**Relacart** 力卡
— Real Sound Always
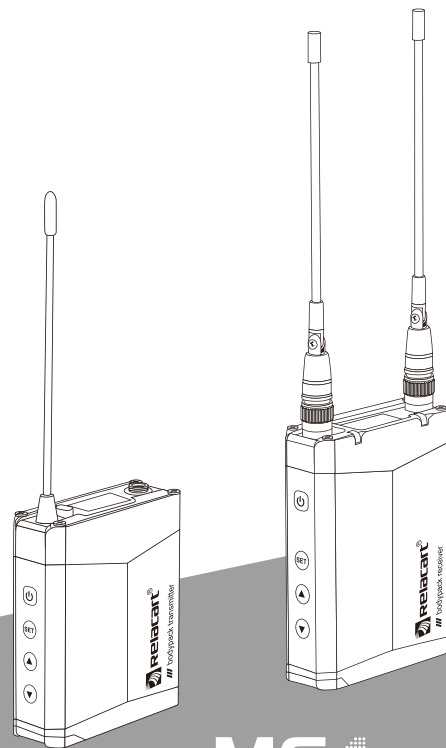
# MS1
## UHF Wireless Microphone System
UHF 無綫麥克風系統

# Introduction

Thank you for choosing Relacart.

The Relacart MS1 is a versatile, lightweight, yet rugged UHF wireless microphone system, which can be compatible with smart phones (3.5mm interface), digital/SLR cameras, camcorders, recorders, tablets and other devices to help pick up high fidelity audio. This model is suitable for interview, microfilm recording or commercial demonstration and other applications.

The portable receiver features a one-touch frequency scan and infrared sync that allows you to effortlessly find a clear channel for your devices. This true-diversity receiver uses dual antennas and reception circuits that eliminate audio dropouts and RF interference. To further protect audio from unwanted interference, MS1 system includes 3-level squelch and pilot tone. The transmitter supports mic input, enabling the wireless system to provide clean, accurate and pristine audio. The receiver is equipped with earphone monitoring function; AFS automatically scans the clean frequency, the current application connection scan function, etc. The effective working distance can reach 50m (open and wide occasions).

# Characteristic

· UHF wireless transmission, providing high fidelity sound source.
· Widely compatible with smart phones, digital SLR cameras, portable cameras, tape recorders, tablets, etc.
· 10 switchable frequencies to realize the operation without environmental interference.
· The working distance is up to 50m (up to 50 meters in an open and non-interference environment, up to 30 meters in an obstacle environment)
· Real-time monitoring function with headphones.
· The volume of receiver and transmitter can be adjusted arbitrarily to adapt to the volume level of different equipment.
· Mute mode.
· Adopt OLED display, high-definition and easy to see.
· Receiver and transmitter are powered by two AA batteries.

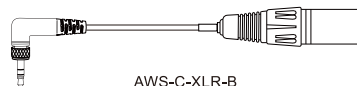# Packing List
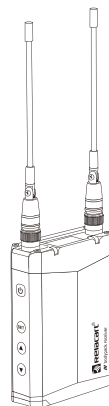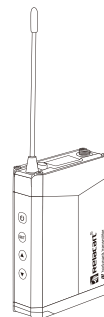


MS1-R Receiver          MS1-T Transmitter          MS1-P Plug-on Transmitter          Belt Clip
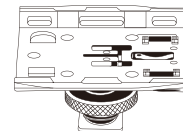
(Transmitter is optional products)

AWS-C-XLR-B
3.5mm balanced XLR cable

Bracket holder

ME4-J
TRRS to dual 3.5mm conversion cable
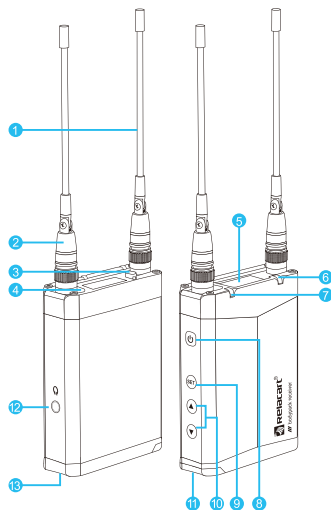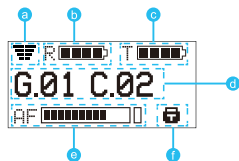
AWS-C-MINI-B
3.5mm balanced cable

LM-P01 Clip microphone

# MS1-R Bodypack receiver



❶ Receiving antenna B.
❷ Receiving antenna A.
❸ AFS button: Automatic frequency scan.
❹ Infrared counter frequency transmission
   window.
❺ OLED display:
   a. True diversity, A and B channel radio
     frequency signals;
   b. Receiver battery indication;
   c. Transmitter battery indication;
   d. Frequency or channel display;
   e. AF indicator;
   f . Lock indicator.
❻ RF indicator: Shows the connection status between the transmitter and receiver.
         Red: No RF signal is detected by the receiver.
         Blue: The receiver detects a strong RF signal.
         Flashing: Low power indication.
❼ Peak indicator: Record whether the output signal of the device is too strong and
             distorted.
         Blue: The output level is normal and there is no distortion.
         Flashing red: The output signal reaches the peak value and may cause
             distortion.
❽ Power/Mute button: Long press device power to be on or off, short press to mute.
   (In the menu mode, short press to return to the previous menu)
❾ Setting button: Long press to enter menu mode or confirm the menu setting.
❿ ▲ / ▼ button: select menu settings.
⓫ Battery bin: can hold two AA batteries.
⓬ 3.5mm headphone monitoring interface.
⓭ 3.5mm balanced output interface.

# MS1-T Bodypack transmitter
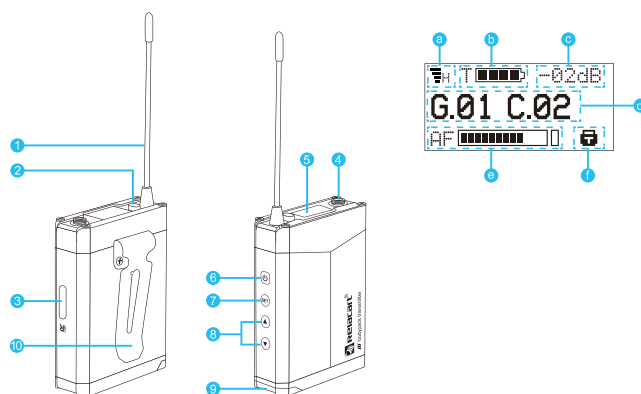


❶ Transmitter Antenna (ANT).
❷ Mute switch.
❸ Infrared counter frequency transmission window.
❹ 3.5mm microphone input interface.
❺ OLED display:  a. Signal power setting;
                 b. Transmitter battery indication;
                 c. Volume setting;
                 d. Frequency or channel display;
                 e. AF indicator;
                  f. Lock indicator.
❻ Power button: Long press device power to be on or off.
   (In the menu mode, short press to return to the previous menu)
❼ Setting button: Long press to enter menu mode or confirm the menu setting.
❽ ▲ / ▼ button: select menu settings.
❾ Battery bin: can hold two AA batteries.
❿ Belt clip: Fix the transmitter around the user's waist.

# MS1-T Plug-on transmitter



```
GR.01-CH.01
620.700MHz
[■■■■]    ⚡ LC PLT
[▮]       Ø MIC
```
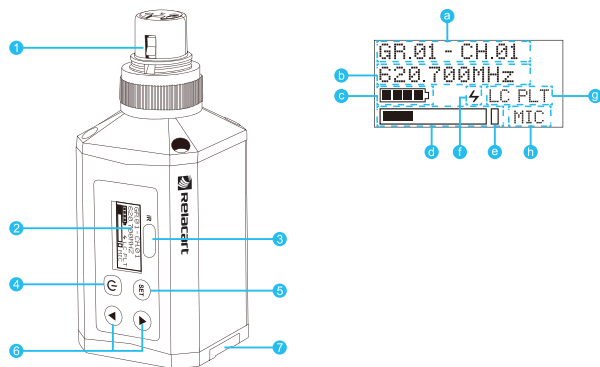
❶ Balanced XLR audio input interface, can set the phantom power (48V).
❷ OLED display: display frequencry and channel，current battery leve and
　　　　　　　other information.
　　　　　　　a. Group and channel；
　　　　　　　b. Frequency；
　　　　　　　c. Battery display；
　　　　　　　d. Audio indication；
　　　　　　　e. Distortion indication；
　　　　　　　f . 48V output；
　　　　　　　g. Low cut；
　　　　　　　h. Mic input, Line input.
❸ IR window.
❹ Power button: touch to turn on or long press to turn off the power; touch to
　　　　　　　return to the menu.
❺ "SET" button: Enter the menu or confirm the menu settings.
❻ "▲ /▼" button: select menu settings.
❼ Battery compartment: use two AA batteries(pull to open the battery door).

# Getting Started

## Installing the Batteries
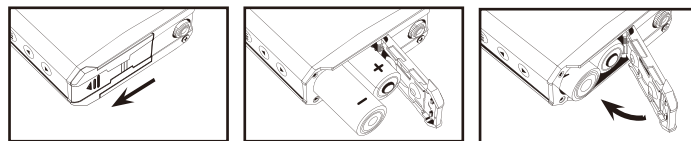


1. Open the battery compartment by sliding the battery compartment door in the
   directions indicated by the arrow.
2. Install the batteries into the battery compartment. Make sure to match the
   polarity indicated on the inside of the battery compartment door.
3. Press the battery compartment door down, and slide it back into place until it
   locks shut.

## Connecting the Receiver

　　　The MS1 microphone system includes two output
cables for devices with an XLR input or a 3.5 mm TRS
input. The output cable adopts a right-angle locking
3.5mm connector, which can be flexibly positioned
whether the receiver is installed on a camera or used
on other equipment. Choose the  appropriate cable for
your device, and follow these steps:
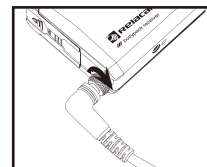
1. Plug the right-angle male 3.5 mm plug into the output jack on the bottom of the
   MS1-R receiver, and turn the locking sleeve clockwise until tight.
2. Connect the other end of the cable to your device.

## Mounting the Receiver

　　　To use the MS1 as a shoe- mounted wireless
system mounted on a camera, follow these steps:
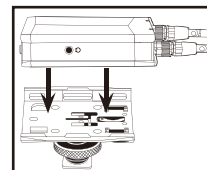
1. Align the camera mount with the back of the MS1-R
   receiver. Press it onto the receiver until it snaps into
   place.
2. Loosen the locking ring by turning it counterclockwise and slide the mounting
   foot into your camera's shoe mount.
3. Tighten the locking ring by turning it clockwise until it's secure.

## Receiver antenna installation and transmitter connection microphone
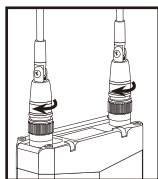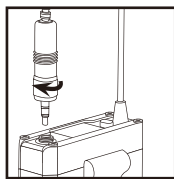
(Receiver Antenna Installation)          (Transmitter Connect to Microphone)

1. Screw the A and B antennas clockwise into the threaded antenna sockets. Make sure they are tightly attached.
2. Plug the microphone's male 3.5 mm plug into the input jack on the top of the MS1-T transmitter, Secure the cable by turning the locking sleeve clockwise until tight.

## Auto Frequency Scanning【AFS】

1. Power on the receiver and transmitter.
2. Press and hold the AFS button on the receiver to initiate a frequency scan. The receiver will scan all available frequencies and select a frequency without interference. Once the scan is complete, and the receiver will automatically send out a sync signal from its IR port.
3. Position the transmitter and receiver so their iR ports face each other, [SYNC√] will appear on the receiver's screen when the devices have been successfully synced.
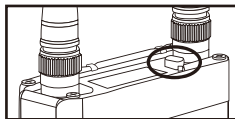
**Note:** The receiver sends an IR sync signal for approximately 10 seconds. If syncing is not accomplished in that time, you can restart the process by pressing and holding the AFS button again.
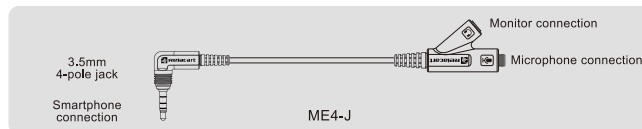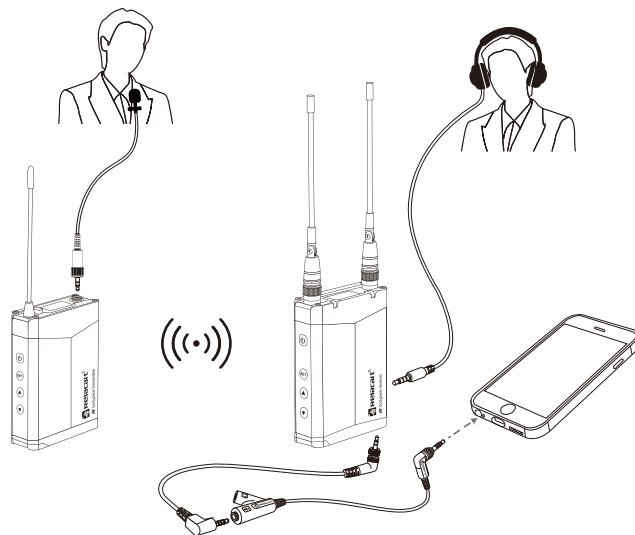
## Manual Sync

To manually sync the receiver and transmitter to the same frequencies, follow these steps:
1. On the receiver or transmitter press and hold the "Set" to enter the setting menu.
2. Find the "Frequency" function, select "Channel or Pilot" to confirm, and SYNC.

# Product connection use

## Products with smart phone connection schematic diagram



3.5mm
4-pole jack

Smartphone connection

Monitor connection

Microphone connection

ME4-J

3.5mm
3-pole jack

Audio output connection

AWS-C-MINI-B

3.5mm
3-pole jack

Ordinary camera connection

**Products with ordinary or professional camera connection schematic diagram**



or

3.5mm
3-pole jack

Audio output
connection

AWS-C-XLR-B

balanced XLR jack

Professional camera
connection
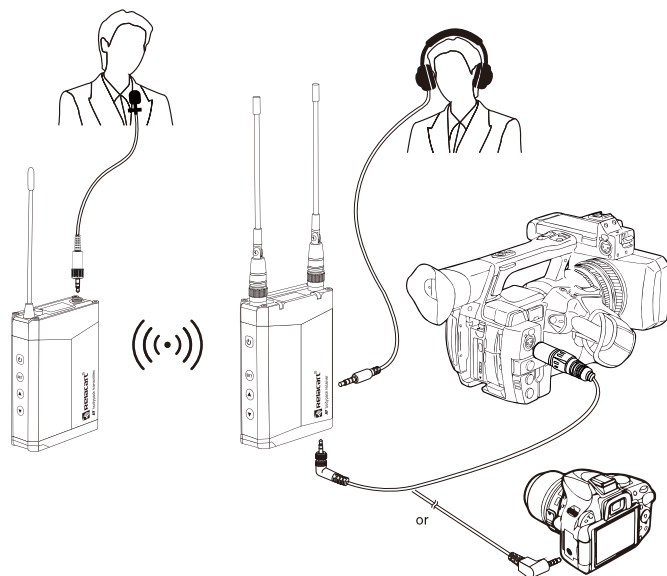
\* Please connect the cable to the same terminal as the above picture according to the device you are using.

# Matching of receiver and transmitter

Before leaving the factory, the receiver and transmitter of each product have been set up in pairs, and can be used directly when starting.

If the radio signals of the receiver and transmitter are connected properly, the blue light indicator of the receiver will be long on, and the parameters of the display screen will be the same as that of the transmitter; if not connected, the receiver blue light indicator will not be on.

However, if the channel is noisy, you can change the interference-free channel or frequency through the "AFS" function or manual synchronization.

# Specifications

## MS1-R Receiver Specifications

| |
|---|
| Frequency response: 80 Hz ~ 15 KHz |
| Total harmonic distortion: <0.9% |
| Pilot tone frequency: 32.768 KHz |
| Power requirement: 2.0 ~ 3.6 V |
| Operating temperature: 0°C ~ 55°C |
| Dimensions without antennas: 80mm(H) × 58mm(W) × 20mm(D) |
| Weight: 116g (Without batteries) |

## MS1-T Transmitter Specifications

| |
|---|
| Reference input level: -26dBV |
| Frequency response: 80 Hz ~ 15 KHz |
| Signal-to-noise ratio: <100 dB |
| Pilot tone frequency: 32.768 KHz |
| Power requirement: 2.0 ~ 3.6 V |
| Operating temperature: 0°C ~ 55°C |
| Dimensions without antenna: 70mm(H) × 50.8mm(W) × 20mm(D) |
| Weight: 84g (Without batteries) |

## MS1-P Plug-on Transmitter Specifications

| |
|---|
| Frequency response: 80 Hz ~ 15 KHz |
| Reference input level: -20 dBV |
| Phantom power supply voltage: 48 V |
| Signal to Noise Ratio: <100 dB |
| Power Requirements: AA 1.5V x2 |
| Current Consumption: 2.0 ~ 3.6 V |
| Dimensions: 105mm(H) × 43mm(W) × 43mm(D) |
| Weight: 133g (without battery) |

## 引言

感謝您選擇 Relacart 。

Relacart MS1 是一款多功能、輕便式、堅固耐用的 UHF 無綫麥克風系統，可兼容智能手機（3.5mm 接口），數碼/單反相機，便攜式攝像機，錄音機，平板電腦等設備輔助拾取高保眞音頻；此產品適用于采訪、微視頻錄制或商業演出等各種專業應用場合。

便攜式接收器具有一鍵式頻率掃描和紅外同步功能，可讓您輕鬆地爲您的設備找到一個清晰的頻道。這種眞分集接收器使用雙天綫和接收電路，消除音頻丟失和射頻幹擾，MS1 系統設計了 3 級靜噪和導頻功能，爲了進一步保護音頻免受不必要的幹擾。發射器支持 mic 輸入，使該無綫系統能夠提供清晰、準確和純凈的音頻。接收器設有耳機監聽功能，AFS 自動掃描幹凈頻點，當前應用連接掃描功能等。有效工作距離可達 50m（空闊場合）。
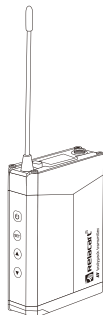
## 特點

· UHF 無綫傳輸，提供高保眞的音源。
· 廣泛兼容智能手機，數碼/單反相機，便攜式攝像機，錄音機，平板電腦。
· 10 個可切換頻點，實現無環境幹擾的操作。
· 拾音距離高達50m（空曠無幹擾環境高達50米，有障礙環境可達30米）
· 附帶耳機的實時監聽功能。
· 接收器、發射器音量可任意調節，以適應不同設備的音量電平。
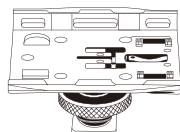· 靜音模式。
· 采用OLED顯示屏，高清易視。
· 接收器和發射器均由兩節AA電池供電。

## 包裝清單
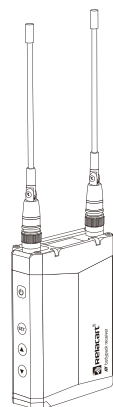


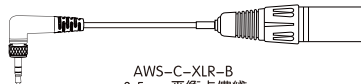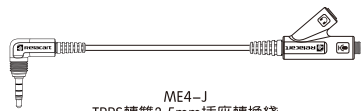托架固定座

MS1-R 接收器    MS1-T 發射器    MS1-P 插入式發射器    腰帶夾

（發射器為選配產品）

AWS-C-XLR-B
3.5mm平衡卡儂綫

LM-P01 領夾式話筒

ME4-J
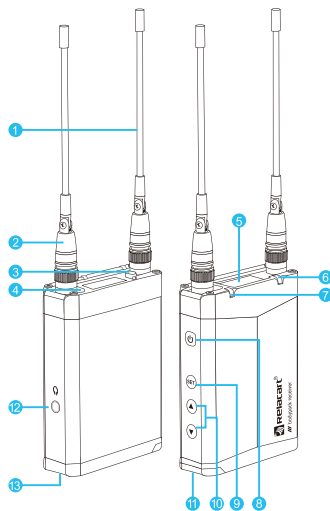TRRS轉雙3.5mm插座轉換綫

合格证

保修卡

说明书

AWS-C-MINI-B
3.5mm平衡連接綫

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## MS1-R 腰包式接收器
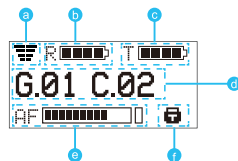


❶ 接收天綫 B。
❷ 接收天綫 A。
❸ AFS 按鈕：自動頻率掃描。
❹ 紅外對頻傳輸窗口。
❺ OLED 顯示屏：
    a、真分集，A、B通道射頻信號；
    b、接收器電池指示；
    c、發射器電池指示；
    d、頻率或通道顯示；
    e、AF 指示；
    f、鎖鍵指示。
❻ RF 指示燈：顯示發射器和接收器之間的連接狀態。
          紅色：接收器沒有檢測到 RF 信號。
          藍色：接收器檢測到一個較強的 RF 信號。
          閃爍：低電量指示。
❼ 峰值指示燈：記錄設備的輸出信號是否太強和失真。
          藍色：輸出電平正常且沒有失真。
          紅色閃爍：輸出信號達到峰值，并可能導致失真。
❽ 電源/靜音按鈕：長按打開或關閉設備電源，短按靜音 。
    （在菜單模式中，短按返回上一級菜單）
❾ 設置按鈕：長按進入菜單模式或確認菜單設置。
❿ ▲ 、▼ 按鈕：選擇菜單設置。
⓫ 電池倉：使用兩節AA電池。
⓬ 3.5mm 耳機監聽端口。
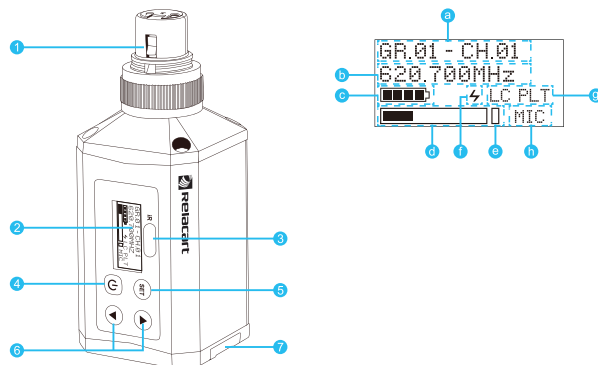⓭ 3.5mm 平衡輸出端口。

## MS1-T 腰包式發射器
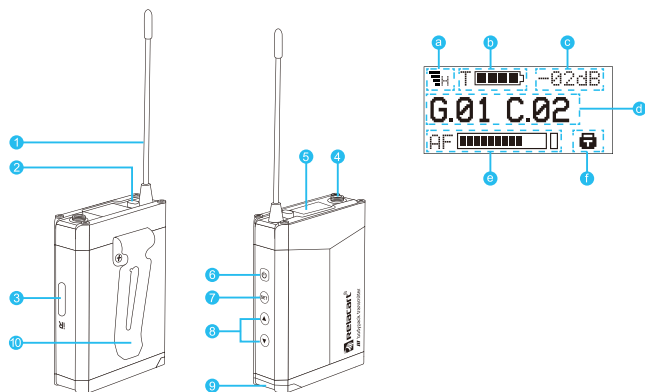


① 發射天綫。
② 靜音開關。
③ 紅外對頻傳輸窗口。
④ 3.5mm麥克風輸入端口。
⑤ OLED顯示屏：a、設置的信號功率標識；
　　　　　　　 b、發射器電池指示；
　　　　　　　 c、設置的音量大小；
　　　　　　　 d、頻率或通道顯示；
　　　　　　　 e、AF指示；
　　　　　　　 f、鎖鍵指示。
⑥ 電源按鈕：長按打開或關閉設備電源。
　　　　　　（在菜單模式中，短按返回上一級菜單）
⑦ 設置按鈕：長按進入菜單模式或確認菜單設置。
⑧ ▲、▼ 按鈕：選擇菜單設置。
⑨ 電池倉：使用兩節AA電池。
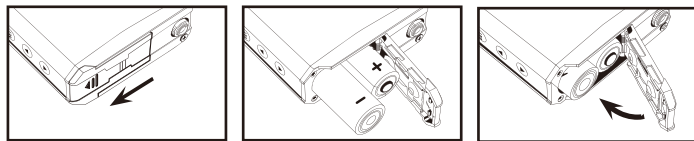⑩ 腰帶夾：將發射器固定在用戶腰部周圍。

## MS1-P 插入式發射器



① 平衡卡儂音頻輸入接口，可設置幻象電源（48V）。
② OLED顯示屏：顯示頻率和通道、當前電池電量等。
　　　　　　　 a、頻組和通道；
　　　　　　　 b、頻率；
　　　　　　　 c、電池顯示；
　　　　　　　 d、音頻指示；
　　　　　　　 e、失真指示；
　　　　　　　 f、48V 輸出標識；
　　　　　　　 g、低切標識；
　　　　　　　 h、話筒輸入, 綫路輸入。
③ 紅外對頻傳輸窗口。
④ 電源按鍵：輕觸打開或長按關閉電源（輕觸可返回菜單）。
⑤ 設置按鈕：進入菜單或確定菜單設置。
⑥ ▲、▼ 按鈕：選擇菜單設置。
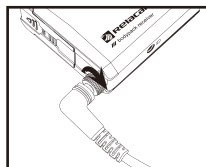⑦ 電池倉：使用兩節AA電池（拔動打開電池倉閥門）。

# 入門指南

## 電池安裝



1、 按照前頭指示的方向滑動電池倉門以打開電池倉。

2、將電池裝入電池倉。確保與電池倉門內側指示的極性匹配。

3、按下電池倉門，然後將其滑回原位，直到其鎖定關閉。

## 連接接收器

　　MS1 麥克風系統包括兩條輸出電纜，用于 XLR 輸入或 3.5 mm 輸入設備。輸出電纜采用直角鎖定 3.5mm 連接器，無論將接收器安裝在相機上或其它設備上使用，都可以靈活定位。爲您的設備選擇合適的電纜，幷遵循以下步驟：
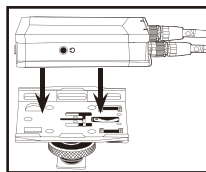
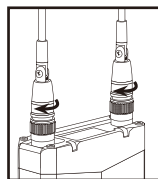1、 將 3.5 mm 直角插頭插入 MS1–R 接收器底部的輸出插孔，順時針旋轉鎖緊套筒直到擰緊。

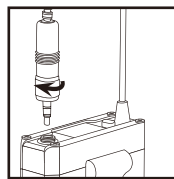2、將電纜的另一端連接到您的設備上。

## 安裝接收器

　　要將 MS1 用作安裝在攝像機上的熱靴適配器無綫系統，請遵循以下步驟：

1、 將托架固定座與 MS1–R 接收器的背面對齊，將其按到接收器上，直到其卡入到位。

2、逆時針旋轉鬆開鎖定環，將安裝脚滑入攝像機的靴座。

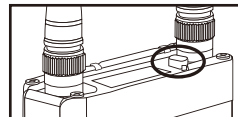3、順時針旋轉鎖定環，直到鎖緊爲止。

## 接收器天綫安裝與發射器連接麥克風



（接收器天綫安裝）　　　　（發射器連接麥克風）

1、 將 A、B天綫順時針擰入帶螺紋的天綫插座中，要確保它們已牢固連接。

2、將麥克風的 3.5mm 插頭插入 MS1–T 發射器頂部的輸入插孔後，順時針旋轉鎖定套筒，直到緊固電纜。

## 自動頻率掃描【 AFS 】

1、 打開接收器和發射器的電源。

2、按住接收器上的 AFS 按鈕啓動頻率掃描。接收器將掃描所有可用的頻率，幷選擇一個無幹擾的頻率。掃描完成後，接收器將自動從其 iR 端口發送一個同步信號。

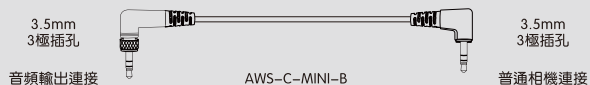3、將發射器和接收器設備成功同步對頻後，【 SYNC√ 】將出現在接收器的屏幕上。

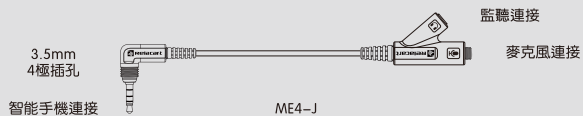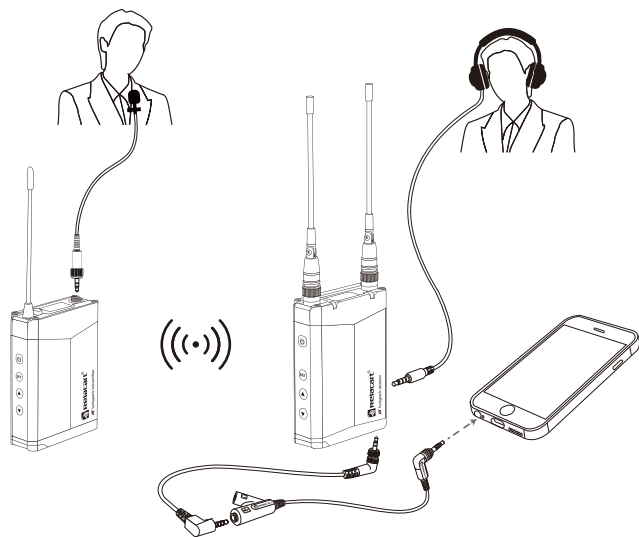注意：接收器發送一個紅外同步信號約 10 秒。如果在這段時間內沒有完成同步，則可以再次按住 AFS 按鈕重新啓動該進程。
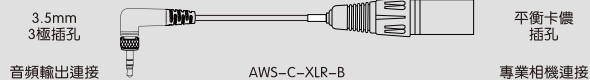
## 手動同步

手動同步接收器和發射器到相同的頻率，按照以下步驟：

1、 在接收器或發射器上，按住 "SET" 進入設置菜單。

2、找到 "頻率" 功能，選擇 "通道或調諧" 確認後，對頻即可。

## 產品連接使用

產品與智能手機連接示意圖



| | | |
|---|---|---|
| 3.5mm<br>4極插孔 | | 監聽連接 |
| | ME4-J | 麥克風連接 |
| 智能手機連接 | | |

| | | |
|---|---|---|
| 3.5mm<br>3極插孔 | | 3.5mm<br>3極插孔 |
| 音頻輸出連接 | AWS-C-MINI-B | 普通相機連接 |

產品與相機連接示意圖



| | | |
|---|---|---|
| 3.5mm<br>3極插孔 | | 平衡卡儂<br>插孔 |
| 音頻輸出連接 | AWS-C-XLR-B | 專業相機連接 |
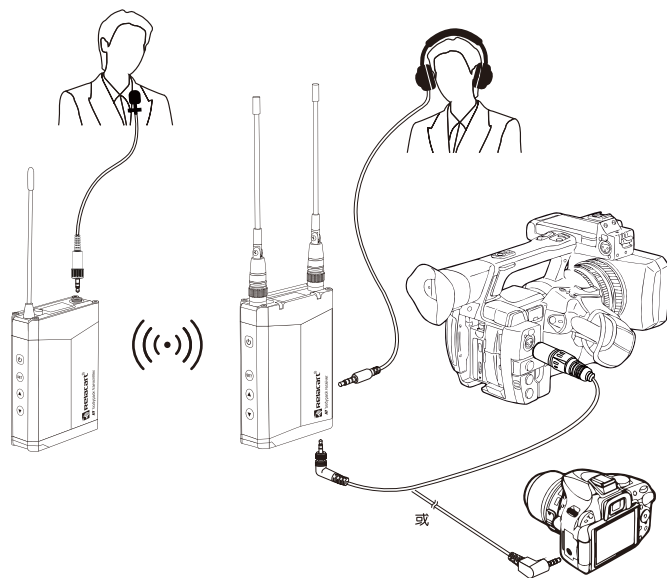
* 請根據您使用的設備將相應的電纜連接到與上圖相同的終端。

## 接收器與發射器配對

出廠前，每個產品的接收器和發射器都與配對設置，開機可直接使用。

如果接收器和發射器的無綫電信號已經連接正常，接收器的藍色指示燈會長亮，顯示屏的參數與發射器的一致；若是沒有連接上，接收器藍色指示燈不亮。

但是，如果所選頻道有噪聲，可以通過"AFS"功能或者手動同步對頻，更改無幹擾通道或頻率。

## 技術指標

### MS1-R 腰包式接收器技術指標

| |
|---|
| 頻率響應：80 Hz ~ 15 KHz |
| 總諧波失眞：<0.9% |
| 導頻頻率：32.768 KHz |
| 電源要求：2.0 ~ 3.6 V |
| 工作溫度：0°C ~ 55°C |
| 不帶天綫的尺寸：80mm（高）× 58mm（寬）× 20mm（深） |
| 重量：116g（不含電池） |

### MS1-T 腰包式發射器技術指標

| |
|---|
| 參考輸入電平：-26dBV |
| 頻率響應：80 Hz ~ 15 KHz |
| 信噪比：<100 dB |
| 導頻頻率：32.768 KHz |
| 電源要求：2.0 ~ 3.6 V |
| 工作溫度：0°C ~ 55°C |
| 不帶天綫的尺寸：70mm（高）× 50.8mm（寬）× 20mm（深） |
| 重量：84g（不含電池） |

### MS1-P 插入式發射器技術指標

| |
|---|
| 頻率響應：80 Hz ~ 15 KHz |
| 參考輸入電平：-20 dBV |
| 幻象電源電壓：48 V |
| 信噪比：<100 dB |
| 正常工作電流：AA 1.5V x2 |
| 電源要求：2.0 ~ 3.6 V |
| 尺寸：105mm(H) × 43mm(W) × 43mm(D) |
| 重量: 133g（不含電池） |