



## 用戶手冊 安全及參考

# LED 電視\*

---

\* LG LED 電視配備具有 LED 背光的 LCD 螢幕。

請於操作產品前仔細閱讀本手冊並將其保留以供未來參考之用。



\* M F L 7 1 7 2 4 3 0 2 \*

(2009-REV01)

[www.lg.com](http://www.lg.com)

Copyright © 2020 LG Electronics Inc. All Rights Reserved. 版權所有。

## 警告! 安全指示

請  
閱



|              |
|--------------|
| <b>注意</b>    |
| 觸電風險<br>請勿打開 |



注意：為減低觸電風險，請勿移除蓋板（或背板）。當中並無用戶可自行維修的組件。請向合資格維修人員諮詢相關維修安排。

 此標誌用作提醒使用者，產品的機殼內有非絕緣保護的「危險電壓」，相關電壓的強度足以構成觸電風險。

 此標誌用作提醒使用者，電器附帶的相關產品說明，已列出重要操作及保養（維修）指示。

警告：為減低火災或觸電風險，請勿將本產品置於雨中或潮濕環境中。

- 為防止火災蔓延，請隨時保持本產品遠離蠟燭或其他有明火物品。
- 請勿將電視及遙控器放置於下列環境：
  - 勿讓產品直接暴曬在陽光下。
  - 高濕度範圍，例如浴室。
  - 發熱源附近例如煮食爐及其他發熱裝置。
  - 輕易暴露於蒸氣或油煙如廚房工作範圍或放濕器附近。
  - 暴露於雨水或當風位置。
  - 勿讓液體滴入或潑灑到裝置，並且勿在裝置上方（例如裝置上方的架子上）放置裝有液體的物體（例如花瓶，杯子等）。
  - 靠近如汽油或蠟燭等易燃物，或將電視置於空調直吹處。
  - 請勿安裝在灰塵過多的位置。否則，可能造成火災，觸電，燃燒/爆炸，故障或產品變形。

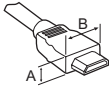
- 通風
    - 請將電視安裝在通風良好的位置。請勿安裝在狹窄的空間（例如書架）。
    - 請勿將產品安裝於地毯或軟墊上。
    - 裝置插入時勿讓衣物或其他材料擋住或蓋住產品。
  - 小心勿觸碰通風口。長時間觀看電視時，通風口可能會產生高溫。
  - 保護電源線以防止受到物理性如扭曲，折彎，緊夾，受到門的擠壓或踩踏或機件受損。請加倍留意插頭，牆上插座以及裝置的電線出口。
  - 連接電源線時，請勿搬動電視。
  - 請勿使用受損或鬆脫的電源線。
  - 拔除電源線時，請確實握住插頭。不要拉扯電源線來拔除電視電源。
  - 請勿在同一交流電源插座上連接過多裝置，因為這可能導致火災或觸電。
  - 切斷裝置主電源
    - 電源插頭與裝置中斷連接。如有緊急情況，電源插頭必須保持隨時可用。
  - 切勿讓孩童攀爬於電視上。否則將導致電視翻倒並引致嚴重受傷。
  - 室外天線接地（可能依國家/地區而異）：
    - 如果安裝了室外天線，請遵循下列注意事項。
- 室外天線系統不應設置於接近高壓電電線或其他路燈照明或電源電路之處，或可能接觸此類輸電線或電路之處，否則可能導致人員傷亡。

- 接地（未接地的裝置除外）
    - 附三插頭的電視必須連接到三孔接地的 AC 插座。確保連接地線，以防觸電。
  - 切勿在雷擊或閃電時碰觸本裝置或天線。將可能導致觸電。
  - 確保電源線安全地連接到電視和牆上插座，若未安全連接，插頭和插座可能損壞，並且在極端情況下可能引發火災。
  - 請勿將金屬或易燃物體插入產品。若有異物掉入產品內，請拔除電源線，並聯絡服務中心。
  - 插頭插上時，請勿觸碰電源線末端。將可能導致觸電。
  - 如發生任何下列情況，即時切斷產品電源並聯絡當地服務中心。
    - 產品曾受損毀。
    - 若有水或其他物質滲入產品（像是 AC 轉接器，電源線或電視）。
    - 若聞到電視發出煙霧或其他臭味。
    - 出現雷擊或閃電時，或者長時間不使用產品時。
- 除非拔除電源線，否則即使用遙控器或電源鍵關閉電視，AC 電源仍會保持接通狀態。
- 請勿在電視附近使用高電壓的電子設備（例如：滅蚊機）。這可能引起產品故障。
  - 未經 LG Electronics 書面授權，請勿嘗試以任何方式修改本產品。可導致火災或觸電。如需服務或維修，請洽詢您當地的客戶服務中心。未經授權的修改可能會讓使用者失去操作本產品的權力。
  - 請僅使用經授權的附件 / LG Electronics 所認可的配件。否則，可能導致火災，觸電或產品無法正常運作。

- 切勿拆開 AC 適配器或電源線。可能導致火災或觸電。
- 請小心處理適配器避免掉落或被撞擊。遭到撞擊可能會對產品造成損害。
- 為降低發生火災或觸電的風險，請勿用濕手碰觸電視。若電源插頭潮濕或佈滿灰塵，請將插頭完全擦乾或擦去灰塵。
- 電池
  - 將附件（電池等）存放在安全的位置並遠離兒童。
  - 請避免短路，拆卸或讓電池過熱。請勿用火焚化電池。電池不應暴露於高溫的地方。
  - 注意：如果更換的電池類型不正確，會有引發火災或爆炸的風險。
- 移動
  - 搬動時，確定已關閉產品電源，拔出插頭，並取下所有纜線。可能需要兩個或更多人搬運較大型的電視。請勿按壓設備屏幕或在電視屏幕上施力壓力。否則，可能導致產品損壞，造成危險或傷害。
- 請將包裝防潮材料或乙烯基包裝物料放置在兒童無法觸及的地方。
- 勿撞擊產品或讓任何物體掉入產品內部，也不要讓任何物體掉落到螢幕上。
- 請勿以手或指甲，鉛筆或鋼筆等尖銳物件用力按壓屏幕，或使其刮花。可能會使螢幕損壞。
- 清潔
  - 清潔時，請拔除電源線並以乾軟布輕拭，以避免刮傷。請勿直接在電視上噴水或其他液體。請勿使用會對產品及其屏幕造成損壞的化學品，例如玻璃清潔劑，空氣清新劑，殺蟲劑，潤滑劑，汽車或工業用蠟劑，磨光劑，稀釋劑，苯，酒精等。否則，可能導致觸電或產品損壞。

## 準備使用

- 如電視從廠商運出後首次開啓，電視初始化可能需時數分鐘。
- 插圖可能與實際情況有差異。
- 您電視的 OSD（螢幕顯示）可能與此手冊中顯示的內容略有不同。
- 可用的功能表及選項可能與您使用的輸入來源或產品型號有所不同。
- 新功能或將添加至此電視。
- 裝置必須在容易接近插座的位置。有些裝置沒有開啓 / 關閉按鈕，需要拔除電源線才能關閉。
- 產品隨附的部件視乎型號而可能有所不同。
- 本手冊的產品規格或內容或會因產品功能升級而隨時變更，恕不另行通知。
- 爲了獲得最好的連接效果，HDMI 纜線和 USB 裝置接頭厚度應少於 10 毫米，寬度應少於 18 毫米。如果 USB 纜線或 USB 記憶卡與您的電視的 USB 端口尺寸不符，請使用支援 USB 2.0 的延長線。



\* A ≤ 10 毫米

\* B ≤ 18 毫米

- 使用附有 HDMI 標誌的獲認證的纜線。
- 如您並非使用獲認證的纜線，可能無法於螢幕顯示畫面，或發生連接錯誤。（建議的 HDMI 線類型）
  - 超高速 HDMI®/™ 線（3 米或以下）

## 選購配件

另購項目可因改善品質而隨時變更或修改，恕不另行通知。如要購買這些項目，請聯絡經銷商。這些裝置僅配合某些型號使用。

型號名稱或設計可因產品功能升級，製造商或有關政策而有所改變。

### LED 時鐘

（視型號而定）

LEC-005

### 神奇遙控器

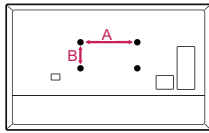
（視型號而定）

AN-MR18HA

檢查您的電視型號是否支援無線模組規格中的 Bluetooth，以確定它能否與神奇遙控器搭配使用。

## 掛牆架

確保使用符合 VESA 標準的螺絲及掛牆底座托架。  
掛牆底座套件的標準尺寸如下表所述。



| 型號                   | 49US76*           | 55US76*           |
|----------------------|-------------------|-------------------|
| VESA (A x B)<br>(毫米) | 200 x 200         | 300 x 300         |
| 標準螺絲                 | M6                | M6                |
| 螺絲數目                 | 4                 | 4                 |
| 掛牆架                  | LSW240B<br>MSW240 | OLW480B<br>MSW240 |
| 型號                   | 65US76*           | 75US76*           |
| VESA (A x B)<br>(毫米) | 300 x 300         | 600 x 400         |
| 標準螺絲                 | M6                | M8                |
| 螺絲數目                 | 4                 | 4                 |
| 掛牆架                  | OLW480B           | LSW640B           |

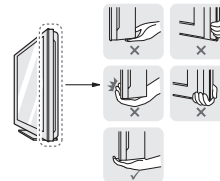
## 抬起與移動電視

不論任何類型及大小，抬起或移動電視時，請閱讀下文，確保安全搬運，以防電視刮花或受損。

- 建議以包裝箱或連同電視原有的包裝材料移動電視。
- 移動或抬起電視前，中斷電源線和所有纜線的連接。
- 當握住電視時螢幕應面向外側以避免損壞。



- 握穩電視的頂部和底部。確保不要握住透明部分，喇叭或喇叭排孔區域。



- 大型電視需最少二人共同運送。
- 使用人手搬運電視時，請根據以下圖示握住電視。



- 搬運電視時，請勿搖動或令電視受過度震動。
- 搬運電視時，保持電視直立，切勿轉向電視的側面，或向左方或右方傾斜電視。
- 請勿過份用力，否則可能導致外框底座屈曲 / 折彎，會損壞螢幕。
- 操作電視時，請勿損壞凸起的按鈕。

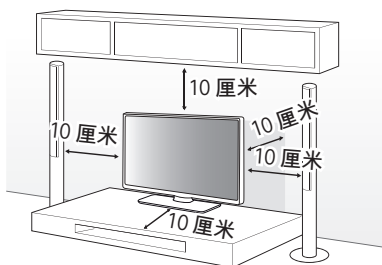


- 避免時常點按畫面，否則會導致畫面受損。
- 請勿握住纜線整理器移動電視，因其可能斷裂而導致受傷及電視損壞。
- 將底座安裝至電視組合時，電視螢幕應面向下方並放於附有軟墊的枱面或平面上以避免螢幕磨損。（視型號而定）

## 安裝到桌面

（視型號而定）

- 1 將電視機抬起並擺放在桌子上，保持機身豎直。
  - 與牆壁保留最少 10 厘米空間以保持空氣流通。



（視型號而定）

- 2 將電源線連接至牆上電源插座。



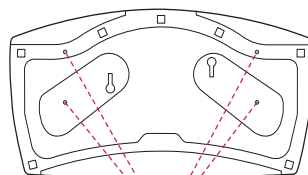
- 在組裝產品時，請勿於螺絲零件處使用油或潤滑劑等外來物質。（這樣可能會導致產品損壞。）
- 如將電視安裝於底座上，請採取措施以預防產品翻倒。否則，將可能導致電視翻倒並引致受傷。
- 請勿使用任何未經批准部件，以確保安全和產品壽命。
- 因使用未經批准物品而造成的任何損壞或傷害並不包括在製造商的保修範圍內。
- 請確保螺絲已正確插入並穩固旋緊。  
（如果沒有穩固扭緊螺絲，電視在安裝後可能會向前傾斜。）請勿過份用力及過度扭緊螺絲，否則螺絲可能會受損並無法正確上緊。

## 將電視安裝到桌台上

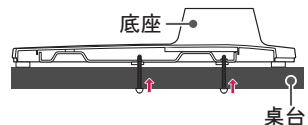
（視型號而定）

電視應安裝到桌台上，使其無法向前/向後拉，而可能造成傷害或產品損壞。

### A 型

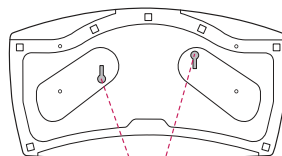


4 個螺絲  
（未隨附於電視）

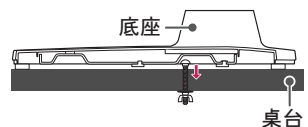


- 螺絲：M5 x L (\*L：桌子深度 + 8~10 毫米)  
例如，桌子深度：15 毫米，螺絲：M5 x L25

### B 型



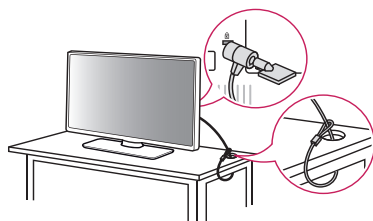
2 個螺絲用於固定底座，  
2 個墊圈用於固定底座，  
2 個螺母用於固定底座  
（隨附於電視）



## 使用 Kensington 保安系統

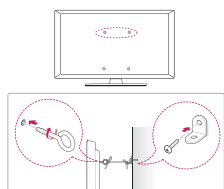
(視型號而定)

Kensington 保安系統連接器位於電視後面。有關詳細的安裝和使用信息，請參閱Kensington保安系統使用手冊或瀏覽 <http://www.kensington.com>。把 Kensington 保安系統連接在電視和桌子之間。



(視型號而定)

## 安全地將電視安裝到牆壁上

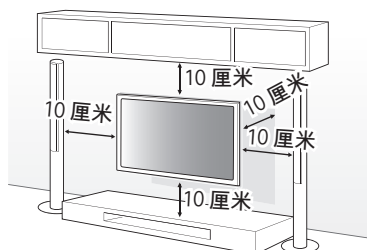


(視型號而定)

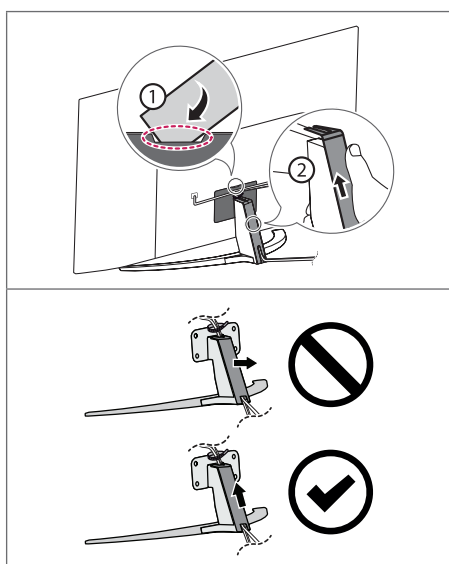
- 1 在電視背面插入並擰緊環首螺栓或 固定片和螺栓。
    - 如果在環首螺栓位置中插入了螺栓，請先將這些螺栓取出。
  - 2 用螺栓將固定片安裝到牆上。將掛牆架的位置對準電視背面的環形螺栓。
  - 3 以堅固繩索將環形螺栓及掛牆架連接。確保繩索與平面保持水平。
- 使用堅固平臺或矮櫃以穩固承托電視。
  - 掛牆架，螺栓及繩索需另行購買。您可從本地經銷商取得其他配件。

## 安裝到牆上

將選購的掛牆架小心安裝在電視後方，再將掛牆架安裝在與地面垂直的堅固牆壁上。將電視安裝在其他建築物料時，請聯絡合資格的人員。LG 建議應由合資格的專業安裝人員進行掛牆安裝。建議使用LG 提供的掛牆架。LG 掛牆架容易與連接的纜線一起移動。如不使用 LG 掛牆架，請使用能將裝置穩固於牆上並有足夠空間連接外部裝置的掛牆架。建議安裝固定的掛牆架之前先連接所有纜線。



- 將電視安裝於掛牆架前需反方向轉動底座以將之移除。(視型號而定)
- 如需螺絲和掛牆架的詳細資訊，請參閱其購買的資訊。
- 如希望將產品安裝於牆上，請於產品背面安裝 VESA 標準掛牆介面(選購配件)。於安裝套件以使用掛牆架(選購配件)時請注意固定以防墜落。
- 將電視以掛牆方式安裝時，務必避免使用電視背面的電源線和訊號線懸掛。
- 如牆壁會暴露於油或油霧，請勿在上面安裝此產品。此舉可能會損壞產品，並導致產品掉落。

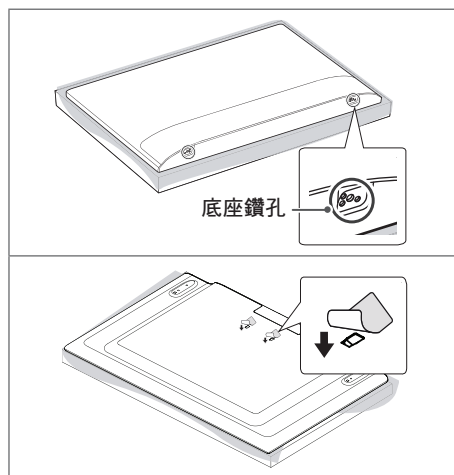


(視型號而定)



- 切勿使用鋒利硬物來拆除纜線保護蓋。以免損壞纜線或機身。及造成人身傷害。(視型號而定)

- 安裝掛牆架時，建議使用膠帶蓋住支架孔，以防灰塵和昆蟲跑進去。(視型號而定)



## 連接

將不同的外置裝置連接至電視，並切換輸入模式以選取外置裝置。有關外置裝置連接的詳情，請參閱個別裝置隨附的手冊。

### 天線/纜線

使用 RF 線（75 Ω）將電視連接至牆壁天線插座。

- 如使用兩部電視以上，使用訊號分線器。
- 如畫面品質惡劣，正確安裝訊號放大器以改善圖像品質。
- 如有連接天線，但畫面品質惡劣，嘗試以正確方向重新對準天線。
- 天線及轉換器並不提供。
- 若是不支援 ULTRA HD 廣播的位置，此電視就無法直接接收 ULTRA HD 廣播。（視型號而定）

## 其他連接

將電視連接至外部裝置。為達到最佳圖片及音訊質素，請使用 HDMI 纜線將外置裝置及電視連接。不提供部份獨立纜線。

### HDMI

- 支援的 HDMI 音效格式：  
（視型號而定）  
Dolby Digital / Dolby Digital Plus（32 kHz / 44.1 kHz / 48 kHz），  
PCM（32 kHz / 44.1 kHz / 48 kHz / 96 kHz / 192 kHz）

（僅限 UHD 型號）

- 選單 **SETTINGS** → ⓘ → [影像] → [其他設置] → [HDMI Ultra HD Deep Color]
  - 開：支援 4K @ 50/60 Hz  
（4:4:4, 4:2:2, 4:2:0）
  - 關閉：支援 4K @ 50/60 Hz 8 位元（4:2:0）  
如果連接到輸入的設備也支援 ULTRA HD Deep Color，您的圖像會更清晰。不過，如果設備不支援，可能無法正常運作。如出現此情況，請將電視的 [HDMI Ultra HD Deep Color] 設定為停用。

### USB

某些 USB 集線器可能不能運作。如連接至 USB 集線器的 USB 裝置未能被探測，可直接將裝置連接至於電視上的 USB 端口。

- 連接網路攝影機時使用 USB 1 端口。USB 2 端口可能不支援某些網路攝影機。（視型號而定）
- 建議使用具有電源供應器的 USB 集線器或 USB HDD。（如果電源供應不足，可能無法正常偵測到 USB 儲存裝置。）
- 建議使用額定電壓小於 5 V 且額定電流小於 500 mA 的外部 USB HDD。

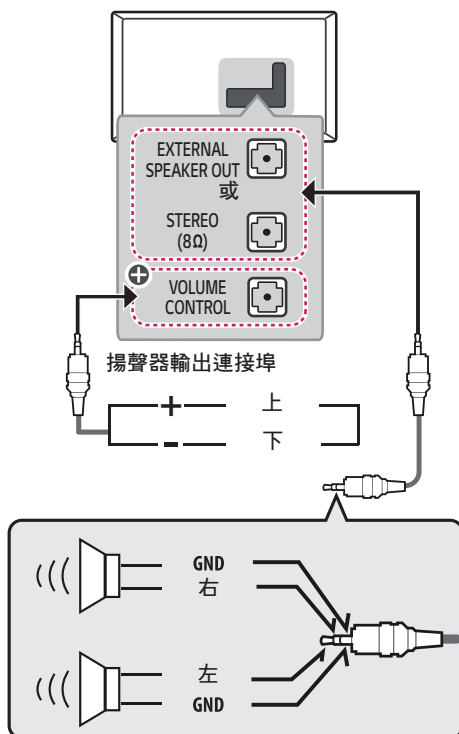
## 外部裝置

可用的外置裝置為：Blu-ray 播放器，HD 接收器，DVD 播放器，VCR，音效系統，USB 儲存裝置，電腦，遊戲裝置及其他外置裝置。

- 外置裝置連接視乎型號而有所不同。
- 不論電視連接埠順序為何，連接外部裝置至電視。
- 有關操作說明，請參閱外部裝置手冊。
- 如果您將遊戲裝置連接至電視，使用遊戲裝置隨附的纜線。
- 於電腦模式，可能產生由解像度，垂直格式，對比度或亮度引致的雜音。如出現雜訊，將電腦輸出變更爲其他解像度或將刷新率變更爲其他頻率，或於影像功能表中調整亮度和對比度，直至影像變爲清晰。
- 於電腦模式，部份解像度設定可能未能正常運作，視乎顯示卡而定。
- 如您在電腦上播放 Ultra HD 內容，視乎電腦性能，視訊或音訊可能會間歇性中斷。（視型號而定）
- 建議使用 CAT 7 網絡線連接區域網絡（LAN）。（僅限提供 LAN 連接埠時。）

## 外部揚聲器

（視型號而定）



⊕：視型號而定

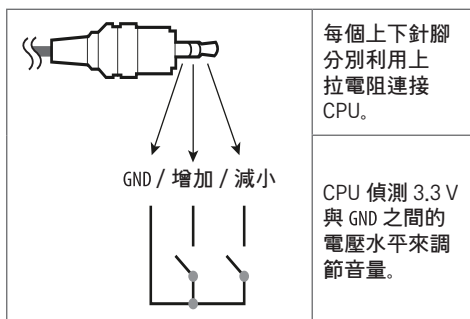


- 只可使用 3 極式 3.5 毫米立體聲插頭。
- 連接至外部揚聲器時，請勿連接耳機或耳筒至連接埠。

## 音量控制

(視型號而定)

- 連接線規格



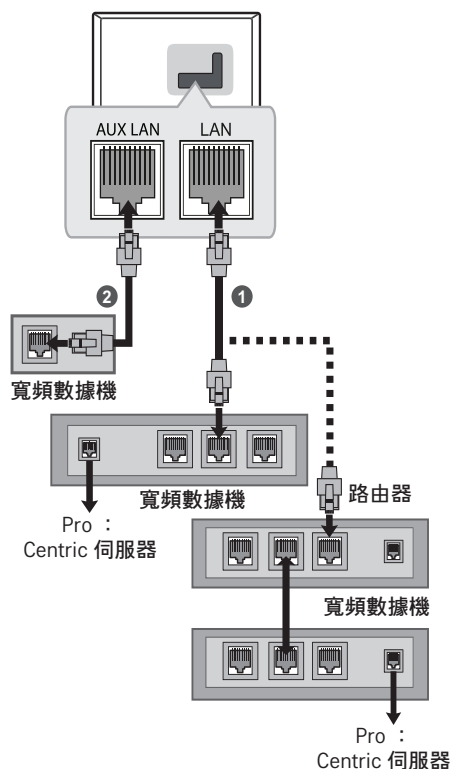
## 網絡

(視型號而定)

### 有線網絡連接

此電視可以透過 LAN 連接埠連接至 Pro : Centric 伺服器。物理連接完成後，電視需要設置網絡通訊。將 Pro : Centric 伺服器的數據機或路由器的 LAN 連接埠連接至電視的 LAN 連接埠。

網絡



- ① 將數據機或路由器的 LAN 連接埠連接至電視的 LAN 連接埠。
- ② 將電腦的 LAN 連接埠連接至電視的 AUX LAN 連接埠。(視型號而定)

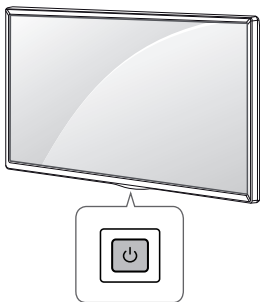


- 請勿將電話線連接至 LAN 連接埠。
- 由於有不同連接方法可供使用，請遵從您電訊供應商或互聯網服務供應商的詳細說明。

# 使用按鈕

電視

(視型號而定)  
只需使用按鈕，即可輕鬆操作電視功能。



# 基本功能

|                                                                                   |                         |
|-----------------------------------------------------------------------------------|-------------------------|
|  | 開機 (按一下)                |
|                                                                                   | 關機 <sup>1</sup> (按住)    |
|                                                                                   | 選單控制 (按下 <sup>2</sup> ) |
|                                                                                   | 選單選擇 (按住 <sup>3</sup> ) |

- 1 所有操作中的應用程式將會關閉。
- 2 您可以在電視開啓時按下按鈕，以存取及調整選單。
- 3 當您存取調整選單時便可使用這功能。

# 調整功能表

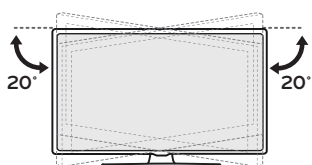
(視型號而定)  
當電視開啓時，按一下按鈕。您可使用按鈕以調整功能表項目。

|                                                                                   |           |
|-----------------------------------------------------------------------------------|-----------|
|  | 關閉電源。     |
|  | 改更輸入來源。   |
|  | 捲動已儲存的節目。 |
|  | 調整音量。     |

## 調整電視的角度以適合觀看

(視型號而定)

向左或向右旋轉 20 度，調整電視的角度以適合您觀看。



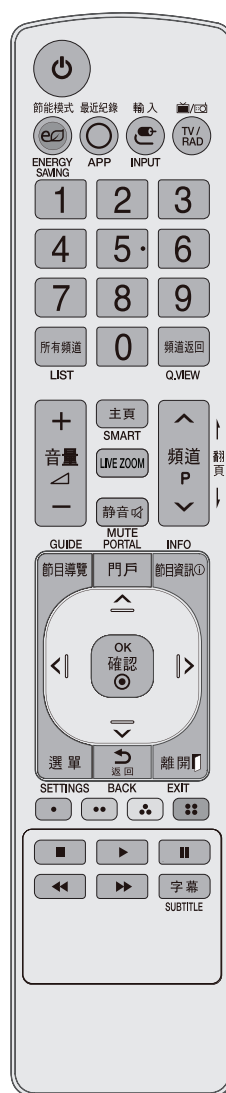
- 調整產品的角度時，請留意您的手指。
- 如果夾到手或手指可能會受傷。如果產品過於傾斜，可能會翻倒而導致損壞或傷害。

## 使用遙控器

本手冊的描述基於遙控器的按鍵而定。請仔細閱讀本手冊並正確使用電視。

如需安裝電池，打開電池蓋，更換電池（1.5 V AAA）時配對電池格內的 ⊕ 及 ⊖ 端標籤，然後關上電池蓋。如要移除電池，以相反步驟執行動作。

確保將遙控器指向電視的遙控器感應器。



(因應產品型號或地區，部分按鈕功能和服務可能無法提供。)

\* 要使用按鈕，請按住超過 3 秒。

⏻ (電源) 開啟或關閉電視。

節能模式 ENERGY SAVING 調整畫面亮度以減少能源消耗。

最近紀錄 APP 顯示歷史記錄。

輸入 INPUT 改更輸入來源。

TV / RAD 選擇收音機，電視和數碼電視節目。

數字鍵 輸入數字。

所有頻道 LIST 進入已儲存節目列表。

頻道返回 Q.VIEW 轉到上次觀看的頻道。

+ 音量 - 調整音量。

主頁 SMART 選擇智能功能表。

LIVE ZOOM 沒有作用。

靜音 MUTE 打開或關閉聲音。

靜音 MUTE\* 進入 [協助工具] 功能表。

^ 頻道 P v 捲動已儲存的節目。

| 翻頁 | 移至上一屏幕或下一屏幕。

節目導覽 GUIDE 顯示節目指南。

選單 SETTINGS 進入主功能表。

門戶 PORTAL 顯示及移除 Pro : Centric 程式。

導航按鍵 (上/下/左/右) 滾動閱覽選單或選項。

OK 確認 選擇選單或選項並確認輸入。

返回 BACK 返回至上一畫面。

節目資訊 INFO 檢視目前節目及畫面的資訊。

離開 EXIT 清除所有 OSD 並返回電視畫面。

訪問某些選單中的特殊功能。

■, ▶, II, ◀, ► 媒體內容控制按鍵。

字 幕 SUBTITLE 在數碼模式調用所需字幕。



- 請勿將新舊電池混合使用。此可導致電池過熱及洩漏。
- 沒有按照兩極正確裝入電池可能會造成電池爆炸或洩漏，引致火災，人身傷害或環境污染。
- 本裝置使用電池。您的居住地區可能會有關規定，要求您基於環境考量，妥善棄置這些電池。請洽詢地方當局，以瞭解棄置或回收的相關資訊。
- 產品的內部和外部電池不應暴露於高溫的地方，例如直射陽光或明火等。
- 在某些國家或收看模擬廣播時，部份按鍵可能無法使用。

## 疑難排解

可以更新軟件版本以提升效能。

客戶需要確保客戶設備與 LGE 軟件的相容性。如有需要，請向 LGE 查詢，並根據 LGE 提供的指引上載已更改的軟件版本。

無法使用遙控器控制電視。

- 請檢查產品上的遙控器感應器，然後再試一次。
- 請檢查產品和遙控器之間是否有任何障礙物。
- 請檢查電池是否仍可使用，且已正確安裝（⊕ 對 ⊕，⊖ 對 ⊖）。

沒有畫面顯示或沒有聲音。

- 請檢查產品是否已開機。
- 請檢查電線是否已連接至牆上插頭。
- 請連接其他產品，確認牆上插頭是否有問題。

電視突然關機。

- 檢查電源控制設定。電源供應可能中斷。
- 檢查自動關閉功能是否在設定相關的時間啟動。
- 如果在電視開機時沒有訊號，15 分鐘後若無任何動作，電視就會自動關機。

連接到電腦（HDMI）時，未偵測到任何訊號。

- 使用遙控器關閉/開啓電視。
- 重新連接 HDMI 纜線。
- 在開啓電視的情況下重新啟動電腦。

## 異常顯示情況

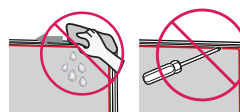
- 如接觸產品時感覺冰冷，於開啓時可能出現「跳線」情況。此為正常情況，產品並無異常。
- 本屏幕是擁有數百萬像素的先進產品。微細黑點及/或高亮彩色光點（紅色，藍或綠色）可能以每百萬分一單位出現於顯示屏幕上。此並不代表非正常運作及並不影響產品之性能及其可靠性。此現象亦會於第三方產品出現並不接受更換或退款。
- 於不同位置（左/右/上/下方）觀看時可能感受到屏幕不同亮度及顏色顯示。此現象的出現乃顯示屏幕的特性。此與產品性能無關，並其運作正常。
- 長時間顯示靜態圖像可能會引致殘像。請避免長時間在電視螢幕顯示固定畫面。

## 產生聲音

- 「咔嚓」斷裂雜音：於觀看或關閉電視時出現的斷裂雜音乃因溫度與濕度而導致塑料的熱收縮所產生。此等雜聲於遇熱膨脹之產品較為常見。
- 電路嗡嗡聲/屏幕訊噪：低水平雜音乃由高速切換電路以產生大量電流令產品運作時發出。其因應產品會有所不同。雜音之產生並不影響產品的性能及可靠性。



- 清潔本產品時，切勿讓任何液體或異物滲入屏幕的上方或左右兩側的間隙。（視型號而定）



- 確保擰乾布上多餘的水分及清潔劑。
- 切勿直接在電視螢幕上噴水或清潔劑。
- 請只在乾布上噴上適度的水或清潔劑以擦拭螢幕。

## 規格

說明

- 能源標籤上標明的每年能源消耗是根據 IEC 62087 及香港能源效益標籤計劃 (MEELS) 來計算。
- 實際的能源消耗取決於使用環境 (觀看的内容, 電視設定等) 而定。

| 廣播規格      |                                             |                                                                                                                                    |
|-----------|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
|           | 數碼訊號                                        | 類比訊號                                                                                                                               |
| 電視制式      | DTMB, DVB-C                                 | PAL D/K/B/G/I, NTSC-M                                                                                                              |
| 節目範圍 (波段) | DTMB : 1 ~ 62<br>DVB-C : 52.5 MHz ~ 866 MHz | PAL D/K : VHF/UHF 1 ~ 62,<br>Cable 1~41<br>PAL B/G/I : VHF/UHF 1 ~ 69,<br>Cable 1 ~ 47<br>NTSC-M : VHF/UHF 2 ~ 78,<br>Cable 1 ~ 71 |
| 外置天線抗阻    | 75 Ω                                        |                                                                                                                                    |

| 無線模組 (LGSBWAC92) 規格                                                                                                                                |           |
|----------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| 無線 LAN (IEEE 802.11a/b/g/n/ac)                                                                                                                     |           |
| 頻率範圍                                                                                                                                               | 輸出功率 (最大) |
| 2400 轉 2483.5 MHz                                                                                                                                  | 18 dBm    |
| 5150 轉 5350 MHz                                                                                                                                    | 18 dBm    |
| 5725 轉 5850 MHz                                                                                                                                    | 12 dBm    |
| Bluetooth                                                                                                                                          |           |
| 頻率範圍                                                                                                                                               | 輸出功率 (最大) |
| 2400 轉 2483.5 MHz                                                                                                                                  | 8 dBm     |
| <ul style="list-style-type: none"> <li>• 由於每個國家的波段頻道有所不同, 用戶無法更改或調整操作頻率。本產品配置之頻率為區域頻率表內。</li> <li>• 為用戶着想, 建議本裝置安裝及使用時, 應最少離用戶身體 20 厘米。</li> </ul> |           |

| 環境條件 |                |
|------|----------------|
| 操作溫度 | 0 °C 至 40 °C   |
| 操作濕度 | 低於 80 %        |
| 儲存溫度 | -20 °C 至 60 °C |
| 儲存濕度 | 低於 85 %        |

## HDMI – DTV 支持模式

| 解像度          | 行 (kHz)                                                         | 場頻 (Hz)                                               |
|--------------|-----------------------------------------------------------------|-------------------------------------------------------|
| 640 x 480p   | 31.46<br>31.5                                                   | 59.94<br>60                                           |
| 720 x 480p   | 31.47<br>31.5                                                   | 59.94<br>60                                           |
| 720 x 576p   | 31.25                                                           | 50                                                    |
| 1280 x 720p  | 44.96<br>45<br>37.5                                             | 59.94<br>60<br>50                                     |
| 1920 x 1080i | 28.12<br>33.72<br>33.75                                         | 50<br>59.94<br>60                                     |
| 1920 x 1080p | 26.97<br>27<br>33.71<br>33.75<br>56.25<br>67.43<br>67.5         | 23.97<br>24<br>29.97<br>30<br>50<br>59.94<br>60       |
| 1920 x 1080p | 112.5<br>134.86<br>135                                          | 100<br>119.88<br>120                                  |
| 3840 x 2160p | 53.95<br>54<br>56.25<br>61.43<br>67.5<br>112.5<br>134.86<br>135 | 23.98<br>24<br>25<br>29.97<br>30<br>50<br>59.94<br>60 |
| 4096 x 2160p | 53.95<br>54<br>56.25<br>61.43<br>67.5<br>112.5<br>134.86<br>135 | 23.98<br>24<br>25<br>29.97<br>30<br>50<br>59.94<br>60 |

## HDMI-PC 支援模式

- 不支援電腦音訊。
- PC 模式時使用 HDMI IN 1。 (視型號而定)

| 解像度         | 行 (kHz)                                                         | 場頻 (Hz)                                               |
|-------------|-----------------------------------------------------------------|-------------------------------------------------------|
| 640 x 350   | 31.46                                                           | 70.09                                                 |
| 720 x 400   | 31.46                                                           | 70.08                                                 |
| 640 x 480   | 31.46                                                           | 59.94                                                 |
| 800 x 600   | 37.87                                                           | 60.31                                                 |
| 1024 x 768  | 48.36                                                           | 60                                                    |
| 1360 x 768  | 47.71                                                           | 60.01                                                 |
| 1152 x 864  | 54.34                                                           | 60.05                                                 |
| 1280 x 1024 | 63.98                                                           | 60.02                                                 |
| 1920 x 1080 | 67.5<br>134.86<br>135                                           | 60<br>119.88<br>120                                   |
| 2560 x 1440 | 88.78                                                           | 59.95                                                 |
| 3840 x 2160 | 53.95<br>54<br>56.25<br>61.43<br>67.5<br>112.5<br>134.86<br>135 | 23.98<br>24<br>25<br>29.97<br>30<br>50<br>59.94<br>60 |
| 4096 x 2160 | 53.95<br>54<br>56.25<br>61.43<br>67.5<br>112.5<br>134.86<br>135 | 23.98<br>24<br>25<br>29.97<br>30<br>50<br>59.94<br>60 |

1080i  
1080p

## 支援的相片格式

| 檔案格式                    | 格式   | 解像度                                                                               |
|-------------------------|------|-----------------------------------------------------------------------------------|
| .jpeg,<br>.jpg,<br>.jpe | JPEG | 最低：64（闊）x 64（高）<br>最大（正常類型）：<br>15360（闊）x 8640（高）<br>最大（逐步型）：<br>1920（闊）x 1440（高） |
| .png                    | PNG  | 最低：64（闊）x 64（高）<br>最大：<br>5760（闊）x 5760（高）                                        |
| .bmp                    | BMP  | 最低：64（闊）x 64（高）<br>最大：<br>1920（闊）x 1080（高）                                        |

## 支援的音訊格式

| 檔案格式  | 項目   | 資料                  |
|-------|------|---------------------|
| .mp3  | 位元率  | 32 Kbps – 320 Kbps  |
|       | 取樣頻率 | 16 kHz – 48 kHz     |
|       | 支援   | MPEG1, MPEG2        |
|       | 頻道   | 單聲, 立體聲             |
| .wav  | 位元率  | –                   |
|       | 取樣頻率 | 8 kHz – 96 kHz      |
|       | 支援   | PCM                 |
|       | 頻道   | 單聲, 立體聲             |
| .ogg  | 位元率  | 64 kbps – 320 kbps  |
|       | 取樣頻率 | 8 kHz – 48 kHz      |
|       | 支援   | Vorbis              |
|       | 頻道   | 單聲, 立體聲             |
| .wma  | 位元率  | 128 kbps – 320 kbps |
|       | 取樣頻率 | 8 kHz – 48 kHz      |
|       | 支援   | WMA                 |
|       | 頻道   | 最多 6 個頻道            |
| .flac | 位元率  | –                   |
|       | 取樣頻率 | 8 kHz – 96 kHz      |
|       | 支援   | FLAC                |
|       | 頻道   | 單聲, 立體聲             |

- 支援的節目數目可能視乎取樣頻率而定。

## 支援的視訊格式

| 延伸                         | 編碼 |                                                                                                                     |
|----------------------------|----|---------------------------------------------------------------------------------------------------------------------|
| .asf<br>.wmv               | 視訊 | VC-1 進階設定檔 (WMVA 除外),<br>VC-1 簡單和主設定檔                                                                               |
|                            | 音訊 | WMA 標準 (WMA v1/WMA 語音除外)                                                                                            |
| .avi                       | 視訊 | Xvid (未支援 GMC),<br>H.264/AVC, Motion Jpeg, MPEG-4                                                                   |
|                            | 音訊 | MPEG-1 Layer I, II,<br>MPEG-1 Layer III (MP3),<br>Dolby Digital, LPCM, ADPCM                                        |
| .mp4<br>.m4v<br>.mov       | 視訊 | H.264/AVC, MPEG-4, HEVC, AV1                                                                                        |
|                            | 音訊 | Dolby Digital, Dolby Digital Plus, AAC, MPEG-1 Layer III (MP3),<br>Dolby AC-4 <sup>1</sup>                          |
| .3gp<br>.3g2               | 視訊 | H.264/AVC, MPEG-4                                                                                                   |
|                            | 音訊 | AAC, AMR-NB, AMR-WB                                                                                                 |
| .mkv                       | 視訊 | MPEG-2, MPEG-4, H.264/AVC, VP8, VP9, HEVC, AV1                                                                      |
|                            | 音訊 | Dolby Digital, Dolby Digital Plus, AAC, PCM, MPEG-1 Layer I, II, MPEG-1 Layer III (MP3)                             |
| .ts<br>.trp<br>.tp<br>.mts | 視訊 | H.264/AVC, MPEG-2, HEVC                                                                                             |
|                            | 音訊 | MPEG-1 Layer I, II, MPEG-1 Layer III (MP3),<br>Dolby Digital, Dolby Digital Plus, AAC, PCM, Dolby AC-4 <sup>1</sup> |
| .mpg<br>.mpeg<br>.dat      | 視訊 | MPEG-1, MPEG-2                                                                                                      |
|                            | 音訊 | MPEG-1 Layer I, II, MPEG-1 Layer III (MP3)                                                                          |
| .vob                       | 視訊 | MPEG-1, MPEG-2                                                                                                      |
|                            | 音訊 | Dolby Digital, MPEG-1 Layer I, II, DVD-LPCM                                                                         |

1. Dolby AC-4：此功能只能在某特定型號使用。

## 播放視訊注意事項

(僅限 UHD 型號)

- ULTRA HD 影片：3840 x 2160, 4096 x 2160
- 有些 LG Electronics 正式提供的內容以外的 HEVC 編碼 ULTRA HD 影片可能無法播放。
- 軟體升級後可能支援部分解碼器。

| 延伸                  | 編碼 |                                        |
|---------------------|----|----------------------------------------|
| .mkv<br>.mp4<br>.ts | 視訊 | H.264/AVC, HEVC                        |
|                     | 音訊 | Dolby Digital, Dolby Digital Plus, AAC |

## 支援的外部字幕

| 字幕    | 格式                                                                                                                       |
|-------|--------------------------------------------------------------------------------------------------------------------------|
| 外部字幕  | *.smi, *.srt, *.sub (MicroDVD, SubViewer 1.0/2.0), *.ass, *.ssa, *.txt (TMPlayer), *.psb (PowerDivX), *.dcs (DLP Cinema) |
| 內嵌的字幕 | Matroska (mkv)：Sub Station Alpha (SSA), Advanced Sub Station Alpha (ASS), SRT<br>MP4：Timed Text                          |

## 開放原始碼軟體注意事項

若要依據 GPL、LGPL、MPL 及其他開放原始碼授權取得對應的原始碼，請瀏覽 <http://opensource.lge.com>。

除了開放原始碼，所有涉及的授權條款、免責聲明和版權聲明均可供下載。

LG Electronics 也可應您要求，在由您支付相關費用（如媒體成本、運費及處理費）的條件下以 CD-ROM 方式提供開放原始程式碼，如有需要請寄送電子郵件至 [opensource@lge.com](mailto:opensource@lge.com)。

此服務提供的有效期限為本產品最後裝運日起計算的三年。此服務提供的有效對象為收到此資訊的任何人。

## 授權

受支援的授權因型號而有所不同。



HDMI、HDMI高畫質多媒體介面及HDMI 標誌為 HDMI Licensing Administrator, Inc.在美國及其他國家的商標或註冊商標。

本產品經過杜比實驗室的授權而製造。Dolby, 杜比視界, 杜比音效, 杜比全景聲, 和雙D記號是杜比實驗室的註冊商標。



## 法規

### 警告!

請勿將電視機置於搖晃不穩的位置。因為電視機可能會掉落並導致嚴重個人傷害及傷亡。只要採取下列預防工作便可避免傷害事故發生（特別是兒童傷害）：

- 使用製造商建議的儲存櫃及支架置放電視。
- 只選用可安全支撐電視機的家具。
- 確保電視機不會懸在支撐家具的邊沿。
- 切勿將電視機置放在家具高處（如櫥櫃或書架），除非以適當的支撐物固定家具和電。
- 電視機和支撐家具之間不要夾置布料或其他材料。
- 告訴兒童爬上家具觸碰電視機或其控制器的危險性。

如要收藏並將電視機置放於其他地方，建議一律採用上述建議。

### 符號

|     |             |
|-----|-------------|
| ～   | AC 代表交流電。   |
| --- | DC 代表直流電。   |
| □   | 代表第二級設備。    |
| ⏻   | 代表待機。       |
|     | 代表「開啓」（電源）。 |
| ⚡   | 代表危險電壓。     |

## 按鍵編碼

• 此功能不是所有型號都適用。

| 編碼<br>(Hexa) | 功能           | 注意    | 編碼<br>(Hexa) | 功能                  | 注意    |
|--------------|--------------|-------|--------------|---------------------|-------|
| 00           | 頻道P  翻頁      | R/C 鍵 | 44           | OK 確認               | R/C 鍵 |
| 01           | 頻道P  翻頁      | R/C 鍵 | 53           | 所有頻道 LIST           | R/C 鍵 |
| 02           | 音量           | R/C 鍵 | 5B           | 離開                  | R/C 鍵 |
| 03           | 音量           | R/C 鍵 | 61           | (藍)                 | R/C 鍵 |
| 06           | (箭嘴鍵 / 向右鍵)  | R/C 鍵 | 63           | (黃)                 | R/C 鍵 |
| 07           | (箭嘴鍵 / 向左鍵)  | R/C 鍵 | 71           | (綠)                 | R/C 鍵 |
| 7C           | 主頁 SMART     | R/C 鍵 | 72           | (紅)                 | R/C 鍵 |
| 08           | (電源)         | R/C 鍵 | 8E           | (快進)                | R/C 鍵 |
| 09           | 靜音  MUTE     | R/C 鍵 | 8F           | (後退)                | R/C 鍵 |
| 0B           | 輸入  INPUT    | R/C 鍵 | AA           | 節目資訊  INFO          | R/C 鍵 |
| 0C           | 門戶 PORTAL    | R/C 鍵 | AB           | 節目導覽 GUIDE          | R/C 鍵 |
| 10~19        | 數字鍵 0 - 9    | R/C 鍵 | AF           | LIVE ZOOM           | R/C 鍵 |
| 1A           | 頻道返回 Q.VIEW  | R/C 鍵 | B0           | (播放)                | R/C 鍵 |
| 28           | 返回 BACK      | R/C 鍵 | B1           | (停下 / File List)    | R/C 鍵 |
| 39           | 字 幕 SUBTITLE | R/C 鍵 | B5           | 最近紀錄  APP           | R/C 鍵 |
| 40           | (箭嘴鍵/ 向上游標)  | R/C 鍵 | BA           | (靜止 / 慢速播放 / 暫停)    | R/C 鍵 |
| 41           | (箭嘴鍵/ 向下游標)  | R/C 鍵 | F0           | /  TV / RAD         | R/C 鍵 |
| 43           | 選 單 SETTINGS | R/C 鍵 | 95           | 節能模式  ENERGY SAVING | R/C 鍵 |

\* 按鍵編碼 4C (0x4C) 適用於使用主頻道/副頻道的 ATSC/ISDB 型號。(適用於南韓, 日本, 北美和拉丁美洲, 哥倫比亞型號除外)

# 外置控制裝置設置

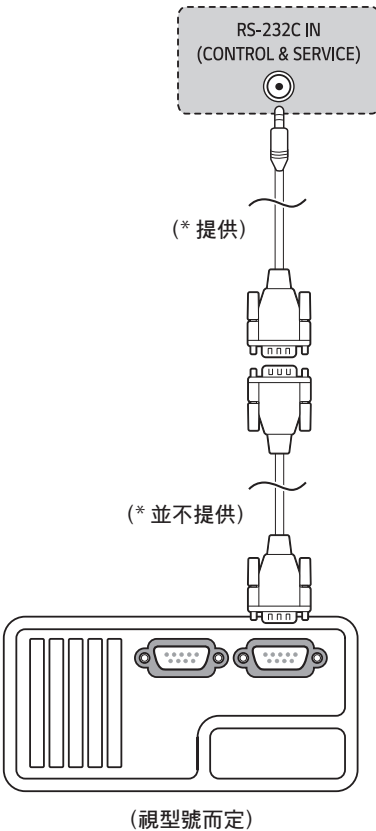
## RS-232C 設置

• 插圖可能與實際情況有差異。  
將 RS-232C（序列連接埠）輸入插頭連接至外置控制裝置（如電腦或 A/V 控制系統），從而於外部控制本產品的功能。

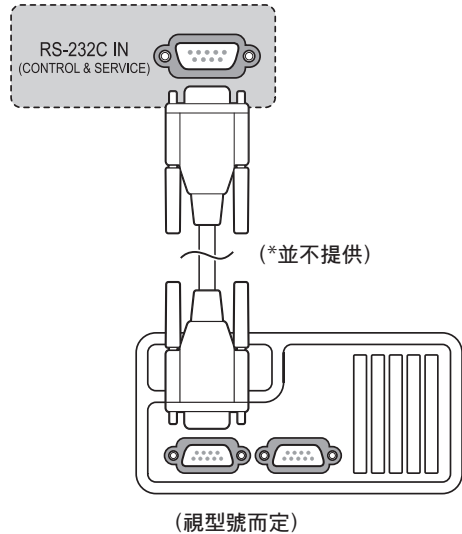
將控制裝置的序列埠連接到產品背板上的 RS-232C 插頭。

- RS-232C 連接纜線未隨產品提供。

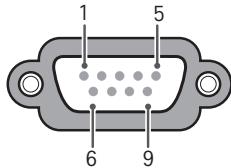
### ► A 型



### ► B 型



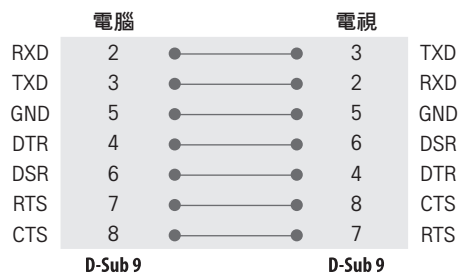
## 連接器類型：9針 D-Sub 公頭



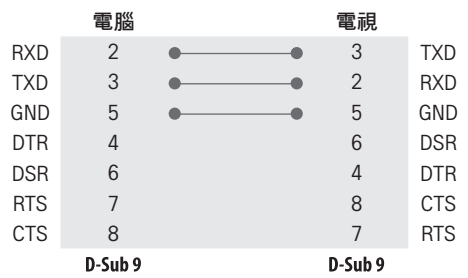
| 編號 | 針腳名稱              |
|----|-------------------|
| 1  | 3.5 V             |
| 2  | RXD（接收數據）         |
| 3  | TXD（傳送數據）         |
| 4  | 從電視 IR 輸出         |
| 5  | GND               |
| 6  | 無連接               |
| 7  | 無連接（5 V 適用於部分型號）  |
| 8  | 無連接               |
| 9  | 無連接（12 V 適用於部分型號） |

# RS-232C 設定

## 7-線設定 (標準RS-232C電纜)



## 3-線設定 (非標準)



# 通訊參數

- 傳輸速率：9600 bps (UART)
- 資料長度：8 位元
- 同位檢查位元：無
- 停止位元：1 位元
- 通訊編碼：ASCII 碼
- 使用交叉（反向）纜線。

# ID 設定

有關設定 ID 號碼，請參閱的「實際數據對應」。

- 1 按 **SETTINGS** → ⓘ 以存取主功能表。
- 2 按導覽鍵以捲動至 [支持] 或 [一般] → [ID 設定]  
然後按 **OK** Ⓞ。
- 3 向左或右捲動以選擇已設定的 [ID 設定]。  
可調整範圍為 1-99。

## 指令參考清單

(視型號而定)

|                        | 指令1 | 指令2 | 數據<br>(十六位元) |
|------------------------|-----|-----|--------------|
| 1 電源                   | k   | a   | 00~01        |
| 2 [畫面比例]               | k   | c   | (參閱第 25 頁)   |
| 3 畫面靜音                 | k   | d   | (參閱第 25 頁)   |
| 4 靜音                   | k   | e   | 00~01        |
| 5 音量控制                 | k   | f   | 00~64        |
| 6 [對比]                 | k   | g   | 00~64        |
| 7 [亮度]                 | k   | h   | 00~64        |
| 8 [色彩]                 | k   | i   | 00~64        |
| 9 [色調]                 | k   | j   | 00~64        |
| 10 [銳利度]               | k   | k   | 00~32        |
| 11 OSD 選擇              | k   | l   | 00~01        |
| 12 遙控器鎖定模式             | k   | m   | 00~01        |
| 13 [平衡]                | k   | t   | 00~64        |
| 14 [色溫]                | x   | u   | 00~64        |
| 15 [智能節電模式]            | j   | q   | (參閱第 27 頁)   |
| 16 自動配置                | j   | u   | 01           |
| 17 [等化器]               | j   | v   | (參閱第 28 頁)   |
| 18 調頻指令                | m   | a   | (參閱第 28 頁)   |
| 19 節目<br>[略過]/<br>[新增] | m   | b   | 00~01        |
| 20 按鍵                  | m   | c   | (參閱第 29 頁)   |
| 21 控制<br>[背光]          | m   | g   | 00~64        |
| 22 輸入<br>選擇            | x   | b   | (參閱第 29 頁)   |

- USB 操作如 DivX 或 EMF 期間，所有除電源 (ka) 及按鍵 (mc) 外的指令將不能運作並作為 NG 處理。

## 傳送 / 接收協定

(視型號而定)

### 傳送

(指令1) (指令2) ( ) ([ID 設定]) ( )  
([資料]) (Cr)

(指令1) : 第一指令以控制電視。  
(j, k, m 或 x)

(指令2) : 第二指令以控制電視。

([ID 設定]) : 您可調整 ID 設定 以於選項功能表選擇所需顯示器 ID 號。調整範圍為 1 至 99。選擇 ID 設定 '0'，即可控制每個連接的電視。ID 設定 於功能表上的標示為十位元 (1 至 99) 並於傳送/接收協定以十六位元 (0 x 00 至 0 x 63) 顯示。

([資料]) : 以傳送指令數據。傳送「FF」以讀取指令狀態。

(Cr) : 返回指令

ASCII 碼「0 x 0D」

( ) : ASCII 碼「空格 (0 x 20)」

### 確認 (OK) 確認訊息

(指令2) ( ) ([ID 設定]) ( ) (OK)  
([資料]) (x)

\* 該設定會於接收正常數據時因應此格式傳送 ACK (確認訊息)。此時，如數據處於數據讀取模式，即代表顯示狀況數據。如數據處於數據讀取模式，它將返回電腦的數據。

### 錯誤確認訊息

(指令2) ( ) ([ID 設定]) ( ) (NG)  
([資料]) (x)

\* 電視接收異常數據或通訊出現錯誤時，將會根據此格式傳送 ACK (確認訊息)。

[資料] 00 : 不合法編碼

### 1 電源 (指令 : k a)

- ▶ 要控制電視機的電源 開啟/關閉。

#### 傳送

(k) (a) ( ) ([ID 設定]) ( ) ([資料])  
(Cr)

[資料] 00 : [關]

[資料] 01 : [開]

#### Ack

(a) ( ) ([ID 設定]) ( ) (OK/NG)  
([資料]) (x)

- ▶ 要顯示電視的電源開啟/關閉。

#### 傳送

(k) (a) ( ) ([ID 設定]) ( ) (FF) (Cr)

#### Ack

(a) ( ) ([ID 設定]) ( ) (OK/NG)  
([資料]) (x)

\* 同樣地，如果其他功能根據此格式傳送「0 x FF」數據，通知數據反饋展示每個功能的狀態。

\* 當電視電源開啟時，OK Ack., Error Ack. 以及其它訊息會顯示在螢幕上。

### 2 [畫面比例] (指令 : k c) (主影像大小)

- ▶ 以調整畫面格式。(主影像格式) 您亦可使用影像設定來調整畫面格式。

#### 傳送

(k) (c) ( ) ([ID 設定]) ( ) ([資料])  
(Cr)

[資料] 01 : [4:3] (標準螢幕 - [點對點掃描] 關閉)

[資料] 02 : [16:9] (寬畫面 - [點對點掃描] 關閉)

[資料] 06 : [原始] ([點對點掃描] 關閉)

[資料] 09 : [點對點掃描]

\* 請確保相關型號產品並不同時支援垂直縮放及全方位縮放模式。

#### Ack

(c) ( ) ([ID 設定]) ( ) (OK/NG)  
([資料]) (x)

\* 使用電腦輸入，您可選擇 16:9 或 4:3 螢幕畫面比例。

\* 在數碼電視/HDMI (1080i 50 Hz / 60 Hz, 720p 50 Hz / 60 Hz, 1080p 24 Hz / 30 Hz / 50 Hz / 60 Hz)，色差 (720p, 1080i, 1080p) 模式中，可使用 [點對點掃描]。

\* 僅數碼，類比及 AV 模式支援全螢幕。

### 3 畫面靜音 (指令 : k d)

- ▶ 選擇畫面靜音開啟/關閉。

#### 傳送

(k) (d) ( ) ([ID 設定]) ( ) ([資料])  
(Cr)

[資料] 00 : 畫面靜音關閉 (影像開啟) / 視訊靜音關閉

[資料] 01 : 畫面靜音開啟 (影像關閉)

[資料] 10 : 視訊靜音開啟

#### Ack

(d) ( ) ([ID 設定]) ( ) (OK/NG)  
([資料]) (x)

\* 若只開啟視訊靜音，電視將顯示螢幕上顯示 (OSD)。但若開啟畫面靜音，電視將不會顯示 OSD。

### 4 靜音 (指令 : k e)

- ▶ 控制靜音開啟/關閉。  
您亦可以利用遙控上的靜音鍵調整靜音功能。

#### 傳送

(k) (e) ( ) ([ID 設定]) ( ) ([資料])  
(Cr)

[資料] 00 : 音量靜音開啟 (音量關閉)

[資料] 01 : 音量靜音關閉 (音量開啟)

#### Ack

(e) ( ) ([ID 設定]) ( ) (OK/NG)  
([資料]) (x)

### 5 音量控制 (指令 : k f)

- ▶ 調整音量。  
您亦可以利用遙控器上的音量鍵調整音量。

#### 傳送

(k) (f) ( ) ([ID 設定]) ( ) ([資料])  
(Cr)

[資料] 最少 : 00 至 最大 : 64

\* 請參閱"實際數據對應"。

#### Ack

(f) ( ) ([ID 設定]) ( ) (OK/NG)  
([資料]) (x)

## 6 [對比] (指令：k g)

- ▶ 調整畫面對比度。  
您亦可在影像功能表調整對比。

### 傳送

(k) (g) ( ) ([ID 設定]) ( ) ([資料])  
(Cr)

[資料] 最少：00 至 最大：64  
\* 請參閱"實際數據對應"。

### Ack

(g) ( ) ([ID 設定]) ( ) (OK/NG)  
([資料]) (x)

## 7 [亮度] (指令：k h)

- ▶ 調整畫面亮度。  
您亦可在影像設定中調整亮度。

### 傳送

(k) (h) ( ) ([ID 設定]) ( ) ([資料])  
(Cr)

[資料] 最少：00 至 最大：64  
\* 請參閱"實際數據對應"。

### Ack

(h) ( ) ([ID 設定]) ( ) (OK/NG)  
([資料]) (x)

## 8 [色彩] (指令：k i)

- ▶ 要調整畫面色彩。  
您亦可在影像設定中調整色彩。

### 傳送

(k) (i) ( ) ([ID 設定]) ( ) ([資料])  
(Cr)

[資料] 最少：00 至 最大：64  
\* 請參閱"實際數據對應"。

### Ack

(i) ( ) ([ID 設定]) ( ) (OK/NG)  
([資料]) (x)

## 9 [色調] (指令：k j)

- ▶ 調整畫面色調。  
您亦可在影像設定中調整色調。

### 傳送

(k) (j) ( ) ([ID 設定]) ( ) ([資料])  
(Cr)

[資料] 紅：00 至 綠：64  
\* 請參閱"實際數據對應"。

### Ack

(j) ( ) ([ID 設定]) ( ) (OK/NG)  
([資料]) (x)

## 10 [銳利度] (指令：k k)

- ▶ 調整畫面銳利度。  
您亦可在影像設定中調整銳利度。

### 傳送

(k) (k) ( ) ([ID 設定]) ( ) ([資料])  
(Cr)

[資料] 最少：00 至 最大：32  
\* 請參閱"實際數據對應"。

### Ack

(k) ( ) ([ID 設定]) ( ) (OK/NG)  
([資料]) (x)

## 11 OSD 選擇 (指令：k l)

- ▶ 於遙距控制時選擇 OSD (螢幕上顯示) 開啓/  
關閉。

### 傳送

(k) (l) ( ) ([ID 設定]) ( ) ([資料])  
(Cr)

[資料] 00：[關]  
[資料] 01：[開]

### Ack

(l) ( ) ([ID 設定]) ( ) (OK/NG)  
([資料]) (x)

## 12 遙控器鎖定模式 (指令：k m)

- ▶ 鎖定於顯示器及遙控器上前置面板的控制。

傳送

(k) (m) ( ) ([ID 設定]) ( ) ([資料])  
(Cr)

[資料] 00：[關]

[資料] 01：[開]

Ack

(m) ( ) ([ID 設定]) ( ) (OK/NG)  
([資料]) (x)

- \* 如您不使用遙控器，可使用此模式。主電源開啓/關閉時，會釋放外部控制的鎖定。
- \* 在備用模式中，如果開啓按鍵鎖，按 IR 或本地按鍵的電源鍵將不會開啓電視。

## 13 [平衡] (指令：k t)

- ▶ 調整平衡。
- 您亦可在音訊設定中調整平衡。

傳送

(k) (t) ( ) ([ID 設定]) ( ) ([資料])  
(Cr)

[資料] L：00 至 R：64

\* 請參閱"實際數據對應"。

Ack

(t) ( ) ([ID 設定]) ( ) (OK/NG)  
([資料]) (x)

## 14 [色溫] (指令：x u)

- ▶ 調整色溫。您亦可在影像設定中調整色溫。

傳送

(x) (u) ( ) ([ID 設定]) ( ) ([資料])  
(Cr)

[資料] 暖色：00 至冷色：64

\* 請參閱"實際數據對應"。

Ack

(u) ( ) ([ID 設定]) ( ) (OK/NG)  
([資料]) (x)

## 15 [智能節電模式] (指令：j q)

- ▶ 以減低電視的耗電量。您亦可於影像設定中調整智能節電模式。

傳送

(j) (q) ( ) ([ID 設定]) ( ) ([資料])  
(Cr)

| 節電功能 |   |   |   |     | 等級 |   |   |   | 說明     |
|------|---|---|---|-----|----|---|---|---|--------|
| 7    | 6 | 5 | 4 |     | 3  | 2 | 1 | 0 |        |
| 0    | 0 | 0 | 0 | 低功率 | 0  | 0 | 0 | 0 | [關]    |
| 0    | 0 | 0 | 0 | 低功率 | 0  | 0 | 0 | 1 | [最小]   |
| 0    | 0 | 0 | 0 | 低功率 | 0  | 0 | 1 | 0 | [中]    |
| 0    | 0 | 0 | 0 | 低功率 | 0  | 0 | 1 | 1 | [最大]   |
| 0    | 0 | 0 | 0 | 低功率 | 0  | 1 | 0 | 1 | [螢幕關閉] |
| 0    | 0 | 0 | 0 | 低功率 | 0  | 1 | 0 | 0 | [自動]   |

- ▶ [自動] 在支援「智能感應模式」的電視中才能使用。

Ack

(q) ( ) ([ID 設定]) ( ) (OK/NG)  
([資料]) (x)

## 16 自動配置 (指令：j u) (僅支援 RGB 型號)

- ▶ 自動調整影像位置及減少畫面震動。僅可在 RGB (電腦) 模式使用。

傳送

(j) (u) ( ) ([ID 設定]) ( ) ([資料])  
(Cr)

[資料] 01：設定

Ack

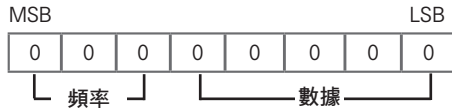
(u) ( ) ([ID 設定]) ( ) (OK/NG)  
([資料]) (x)

## 17 [等化器] (指令 : j v)

► 要調整等化器。

傳送

(j) (v) ( ) ([ID 設定]) ( ) ([資料])  
(Cr)



| 7 | 6 | 5 | 頻率   | 4   | 3   | 2   | 1   | 0   | 音級        |
|---|---|---|------|-----|-----|-----|-----|-----|-----------|
| 0 | 0 | 0 | 第一波段 | 0   | 0   | 0   | 0   | 0   | 0 (十進位元)  |
| 0 | 0 | 1 | 第二波段 | 0   | 0   | 0   | 0   | 1   | 1 (十進位元)  |
| 0 | 1 | 0 | 第三波段 | ... | ... | ... | ... | ... | ...       |
| 0 | 1 | 1 | 第四波段 | 1   | 0   | 0   | 1   | 1   | 19 (十進位元) |
| 1 | 0 | 0 | 第五波段 | 1   | 0   | 1   | 0   | 0   | 20 (十進位元) |

Ack

(v) ( ) ([ID 設定]) ( ) (OK/NG)  
([資料]) (x)

## 18 調頻指令 (指令 : m a)

► 根據具體頻道編號以選擇頻道。

傳送

(m) (a) ( ) ([ID 設定]) ( ) ([資料] 00)  
( ) ([資料] 01) ( ) ([資料] 02) (Cr)

[資料] 00 : 高頻道數據

[資料] 01 : 低頻道數據

例如 : No. 47 → 00 2F (2FH)

No. 394 → 01 8A (18AH) ,

DTV No. 0 → 任何

[資料] 02 : (天線)

0 x 00 : 模擬廣播電視主要

0 x 10 : 數碼電視主要

0 x 20 : 收音機

(纜線)

0 x 80 : 模擬廣播電視主要

0 x 90 : 數碼電視主要

0 x A0 : 收音機

(衛星)

0 x 40 : 數碼電視主要

0 x 50 : 收音機主要

頻道數據範圍

最少 : 00 最大 : 270F (0 至 9999)

Ack

(a) ( ) ([ID 設定]) ( ) (OK/NG)  
([資料]) (x)

## 19 節目 [略過]/[新增] (指令：m b)

► 要設定目前節目的略過狀態。

傳送

(m) (b) ( ) ([ID 設定]) ( ) ([資料])  
(Cr)

[資料] 00：[略過]

[資料] 01：[新增]

Ack

(b) ( ) ([ID 設定]) ( ) (OK/NG)  
([資料]) (x)

## 20 按鍵 (指令：m c)

► 傳送 IR 遙距按鍵編碼。

傳送

(m) (c) ( ) ([ID 設定]) ( ) ([資料])  
(Cr)

[資料] IR 編碼

Ack

(c) ( ) ([ID 設定]) ( ) (OK/NG)  
([資料]) (x)

## 21 控制 [背光] (指令：m g)

► 以控制背光。

傳送

(m) (g) ( ) ([ID 設定]) ( ) ([資料])  
(Cr)

[資料] 最少：00 至 最大：64

Ack

(g) ( ) ([ID 設定]) ( ) (OK/NG)  
([資料]) (x)

## 22 輸入選擇 (指令：x b) (主影像輸入)

► 為主畫面選擇輸入來源。

傳送

(x) (b) ( ) ([ID 設定]) ( ) ([資料])  
(Cr)

[資料] 架構

MSB

LSB

|      |   |   |   |      |   |   |   |
|------|---|---|---|------|---|---|---|
| 0    | 0 | 0 | 0 | 0    | 0 | 0 | 0 |
| 外部輸入 |   |   |   | 輸入號碼 |   |   |   |

| 外部輸入 |   |   |   | 數據   |
|------|---|---|---|------|
| 0    | 0 | 0 | 0 | DTV  |
| 0    | 0 | 0 | 1 | 類比   |
| 0    | 0 | 1 | 0 | AV   |
| 0    | 1 | 0 | 0 | 色差   |
| 0    | 1 | 1 | 0 | RGB  |
| 0    | 1 | 1 | 1 | HDMI |
| 1    | 0 | 0 | 0 |      |
| 1    | 0 | 0 | 1 |      |
| 1    | 0 | 1 | 0 |      |

| 輸入號碼 |   |   |   | 數據  |
|------|---|---|---|-----|
| 0    | 0 | 0 | 0 | 輸入1 |
| 0    | 0 | 0 | 1 | 輸入2 |
| 0    | 0 | 1 | 0 | 輸入3 |
| 0    | 0 | 1 | 1 | 輸入4 |

Ack

(b) ( ) ([ID 設定]) ( ) (OK/NG)  
([資料]) (x)

\* 實際數據對應

00： 步驟 0  
 ∴  
 A： 步驟 10 ([ID 設定] 10)  
 ∴  
 F： 步驟 15 ([ID 設定] 15)  
 10： 步驟 16 ([ID 設定] 16)  
 ∴  
 64： 步驟 100  
 ∴  
 6E： 步驟 110  
 ∴  
 73： 步驟 115  
 74： 步驟 116  
 ∴  
 CF： 步驟 199  
 ∴  
 FE： 步驟 254  
 FF： 步驟 255

## IR 輸出使用指南

### 適合 / 不建議的遙控器數據格式

| 項目       | 數據格式碼                                                      | 注意             |
|----------|------------------------------------------------------------|----------------|
| 適合的數據格式  | NEC, Toshiba Full Repeat Code Format                       | 單一：啓用<br>重複：啓用 |
|          | Philips RC5, RC6 Code Format                               |                |
|          | Zenith Code Format                                         |                |
| 不建議的數據格式 | Matsushita, RCA Code Format                                | 單一：啓用<br>重複：停用 |
|          | Sony 12/15/20 位元, Mitsubishi Code Format                   |                |
|          | Sharp, JVC, R-step, Philips RCMM, RECS-80, XMP Code Format | 單一：停用<br>重複：停用 |

### IR 接收器規格

|               |                |
|---------------|----------------|
| 載波頻率          | 37.9 KHz       |
| 峰值波長          | 940 nm         |
| 最小突發長度        | 最小 300 $\mu$ s |
| 最小間距時間需要為     | 最小 350 $\mu$ s |
| 資料文字長度        | 最大 100 ms      |
| 數據流的最小間距時間需要為 | 最小 50 ms       |

| 參數       | 符號              | 條件                               | 最小  | 類型 | 最大  | 單位      |
|----------|-----------------|----------------------------------|-----|----|-----|---------|
| 高級輸出脈波寬度 | Tw <sub>h</sub> | 突發波 = 600 $\mu$ s<br>期間 = 1.2 ms | 400 | –  | 800 | $\mu$ s |
| 低級輸出脈波寬度 | Tw <sub>l</sub> |                                  | 400 | –  | 800 | $\mu$ s |

⚠ 如果未使用具建議數據格式的遙控器，IR 輸出訊號將會被 IR 接收器自動抑制。在此狀況下，LG 不保證 IR 運作正常。為確保這有作用，以下是兩個方法。

- 使用具合適數據格式的遙控器。
- 使用機頂盒的 IR 接收器。



產品的型號和序號位在產品的背面和其中一個側邊。請記下下列資料，以備需要服務時使用。

型號

序號



# OWNER'S MANUAL

Safety and Reference

## LED TV\*

---

\* LG LED TV applies LCD screen with LED backlights.

Please read this manual carefully before operating your set and retain it for future reference.

[www.lg.com](http://www.lg.com)

Copyright © 2020 LG Electronics Inc. All Rights Reserved.

# Warning! Safety Instructions



**CAUTION**

RISK OF ELECTRIC SHOCK  
DO NOT OPEN



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER TO QUALIFIED SERVICE PERSONNEL.

 This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

 This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING: TO REDUCE THE RISK OF FIRE AND ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.

- TO PREVENT THE SPREAD OF FIRE, KEEP CANDLES OR OTHER ITEMS WITH OPEN FLAMES AWAY FROM THIS PRODUCT AT ALL TIMES.
- **Do not place the TV and/or remote control in the following environments:**
  - Keep the product away from direct sunlight.
  - An area with high humidity such as a bathroom.
  - Near any heat source such as stoves and other devices that produce heat.
  - Near kitchen counters or humidifiers where they can easily be exposed to steam or oil.
  - An area exposed to rain or wind.
  - Do not expose to dripping or splashing and do not place objects filled with liquids, such as vases, cups, etc. on or over the apparatus (e.g., on shelves above the unit).
  - Near flammable objects such as gasoline or candles, or expose the TV to direct air conditioning.
  - Do not install in excessively dusty places.

Otherwise, this may result in fire, electric shock, combustion/explosion, malfunction or product deformation.

## • Ventilation

- Install your TV where there is proper ventilation. Do not install in a confined space such as a bookcase.
- Do not install the product on a carpet or cushion.
- Do not block or cover the product with cloth or other materials while unit is plugged in.
- Take care not to touch the ventilation openings. When watching the TV for a long period, the ventilation openings may become hot.
- Protect the power cord from physical or mechanical abuse, such as being twisted, kinked, pinched, closed in a door, or walked upon. Pay particular attention to plugs, wall outlets, and the point where the cord exits the device.
- Do not move the TV whilst the Power cord is plugged in.
- Do not use a damaged or loosely fitting power cord.
- Be sure to grasp the plug when unplugging the power cord. Do not pull on the power cord to unplug the TV.
- Do not connect too many devices to the same AC power outlet as this could result in fire or electric shock.

## • Disconnecting the Device from the Main Power

- The power plug is the disconnecting device. In case of an emergency, the power plug must remain readily accessible.
- Do not let your children climb or cling onto the TV. Otherwise, the TV may fall over, which may cause serious injury.

## • Outdoor Antenna Grounding (Can differ by country):

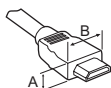
- If an outdoor antenna is installed, follow the precautions below.  
An outdoor antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can come in contact with such power lines or circuits as death or serious injury can occur.

- **Grounding** (Except for devices which are not grounded.)
  - TV with a three-prong grounded AC plug must be connected to a three-prong grounded AC outlet. Ensure that you connect the earth ground wire to prevent possible electric shock.
- Never touch this apparatus or antenna during a lightning storm. You may be electrocuted.
- Make sure the power cord is connected securely to the TV and wall socket if not secured damage to the Plug and socket may occur and in extreme cases a fire may break out.
- Do not insert metallic or inflammable objects into the product. If a foreign object is dropped into the product, unplug the power cord and contact the customer service.
- Do not touch the end of the power cord while it is plugged in. You may be electrocuted.
- **If any of the following occur, unplug the product immediately and contact your local customer service.**
  - The product has been damaged.
  - If water or another substance enters the product (like an AC adapter, power cord, or TV).
  - If you smell smoke or other odors coming from the TV.
  - When lightning storms or when unused for long periods of time.

Even if the TV is turned off by the remote control or power button, AC power source is still connected to the unit if it is not unplugged.
- Do not use high voltage electrical equipment near the TV (e.g., a bug zapper). This may result in product malfunction.
- Do not attempt to modify this product in any way without written authorisation from LG Electronics. Accidental fire or electric shock can occur. Contact your local customer service for service or repair. Unauthorised modification could void the user's authority to operate this product.
- Use only an authorised attachments / accessories approved by LG Electronics. Otherwise, this may result in fire, electric shock, malfunction, or product damage.
- Never disassemble the AC adapter or power cord. This may result in fire or electric shock.
- Handle the adapter carefully to avoid dropping or striking it. An impact could damage the adapter.
- To reduce the risk of fire or electrical shock, do not touch the TV with wet hands. If the power cord prongs are wet or covered with dust, dry the power plug completely or wipe dust off.
- **Batteries**
  - Store the accessories (battery, etc.) in a safe location out of the reach of children.
  - Do not short circuit, disassemble, or allow the batteries to overheat. Do not dispose of batteries in a fire. Batteries should not be exposed to excessive heat.
  - Caution : Risk of fire or explosion if the battery is replaced by an incorrect type.
- **Moving**
  - When moving, make sure the product is turned off, unplugged, and all cables have been removed. It may take 2 or more people to carry larger TVs. Do not press or put stress on the front panel of the TV. Otherwise, this may result in product damage, fire hazard or injury.
- Keep the packing anti-moisture material or vinyl packing out of the reach of children.
- Do not allow an impact shock, any objects to fall into the product, and do not drop anything onto the screen.
- Do not press strongly upon the panel with a hand or a sharp object such as a nail, pencil, or pen, or make a scratch on it. It may cause damage to screen.
- **Cleaning**
  - When cleaning, unplug the power cord and wipe gently with a soft/dry cloth. Do not spray water or other liquids directly on the TV. Do not clean your TV with chemicals including glass cleaner, any type of air freshener, insecticide, lubricants, wax (car, industrial), abrasive, thinner, benzene, alcohol etc., which can damage the product and/or its panel. Otherwise, this may result in electric shock or product damage.

## Preparing

- If the TV is turned on for the first time after it was shipped from the factory, initialization of the TV may take a few minutes.
- Image shown may differ from your TV.
- Your TV's OSD (On Screen Display) may differ slightly from that shown in this manual.
- The available menus and options may differ from the input source or product model that you are using.
- New features may be added to this TV in the future.
- The device must be easily accessed to a location outlet near the access. Some devices are not made by turning on / off button, turning off the device and unplugging the power cord.
- The items supplied with your product may vary depending on the model.
- Product specifications or contents of this manual may be changed without prior notice due to upgrade of product functions.
- For an optimal connection, HDMI cables and USB devices should have bezels less than 10 mm thick and 18 mm width. Use an extension cable that supports USB 2.0 if the USB cable or USB memory stick does not fit into your TV's USB port.



\*  $A \leq 10 \text{ mm}$

\*  $B \leq 18 \text{ mm}$

- Use a certified cable with the HDMI logo attached.
- If you do not use a certified HDMI cable, the screen may not display or a connection error may occur. (Recommended HDMI Cable Types)
  - Ultra High Speed HDMI®/™ Cable (3 m or less)

## Separate Purchase

Separate purchase items can be changed or modified for quality improvement without any notification. Contact your dealer to buy these items. These devices only work with certain models.

The model name or design may be changed depending on the upgrade of product functions, manufacturer's circumstances or policies.

### LED Clock

(Depending on model)

**LEC-005**

### Magic Remote Control

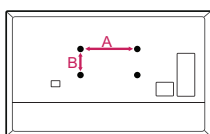
(Depending on model)

**AN-MR18HA**

Check whether your TV model supports Bluetooth in the Wireless Module Specification to verify whether it can be used with the Magic Remote.

## Wall Mounting Bracket

Make sure to use screws and wall mount bracket that meet the VESA standard. Standard dimensions for the wall mount kits are described in the following table.



|                           |                   |                   |
|---------------------------|-------------------|-------------------|
| <b>Model</b>              | 49US76*           | 55US76*           |
| <b>VESA (A x B) (mm)</b>  | 200 x 200         | 300 x 300         |
| <b>Standard screw</b>     | M6                | M6                |
| <b>Number of screws</b>   | 4                 | 4                 |
| <b>Wall mount bracket</b> | LSW240B<br>MSW240 | OLW480B<br>MSW240 |
| <b>Model</b>              | 65US76*           | 75US76*           |
| <b>VESA (A x B) (mm)</b>  | 300 x 300         | 600 x 400         |
| <b>Standard screw</b>     | M6                | M8                |
| <b>Number of screws</b>   | 4                 | 4                 |
| <b>Wall mount bracket</b> | OLW480B           | LSW640B           |

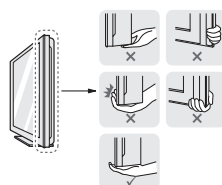
## Lifting and moving the TV

Please note the following advice to prevent the TV from being scratched or damaged and for safe transportation regardless of its type and size.

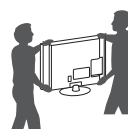
- It is recommended to move the TV in the box or packing material that the TV originally came in.
- Before moving or lifting the TV, disconnect the power cord and all cables.
- When holding the TV, the screen should face away from you to avoid damage.



- Hold the top and bottom of the TV frame firmly. Make sure not to hold the transparent part, speaker, or speaker grill area.



- When transporting a large TV, there should be at least 2 people.
- When transporting the TV by hand, hold the TV as shown in the following illustration.



- When transporting the TV, do not expose the TV to jolts or excessive vibration.
- When transporting the TV, keep the TV upright, never turn the TV on its side or tilt towards the left or right.
- Do not apply excessive pressure to cause flexing / bending of frame chassis as it may damage the screen.
- When handling the TV, be careful not to damage the protruding buttons.



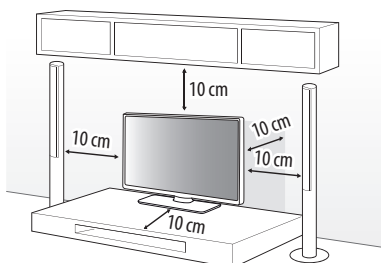
- Avoid touching the screen at all times, as this may result in damage to the screen.
- Do not move the TV by holding the cable holders, as the cable holders may break, and injuries and damage to the TV may occur.
- When attaching the stand to the TV set, place the screen facing down on a cushioned table or flat surface to protect the screen from scratches. (Depending on model)

## Mounting on a Table

(Depending on model)

### 1 Lift and tilt the TV into its upright position on a table.

- Leave a 10 cm (minimum) space from the wall for proper ventilation.



(Depending on model)

### 2 Connect the power cord to a wall outlet.



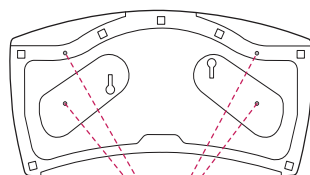
- Do not apply foreign substances (oils, lubricants, etc.) to the screw parts when assembling the product. (Doing so may damage the product.)
- If you install the TV on a stand, you need to take actions to prevent the product from overturning. Otherwise, the product may fall over, which may cause injury.
- Do not use any unapproved items to ensure the safety and product life span.
- Any damage or injuries caused by using unapproved items are not covered by the manufacturer's warranty.
- Make sure that the screws are inserted correctly and fastened securely. (If they are not fastened securely enough, the TV may tilt forward after being installed.) Do not use too much force and over tighten the screws; otherwise screw may be damaged and not tighten correctly.

## Attaching the TV to a Desk

(Depending on model)

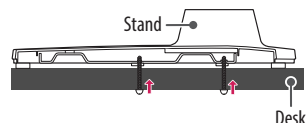
The TV should be attached to a desk so it cannot be pulled in a forward/backward direction, potentially causing injury or damaging the product.

### A type



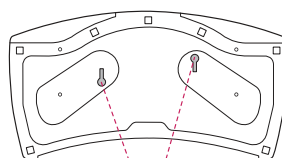
4-Screws

(Not supplied with TV)

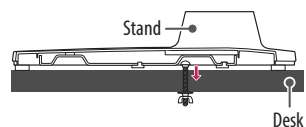


- Screw: M5 x L (\*L: Table depth + 8~10 mm)  
ex) Table depth: 15 mm, Screw: M5 x L25

### B type



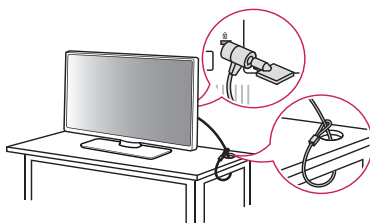
2-Screws for Stand Fixing,  
2-Washers for Stand Fixing,  
2-Nuts for Stand Fixing  
(Supplied with TV)



## Using the Kensington security system

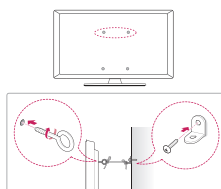
(Depending on model)

The Kensington security system connector is located at the rear of the TV. For more information of installation and using, refer to the manual provided with the Kensington security system or visit <http://www.kensington.com>. Connect the Kensington security system cable between the TV and a table.



(Depending on model)

## Securing the TV to a Wall

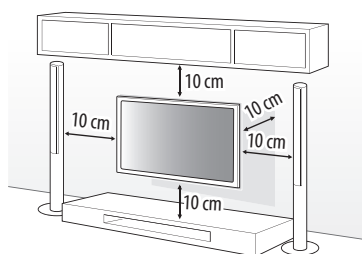


(Depending on model)

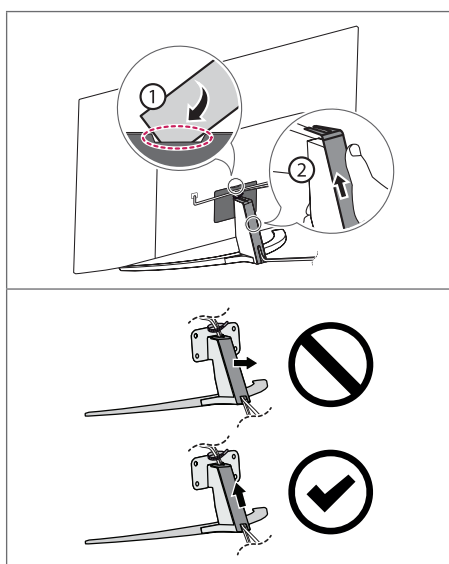
- 1 Insert and tighten the eye-bolts, or TV brackets and bolts on the back of the TV.
    - If there are bolts inserted at the eye-bolts position, remove the bolts first.
  - 2 Mount the wall brackets with the bolts to the wall. Match the location of the wall bracket and the eye-bolts on the rear of the TV.
  - 3 Connect the eye-bolts and wall brackets tightly with a sturdy rope. Make sure to keep the rope horizontal with the flat surface.
- Use a platform or cabinet that is strong and large enough to support the TV securely.
  - Brackets, bolts and ropes are not provided. You can obtain additional accessories from your local dealer.

## Mounting to the Wall

Attach an optional wall mount bracket at the rear of the TV carefully and install the wall mount bracket on a solid wall perpendicular to the floor. When you attach the TV to other building materials, please contact qualified personnel. LG recommends that wall mounting be performed by a qualified professional installer. We recommend the use of LG's wall mount bracket. LG's wall mount bracket is easy to move with cables connected. When you do not use LG's wall mount bracket, please use a wall mount bracket where the device is adequately secured to the wall with enough space to allow connectivity to external devices. It is advised to connect all the cables before installing fixed wall mounts.



- Remove the stand before installing the TV on a wall mount by performing the stand attachment in reverse. (Depending on model)
- For more information of screws and wall mount bracket, refer to the Separate purchase.
- If you intend to mount the product to a wall, attach VESA standard mounting interface (optional parts) to the back of the product. When you install the set to use the wall mounting bracket (optional parts), fix it carefully so as not to drop.
- When mounting a TV on the wall, make sure not to install the TV by hanging the power and signal cables on the back of the TV.
- Do not install this product on a wall if it could be exposed to oil or oil mist. This may damage the product and cause it to fall.

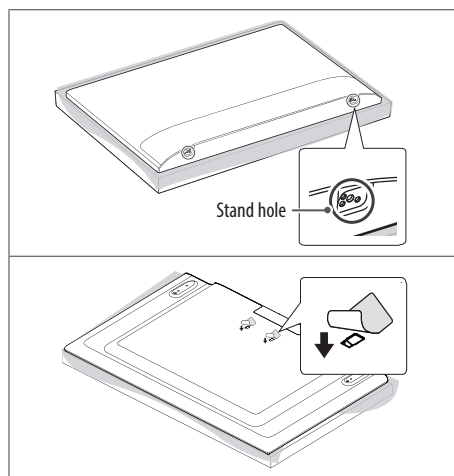


(Depending on model)



- Do not use a sharp object when you detached the cable cover. This could damage the cable or the cabinet. It may also cause personal harm. (Depending on model)

- When installing the wall mounting bracket, it is recommended to cover the stand hole using tape, in order to prevent the influx of dust and insects. (Depending on model)



## Connections

Connect various external devices to the TV and switch input modes to select an external device. For more information of external device's connection, refer to the manual provided with each device.

### Antenna/Cable

Connect the TV to a wall antenna socket with an RF cable (75 Ω).

- Use a signal splitter to use more than 2 TVs.
- If the image quality is poor, install a signal amplifier properly to improve the image quality.
- If the image quality is poor with an antenna connected, try to realign the antenna in the correct direction.
- An antenna cable and converter are not supplied.
- For a location that is not supported with ULTRA HD broadcasting, this TV cannot receive ULTRA HD broadcasts directly. (Depending on model)

## Other connections

Connect your TV to external devices. For the best picture and audio quality, connect the external device and the TV with the HDMI cable. Some separate cable is not provided.

### HDMI

- Supported HDMI Audio format:  
(Depending on model)  
Dolby Digital / Dolby Digital Plus (32 kHz / 44.1 kHz / 48 kHz),  
PCM (32 kHz / 44.1 kHz / 48 kHz / 96 kHz / 192 kHz)

(Only UHD models)

- 選單 **SETTINGS** → ⓘ → [Picture] → [Additional Settings] → [HDMI Ultra HD Deep Colour]  
- On: Support 4K @ 50/60 Hz (4:4:4, 4:2:2, 4:2:0)  
- Off: Support 4K @ 50/60 Hz 8 bit (4:2:0)

If the device connected to Input Port also supports ULTRA HD Deep Colour, your picture may be clearer. However, if the device doesn't support it, it may not work properly. In that case, change the TV's [HDMI Ultra HD Deep Colour] setting to Off.

### USB

Some USB Hubs may not work. If a USB device connected through a USB Hub is not detected, connect it directly to the USB port on the TV.

- Use USB 1 port when connecting a webcam. USB 2 port may not support some webcam. (Depending on model)
- It is recommended that you use a USB hub or USB HDD with a power supply. (If the power supplied is not sufficient, the USB storage device may not be detected properly.)
- It is recommended that you use an external USB HDD with a rated voltage of 5 V or less and a rated current of 500 mA or less.

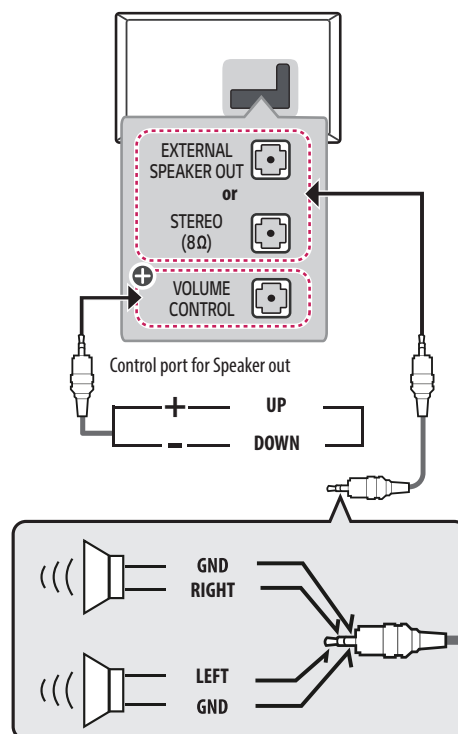
## External Devices

Available external devices are: Blu-ray player, HD receivers, DVD players, VCRs, audio systems, USB storage devices, PC, gaming devices, and other external devices.

- The external device connection may differ from the model.
- Connect external devices to the TV regardless of the order of the TV port.
- Refer to the external equipment's manual for operating instructions.
- If you connect a gaming device to the TV, use the cable supplied with the gaming device.
- In PC mode, there may be noise associated with the resolution, vertical pattern, contrast or brightness. If noise is present, change the PC output to another resolution, change the refresh rate to another rate or adjust the brightness and contrast on the PICTURE menu until the picture is clear.
- In PC mode, some resolution settings may not work properly depending on the graphics card.
- If ULTRA HD content is played on your PC, video or audio may become disrupted intermittently depending on your PC's performance. (Depending on model)
- When connecting via a wired LAN, it is recommended to use a CAT 7 cable. (Only when **LAN** port is provided.)

## External Speakers

(Depending on model)



⊕ : Depending on model

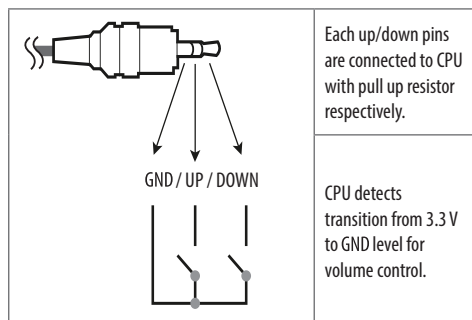


- Use only with the 3 Pole 3.5 mm Stereo Jack.
- Do not connect your headphones or earphones to the port for connecting an external speaker.

## Method of volume control port

(Depending on model)

- Cable Spec.



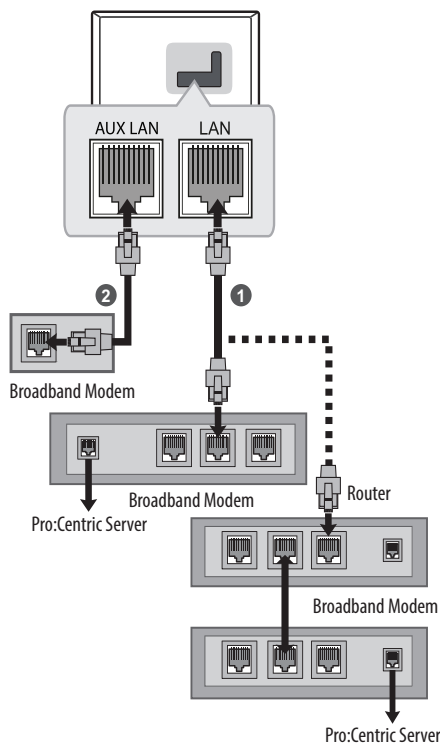
## Network

(Depending on model)

### Wired network connection

This TV can be connected to a Pro:Centric server via the **LAN** port. After making the physical connection, the TV needs to be set up for network communication.

Connect the **LAN** port of the Modem or Router from Pro:Centric server to the **LAN** port on the TV.



- 1 Connect the **LAN** port of the Modem or Router to the **LAN** port on the TV.
- 2 Connect the **LAN** port of the PC to the **AUX LAN** port on the TV. (Depending on model)

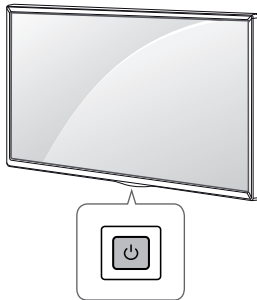


- Do not connect a modular phone cable to the **LAN** port.
- Since there are various connection methods, please follow the specifications of your telecommunication carrier or internet service provider.

# Using Button

(Depending on model)

You can simply operate the TV functions, using the button.



## Basic functions

|                                                                                   |                                               |
|-----------------------------------------------------------------------------------|-----------------------------------------------|
|  | Power On (Press)                              |
|                                                                                   | Power Off <sup>1</sup> (Press and Hold)       |
|                                                                                   | Menu Control (Press <sup>2</sup> )            |
|                                                                                   | Menu Selection (Press and Hold <sup>3</sup> ) |

- 1 All running apps will close.
- 2 You can access and adjust the menu by pressing the button when TV is on.
- 3 You can use the function when you access menu control.

## Adjusting the menu

(Depending on model)

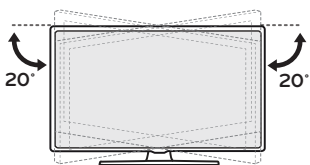
When the TV is turned on, press the  button one time. You can adjust the Menu items using the button.

|                                                                                   |                                       |
|-----------------------------------------------------------------------------------|---------------------------------------|
|  | Turns the power off.                  |
|  | Changes the input source.             |
|  | Scrolls through the saved programmes. |
|  | Adjusts the volume level.             |

## Adjusting the Angle of the TV to suit view

(Depending on model)

Swivel 20 degrees to the left or right and adjust the angle of the TV to suit your view.



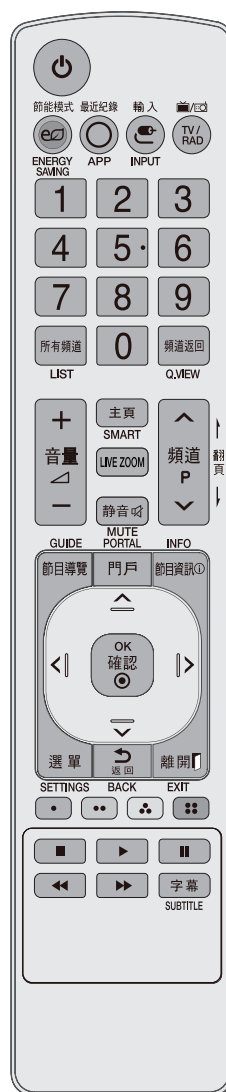
- When adjusting the angle of the product, watch out for your fingers.
- Personal injury may occur if hands or fingers are pinched. If the product is tilted too much, it may fall, causing damage or injury.

## Using Remote Control

The descriptions in this manual are based on the buttons on the remote control. Please read this manual carefully and use the TV correctly.

To replace batteries, open the battery cover, replace batteries (1.5 V AAA) matching the ⊕ and ⊖ ends to the label inside the compartment, and close the battery cover. To remove the batteries, perform the installation actions in reverse.

Make sure to point the remote control toward the remote control sensor on the TV.



(Some buttons and services may not be provided depending on models or regions.)

**\* To use the button, press and hold for more than 3 seconds.**

 **(Power)** Turns the TV on or off.

節能模式  **ENERGY SAVING** Adjusts the brightness of the screen to reduce energy consumption.

最近紀錄  **APP** Shows the previous history.

輸入  **INPUT** Changes the input source.

 **TV / RAD** Selects Radio, TV, and DTV programme.

**Number buttons** Enters numbers.

所有頻道 **LIST** Accesses the saved channel list.

頻道返回 **Q.VIEW** Tunes to the last channel viewed.

 **音量** Adjusts the volume level.

主頁 **SMART** Selects a smart menu.

**LIVE ZOOM** Not functional.

静音  **MUTE** Mutes all sounds.

静音  **MUTE\*** Accesses the [Accessibility] menu.

 **頻道P** Scrolls through the saved channels.

 **翻頁** Moves to the previous or next screen.

節目導覽 **GUIDE** Shows programme guide.

選單 **SETTINGS** Accesses the main menu.

門戶 **PORTAL** Displays and removes Pro:Centric Application.

**Navigation buttons (up/down/left/right)** Scrolls through menus or options.

**OK 確認**  Selects menus or options and confirms your input.

 **返回BACK** Returns to the previous screen.

節目資訊  **INFO** Views the information of the current programme and screen.

離開  **EXIT** Clears all on-screen displays and returns to TV viewing.

 These access special functions in some menus.

 **■, ►, II, ◀, ▶** Control buttons for media contents

字幕 **SUBTITLE** Activates your preferred subtitle in digital mode.



- Do not mix new batteries with old batteries. This may cause the batteries to overheat and leak.
- Failure to match the correct polarities of the battery may cause the battery to burst or leak, resulting in fire, personal injury, or ambient pollution.
- This apparatus uses batteries. In your community there might be regulations that require you to dispose of these batteries properly due to environmental considerations. Please contact your local authorities for disposal or recycling information.
- The product's internal and external batteries should not be exposed to excessive heat such as direct sunlight, fire, or the like.
- In Analogue TV and some countries, some remote control buttons may not work.

## Troubleshooting

The software version can be updated for improvement in performance.

Customer needs to ensure the compatibility of customer's equipment with LGE software. If needed, please consult with LGE and upload revised software version according to the guidance provided by LGE.

Cannot control the TV with the remote control.

- Check the remote control sensor on the product and try again.
- Check if there is any obstacle between the product and the remote control.
- Check if the batteries are still working and properly installed (⊕ to ⊕, ⊖ to ⊖).

No image display and no sound is produced.

- Check if the product is turned on.
- Check if the power cord is connected to a wall outlet.
- Check if there is a problem in the wall outlet by connecting other products.

The TV turns off suddenly.

- Check the power control settings. The power supply may be interrupted.
- Check if the auto-off function is activated on the settings related time.
- If there is no signal while the TV is on, the TV will turn off automatically after 15 minutes of inactivity.

When connecting to the PC (HDMI), no signal is detected.

- Turn the TV off/on using the remote control.
- Reconnect the HDMI cable.
- Restart the PC with the TV on.

### Abnormal display

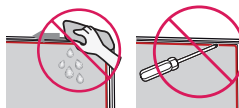
- If the product feels cold to the touch, there may be a small "flicker" when it is turned on. This is normal, there is nothing wrong with product.
- This panel is an advanced product that contains millions of pixels. You may see tiny black dots and/or brightly coloured dots (red, blue or green) at a size of 1 ppm on the panel. This does not indicate a malfunction and does not affect the performance and reliability of the product. This phenomenon also occurs in third-party products and is not subject to exchange or refund.
- You may find different brightness and colour of the panel depending on your viewing position(left/right/top/down).  
This phenomenon occurs due to the characteristic of the panel. It is not related with the product performance, and it is not malfunction.
- Displaying a still image for a prolonged period of time may cause image sticking. Avoid displaying a fixed image on the TV screen for a long period of time.

### Generated sound

- "Cracking" noise: A cracking noise that occurs when watching or turning off the TV is generated by plastic thermal contraction due to temperature and humidity. This noise is common for products where thermal deformation is required.
- Electrical circuit humming/panel buzzing: A low level noise is generated from a high-speed switching circuit, which supplies a large amount of current to operate a product. It varies depending on the product. This generated sound does not affect the performance and reliability of the product.



- When cleaning the product, be careful not to allow any liquid or foreign objects to enter the gap between the upper, left or right side of the panel and the guide panel. (Depending on model)



- Make sure to wring any excess water or cleaner from the cloth.
- Do not spray water or cleaner directly onto the TV screen.
- Make sure to spray just enough of water or cleaner onto a dry cloth to wipe the screen.

## Specifications

- The annual energy consumption indicated on the energy label is measured in accordance with IEC 62087 and the Hong Kong Energy Efficiency Labelling Scheme (MEELS).
- The actual energy consumption depends on the usage environment (the content watched, TV settings, etc.).

| Broadcasting Specifications       |                                           |                                                                                                                          |
|-----------------------------------|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
|                                   | Digital TV                                | Analogue TV                                                                                                              |
| <b>Television system</b>          | DTMB, DVB-C                               | PAL D/K/B/G/I, NTSC-M                                                                                                    |
| <b>programme coverage (Band)</b>  | DTMB: 1 ~ 62<br>DVB-C: 52.5 MHz ~ 866 MHz | PAL D/K: VHF/UHF 1 ~ 62, Cable 1 ~ 41<br>PAL B/G/I: VHF/UHF 1 ~ 69, Cable 1 ~ 47<br>NTSC-M: VHF/UHF 2 ~ 78, Cable 1 ~ 71 |
| <b>External antenna impedance</b> | 75 Ω                                      |                                                                                                                          |

| Wireless module (LGSBWAC92) specifications                                                                                                                                                                                                                                                                                                                                 |                     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| Wireless LAN (IEEE 802.11a/b/g/n/ac)                                                                                                                                                                                                                                                                                                                                       |                     |
| Frequency Range                                                                                                                                                                                                                                                                                                                                                            | Output Power (Max.) |
| 2400 to 2483.5 MHz                                                                                                                                                                                                                                                                                                                                                         | 18 dBm              |
| 5150 to 5350 MHz                                                                                                                                                                                                                                                                                                                                                           | 18 dBm              |
| 5725 to 5850 MHz                                                                                                                                                                                                                                                                                                                                                           | 12 dBm              |
| Bluetooth                                                                                                                                                                                                                                                                                                                                                                  |                     |
| Frequency Range                                                                                                                                                                                                                                                                                                                                                            | Output Power (Max.) |
| 2400 to 2483.5 MHz                                                                                                                                                                                                                                                                                                                                                         | 8 dBm               |
| <ul style="list-style-type: none"> <li>• As band channels can vary per country, the user cannot change or adjust the operating frequency. This product is configured for the regional frequency table.</li> <li>• For consideration of the user, this device should be installed and operated with a minimum distance of 20 cm between the device and the body.</li> </ul> |                     |

| Environment condition        |                 |
|------------------------------|-----------------|
| <b>Operating Temperature</b> | 0 °C to 40 °C   |
| <b>Operating Humidity</b>    | Less than 80 %  |
| <b>Storage Temperature</b>   | -20 °C to 60 °C |
| <b>Storage Humidity</b>      | Less than 85 %  |

## HDMI-DTV supported mode

| Resolution   | Horizontal Frequency (kHz) | Vertical Frequency (Hz) |
|--------------|----------------------------|-------------------------|
| 640 x 480p   | 31.46                      | 59.94                   |
|              | 31.5                       | 60                      |
| 720 x 480p   | 31.47                      | 59.94                   |
|              | 31.5                       | 60                      |
| 720 x 576p   | 31.25                      | 50                      |
| 1280 x 720p  | 44.96                      | 59.94                   |
|              | 45                         | 60                      |
|              | 37.5                       | 50                      |
| 1920 x 1080i | 28.12                      | 50                      |
|              | 33.72                      | 59.94                   |
|              | 33.75                      | 60                      |
| 1920 x 1080p | 26.97                      | 23.97                   |
|              | 27                         | 24                      |
|              | 33.71                      | 29.97                   |
|              | 33.75                      | 30                      |
|              | 56.25                      | 50                      |
|              | 67.43                      | 59.94                   |
|              | 67.5                       | 60                      |
| 1920 x 1080p | 112.5                      | 100                     |
|              | 134.86                     | 119.88                  |
|              | 135                        | 120                     |
| 3840 x 2160p | 53.95                      | 23.98                   |
|              | 54                         | 24                      |
|              | 56.25                      | 25                      |
|              | 61.43                      | 29.97                   |
|              | 67.5                       | 30                      |
|              | 112.5                      | 50                      |
|              | 134.86                     | 59.94                   |
| 4096 x 2160p | 135                        | 60                      |
|              | 53.95                      | 23.98                   |
|              | 54                         | 24                      |
|              | 56.25                      | 25                      |
|              | 61.43                      | 29.97                   |
|              | 67.5                       | 30                      |
|              | 112.5                      | 50                      |
| 4096 x 2160p | 134.86                     | 59.94                   |
|              | 135                        | 60                      |

## HDMI-PC supported Mode

- PC audio is not supported.
- Use HDMI IN 1 for PC mode. (Depending on model)

| Resolution  | Horizontal Frequency (kHz) | Vertical Frequency (Hz) |
|-------------|----------------------------|-------------------------|
| 640 x 350   | 31.46                      | 70.09                   |
| 720 x 400   | 31.46                      | 70.08                   |
| 640 x 480   | 31.46                      | 59.94                   |
| 800 x 600   | 37.87                      | 60.31                   |
| 1024 x 768  | 48.36                      | 60                      |
| 1360 x 768  | 47.71                      | 60.01                   |
| 1152 x 864  | 54.34                      | 60.05                   |
| 1280 x 1024 | 63.98                      | 60.02                   |
| 1920 x 1080 | 67.5                       | 60                      |
|             | 134.86                     | 119.88                  |
|             | 135                        | 120                     |
| 2560 x 1440 | 88.78                      | 59.95                   |
| 3840 x 2160 | 53.95                      | 23.98                   |
|             | 54                         | 24                      |
|             | 56.25                      | 25                      |
|             | 61.43                      | 29.97                   |
|             | 67.5                       | 30                      |
|             | 112.5                      | 50                      |
|             | 134.86                     | 59.94                   |
| 4096 x 2160 | 135                        | 60                      |
|             | 53.95                      | 23.98                   |
|             | 54                         | 24                      |
|             | 56.25                      | 25                      |
|             | 61.43                      | 29.97                   |
|             | 67.5                       | 30                      |
|             | 112.5                      | 50                      |
| 4096 x 2160 | 134.86                     | 59.94                   |
|             | 135                        | 60                      |

## Supported Photo Formats

| File Format       | Format | Resolution                                                                                                                 |
|-------------------|--------|----------------------------------------------------------------------------------------------------------------------------|
| .jpeg, .jpg, .jpe | JPEG   | Minimum: 64 (W) x 64 (H)<br>Maximum (Normal Type): 15360 (W) x 8640 (H)<br>Maximum (Progressive Type): 1920 (W) x 1440 (H) |
| .png              | PNG    | Minimum: 64 (W) x 64 (H)<br>Maximum: 5760 (W) x 5760 (H)                                                                   |
| .bmp              | BMP    | Minimum: 64 (W) x 64 (H)<br>Maximum: 1920 (W) x 1080 (H)                                                                   |

## Supported Audio Formats

| File Format | Item         | Info                |
|-------------|--------------|---------------------|
| .mp3        | Bit rate     | 32 Kbps - 320 Kbps  |
|             | Sample freq. | 16 kHz - 48 kHz     |
|             | Support      | MPEG1, MPEG2        |
|             | Channels     | mono, stereo        |
| .wav        | Bit rate     | -                   |
|             | Sample freq. | 8 kHz - 96 kHz      |
|             | Support      | PCM                 |
|             | Channels     | mono, stereo        |
| .ogg        | Bit rate     | 64 kbps - 320 kbps  |
|             | Sample freq. | 8 kHz - 48 kHz      |
|             | Support      | Vorbis              |
|             | Channels     | mono, stereo        |
| .wma        | Bit rate     | 128 kbps - 320 kbps |
|             | Sample freq. | 8 kHz - 48 kHz      |
|             | Support      | WMA                 |
|             | Channels     | up to 6 ch          |
| .flac       | Bit rate     | -                   |
|             | Sample freq. | 8 kHz - 96 kHz      |
|             | Support      | FLAC                |
|             | Channels     | mono, stereo        |

- The number of supported programmes may vary depending on the sample frequency.

## Supported Video Formats

| Extension                  | Codec |                                                                                                                  |
|----------------------------|-------|------------------------------------------------------------------------------------------------------------------|
| .asf<br>.wmv               | Video | VC-1 Advanced Profile (except for WMVA), VC-1 Simple and Main Profiles                                           |
|                            | Audio | WMA Standard (except for WMA v1/WMA Speech)                                                                      |
| .avi                       | Video | Xvid (GMC is not supported), H.264/AVC, Motion Jpeg, MPEG-4                                                      |
|                            | Audio | MPEG-1 Layer I, II, MPEG-1 Layer III (MP3), Dolby Digital, LPCM, ADPCM                                           |
| .mp4<br>.m4v<br>.mov       | Video | H.264/AVC, MPEG-4, HEVC, AV1                                                                                     |
|                            | Audio | Dolby Digital, Dolby Digital Plus, AAC, MPEG-1 Layer III (MP3), Dolby AC-4 <sup>1</sup>                          |
| .3gp<br>.3g2               | Video | H.264/AVC, MPEG-4                                                                                                |
|                            | Audio | AAC, AMR-NB, AMR-WB                                                                                              |
| .mkv                       | Video | MPEG-2, MPEG-4, H.264/AVC, VP8, VP9, HEVC, AV1                                                                   |
|                            | Audio | Dolby Digital, Dolby Digital Plus, AAC, PCM, MPEG-1 Layer I, II, MPEG-1 Layer III (MP3)                          |
| .ts<br>.trp<br>.tp<br>.mts | Video | H.264/AVC, MPEG-2, HEVC                                                                                          |
|                            | Audio | MPEG-1 Layer I, II, MPEG-1 Layer III (MP3), Dolby Digital, Dolby Digital Plus, AAC, PCM, Dolby AC-4 <sup>1</sup> |
| .mpg<br>.mpeg<br>.dat      | Video | MPEG-1, MPEG-2                                                                                                   |
|                            | Audio | MPEG-1 Layer I, II, MPEG-1 Layer III (MP3)                                                                       |
| .vob                       | Video | MPEG-1, MPEG-2                                                                                                   |
|                            | Audio | Dolby Digital, MPEG-1 Layer I, II, DVD-LPCM                                                                      |

1. Dolby AC-4 : This feature is available in certain models only.

## Cautions for Video Playback

(Only UHD models)

- ULTRA HD Video: 3840 x 2160, 4096 x 2160
- Some HEVC encoded ULTRA HD videos other than the content officially provided by LG Electronics may not be played.
- Some codecs can be supported after a software upgrade.

| Extension           | Codec |                                        |
|---------------------|-------|----------------------------------------|
| .mkv<br>.mp4<br>.ts | Video | H.264/AVC, HEVC                        |
|                     | Audio | Dolby Digital, Dolby Digital Plus, AAC |

## Supported External Subtitles

| Subtitle          | Format                                                                                                                  |
|-------------------|-------------------------------------------------------------------------------------------------------------------------|
| External Subtitle | *.smi, *.srt, *.sub (MicroDVD, SubViewer 1.0/2.0), *.ass, *.ssa, *.txt (TPlayer), *.psb (PowerDivX), *.dcs (DLP Cinema) |
| Embedded Subtitle | Matroska(mkv): Sub Station Alpha (SSA), Advanced Sub Station Alpha (ASS), SRT<br>MP4: Timed Text                        |

## Open Source Software Notice Information

To obtain the source code under GPL, LGPL, MPL, and other open source licenses, that is contained in this product, please visit <http://opensource.lge.com>.

In addition to the source code, all referred license terms, warranty disclaimers and copyright notices are available for download.

LG Electronics will also provide open source code to you on CD-ROM for a charge covering the cost of performing such distribution (such as the cost of media, shipping, and handling) upon email request to [opensource@lge.com](mailto:opensource@lge.com).

This offer is valid for a period of three years after our last shipment of this product. This offer is valid to anyone in receipt of this information.

## Licenses

Supported licenses may differ by model.



The terms HDMI, HDMI High-Definition Multimedia Interface, and the HDMI Logo are trademarks or registered trademarks of HDMI Licensing Administrator, Inc.

Manufactured under license from Dolby Laboratories. Dolby, Dolby Vision, Dolby Audio, Dolby Atmos, and the double-D symbol are trademarks of Dolby Laboratories.



## Regulatory

### WARNING!

Never place a television set in an unstable location. A television set may fall, causing serious personal injury or death. Many injuries, particularly to children, can be avoided by taking simple precautions such as:

- Using cabinets or stands recommended by the manufacturer of the television set.
- Only using furniture that can safely support the television set.
- Ensuring the television set is not overhanging the edge of the supporting furniture.
- Not placing the television set on tall furniture (for example, cupboards or bookcases) without anchoring both the furniture and the television set to a suitable support.
- Not placing the television set on cloth or other materials that may be located between the television set and supporting furniture.
- Educating children about the dangers of climbing on furniture to reach the television set or its controls.

If your existing television set is being retained and relocated, the same considerations as above should be applied.

### Symbols

|  |                                    |
|--|------------------------------------|
|  | Refers to alternating current(AC). |
|  | Refers to direct current(DC).      |
|  | Refers to class II equipment.      |
|  | Refers to stand-by.                |
|  | Refers to "ON" (power).            |
|  | Refers to dangerous voltage.       |

## Key Codes

- This feature is not available for all models.

| Code (Hexa) | Function                                                                                  | Note       | Code (Hexa) | Function                                                                                                       | Note       |
|-------------|-------------------------------------------------------------------------------------------|------------|-------------|----------------------------------------------------------------------------------------------------------------|------------|
| 00          | 頻道P <sup>△</sup> 翻頁                                                                       | R/C Button | 44          | OK確認 <sup>○</sup>                                                                                              | R/C Button |
| 01          | 頻道P <sup>▽</sup> 翻頁                                                                       | R/C Button | 53          | 所有頻道LIST                                                                                                       | R/C Button |
| 02          | 音量 <sup>△</sup> +                                                                         | R/C Button | 5B          | 離開EXIT                                                                                                         | R/C Button |
| 03          | 音量 <sup>▽</sup> -                                                                         | R/C Button | 61          |  (Blue)                       | R/C Button |
| 06          | <sup>➤</sup> (Arrow Key / Right Key)                                                      | R/C Button | 63          |  (Yellow)                     | R/C Button |
| 07          | <sup>➤</sup> (Arrow Key / Left Key)                                                       | R/C Button | 71          |  (Green)                      | R/C Button |
| 7C          | 主頁SMART                                                                                   | R/C Button | 72          |  (Red)                        | R/C Button |
| 08          |  (POWER) | R/C Button | 8E          |  (Forward)                    | R/C Button |
| 09          | 靜音 <sup>🔇</sup> MUTE                                                                      | R/C Button | 8F          |  (Rewind)                     | R/C Button |
| 0B          | 輸入 <sup>📺</sup> INPUT                                                                     | R/C Button | AA          | 節目資訊 <sup>①</sup> INFO                                                                                         | R/C Button |
| 0C          | 門戶PORTAL                                                                                  | R/C Button | AB          | 節目導覽GUIDE                                                                                                      | R/C Button |
| 10 - 19     | Number Key 0 - 9                                                                          | R/C Button | AF          | LIVE ZOOM                                                                                                      | R/C Button |
| 1A          | 頻道返回Q.VIEW                                                                                | R/C Button | B0          |  (Play)                       | R/C Button |
| 28          |  返回BACK  | R/C Button | B1          |  (Stop / File List)           | R/C Button |
| 39          | 字幕SUBTITLE                                                                                | R/C Button | B5          | 最近紀錄 <sup>○</sup> APP                                                                                          | R/C Button |
| 40          | <sup>^</sup> (Arrow Key / Cursor Up)                                                      | R/C Button | BA          |  (Freeze / Slow Play / Pause) | R/C Button |
| 41          | <sup>v</sup> (Arrow Key / Cursor Down)                                                    | R/C Button | F0          |  TV / RAD                   | R/C Button |
| 43          | 選單SETTINGS                                                                                | R/C Button | 95          | 節能模式 <sup>🔌</sup><br>ENERGY SAVING                                                                             | R/C Button |

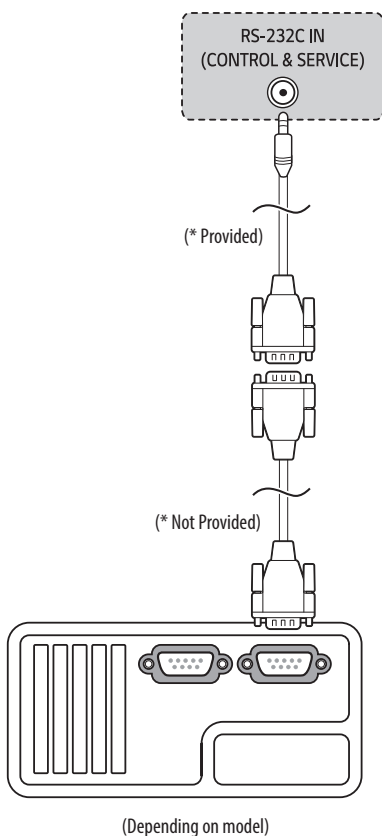
\* Key code 4C (0x4C) is available on ATSC/ISDB models which use major/minor channel. (For South Korea, Japan, North America, Latin America except Colombia models)

# EXTERNAL CONTROL DEVICE SETUP

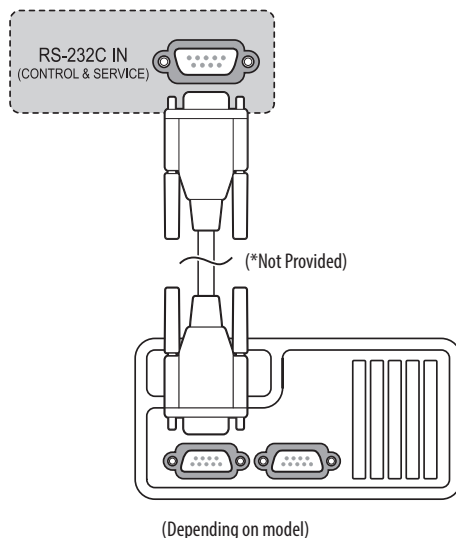
## RS-232C Setup

- Image shown may differ from your TV.
- Connect the RS-232C (serial port) input jack to an external control device (such as a computer or an A/V control system) to control the product's functions externally.
- Connect the serial port of the control device to the RS-232C jack on the product back panel.
- RS-232C connection cables are not supplied with the product.

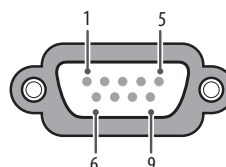
### ► A Type



### ► B Type



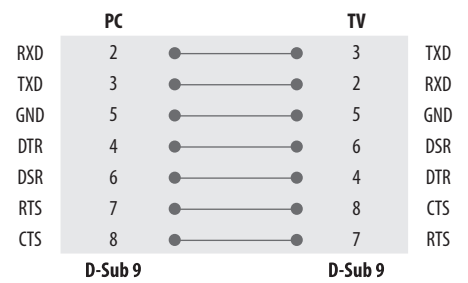
## Type of Connector : D-Sub 9-Pin Male



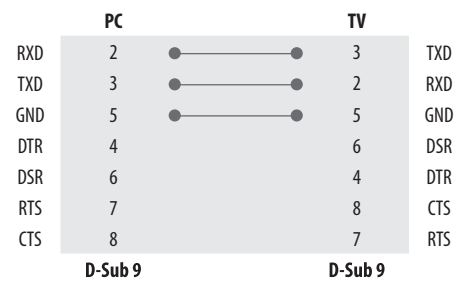
| No. | Pin name                                      |
|-----|-----------------------------------------------|
| 1   | 3.5 V                                         |
| 2   | RXD (Receive data)                            |
| 3   | TXD (Transmit data)                           |
| 4   | IR OUT from TV                                |
| 5   | GND                                           |
| 6   | No Connection                                 |
| 7   | No Connection (5 V available in some models)  |
| 8   | No Connection                                 |
| 9   | No Connection (12 V available in some models) |

# RS-232C Configurations

## 7-Wire Configurations (Standard RS-232C cable)



## 3-Wire Configurations (Not standard)



# Communication Parameters

- Baud rate: 9,600 bps (UART)
- Data length: 8 bits
- Parity: None
- Stop bit: 1 bit
- Communication code: ASCII code
- Use a crossed (reverse) cable.

## Set ID

For Set ID number, see “Real Data Mapping”.

- 1 Press **SETTINGS** → ⓘ to access the main menus.
- 2 Press the Navigation buttons to scroll to [Support] or [General] → [Set ID] and press **OK** Ⓞ.
- 3 Scroll left or right to select a [Set ID] number.  
The adjustment range is 1-99.

## Command Reference List

(Depending on model)

|                             | Command1 | Command2 | Data<br>(Hexadecimal) |
|-----------------------------|----------|----------|-----------------------|
| 1 Power                     | k        | a        | 00 to 01              |
| 2 [Aspect Ratio]            | k        | c        | (See p. 25)           |
| 3 Screen Mute               | k        | d        | (See p. 25)           |
| 4 Volume Mute               | k        | e        | 00 to 01              |
| 5 Volume Control            | k        | f        | 00 to 64              |
| 6 [Contrast]                | k        | g        | 00 to 64              |
| 7 [Brightness]              | k        | h        | 00 to 64              |
| 8 [Colour]                  | k        | i        | 00 to 64              |
| 9 [Tint]                    | k        | j        | 00 to 64              |
| 10 [Sharpness]              | k        | k        | 00 to 32              |
| 11 OSD Select               | k        | l        | 00 to 01              |
| 12 Remote Control Lock Mode | k        | m        | 00 to 01              |
| 13 [Balance]                | k        | t        | 00 to 64              |
| 14 [Colour Temperature]     | x        | u        | 00 to 64              |
| 15 [Energy Saving]          | j        | q        | (See p. 27)           |
| 16 Auto Configuration       | j        | u        | 01                    |
| 17 [Equalizer]              | j        | v        | (See p. 28)           |
| 18 Tune Command             | m        | a        | (See p. 28)           |
| 19 Programme [Skip] / [Add] | m        | b        | 00 to 01              |
| 20 Key                      | m        | c        | (See p. 29)           |
| 21 Control [Backlight]      | m        | g        | 00 to 64              |
| 22 Input select             | x        | b        | (See p. 29)           |

- During USB operations such as DivX or EMF, all commands except Power(ka) and Key(mc) are not executed and treated as NG.

## Transmission / Receiving Protocol

(Depending on Model)

### Transmission

**(Command1)(Command2)([Set ID])([Data])(Cr)**

(Command1) : First command to control the TV. (j, k, m or x)

(Command2) : Second command to control the TV.

([Set ID]) : You can adjust the set ID to choose desired monitor ID number in option menu. Adjustment range is 1 to 99. When selecting Set ID '0', every connected set is controlled. Set ID is indicated as decimal (1 to 99) on menu and as Hexa decimal (0 x 0 to 0 x 63) on transmission/receiving protocol.

([Data]) : To transmit command data. Transmit 'FF' data to read status of command.

(Cr) : Carriage Return

ASCII code '0 x 0D'

( ) : ASCII code 'space (0 x 20)'

### OK Acknowledgement

**(Command2)([Set ID])(OK)([Data])(x)**

\* The set transmits ACK (acknowledgement) based on this format when receiving normal data. At this time, if the data is data read mode, it indicates present status data. If the data is data write mode, it returns the data of the PC computer.

### Error Acknowledgement

**(Command2)([Set ID])(NG)([Data])(x)**

\* The set transmits ACK (acknowledgement) based on this format when receiving abnormal data from non-viable functions or communication errors.

[Data] 00 : Illegal Code

## 1 Power (Command: k a)

- To control Power On/Off of the set.

Transmission

(k)(a)( )([Set ID])( )([Data])(Cr)

[Data] 00 : [Off]

[Data] 01 : [On]

Ack

(a)( )([Set ID])( )(OK/NG)([Data])(x)

- To Show TV is Power On/Off.

Transmission

(k)(a)( )([Set ID])( )(FF)(Cr)

Ack

(a)( )([Set ID])( )(OK/NG)([Data])(x)

\* Similarly, if other functions transmit '0 x FF' data based on this format, Acknowledgement data feed back presents status about each function.

\* OK Ack., Error Ack. and other message may display on the screen when TV is power On.

## 2 [Aspect Ratio] (Command: k c) (Main Picture Size)

- To adjust the screen format. (Main picture format) You can also adjust the screen format using the picture settings.

Transmission

(k)(c)( )([Set ID])( )([Data])(Cr)

[Data] 01 : [4:3] (Normal screen - [Just Scan] Off)

[Data] 02 : [16:9] (Wide screen - [Just Scan] Off)

[Data] 06 : [Original] ([Just Scan] Off)

[Data] 09 : [Just Scan]

\* Please make sure that the model doesn't support both Vertical Zoom and All-Direction Zoom mode.

Ack

(c)( )([Set ID])( )(OK/NG)([Data])(x)

\* Using the PC input, you select either 16:9 or 4:3 screen aspect ratio.

\* In DTV/HDMI (1080i 50 Hz / 60 Hz, 720p 50 Hz / 60 Hz, 1080p 24 Hz / 30 Hz / 50 Hz / 60 Hz), Component (720p, 1080i, 1080p) mode, [Just Scan] is available.

\* Full Wide is supported only for Digital, Analogue, AV.

## 3 Screen Mute (Command: k d)

- To select screen mute on/off.

Transmission

(k)(d)( )([Set ID])( )([Data])(Cr)

[Data] 00 : Screen mute off (Picture on) / Video mute off

[Data] 01 : Screen mute on (Picture off)

[Data] 10 : Video mute on

Ack

(d)( )([Set ID])( )(OK/NG)([Data])(x)

\* In case of video mute on only, TV will display On Screen Display (OSD).  
But, in case of Screen mute on, TV will not display OSD.

## 4 Volume Mute (Command: k e)

- To control volume mute on/off.  
You can also adjust mute using the mute button on remote control.

Transmission

(k)(e)( )([Set ID])( )([Data])(Cr)

[Data] 00 : Volume mute on (Volume off)

[Data] 01 : Volume mute off (Volume on)

Ack

(e)( )([Set ID])( )(OK/NG)([Data])(x)

## 5 Volume Control (Command: k f)

- To adjust volume.  
You can also adjust volume with the volume buttons on remote control.

Transmission

(k)(f)( )([Set ID])( )([Data])(Cr)

[Data] Min : 00 to Max : 64

\* Refer to "Real data mapping".

Ack

(f)( )([Set ID])( )(OK/NG)([Data])(x)

**6 [Contrast]** (Command: k g)

- To adjust screen contrast.  
You can also adjust contrast in the picture settings.

Transmission

`(k)(g)( )([Set ID])( )([Data])(Cr)`

[Data] Min : 00 to Max : 64

\* Refer to "Real data mapping".

Ack

`(g)( )([Set ID])( )(OK/NG)([Data])(x)`**7 [Brightness]** (Command: k h)

- To adjust screen brightness.  
You can also adjust brightness in the picture settings.

Transmission

`(k)(h)( )([Set ID])( )([Data])(Cr)`

[Data] Min : 00 to Max : 64

\* Refer to "Real data mapping".

Ack

`(h)( )([Set ID])( )(OK/NG)([Data])(x)`**8 [Colour]** (Command: k i)

- To adjust the screen colour.  
You can also adjust colour in the picture settings.

Transmission

`(k)(i)( )([Set ID])( )([Data])(Cr)`

[Data] Min : 00 to Max : 64

\* Refer to "Real data mapping".

Ack

`(i)( )([Set ID])( )(OK/NG)([Data])(x)`**9 [Tint]** (Command: k j)

- To adjust the screen tint.  
You can also adjust tint in the picture settings.

Transmission

`(k)(j)( )([Set ID])( )([Data])(Cr)`

[Data] Red : 00 to Green : 64

\* Refer to "Real data mapping".

Ack

`(j)( )([Set ID])( )(OK/NG)([Data])(x)`**10 [Sharpness]** (Command: k k)

- To adjust the screen sharpness.  
You can also adjust sharpness in the picture settings.

Transmission

`(k)(k)( )([Set ID])( )([Data])(Cr)`

[Data] Min : 00 to Max : 32

\* Refer to "Real data mapping".

Ack

`(k)( )([Set ID])( )(OK/NG)([Data])(x)`**11 OSD Select** (Command: k l)

- To select OSD (On Screen Display) on/off when controlling remotely.

Transmission

`(k)(l)( )([Set ID])( )([Data])(Cr)`

[Data] 00 : [Off]

[Data] 01 : [On]

Ack

`(l)( )([Set ID])( )(OK/NG)([Data])(x)`

## 12 Remote Control Lock Mode (Command: k m)

- To lock the front panel controls on the monitor and remote control.

Transmission

(k)(m)( )([Set ID])( )([Data])(Cr)

[Data] 00 : [Off]

[Data] 01 : [On]

Ack

(m)( )([Set ID])( )(OK/NG)([Data])(x)

- \* If you are not using the remote control, use this mode. When main power is on/off, external control lock is released.
- \* In the standby mode, if key lock is on, TV will not turn on by power on key of IR & Local Key.

## 13 [Balance] (Command: k t)

- To adjust balance.  
You can also adjust balance in the audio settings.

Transmission

(k)(t)( )([Set ID])( )([Data])(Cr)

[Data] L : 00 to R : 64

- \* Refer to "Real data mapping".

Ack

(t)( )([Set ID])( )(OK/NG)([Data])(x)

## 14 [Colour Temperature] (Command: x u)

- To adjust Colour Temperature. You can also adjust Colour Temperature in the picture settings.

Transmission

(x)(u)( )([Set ID])( )([Data])(Cr)

[Data] Warm: 00 to Cool: 64

- \* Refer to "Real data mapping".

Ack

(u)( )([Set ID])( )(OK/NG)([Data])(x)

## 15 [Energy Saving] (Command: j q)

- To reduce the power consumption of the TV. You can also adjust Energy Saving in picture settings.

Transmission

(j)(q)( )([Set ID])( )([Data])(Cr)

| Power Saving Function |   |   |   | Level     |   |   |   | Description  |
|-----------------------|---|---|---|-----------|---|---|---|--------------|
| 7                     | 6 | 5 | 4 | 3         | 2 | 1 | 0 |              |
| 0                     | 0 | 0 | 0 | Low Power | 0 | 0 | 0 | [Off]        |
| 0                     | 0 | 0 | 0 | Low Power | 0 | 0 | 0 | [Minimum]    |
| 0                     | 0 | 0 | 0 | Low Power | 0 | 0 | 1 | [Medium]     |
| 0                     | 0 | 0 | 0 | Low Power | 0 | 0 | 1 | [Maximum]    |
| 0                     | 0 | 0 | 0 | Low Power | 0 | 1 | 0 | [Screen Off] |
| 0                     | 0 | 0 | 0 | Low Power | 0 | 1 | 0 | [Auto]       |

- [Auto] is available in TV that supports 'Intelligent Sensor'.

Ack

(q)( )([Set ID])( )(OK/NG)([Data])(x)

## 16 Auto Configuration (Command: j u) (Only RGB support model)

- To adjust picture position and minimize image shaking automatically. It works only in RGB (PC) mode.

Transmission

(j)(u)( )([Set ID])( )([Data])(Cr)

[Data] 01 : To set

Ack

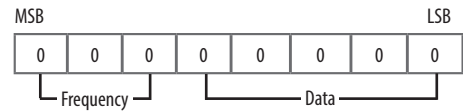
(u)( )([Set ID])( )(OK/NG)([Data])(x)

### 17 [Equalizer] (Command : j v)

► To adjust equalizer.

Transmission

(j)(v)( )([Set ID])( )([Data])(Cr)



| 7 | 6 | 5 | Frequency | 4   | 3   | 2   | 1   | 0   | Step         |
|---|---|---|-----------|-----|-----|-----|-----|-----|--------------|
| 0 | 0 | 0 | 1st Band  | 0   | 0   | 0   | 0   | 0   | 0 (decimal)  |
| 0 | 0 | 1 | 2nd Band  | 0   | 0   | 0   | 0   | 1   | 1 (decimal)  |
| 0 | 1 | 0 | 3rd Band  | ... | ... | ... | ... | ... | ...          |
| 0 | 1 | 1 | 4th Band  | 1   | 0   | 0   | 1   | 1   | 19 (decimal) |
| 1 | 0 | 0 | 5th Band  | 1   | 0   | 1   | 0   | 0   | 20 (decimal) |

Ack

(v)( )([Set ID])( )(OK/NG)([Data])(x)

### 18 Tune Command (Command: m a)

► Select channel to following physical number.

Transmission

(m)(a)( )([Set ID])( )([Data] 00)( )([Data] 01)( )([Data] 02)(Cr)

[Data] 00 : High channel data

[Data] 01 : Low channel data

ex. No. 47 → 00 2F (2FH)

No. 394 → 01 8A (18AH),

DTV No. 0 → Don't care

[Data] 02 : (Antenna)

0 x 00 : Analogue Main

0 x 10 : DTV Main

0 x 20 : Radio

(Cable)

0 x 80 : Analogue Main

0 x 90 : DTV Main

0 x A0 : Radio

(Satellite)

0 x 40 : DTV Main

0 x 50 : Radio Main

Channel data range

Min : 00 Max : 270F (0 to 9999)

Ack

(a)( )([Set ID])( )(OK/NG)([Data])(x)

## 19 Programme [Skip] / [Add] (Command: m b)

- To set skip status for the current Programme.

Transmission

(m)(b)( )([Set ID])( )([Data])(Cr)

[Data] 00 : [Skip]

[Data] 01 : [Add]

Ack

(b)( )([Set ID])( )(OK/NG)([Data])(x)

## 20 Key (Command: m c)

- To send IR remote key code.

Transmission

(m)(c)( )([Set ID])( )([Data])(Cr)

[Data] IR CODES

Ack

(c)( )([Set ID])( )(OK/NG)([Data])(x)

## 21 Control [Backlight] (Command: m g)

- To control the backlight.

Transmission

(m)(g)( )([Set ID])( )([Data])(Cr)

[Data] Min : 00 to Max : 64

Ack

(g)( )([Set ID])( )(OK/NG)([Data])(x)

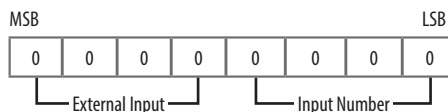
## 22 Input select (Command: x b) (Main Picture Input)

- To select input source for main picture.

Transmission

(x)(b)( )([Set ID])( )([Data])(Cr)

[Data] Structure



| External Input |   |   |   | Data      |
|----------------|---|---|---|-----------|
| 0              | 0 | 0 | 0 | DTV       |
| 0              | 0 | 0 | 1 | Analogue  |
| 0              | 0 | 1 | 0 | AV        |
| 0              | 1 | 0 | 0 | Component |
| 0              | 1 | 1 | 0 | RGB       |
| 0              | 1 | 1 | 1 | HDMI      |
| 1              | 0 | 0 | 0 |           |
| 1              | 0 | 0 | 1 |           |
| 1              | 0 | 1 | 0 |           |

| Input Number |   |   |   | Data   |
|--------------|---|---|---|--------|
| 0            | 0 | 0 | 0 | Input1 |
| 0            | 0 | 0 | 1 | Input2 |
| 0            | 0 | 1 | 0 | Input3 |
| 0            | 0 | 1 | 1 | Input4 |

Ack

(b)( )([Set ID])( )(OK/NG)([Data])(x)

**\* Real data mapping**

|     |                       |
|-----|-----------------------|
| 00: | Step 0                |
| :   |                       |
| A:  | Step 10 ([Set ID] 10) |
| :   |                       |
| F:  | Step 15 ([Set ID] 15) |
| 10: | Step 16 ([Set ID] 16) |
| :   |                       |
| 64: | Step 100              |
| :   |                       |
| 6E: | Step 110              |
| :   |                       |
| 73: | Step 115              |
| 74: | Step 116              |
| :   |                       |
| CF: | Step 199              |
| :   |                       |
| FE: | Step 254              |
| FF: | Step 255              |

# IR OUT Using Guide

## Suitable / Not Recommend remote-controller data format

| Item                      | Data format code                                           | Note                               |
|---------------------------|------------------------------------------------------------|------------------------------------|
| Suitable Data Format      | NEC, Toshiba Full Repeat Code Format                       | Single: Enable                     |
|                           | Philips RC5, RC6 Code Format                               | Repeat: Enable                     |
|                           | Zenith Code Format                                         |                                    |
| Not Recommend Data Format | Matsushita, RCA Code Format                                | Single: Enable                     |
|                           | Sony 12/15/20 bit, Mitsubishi Code Format                  | Repeat: Disable                    |
|                           | Sharp, JVC, R-step, Philips RCMM, RECS-80, XMP Code Format | Single: Disable<br>Repeat: Disable |

ENGLISH

## IR Receiver specifications

|                                                  |                  |
|--------------------------------------------------|------------------|
| Carrier frequency                                | 37.9 KHz         |
| Peak Wavelength                                  | 940 nm           |
| Minimum burst length                             | Min. 300 $\mu$ s |
| Minimum gap time is required of                  | Min. 350 $\mu$ s |
| Data word length                                 | Max. 100 ms      |
| Minimum gap time in the data stream is needed of | Min. 50 ms       |

| Parameter                  | Symbol          | Conditions                                  | Min | Typ | Max | Unit    |
|----------------------------|-----------------|---------------------------------------------|-----|-----|-----|---------|
| High Level Out Pulse Width | Tw <sub>H</sub> | Burst Wave = 600 $\mu$ s<br>Period = 1.2 ms | 400 | -   | 800 | $\mu$ s |
| Low Level Out Pulse Width  | Tw <sub>L</sub> |                                             | 400 | -   | 800 | $\mu$ s |



If not use the remote-controller with data formats recommended, IR output signals will be suppressed automatically by IR receiver. In this case, LG does not guarantee IR working function. To make sure of this matter, here are two methods as below.

- Use the remote-controller with suitable data formats.
- Use the IR dongle receiver of the set-top box.



The model and serial number of the product are located on the back and on one side of the product. Record them below in case you ever need service.

Model \_\_\_\_\_

Serial no. \_\_\_\_\_