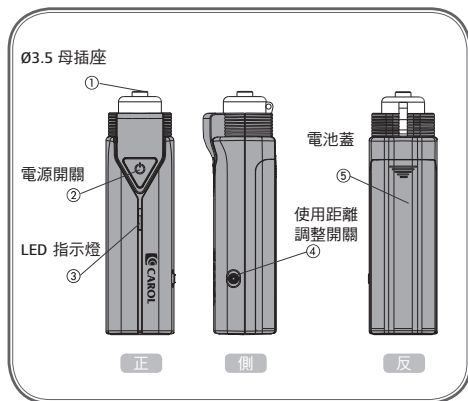
1. 用來連接擴大機或輸出設備
2. 電源 ON/OFF 切換及功能操作
3. 用來指示工作狀態
4. 用來保護電池盒更換電池位置

### 2.2 XLR 發射機( TX )BTM-210BD



1. 用來連接輸出端為 XLR 公插頭之麥克風
2. 電源 ON/OFF 切換及功能操作
3. 用來指示工作狀態
4. 依照使用需求調整使用距離(短距離可降低消耗電量)
5. 用來保護電池盒更換電池位置

## 2.3 Ø6.3 發射機( TX )BTM-510BC



1. 用來連接輸出端為 Ø3.5 公插頭之麥克風
2. 電源 ON/OFF 切換及功能操作
3. 用來指示工作狀態
4. 依照使用需求調整使用距離(短距離可降低消耗電量)
5. 用來保護電池盒更換電池位置

## 3. 操作使用說明

### 3.1 產品使用

- 3.1.1 使用一組接收機( RX )機加上發射機( TX )，就可以將動圈式( XLR Connector )麥克風的聲音或電容式( Ø3.5 Phone Plug )麥克風的聲音，經藍牙無線收發機傳送到擴大機。

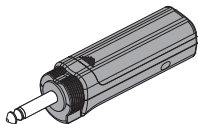
### 3.2 燈號說明

模組狀態	燈號模式
開機	綠燈亮起
自動連線	紅綠燈交互閃爍
聲音傳送	綠燈 3 秒閃爍一次
關機	紅燈亮起
電池電量過低	紅綠燈閃 2 秒一次

### 3.3 操作說明

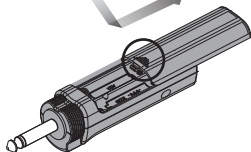
#### ■ 3.3.1 安裝、更換電池

1



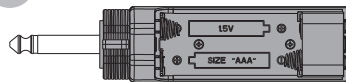
請翻轉藍牙接收(發射)機，使電池蓋朝上。

2



請按住凸點(如圖圓圈處)並向後下方輕推開電池蓋。

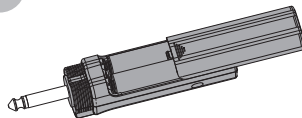
3



請依電池座所標示之正負極方向，將兩顆 AAA 電池依序放入。

\*建議使用充電電池(鎳氫電池)

4



請依反方向方式蓋回電池蓋。推回時請注意前後兩個卡榫均需要卡入電池座內。

### ■ 3.3.2 開機

- (1) 先將藍牙接收(發射)機裝入電池。
- (2) 按鍵連續按住 2 秒鐘，藍牙接收(發射)機就會被開機。
- (3) 綠燈亮起。
- (4) 藍牙接收(發射)機在開機後會直接進入自動連線的狀態。

### ■ 3.3.3 自動連線

- (1) 開機後即可進入自動連線。
- (2) 進入自動連線後，藍牙接收(發射)機會去搜尋在附近已綁定的藍牙設備，此時的燈號為紅綠燈交互閃爍。
- (3) 如設備之間尚未配對過，短按按鍵 5 次，設備將閃爍 5 次紅燈後紅綠燈交互閃爍進入重新配對。

### ■ 3.3.4 聲音傳送

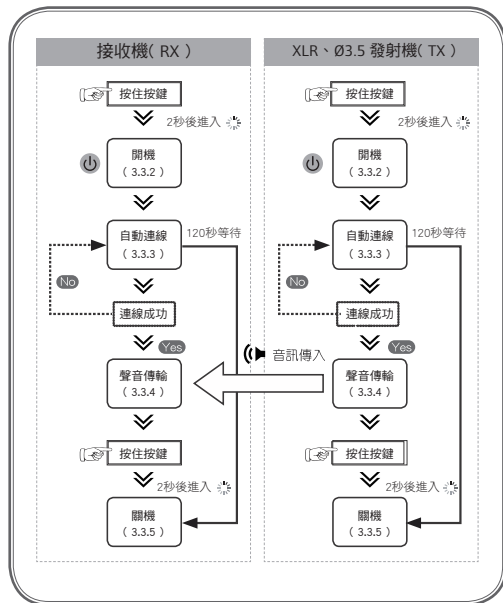
- (1) 藍牙接收(發射)機在自動連線中搜尋到可以提供聲音傳送的藍牙設備時，藍牙接收(發射)機會自動進入聲音傳送。
- (2) 進入聲音傳送後就可以開始從發射(TX)機傳輸聲音訊號到接收(RX)機，此時所指示的燈號為綠燈 2 秒閃一次。
- (3) 使用過程中可以利用側邊的距離調整開關調整適合的用電量與傳輸距離，向上為長傳輸距離(高耗電)，向下為短傳輸距離(低耗電)。



### ■ 3.3.5 關機(低電壓)

- (1) 藍牙接收(發射)機於啟動狀態時，按鍵連續按住 2 秒鐘，紅燈亮起，藍牙接收(發射)機就會被關機。
- (2) 當藍牙接收(發射)機偵測到電池電壓過低時，就會以紅綠燈閃 2 秒一次，來指示使用者準備換電池。如果使用者沒有換電池，當藍牙接收(發射)機偵測到更低的電壓時，會中斷電池電源的供給。

### 3.3.7 操作程序



## 4. 故障排除

故障	解決方式
無法開機	請先確認電池的電量是否足夠。 如果還是無法正常的開機，請先將電池除去，讓藍牙接收(發射)機完全斷電，10秒後，再試一次。
無法連線	將接收機(RX)先開機，發射機(TX)後開機。 除了接收(RX)機和發射(TX)機以外，關掉有效距離內所有其他不相關的藍牙設備。 連續按按鈕五下，燈號紅燈快閃五下顯示，即可進入配對模式，並進行重新配對。 所有要進行配對的接收機(RX)、發射機(TX)都需要操作一次重新配對的動作，產品會自動進入配對程序。

## 5. 規格

- 5.1 相容標準：**BLE (Bluetooth Low Energy) 5.1 藍牙低功耗
- 5.2 發射功率規格：**Class 1
- 5.3 通訊距離：**至少 20 公尺 (直線距離)
- 5.4 電池規格、數量：**AAA size 4 個 (TX 2 個、RX 2 個)  
建議使用充電電池(鎳氫電池)
- 5.5 電池使用壽命：**大約 8 小時
- 5.6 接收 (RX) 機設置有** Ø6.3mm Phone Plug(插頭)
- 5.7 XLR 發機 (TX) 設置有** XLR 插座，適用於動圈式麥克風
- 5.8 Ø3.5 發射機 (TX) 設置有** Ø3.5 Phone Jack(插座)，適用於電容式麥克風
- 5.9 載波頻帶：**ISM band 2.400~2.480GHz
- 5.10 無線發射功率：**+10dBm
- 5.11 無線接收靈敏度：**-94dBm
- 5.12 最大輸出電壓：**900mVpp
- 5.13 最大消耗電流：**80mA
- 5.14 頻率響應：**16~22KHz(BTM-510BC)  
16~22KHz(BTM-510BD)

## 6. 注意事項

- 6.1** 請勿將有電和沒電的電池混合使用(或是混用不同規格電池)，因為沒有電的電池(或電力較差的電池)會阻礙大部分的電力供應，造成電池使用壽命嚴重縮短，甚至會有發生漏液和爆炸的可能性
- 6.2** 接收 (RX) 機只能同時接收一組發射 (TX) 機傳送聲音訊號，無法同時接收兩組或兩組以上的發射 (TX) 機。
- 6.3** 電池使用壽命8小時為使用充電電池(鎳氫電池)進行計算，根據電池種類與廠牌不同而有所變化，請以實際使用為主



**警告：**

器材名稱：BLE True Sound low Latency Audio Transmission Adapter

廠牌：CAROL

型號：BTM-510BC/ BTM-510BD

NCC 規定：

取得審驗證明之低功率射頻器材，非經核准，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。

低功率射頻器材之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。

前述合法通信，指依電信管理法規定作業之無線電通信。

低功率射頻器材須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。



Sound of Excellence

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