



LG OLED TV

THE ULTIMATE DISPLAY

OWNER'S MANUAL

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

EC93**
EC97**
EC98**



www.lg.com

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COMMON

LANGUAGE LIST

English
Deutsch
Français
Italiano
Español
Português
Nederlands
Ελληνικά
Slovenščina

LANGUAGE

B-1 SPECIFICATIONS

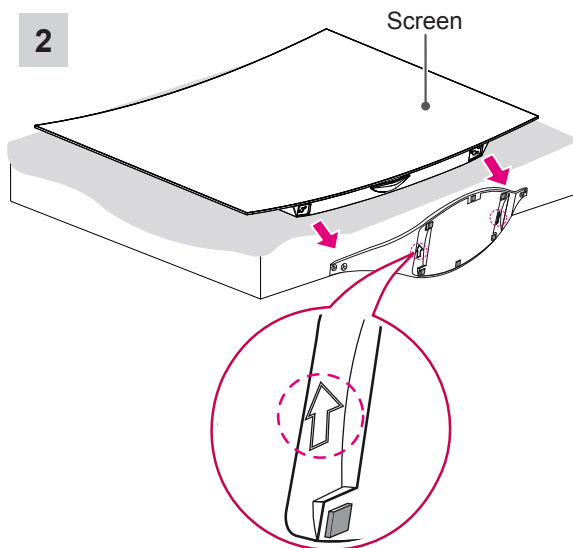
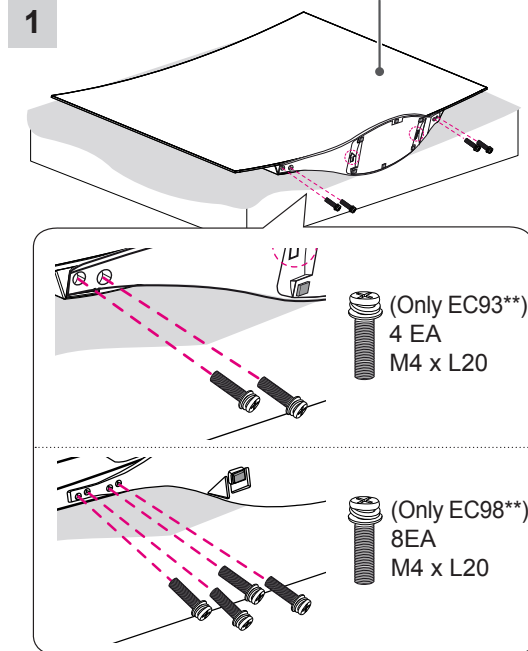
COMMON

SETTING UP THE TV

Image shown may differ from your TV.

Detaching the stand

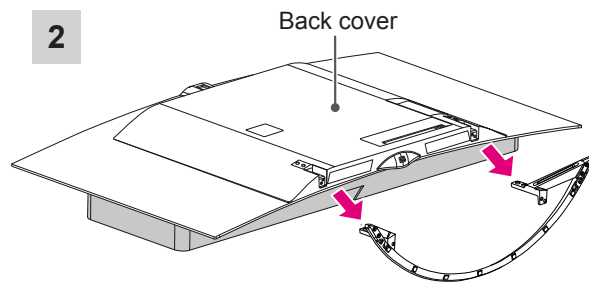
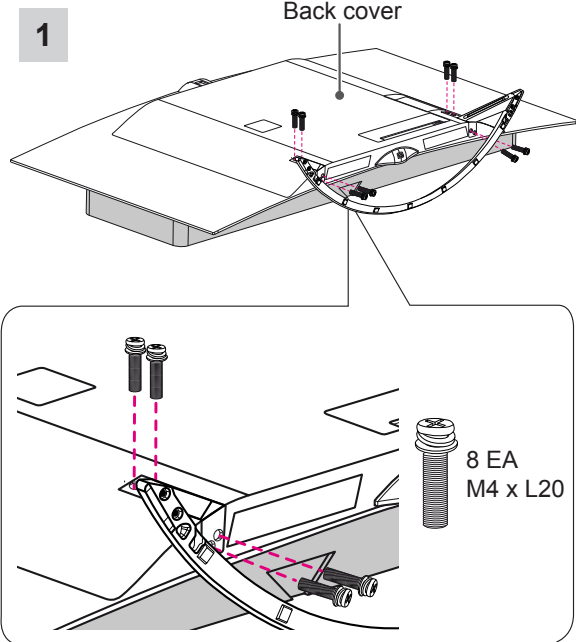
(Only EC93**, EC98**)



CAUTION

- When detaching the stand, make sure to hold it firmly while removing the screws to stop it from falling.
- When you assemble the stand again, have the arrows on the bottom of the stand base looking toward same direction to screen.

(Only EC97**)



CAUTION

- When detaching the stand to the TV set, place the screen(or back) facing down on a cushioned table or flat surface to protect the screen(or back) from scratches.
- 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.



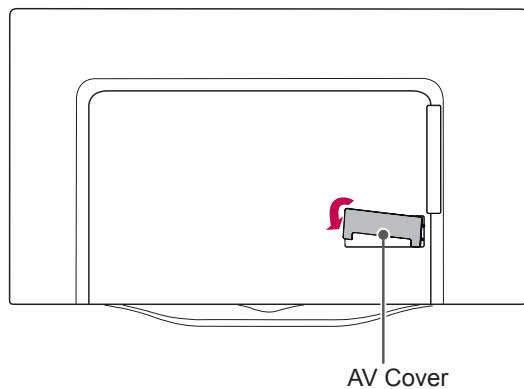
NOTE

- When you assemble the stand again, performing the stand detaching in reverse.

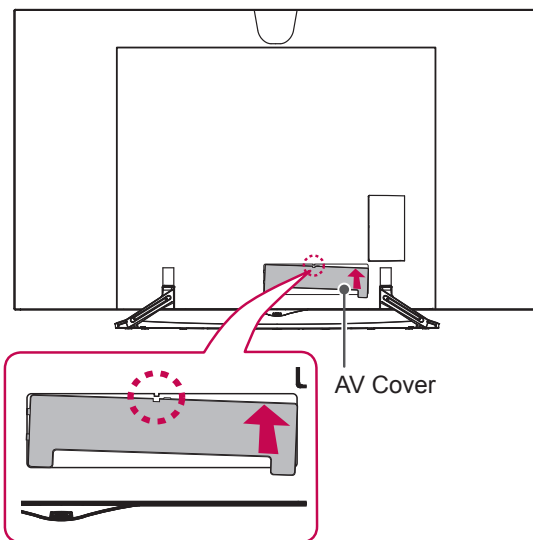
Assembling the AV cover

Assemble the AV Cover as shown.

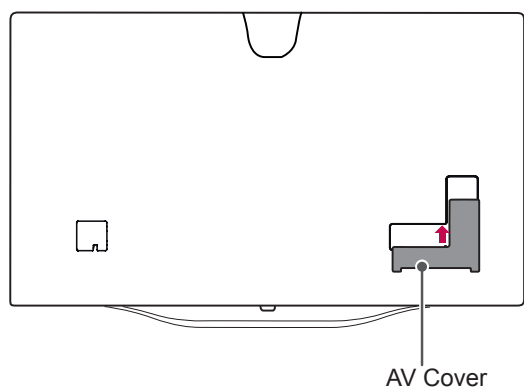
(Only EC93**)



(Only EC97**)



(Only EC98**)



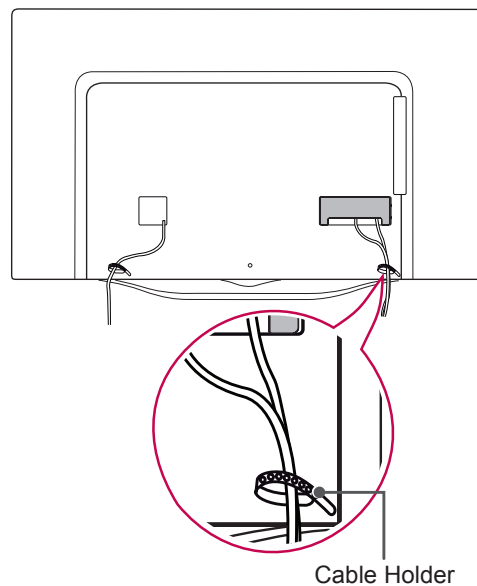
Tidying cables

Image shown may differ from your TV.

Stand Type

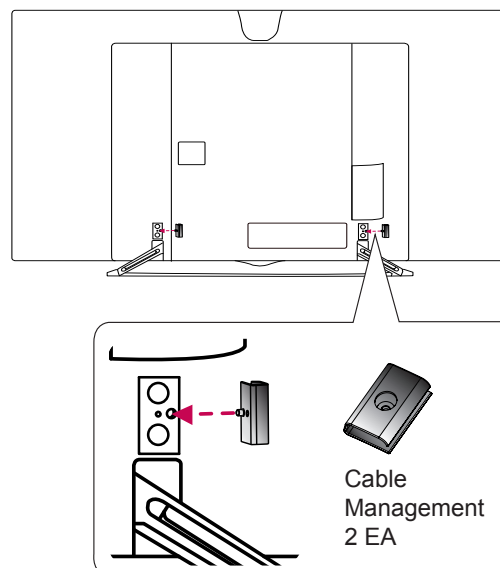
(Only EC93**)

Gather and bind the cables with the cable holder.

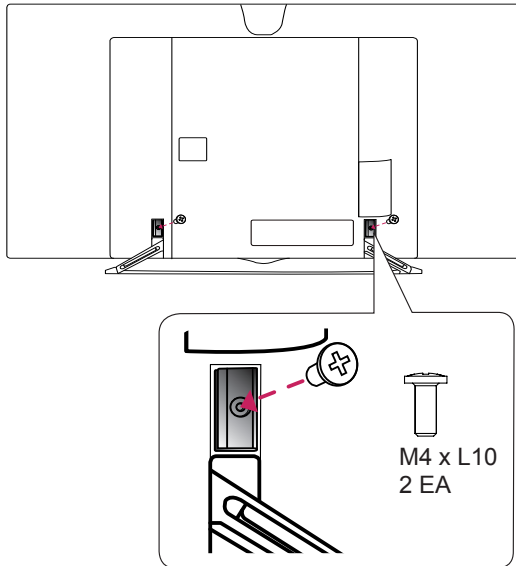


(Only EC97**)

- 1 Put the cable management in the hole of TV back cover.



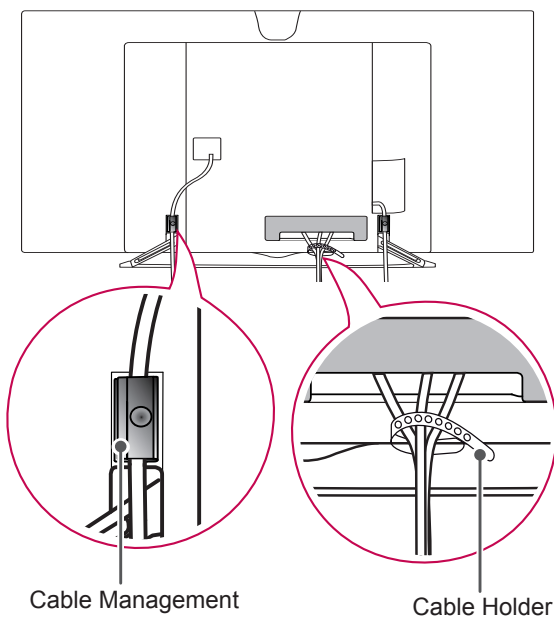
- 2 Fix the cable management with cable management screw.



! NOTE

- When attaching the cable management, use a magnetic screwdriver.
- If you don't have a magnetic screwdriver, insert the screws into the cable management and then attach it to the TV.

- 3 Gather and bind the cables with the cable holder. Arrange the cable in the cable management.

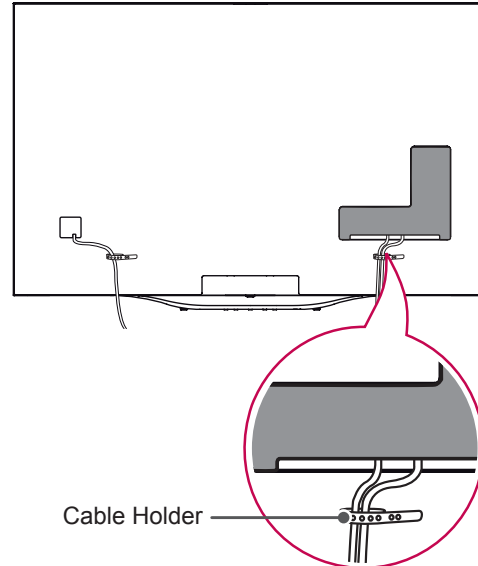


Cable Management

Cable Holder

(Only EC98**)

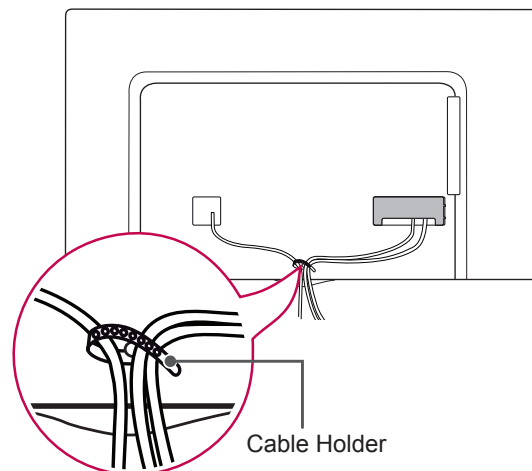
Gather and bind the cables with the cable holder.



Cable Holder

Wall Mount Type

(Only EC93**)



Cable Holder



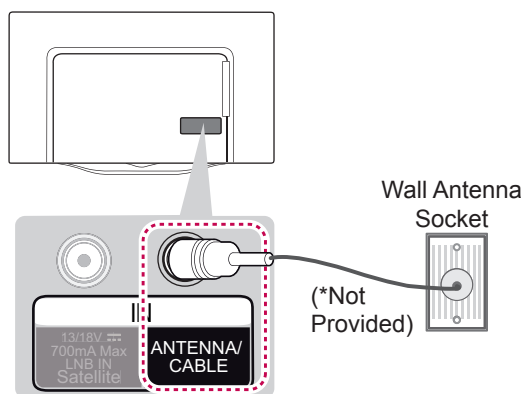
CAUTION

- Do not move the TV by holding the cable holder, as the cable holder may break, and injuries and damage to the TV may occur.

MAKING CONNECTIONS

This section on **MAKING CONNECTIONS** mainly uses diagrams for the EC93** models.

Antenna Connection



English

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

! NOTE

- 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 provided.
- Supported DTV Audio: MPEG, Dolby Digital, Dolby Digital Plus, HE-AAC

Deutsch

Schließen Sie das TV-Gerät mit einem HF-Kabel (75 Ω) an eine Wandantennenbuchse an.

! HINWEIS

- Bei Verwendung von mehr als 2 TV-Geräten verwenden Sie einen Signalsplitter.
- Ist das Bild schlecht, installieren Sie einen Signalverstärker, um die Bildqualität zu verbessern.
- Wenn die Bildqualität bei angeschlossener Antenne schlecht ist, richten Sie die Antenne richtig aus.
- Antennenkabel und Verstärker sind nicht im Lieferumfang enthalten.
- Unterstützter DTV-Ton: MPEG, Dolby Digital, Dolby Digital Plus, HE-AAC

Français

Connectez la TV à une prise d'antenne murale avec un câble RF (75 Ω).

! REMARQUE

- Utilisez un séparateur de signaux pour utiliser plus de deux téléviseurs.
- Si la qualité d'image est mauvaise, installez correctement un amplificateur de signaux pour l'améliorer.
- Si vous utilisez une antenne et que la qualité d'image est mauvaise, essayez de réaligner l'antenne dans la bonne direction.
- Le câble et le convertisseur d'antenne ne sont pas fournis.
- Technologies audio TNT prises en charge : MPEG, Dolby Digital, Dolby Digital Plus, HE-AAC

Italiano

Collegare il televisore all'antenna centralizzata con un cavo RF (75 Ω).

! NOTA

- Utilizzare uno sdoppiatore del segnale per usare più di 2 televisori.
- Se la qualità dell'immagine è scarsa, installare correttamente un amplificatore del segnale per migliorarla.
- Se la qualità dell'immagine è scarsa con un'antenna collegata, provare a riallineare l'antenna nella direzione corretta.
- Il cavo e il convertitore dell'antenna non sono in dotazione.
- Audio DTV supportato: MPEG, Dolby Digital, Dolby Digital Plus, HE-AAC

Español

Conecte la TV a una toma de pared de antena con un cable RF (75 Ω).

! NOTA

- Emplee un divisor de señal cuando desee utilizar más de dos TV.
- Si la imagen es de poca calidad, instale un amplificador de señal correctamente para mejorar la calidad de imagen.
- Si la imagen es de poca calidad con una antena conectada, intente volver a orientar la antena en la dirección adecuada.
- No se suministran el cable de antena ni el convertidor.
- Audio DTV admitido: MPEG, Dolby Digital, Dolby Digital Plus, HE-AAC

Português

Ligue a TV a uma tomada de antena de parede com um cabo RF (75 Ω).

! NOTA

- Utilize um separador de sinal se quiser utilizar mais de 2 TVs.
- Se a qualidade de imagem for fraca, instale um amplificador de sinal para melhorar a qualidade de imagem.
- Se a qualidade de imagem for fraca mesmo que tenha uma antena ligada, tente orientar a antena para a direcção correcta.
- O cabo da antena e o conversor não são fornecidos.
- Áudio DTV suportado: MPEG, Dolby Digital, Dolby Digital Plus, HE-AAC

Nederlands

Sluit de TV met behulp van een RF-kabel (75 Ω) aan op een antenneaansluiting op de muur.

! OPMERKING

- Gebruik een signaalsplitter om meer dan twee TV's te gebruiken.
- Als de beeldkwaliteit slecht is, installeert u een signaalversterker om de beeldkwaliteit te verbeteren.
- Als de beeldkwaliteit slecht is terwijl een antenne is aangesloten, probeert u de antenne in de juiste richting te draaien.
- Antennekabel en converter worden niet meegeleverd.
- Ondersteunde DTV-audio: MPEG, Dolby Digital, Dolby Digital Plus, HE-AAC

Ελληνικά

Συνδέστε την τηλεόραση σε μια υποδοχή κεραίας στον τοίχο με ένα καλώδιο RF (75 Ω).

! ΣΗΜΕΙΩΣΗ

- Χρησιμοποιήστε ένα διαχωριστή σήματος για την χρήση περισσότερων από 2 τηλεοράσεων.
- Αν η ποιότητα της εικόνας δεν είναι καλή, εγκαταστήστε έναν ενισχυτή σήματος για τη βελτίωση της ποιότητας εικόνας.
- Αν η ποιότητα της εικόνας δεν είναι καλή μετά τη σύνδεση της κεραίας, δοκιμάστε να αλλάξετε τον προσανατολισμό της κεραίας στη σωστή κατεύθυνση.
- Δεν παρέχεται καλώδιο κεραίας και μετατροπέας.
- Υποστηριζόμενος ήχος DTV: MPEG, Dolby Digital, Dolby Digital Plus, HE-AAC

Slovenščina

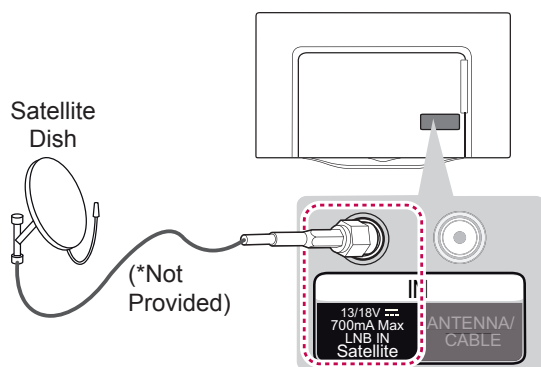
Televizor priključite v stensko antensko vtičnico s kablom RF (75 Ω).

! OPOMBA

- Če želite uporabljati več kot 2 televizorja, uporabite razcepnik za signal.
- Če je kakovost slike slaba, jo izboljšajte tako, da ustrezno namestite ojačevalnik signala.
- Če je kakovost slike slaba in uporabljate anteno, usmerite anteno v ustrezno smer.
- Kabel antene in pretvornik nista priložena.
- Podprte oblike zvoka za DTV: MPEG, Dolby Digital, Dolby Digital Plus, HE-AAC

Satellite dish Connection

(Only satellite models)



English

Connect the TV to a satellite dish to a satellite socket with a satellite RF cable (75 Ω).

Deutsch

Schließen Sie das TV-Gerät mit einem Satelliten-HF-Kabel (75 Ω) an eine Satellitenschüssel oder an eine Satellitenbuchse an.

Français

Connectez la TV à une parabole satellite ou à une prise satellite à l'aide d'un câble satellite RF (75 Ω).

Italiano

Collegare la TV a un'antenna satellitare e a una presa satellitare con un cavo RF satellitare (75 Ω).

Español

Para conectar la TV a una antena parabólica, enchufe un cable de RF de satélite a una toma de satélite (75 Ω).

Português

Ligue a TV a uma antena parabólica a uma tomada de satélite com um cabo RF para satélite (75 Ω).

Nederlands

Sluit de TV met behulp van een RF-satellietkabel (75 Ω) aan op een satellietschotel.

Ελληνικά

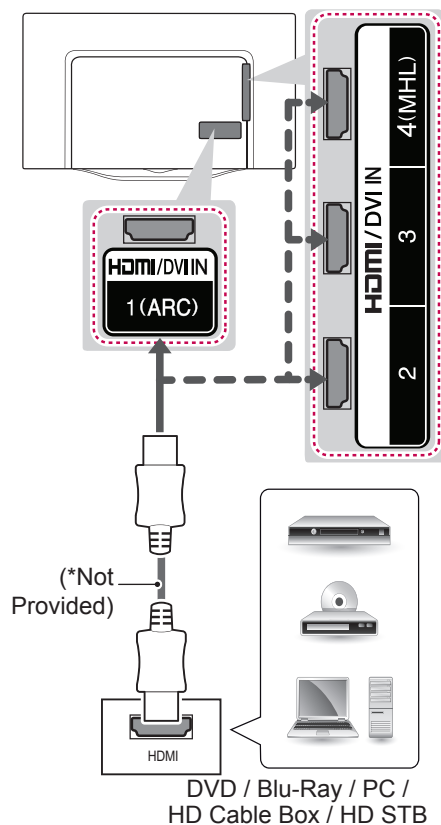
Συνδέστε την τηλεόραση σε μια δορυφορική κεραία, μέσω μιας δορυφορικής υποδοχής με δορυφορικό καλώδιο (75 Ω).

Slovenščina

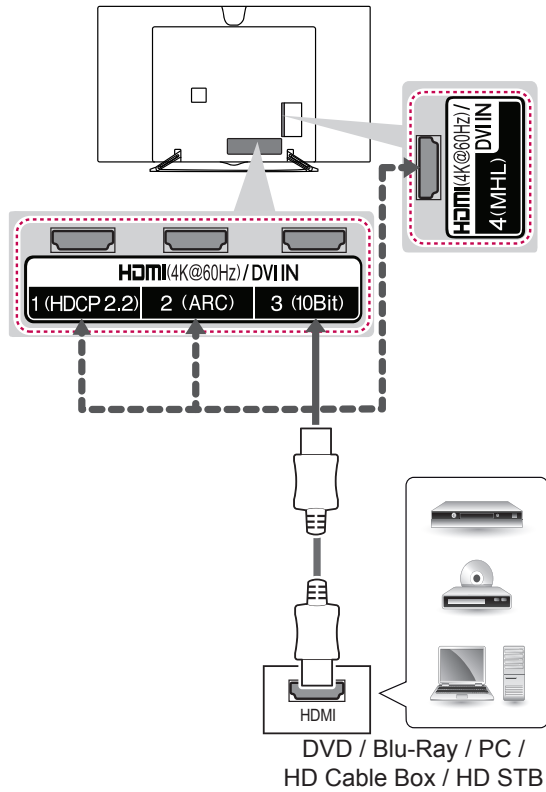
S kablom RF za satelit povežite televizor s satelitskim krožnikom prek vtičnice za satelit (75 Ω).

HDMI Connection

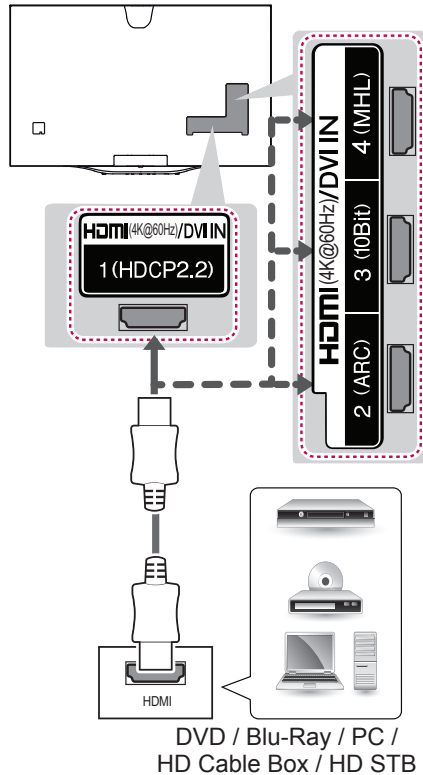
(Only EC93**)



(Only EC97**)



(Only EC98**)



English

Transmits the digital video and audio signals from an external device to the TV. Connect the external device and the TV with the HDMI cable as shown.

NOTE

- It is recommended to use the TV with the HDMI connection for the best image quality.
- Use the latest High Speed HDMI™ Cable with CEC (Customer Electronics Control) function.
- High Speed HDMI™ Cables are tested to carry an HD signal up to 1080p and higher.
- Supported HDMI Audio format : Dolby Digital (32Khz, 44.1Khz, 48Khz), DTS(44.1Khz, 48Khz), PCM (32Khz, 44.1Khz, 48Khz, 96Khz, 192Khz)

(Only EC97**, EC98**)

- 1) HDMI specifications may be different for each input port, so make sure to check the device specifications before connecting.
- 2) The **HDMI IN 3** port is especially suitable for the specifications to enjoy UHD Video (4:4:4, 4:2:2) of 4K @ 50/60 Hz. However, video or audio may not be supported depending on the specifications of the external equipment. In that case, use any other HDMI IN port.
- 3) Contact customer service for more information on the HDMI specifications of each input port.

4K @ 50/60 Hz Support Format

Resolution	Frame rate (Hz)	Colour Depth / Chroma Sampling		
		8 bit	10 bit	12 bit
3840 x 2160p 4096 x 2160p	50.00 59.94 60.00	YCbCr 4:2:0	YCbCr 4:2:0 ¹	
		YCbCr 4:2:2 ¹		
		YCbCr 4:4:4 ¹	-	-
		RGB 4:4:4 ¹	-	-

1: Only Supported at **HDMI IN 3** Port

NOTE

- When you use HDMI port 3, it is recommended that you use the cable provided. If you want to use a regular HDMI cable, use one that is a highspeed HDMI cable (3m or less).

Deutsch

Überträgt digitale Video- und Audiosignale von einem externen Gerät an das TV-Gerät. Verbinden Sie das externe Gerät, wie in der folgenden Abbildung gezeigt, mithilfe des HDMI-Kabels mit dem TV-Gerät.

! HINWEIS

- Für optimale Bildqualität wird empfohlen, den HDMI-Anschluss des TV-Geräts zu verwenden.
- Verwenden Sie das neueste Hochgeschwindigkeits-HDMI™-Kabel mit CEC-Funktion (Customer Electronics Control).
- High-Speed-HDMI™-Kabel sind für die Übertragung von HD-Signalen bis zu 1080p und höher getestet.
- Unterstütztes HDMI-Audioformat: Dolby Digital(32Khz, 44.1Khz, 48Khz), DTS(44.1Khz, 48Khz), PCM(32Khz, 44.1Khz, 48Khz, 96Khz, 192Khz)

(Nur EC97**, EC98**)

- 1) Die HDMI-Spezifikationen können für jeden Eingangsanschluss unterschiedlich sein. Überprüfen Sie deshalb die Spezifikationen des Geräts, bevor Sie es anschließen.
- 2) Der **HDMI IN 3**-Anschluss ist besonders geeignet für die Spezifikationen, die für UHD-Video (4:4:4, 4:2:2) mit 4K @ 50/60 Hz erforderlich sind. Jedoch wird, je nach den Spezifikationen der externen Geräte, Video oder Audio möglicherweise nicht unterstützt. Verwenden Sie in einem solchen Fall einen anderen HDMI IN-Anschluss.
- 3) Für mehr Informationen zu den HDMI-Spezifikationen für jeden Eingang wenden Sie sich an den Kundenservice.

Unterstütztes Format: 4K @ 50/60 Hz

Auflösung	Bildrate (Hz)	Farbtiefe/Chroma-Abtaste		
		8 bit	10 bit	12 bit
3840 x 2160p 4096 x 2160p	50.00 59.94 60.00	YCbCr 4:2:0	YCbCr 4:2:0 ¹	
		YCbCr 4:2:2 ¹		
		YCbCr 4:4:4 ¹	-	-
		RGB 4:4:4 ¹	-	-

1: Wird nur bei einem **HDMI IN 3**-Anschluss unterstützt

! HINWEIS

- Es wird empfohlen, das mitgelieferte HDMI-Kabel (HDMI-Anschluss 3) zu verwenden. Wenn Sie sich für ein handelsübliches HDMI-Kabel entscheiden, verwenden Sie ein High-Speed-HDMI-Kabel (3 m oder kürzer).

Français

Permet de transmettre les signaux vidéo et audio numériques d'un périphérique externe vers la TV. Connectez le périphérique externe et la TV avec le câble HDMI comme indiqué sur l'illustration suivante.

! REMARQUE

- Pour obtenir une meilleure qualité d'image, il est recommandé d'utiliser la TV avec une connexion HDMI.
- Utilisez le tout nouveau câble haut débit HDMI™ avec la fonction CEC (contrôles électroniques client).
- Les câbles HDMI™ haut débit sont testés pour transporter un signal HD de 1080p ou supérieur.
- Formats audio HDMI pris en charge : Dolby Digital (32Khz, 44.1Khz, 48Khz), DTS(44.1Khz, 48Khz), PCM(32Khz, 44.1Khz, 48Khz, 96Khz, 192Khz)

(Uniquement EC97**, EC98**)

- 1) Les caractéristiques HDMI pouvant être différentes pour chaque port de source d'entrée, nous vous conseillons de consulter les caractéristiques du périphérique avant d'effectuer la connexion.
- 2) Le port **HDMI IN 3** est spécialement adapté aux caractéristiques permettant de profiter de vidéos UHD (4:4:4, 4:2:2) de 4K @ 50/60 Hz. Toutefois, les fonctions vidéo ou audio peuvent ne pas être prises en charge (cela dépend des caractéristiques de l'équipement externe). Dans ce cas, veuillez utiliser tout autre port HDMI IN.
- 3) Contactez le service clientèle pour obtenir plus d'informations concernant les caractéristiques HDMI de chaque port d'entrée.

Format de prise en charge 4K @ 50/60 Hz

Résolution	Fréquence d'image (Hz)	Profondeur de couleur / Taux d'échantillonnage		
		8 bit	10 bit	12 bit
3840 x 2160p 4096 x 2160p	50.00 59.94 60.00	YCbCr 4:2:0	YCbCr 4:2:0 1	
		YCbCr 4:2:2 1		
		YCbCr 4:4:4 1	-	-
		RGB 4:4:4 1	-	-

1: Pris en charge uniquement par le port **HDMI IN 3**

! REMARQUE

- Lors de l'utilisation d'un câble HDMI (port HDMI 3), il est recommandé d'utiliser le câble fourni. Si vous utilisez un câble HDMI conventionnel, utilisez un câble HDMI haut débit (max. 3 m).

Italiano

Il segnale digitale audio e video viene trasmesso da un dispositivo esterno al televisore. Collegare il dispositivo esterno e il televisore mediante il cavo HDMI come mostrato nell'illustrazione di seguito.

! NOTA

- Si consiglia di utilizzare il televisore con il collegamento HDMI per ottenere la migliore qualità delle immagini.
- Utilizzare un cavo HDMI™ ad alta velocità dotato dei requisiti più recenti con funzione CEC (Customer Electronics Control).
- I cavi HDMI™ ad alta velocità sono testati per trasmettere un segnale HD fino a 1080p e superiore.
- Formato audio HDMI supportato: Dolby Digital (32Khz, 44.1Khz, 48Khz), DTS(44.1Khz, 48Khz), PCM(32Khz, 44.1Khz, 48Khz, 96Khz, 192Khz)

(Solo EC97**, EC98**)

- 1) Le specifiche HDMI potrebbero differire per ogni porta d'ingresso; pertanto, controllare le specifiche del dispositivo prima del collegamento.
- 2) Le porte **HDMI IN 3** sono particolarmente idonee per le specifiche necessarie alla riproduzione di video UHD (4:4:4, 4:2:2) da 4K @ 50/60 Hz. Tuttavia, la riproduzione video o audio può non essere supportata a seconda delle specifiche dell'apparecchiatura esterna. In tal caso, utilizzare una porta HDMI IN differente.
- 3) Contattare il servizio clienti per ulteriori informazioni sulle specifiche HDMI di ciascuna porta d'ingresso.

Formato supportato: 4K @ 50/60 Hz

Risoluzione	Frequenza fotogrammi (Hz)	Intensità di colore/ Campionamento dei colori		
		8 bit	10 bit	12 bit
3840 x 2160p 4096 x 2160p	50.00 59.94 60.00	YCbCr 4:2:0	YCbCr 4:2:0 ¹	
		YCbCr 4:2:2 ¹		
		YCbCr 4:4:4 ¹	-	-
		RGB 4:4:4 ¹	-	-

1: Supportato solo sulla porta **HDMI IN 3**

! NOTA

- Se si utilizza un cavo HDMI (HDMI 3 porte), si consiglia di utilizzare il cavo fornito. Se si utilizza un normale cavo HDMI, utilizzare un cavo HDMI ad alta velocità (lunghezza uguale o inferiore a 3 m) a seconda del modello.

Español

Transmite las señales de audio y vídeo digital de un dispositivo externo a la TV. Use el cable HDMI para conectar el dispositivo externo a la TV, tal y como se muestra en la siguiente ilustración.

! NOTA

- Se recomienda usar la conexión HDMI de la TV para obtener la mejor calidad de imagen.
- Utilice el cable HDMI™ de alta velocidad más reciente con la función CEC (control de electrónica de consumo).
- Los cables HDMI™ de alta velocidad están preparados para transportar una señal HD de 1080p o superior.
- Formato de audio HDMI admitido: Dolby Digital (32Khz, 44.1Khz, 48Khz), DTS(44.1Khz, 48Khz), PCM(32Khz, 44.1Khz, 48Khz, 96Khz, 192Khz)

(Solo EC97**, EC98**)

- 1) Las especificaciones de HDMI pueden ser diferentes para cada puerto de entrada, por lo que debe asegurarse de comprobar las especificaciones del dispositivo antes de conectarlo.
- 2) El puerto **HDMI IN 3** es especialmente adecuado para las especificaciones para disfrutar de vídeo UHD (4:4:4, 4:2:2) de 4K @ 50/60 Hz. No obstante, es posible que, dependiendo de las especificaciones del equipo externo, el vídeo o el audio no sea compatible. En ese caso, utilice cualquier otro puerto HDMI IN.
- 3) Póngase en contacto con el servicio de atención al cliente para obtener más información sobre las especificaciones de HDMI de cada puerto de entrada.

Formato compatible con 4K @ 50/60 Hz

Resolución	Velocidad de fotogramas (Hz)	Profundidad de color / Muestreo de color		
		8 bit	10 bit	12bit
3840 x 2160p 4096 x 2160p	50.00 59.94 60.00	YCbCr 4:2:0	YCbCr 4:2:0 ¹	
		YCbCr 4:2:2 ¹		
		YCbCr 4:4:4 ¹	-	-
		RGB 4:4:4 ¹	-	-

1: Solo compatible en el puerto **HDMI IN 3**

! NOTA

- Cuando use un cable HDMI (puerto HDMI3), se recomienda que use el cable proporcionado. Si utiliza un cable HDMI convencional, asegúrese de que se trata de un cable de alta velocidad (3 m o menos).

Português

Transmite os sinais digitais de vídeo e áudio de um dispositivo externo para a TV. Ligue o dispositivo externo à TV com o cabo HDMI, conforme demonstrado na ilustração.

! NOTA

- Recomenda-se a utilização da TV com a ligação HDMI para uma melhor qualidade de imagem.
- Utilize o mais recente cabo HDMI™ de alta velocidade com função CEC (Customer Electronics Control).
- Os cabos HDMI™ de alta velocidade foram testados para executar um sinal HD até 1080p e superior.
- Formato de áudio HDMI suportado: Dolby Digital (32Khz, 44.1Khz, 48Khz), DTS(44.1Khz, 48Khz), PCM(32Khz, 44.1Khz, 48Khz, 96Khz, 192Khz)

(Apenas EC97**, EC98**)

- 1) As especificações de HDMI poderão variar entre as portas de entrada, pelo que deve verificar as especificações do dispositivo antes de estabelecer a ligação.
- 2) A porta **HDMI IN 3** é especialmente adequada para reprodução de vídeo UHD (4:4:4, 4:2:2) de 4K @ 50/60 Hz. No entanto, o vídeo ou o áudio poderão não ser suportados dependendo das especificações do equipamento externo. Nesse caso, utilize qualquer outra porta HDMI IN.
- 3) Contacte o apoio ao cliente para obter mais informações sobre as especificações de HDMI de cada porta de entrada.

Formato suportado: 4K @ 50/60 Hz

Otimiza Captação: 1080p 30FPS F12				
Resolução	Velocidade de frames (Hz)	Profundidade de cores / amostragem de cores		
		8 bit	10 bit	12 bit
3840 x 2160p 4096 x 2160p	50.00 59.94 60.00	YCbCr 4:2:0	YCbCr 4:2:0 ¹	
		YCbCr 4:2:2 ¹		
		YCbCr 4:4:4 ¹	-	-
		RGB 4:4:4 ¹	-	-

1: Suportado apenas na porta **HDMI IN 3**

! NOTA

- Se utilizar um cabo HDMI (porta HDMI 3), recomenda-se a utilização do cabo fornecido. Se utilizar um cabo HDMI comum, utilize um cabo HDMI de alta velocidade (3 m ou menos).

Nederlands

U kunt de digitale video- en audiosignalen vanaf een extern apparaat naar de TV zenden. Sluit het externe apparaat en de TV op elkaar aan met behulp van de HDMI-kabel, zoals aangegeven in de volgende afbeelding.

! OPMERKING

- Wij raden u aan de TV aan te sluiten door middel van een HDMI-verbinding voor de hoogste beeldkwaliteit.
- Gebruik de nieuwste High Speed HDMI™-kabel met CEC-functie (Customer Electronics Control).
- HDMI™-kabels van het type High Speed zijn getest op het verzenden van HD-signalen tot 1080p en hoger.
- Ondersteunde HDMI-audio-indeling: Dolby Digital (32Khz, 44.1Khz, 48Khz), DTS(44.1Khz, 48Khz), PCM(32Khz, 44.1Khz, 48Khz, 96Khz, 192Khz)

(Alleen EC97**, EC98**)

- 1) HDMI-specificaties kunnen per ingangspoort verschillen, controleer dus de apparaatspecificaties voordat u het aansluit
- 2) De **HDMI IN 3**-poort is vooral geschikt voor de specificaties om van UHD-video's (4:4:4, 4:2:2) van 4K @ 50/60 Hz te genieten. Video of audio wordt echter mogelijk niet ondersteund afhankelijk van de specificaties van de externe apparatuur. Gebruik in dat geval een andere HDMI IN-poort.
- 3) Neem contact op met de klantenservice voor meer informatie over de HDMI-specificaties van iedere ingangspoort.

Ondersteuning voor 4K @ 50/60 Hz

Resolutie	Framesnelheid (Hz)	Kleurdiepte / kleurbemonstering		
		8 bit	10 bit	12 bit
3840 x 2160p 4096 x 2160p	50.00 59.94 60.00	YCbCr 4:2:0	YCbCr 4:2:0 1	
		YCbCr 4:2:2 1		
		YCbCr 4:4:4 1	-	-
		RGB 4:4:4 1	-	-

1: Alleen ondersteund met **HDMI IN 3**-poort

! OPMERKING

- Als u een HDMI-kabel (HDMI 3-poorts) gebruikt, raden we u aan om de meegeleverde kabel te gebruiken. Als u een normale HDMI-kabel gebruikt, dan dient u een High Speed HDMI-kabel (niet langer dan 3 meter) te gebruiken.

Ελληνικά

Μεταδίδει τα ψηφιακά σήματα εικόνας και ήχου από μια εξωτερική συσκευή στην τηλεόραση. Συνδέστε την εξωτερική συσκευή και την τηλεόραση με το καλώδιο HDMI, όπως φαίνεται στην παρακάτω εικόνα.

ΣΗΜΕΙΩΣΗ

- Για τη βέλτιστη ποιότητα εικόνας, χρησιμοποιήστε την τηλεόραση με σύνδεση HDMI.
- Χρησιμοποιήστε το καλώδιο HDMI™ υψηλής ταχύτητας με λειτουργία CEC (Customer Electronics Control).
- Τα καλώδια HDMI™ υψηλής ταχύτητας έχουν ελεγχθεί για τη μετάδοση σήματος HD ανάλυσης έως 1080p ή υψηλότερης.
- Υποστηριζόμενη μορφή ήχου HDMI: Dolby Digital (32KHz, 44.1KHz, 48KHz), DTS(44.1KHz, 48KHz), PCM(32KHz, 44.1KHz, 48KHz, 96KHz, 192KHz)

(Μόνο για τα μοντέλα EC97**, EC98**)

- 1) Οι προδιαγραφές HDMI μπορεί να διαφέρουν για κάθε θύρα εισόδου, οπότε φροντίστε να ελέγχετε τις προδιαγραφές της συσκευής πριν από τη σύνδεση.
- 2) Η θύρα **HDMI IN 3** είναι κατάλληλη για τις προδιαγραφές παρακολούθησης βίντεο UHD (4:4:4, 4:2:2), 4K @ 50/60 Hz. Ωστόσο, ενδέχεται να μην υποστηρίζεται βίντεο ή ήχος ανάλογα με τις προδιαγραφές του εξωτερικού εξοπλισμού. Σε αυτή την περίπτωση, χρησιμοποιήστε οποιαδήποτε άλλη θύρα HDMI IN.
- 3) Επικοινωνήστε με την εξυπηρέτηση πελατών για περισσότερες πληροφορίες σχετικά με τις προδιαγραφές HDMI κάθε θύρας εισόδου.

Υποστήριξη μορφής 4K @ 50/60 Hz

Ανάλυση	Ρυθμός καρέ (Hz)	Βάθος χρώματος / Δειγματοληψία χρωματικής διαφοράς		
		8 bit	10 bit	12 bit
3840 x 2160p 4096 x 2160p	50.00 59.94 60.00	YCbCr 4:2:0	YCbCr 4:2:0 ¹	
		YCbCr 4:2:2 ¹		
		YCbCr 4:4:4 ¹	-	-
		RGB 4:4:4 ¹	-	-

1: Υποστηρίζεται μόνο στη θύρα **HDMI IN 3**

ΣΗΜΕΙΩΣΗ

- Για χρήση καλωδίου HDMI (HDMI port3), συνιστάται η χρήση του παρεχόμενου καλωδίου. Αν χρησιμοποιείτε ένα κανονικό καλώδιο HDMI, χρησιμοποιήστε ένα καλώδιο HDMI υψηλής ταχύτητας (μέχρι 3 μέτρα).

Slovenščina

Prenaša digitalne video in zvočne signale iz zunanje naprave na televizor. Povežite zunanjo napravo in televizor s HDMI-kablom, kot je prikazano na naslednji sliki.

OPOMBA

- Za najboljšo kakovost slike priporočamo uporabo televizorja s HDMI-povezavo.
- Uporabite najnovejši kabel HDMI™ za hitri prenos s funkcijo CEC (Customer Electronics Control).
- Kabli HDMI™ za hitri prenos so preizkušeni, tako da lahko prenašajo signal visoke ločljivosti do 1080p in več.
- Podprte oblike zvoka za HDMI: Dolby Digital (32KHz, 44.1KHz, 48KHz), DTS(44.1KHz, 48KHz), PCM(32KHz, 44.1KHz, 48KHz, 96KHz, 192KHz)

(Samo modeli EC97**, EC98**)

- 1) Specifikacije HDMI posameznih vhodnih vrat se lahko razlikujejo, zato jih preverite pred priključitvijo.
- 2) Vrata **HDMI IN 3** so še posebej primerna za specifikacije, s katerimi boste zares uživali v videu UHD (4:4:4, 4:2:2) z ločljivostjo 4K @ 50/60 Hz. Vendar pa odvisno od specifikacij zunanje opreme video ali zvok morda ne bo podprt. V tem primeru uporabite katera koli druga vrata HDMI IN.
- 3) Za več informacij o specifikacijah HDMI posameznih vhodnih vrat se obrnite na oddelek za pomoč uporabnikom.

Podprte oblike ločljivosti 4K @ 50/60 Hz

Ločljivost	Hitrost sličic (Hz)	Barvna globina / vzorčenje krominance		
		8 bit	10 bit	12 bit
3840 x 2160p 4096 x 2160p	50.00 59.94 60.00	YCbCr 4:2:0	YCbCr 4:2:0 ¹	
		YCbCr 4:2:2 ¹		
		YCbCr 4:4:4 ¹	-	-
		RGB 4:4:4 ¹	-	-

1: Podprto samo na vratih **HDMI IN 3**

OPOMBA

- Če nameravate uporabiti kabel HDMI (vrata HDMI 3), priporočamo, da uporabite priloženi kabel. Če boste uporabili navaden kabel HDMI, uporabite takega za hitri prenos (dolžine do 3 m).

ARC (Audio Return Channel)

English

- An external audio device that supports SIMPLINK and ARC must be connected using **HDMI/DVI IN 1 (ARC)** or **HDMI(4K @ 60 Hz)/DVI IN 2 (ARC)** port.
- When connected with a high-speed HDMI cable, the external audio device that supports ARC outputs optical SPDIF without additional optical audio cable and supports the SIMPLINK function.

Deutsch

- Ein externes Audiogerät, das SIMPLINK und ARC unterstützt, muss über den **HDMI/DVI IN 1 (ARC)**- oder **HDMI(4K @ 60 Hz)/DVI IN 2 (ARC)**-Anschluss verbunden werden.
- Wenn der Anschluss mit einem High-Speed HDMI-Kabel erfolgt, gibt das externe Audiogerät, das ARC unterstützt, SPDIF ohne zusätzliches optisches Audiokabel aus und unterstützt die SIMPLINK-Funktion.

Français

- Un périphérique audio externe prenant en charge SIMPLINK et ARC doit être connecté à l'aide du port **HDMI/DVI IN 1 (ARC)** ou **HDMI(4K @ 60 Hz)/DVI IN 2 (ARC)**.
- Si vous reliez un câble HDMI haut débit, le périphérique audio externe qui prend en charge les sorties ARC, prend également en charge la sortie optique SPDIF sans câble audio optique supplémentaire, ainsi que la fonction SIMPLINK.

Italiano

- Un dispositivo audio esterno che supporta SIMPLINK e ARC deve essere collegato tramite la porta **HDMI/DVI IN 1 (ARC)** o **HDMI(4K @ 60 Hz)/DVI IN 2 (ARC)**.
- Se si effettua il collegamento con un cavo HDMI ad alta velocità, il dispositivo audio esterno che supporta ARC trasmette il segnale SPDIF senza il cavo ottico aggiuntivo e supporta la funzione SIMPLINK.

Español

- Hay que conectar un dispositivo de audio externo que admita SIMPLINK y ARC utilizando el puerto **HDMI/DVI IN 1 (ARC)** o **HDMI(4K @ 60 Hz)/DVI IN 2 (ARC)**.
- Cuando esté conectado mediante un cable HDMI de alta velocidad, el dispositivo de audio externo que admite ARC emite el SPDIF óptico sin necesidad de un cable óptico de audio adicional y admite la función SIMPLINK.

Português

- É necessário ligar um dispositivo de áudio externo que suporte SIMPLINK e ARC utilizando as portas **HDMI/DVI IN 1 (ARC)** ou **HDMI(4K @ 60 Hz)/DVI IN 2 (ARC)**.
- Quando ligado a um cabo HDMI de alta velocidade, o aparelho de áudio externo que suporta ARC transmite SPDIF óptica sem um cabo de áudio óptico adicional e suporta a função SIMPLINK.

Nederlands

- Een extern audioapparaat dat ondersteuning biedt voor SIMPLINK en ARC moet met behulp van de **HDMI/DVI IN 1 (ARC)**- of **HDMI(4K @ 60 Hz)/DVI IN 2 (ARC)**-poort worden aangesloten.
- Bij aansluiting met een High Speed HDMI-kabel zorgt het externe audioapparaat met ARC-ondersteuning ervoor dat optische SPDIF wordt uitgevoerd zonder extra optische audiokabel, en ondersteunt dit apparaat de SIMPLINK-functie.

Ελληνικά

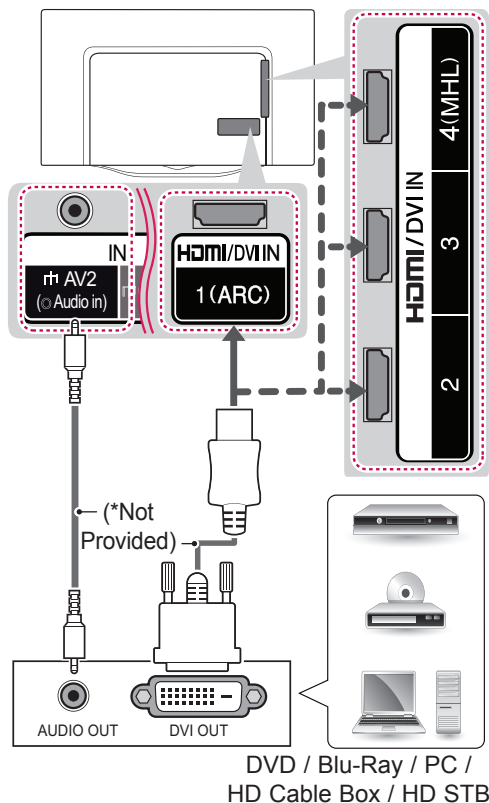
- Μια εξωτερική συσκευή ήχου η οποία υποστηρίζει τις λειτουργίες SIMPLINK και ARC πρέπει να συνδεθεί μέσω της θύρας **HDMI/DVI IN 1 (ARC)** ή **HDMI(4K @ 60 Hz)/DVI IN 2 (ARC)**.
- Κατά τη σύνδεση με καλώδιο HDMI υψηλής ταχύτητας, η εξωτερική συσκευή ήχου που υποστηρίζει το ARC παρέχει οπτικό σήμα SPDIF χωρίς πρόσθετο οπτικό καλώδιο ήχου και υποστηρίζει την λειτουργία SIMPLINK.

Slovenščina

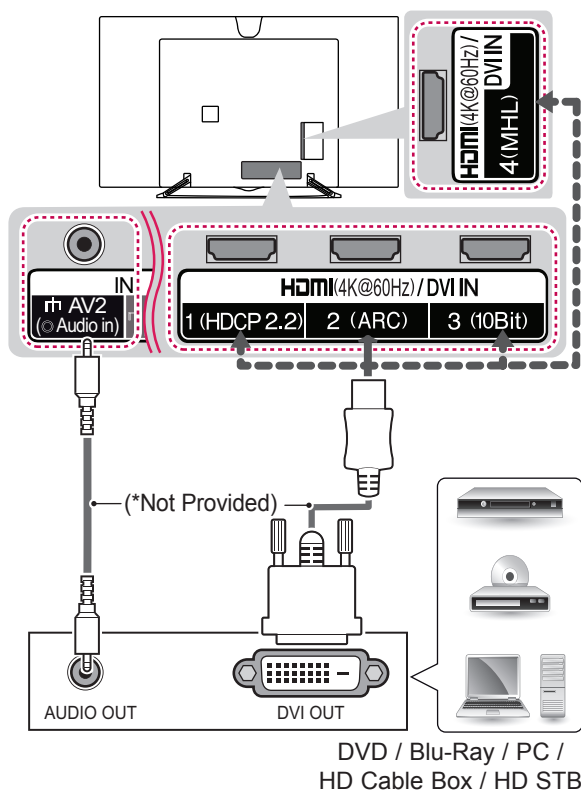
- Zunanjo zvočno napravo, ki podpira SIMPLINK in ARC, priključite v vrata **HDMI/DVI IN 1 (ARC)** ali **HDMI(4K @ 60 Hz)/DVI IN 2 (ARC)**.
- Če jo povežete s kablom HDMI za hitri prenos, zunanja zvočna naprava, ki podpira funkcijo ARC, oddaja optični zapis SPDIF brez dodatnega optičnega zvočnega kabla in podpira funkcijo SIMPLINK.

DVI to HDMI Connection

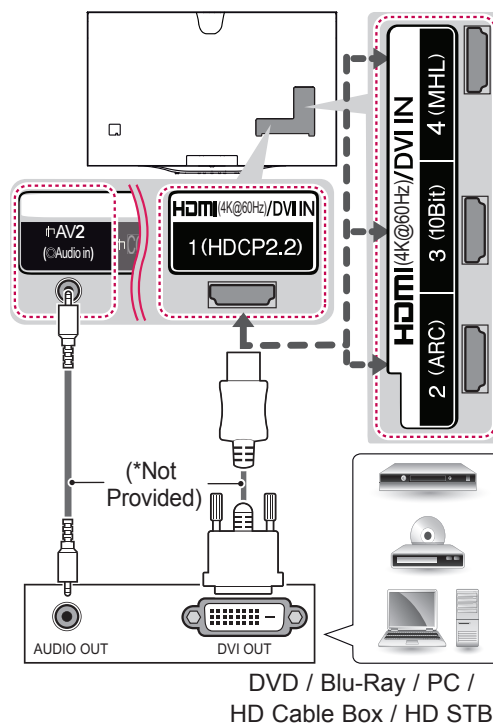
(Only EC93**)



(Only EC97**)



(Only EC98**)



English

Transmits the digital video signal from an external device to the TV. Connect the external device and the TV with the DVI-HDMI cable as shown. To transmit an audio signal, connect an audio cable.

NOTE

- Depending on the graphics card, DOS mode may not work if a HDMI to DVI Cable is in use.
- When using the HDMI / DVI cable, Single link is only supported.

Deutsch

Überträgt digitale Videosignale von einem externen Gerät an das TV-Gerät. Verbinden Sie das externe Gerät, wie in der folgenden Abbildung gezeigt, mithilfe des DVI-HDMI-Kabels mit dem TV-Gerät. Schließen Sie ein Audiokabel an, um ein Audiosignal zu übertragen.

HINWEIS

- Abhängig von der Grafikkarte funktioniert der DOS-Modus bei Einsatz eines HDMI-zu-DVI-Kabels möglicherweise nicht.
- Bei Verwendung des HDMI/DVI-Kabels wird nur eine einfache Verbindung unterstützt.

Français

Permet de transmettre les signaux vidéo d'un périphérique externe vers la TV. Connectez le périphérique externe et la TV avec le câble DVI-HDMI comme indiqué sur l'illustration suivante. Pour émettre un signal audio, raccordez un câble audio.

REMARQUE

- Selon la carte graphique, le mode DOS peut ne pas fonctionner si vous utilisez un câble pour établir la connexion HDMI-DVI.
- Lors de l'utilisation du câble HDMI/DVI, seule une liaison unique peut être prise en charge.

Italiano

Il segnale digitale video viene trasmesso da un dispositivo esterno al televisore. Collegare il dispositivo esterno e il televisore mediante il cavo DVI-HDMI come mostrato nell'illustrazione di seguito. Per trasmettere un segnale audio, collegare un cavo audio.

NOTA

- A seconda della scheda grafica in uso, la modalità DOS potrebbe non funzionare se si utilizza un cavo da HDMI a DVI.
- Quando si utilizza il cavo HDMI/DVI, è supportata solo l'interfaccia Single link.

Español

Transmite la señal de vídeo digital de un dispositivo externo a la TV. Use el cable DVI-HDMI para conectar el dispositivo externo a la TV, tal y como se muestra en la siguiente ilustración. Para transmitir una señal de audio, conecte un cable de audio.

NOTA

- En función de la tarjeta gráfica, puede que no funcione el modo DOS si se está utilizando un cable de HDMI a DVI.
- Si se utiliza un cable HDMI/DVI, solo se admite un enlace.

Português

Transmite o sinal digital de vídeo de um dispositivo externo para a TV. Ligue o dispositivo externo à TV com o cabo DVI-HDMI, conforme demonstrado na seguinte ilustração. Para transmitir um sinal de áudio, ligue um cabo de áudio.

NOTA

- Dependendo da placa gráfica, o modo DOS poderá não funcionar se utilizar um cabo HDMI para DVI.
- Ao utilizar o cabo HDMI/DVI, apenas a Ligação única é suportada.

Nederlands

U kunt het digitale videosignaal vanaf een extern apparaat naar de TV zenden. Sluit het externe apparaat en de TV op elkaar aan met behulp van de DVI-HDMI-kabel, zoals aangegeven in de volgende afbeelding.

OPMERKING

- Afhankelijk van de grafische kaart werkt de DOSmodus mogelijk niet bij het gebruik van een HDMI/DVI-kabel.
- Bij gebruik van de HDMI/DVI-kabel wordt alleen single link ondersteund.

Ελληνικά

Μεταδίδει το ψηφιακό σήμα εικόνας από μια εξωτερική συσκευή στην τηλεόραση. Συνδέστε την εξωτερική συσκευή και την τηλεόραση με το καλώδιο DVI-HDMI, όπως φαίνεται στην παρακάτω εικόνα. Για την μετάδοση σήματος ήχου, συνδέστε ένα καλώδιο ήχου.

ΣΗΜΕΙΩΣΗ

- Ανάλογα με την κάρτα γραφικών, η λειτουργία DOS ενδέχεται να μην λειτουργεί, εάν χρησιμοποιείται καλώδιο HDMI σε DVI.
- Όταν χρησιμοποιείτε το καλώδιο HDMI/DVI, υποστηρίζεται αποκλειστικά η μονή σύνδεση.

Slovenščina

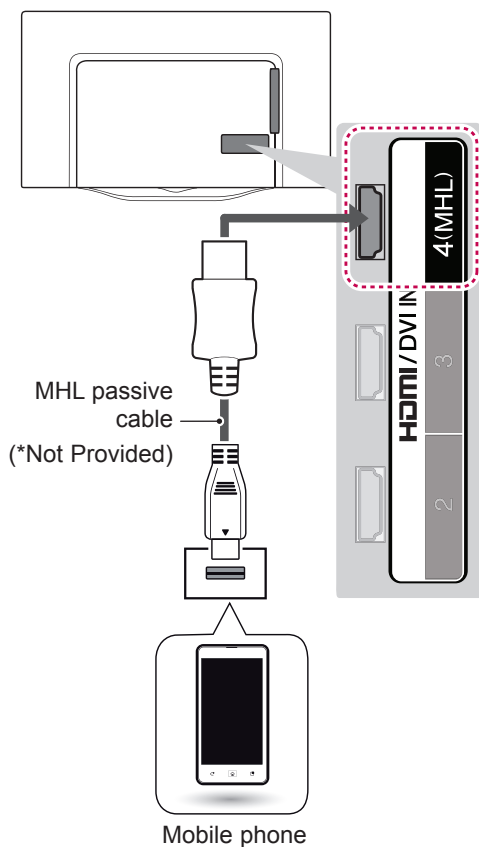
Prenaša digitalni video signal iz zunanje naprave na televizor. Povežite zunanjo napravo in televizor s kablom DVI-HDMI, kot je prikazano na naslednji sliki. Za prenos avdio signala priključite avdio kabel.

OPOMBA

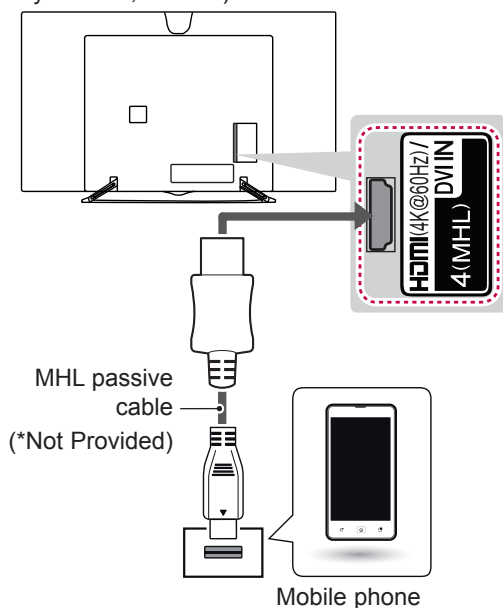
- Odvisno od grafične kartice način DOS morda ne bo deloval, če uporabljate kabel HDMI-DVI.
- Ko uporabljate kabel HDMI/DVI, je podprta le ena povezava.

MHL Connection

(Only EC93**)



(Only EC97**, EC98**)



English

Mobile High-definition Link (MHL) is an interface for transmitting digital audiovisual signals from mobile phones to television sets.

! NOTE

- Connect the mobile phone to the **HDMI/DVI IN 4 (MHL)** or **HDMI(4K @ 60 Hz)/DVI IN 4 (MHL)** port to view the phone screen on the TV.
- The MHL passive cable is needed to connect the TV and a mobile phone.
- This only works for the MHL-enabled phone.
- Some applications can be operated by the remote control.
- For some mobile phones supporting MHL, you can control with the magic remote control.
- Remove the MHL passive cable from the TV when:
 - The MHL function is disabled
 - Your mobile device is fully charged in standby mode

Deutsch

Mobile High-definition Link (MHL) ist eine digitale Schnittstelle, welche audiovisuelle Signale vom Mobiltelefon an ein TV-Gerät überträgt.

! HINWEIS

- Verbinden Sie das Mobiltelefon mit dem **HDMI/DVI IN 4 (MHL)**- oder **HDMI(4K @ 60 Hz)/DVI IN 4 (MHL)**-Anschluss, um den Bildschirm des Telefons auf dem Fernsehgerät anzuzeigen.
- Das passive MHL-Kabel dient dazu, das TV-Gerät mit einem Mobiltelefon zu verbinden.
- Dies ist nur bei MHL-fähigen Telefonen möglich.
- Einige Anwendungen können über die Fernbedienung gesteuert werden.
- Einige MHL-fähige Mobiltelefone können mit der Magic-Fernbedienung bedient werden.
- Entfernen Sie das passive MHL-Kabel vom TV-Gerät, wenn:
 - die MHL-Funktion deaktiviert ist
 - Ihr Mobilfunkgerät im Standby-Modus vollständig geladen ist

Français

Mobile High-definition Link (MHL) est une interface qui permet de transmettre des signaux audiovisuels numériques depuis des téléphones portables vers des téléviseurs.

! REMARQUE

- Connectez le téléphone portable au port **HDMI/DVI IN 4 (MHL)** ou **HDMI(4K @ 60 Hz)/DVI IN 4 (MHL)** pour afficher l'écran du téléphone sur le téléviseur.
- Le câble passif MHL sert à connecter la TV à un téléphone portable.
- Cette fonctionnalité est uniquement disponible sur les téléphones prenant en charge la connexion MHL.
- Certaines applications peuvent être utilisées depuis la télécommande.
- Vous pouvez utiliser la télécommande Magic sur certains téléphones portables prenant en charge la connexion MHL.
- Retirez le câble passif MHL du téléviseur uniquement si :
 - la fonction MHL est désactivée,
 - votre périphérique mobile est complètement chargé et en mode veille ou standby mode

Español

El enlace de alta definición móvil o MHL (del inglés "Mobile High-definition Link") es una interfaz que se utiliza para transmitir señales audiovisuales digitales de teléfonos móviles a equipos de televisión.

! NOTA

- Conecte el teléfono móvil al puerto **HDMI/DVI IN 4 (MHL)** o **HDMI(4K @ 60 Hz)/DVI IN 4 (MHL)** para ver la pantalla del teléfono en la TV.
- Se necesita un cable pasivo MHL para conectar el televisor y el teléfono móvil.
- Esta función solo está disponible en teléfonos compatibles con MHL.
- Algunas aplicaciones se pueden utilizar a través del mando a distancia.
- Desde algunos teléfonos móviles compatibles con MHL, se puede controlar el dispositivo por medio del mando a distancia Mágico.
- Extraiga el cable pasivo MHL de la TV cuando:
 - la función MHL esté deshabilitada
 - su dispositivo móvil esté completamente cargado y en modo de espera

Italiano

Mobile High-definition Link (MHL) è un'interfaccia per la trasmissione di segnali audiovisivi digitali dai cellulari ai TV.

! NOTA

- Collegare il telefono cellulare alla porta **HDMI/DVI IN 4 (MHL)** o **HDMI(4K @ 60 Hz)/DVI IN 4 (MHL)** per visualizzare lo schermo del telefono sul TV.
- È necessario un cavo passivo MHL per collegare il TV a un cellulare.
- Questa funzione è disponibile soltanto sui telefoni che supportano l'interfaccia MHL.
- È possibile utilizzare alcune applicazioni tramite il telecomando.
- Per alcuni cellulari che supportano la tecnologia MHL, è possibile utilizzare il telecomando magico.
- Rimuovere il cavo passivo MHL dal TV quando:
 - La funzione MHL è disattivata
 - Il dispositivo mobile è completamente carico in modalità standby

Português

A Ligação de Alta Definição Móvel (MHL) é uma interface para transmissão de sinais audiovisuais digitais do telemóvel para a televisão.

! NOTA

- Ligue o telemóvel à porta **HDMI/DVI IN 4 (MHL)** ou **HDMI(4K @ 60 Hz)/DVI IN 4 (MHL)** para visualizar o ecrã do telemóvel na TV.
- O cabo passivo MHL é necessário para ligar a TV a um telemóvel.
- Funciona apenas no telemóvel compatível com MHL.
- É possível utilizar algumas aplicações através do controlo remoto.
- Em alguns telemóveis que suportam MHL, é possível controlar com o Comando Mágico.
- Remova o cabo passivo MHL da TV quando:
 - a função MHL está desactivada
 - o seu dispositivo móvel está totalmente carregado no modo de espera

Nederlands

MHL (Mobile High-definition Link) is een interface voor het verzenden van digitale audiovisuele signalen van mobiele telefoons naar televisies.

! OPMERKING

- Verbind de mobiele telefoon met de **HDMI/DVI IN 4 (MHL)**- of **HDMI(4K @ 60 Hz)/DVI IN 4 (MHL)**-poort om het telefoonscherm op de TV weer te geven.
- De MHL passieve kabel is nodig om de TV en een mobiele telefoon met elkaar te verbinden.
- Dit kan alleen met een MHL-telefoon.
- Sommige toepassingen kunnen met de afstandsbediening worden bediend.
- Bij sommige mobiele telefoons met MHL kunt u de Magic-afstandsbediening gebruiken.
- Koppel de MHL-passieve kabel los van de TV wanneer:
 - de MHL-functie is uitgeschakeld
 - uw mobiele apparaat volledig is opgeladen in standby-modus

Slovenščina

Povezava MHL (Mobile High-definition Link) je vmesnik za oddajanje digitalnih zvočnih in vizualnih signalov iz mobilnih telefonov v televizorje.

! OPOMBA

- Če želite zaslon mobilnega telefona prikazati na televizorju, telefon priključite v vrata **HDMI IN 4 (MHL)** ali **HDMI(4K @ 60 Hz)/DVI IN 4 (MHL)**.
- Pasivni kabel MHL potrebujete za povezavo televizorja in mobilnega telefona.
- To deluje samo pri telefonih s podporo za MHL.
- Nekatere aplikacije lahko upravljate z daljinskim upravljalnikom.
- Pri nekaterih telefonih, ki podpirajo MHL, lahko predvajanje upravljate z daljinskim upravljalnikom Magic.
- Pasivni kabel MHL odstranite s televizorja, ko:
 - je funkcija MHL onemogočena
 - je mobilna naprava popolnoma napolnjena v načinu pripravljenosti

Ελληνικά

Το MHL (Mobile High-definition Link) είναι μια διασύνδεση για τη μετάδοση ψηφιακών οπτικοακουστικών σημάτων από κινητά τηλέφωνα προς τηλεοράσεις.

! ΣΗΜΕΙΩΣΗ

- Συνδέστε το κινητό τηλέφωνο στη θύρα **HDMI/DVI IN 4 (MHL)** ή **HDMI(4K @ 60 Hz)/DVI IN 4 (MHL)**, για προβολή της οθόνης του τηλεφώνου στην τηλεόραση.
- Το παθητικό καλώδιο MHL είναι απαραίτητο για τη σύνδεση της τηλεόρασης με κινητό τηλέφωνο.
- Η λειτουργία αυτή υποστηρίζεται μόνο για τηλέφωνα με δυνατότητα MHL.
- Ορισμένες εφαρμογές μπορούν να χρησιμοποιηθούν μέσω του τηλεχειριστηρίου.
- Για ορισμένα κινητά τηλέφωνα που υποστηρίζουν MHL, ο χειρισμός είναι δυνατός μέσω του Magic Remote Control (μαγικού τηλεχειριστηρίου).
- Πρέπει να αφαιρείτε το παθητικό καλώδιο MHL από την τηλεόραση όταν:
 - η λειτουργία MHL είναι απενεργοποιημένη
 - η κινητή συσκευή είναι πλήρως φορτισμένη και βρίσκεται σε κατάσταση αναμονής



Transmits analogue video and audio signals from an external device to the TV. Connect the external device and the TV with a component gender cable as shown.

- If cables are not installed correctly, it could cause this image to display in black and white or with distorted colours.

Überträgt analoge Video- und Audiosignale von einem externen Gerät an das TV-Gerät. Verbinden Sie das externe Gerät wie in der Abbildung gezeigt über ein Komponentenkabel mit dem TV-Gerät.

- Wenn Kabel falsch angeschlossen werden, kann dies dazu führen, dass ein Bild in Schwarz-Weiß oder in verzerrten Farben erscheint.

Permet de transmettre les signaux audio et vidéo analogiques d'un périphérique externe vers la TV. Connectez le périphérique externe et le téléviseur avec un câble composant (ou un câble mâle composant) comme indiqué.

- Si les câbles sont mal installés, l'image peut s'afficher en noir et blanc ou avec des couleurs de mauvaise qualité.

Il segnale audio e video analogico viene trasmesso da un dispositivo esterno al televisore. Collegare il dispositivo esterno e il TV con un cavo Component (o un cavo generico Component) come mostrato.

- L'errato collegamento dei cavi può far sì che le immagini vengano visualizzate in bianco e nero o con colori distorti.

Transmite las señales de audio y vídeo analógico de un dispositivo externo a la TV. Use un cable de componentes (o de género compuesto) para conectar el dispositivo externo a la TV como se indica.

- Si los cables no se instalan correctamente, puede que la imagen se visualice en blanco y negro o con los colores distorsionados.

Português

Transmite sinais analógicos de vídeo e áudio de um dispositivo externo para a TV. Ligue o dispositivo externo à TV com um cabo de componente (ou cabo de componente macho), conforme demonstrado.

! NOTA

- Se os cabos não forem devidamente instalados, poderão causar uma exibição de imagem a preto e branco ou com cor distorcida.

Nederlands

U kunt analoge video- en audiosignalen vanaf een extern apparaat naar de TV zenden. Sluit het externe apparaat en de TV op elkaar aan met behulp van een componentkabel (mannelijk/vrouwelijk), zoals in de afbeelding.

! OPMERKING

- Als kabels onjuist zijn geïnstalleerd, kan het beeld worden weergegeven in zwart-wit of met vervormde kleuren.

Ελληνικά

Μεταδίδει τα αναλογικά σήματα εικόνας και ήχου από μια εξωτερική συσκευή στην τηλεόραση. Συνδέστε την εξωτερική συσκευή και την τηλεόραση με ένα καλώδιο component (ή καλώδιο component αρσενικό-θηλυκό) όπως φαίνεται στην εικόνα.

! ΣΗΜΕΙΩΣΗ

- Αν τα καλώδια δεν έχουν συνδεθεί σωστά, η εικόνα ενδέχεται να εμφανίζεται ασπρόμαυρη ή με αλλοιωμένα χρώματα.

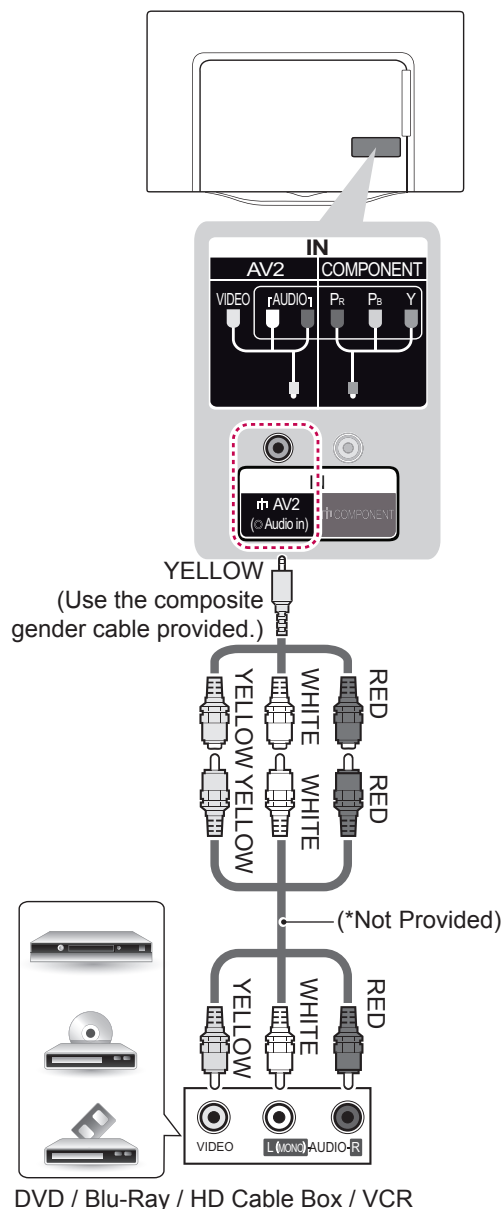
Slovenščina

Prenaša analogne video in zvočne signale iz zunanje naprave na televizor. Povežite zunanjo napravo in televizor s komponentnim kablom (ali pretvorniškimi komponentnim kablom), kot je prikazano.

! OPOMBA

- Če so kabli nepravilno nameščeni, se lahko slika prikaže kot črnobela ali s popačeno barvo.

Composite Connection



English

Transmits analogue video and audio signals from an external device to the TV. Connect the external device and the TV with a composite gender cable as shown.

Deutsch

Überträgt analoge Video- und Audiosignale von einem externen Gerät an das TV-Gerät. Verbinden Sie das externe Gerät wie in der Abbildung gezeigt über ein Komponentenkabel mit dem TV-Gerät.

Français

Permet de transmettre les signaux audio et vidéo analogiques d'un périphérique externe vers la TV. Connectez le périphérique externe et le téléviseur avec un câble mâle composant comme indiqué.

Italiano

Il segnale audio e video analogico viene trasmesso da un dispositivo esterno al televisore. Collegare il dispositivo esterno e il TV con un cavo generico Component come mostrato.

Español

Transmite las señales de audio y vídeo analógico de un dispositivo externo a la TV. Use un cable de género compuesto para conectar el dispositivo externo a la TV como se indica.

Português

Transmite sinais analógicos de vídeo e áudio de um dispositivo externo para a TV. Ligue o dispositivo externo à TV com um cabo de componente macho, conforme demonstrado.

Nederlands

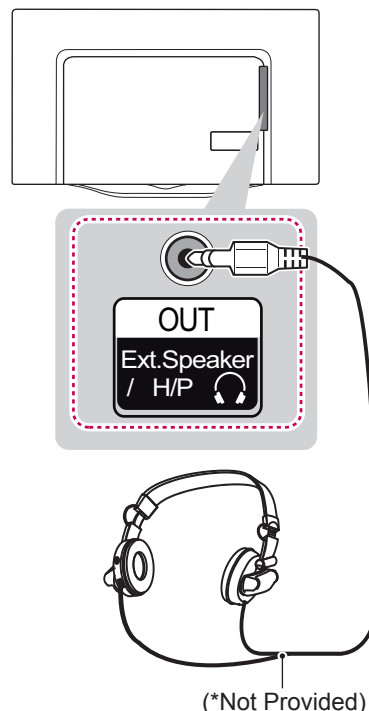
U kunt analoge video- en audiosignalen vanaf een extern apparaat naar de TV zenden. Sluit het externe apparaat en de TV op elkaar aan met behulp van een componentkabel, zoals in de afbeelding.

Ελληνικά

Μεταδίδει τα αναλογικά σήματα εικόνας και ήχου από μια εξωτερική συσκευή στην τηλεόραση. Συνδέστε την εξωτερική συσκευή και την τηλεόραση με ένα καλώδιο component αρσενικό-θηλυκό όπως φαίνεται στην εικόνα.

Slovenščina

Prenaša analogne video in zvočne signale iz zunanje naprave na televizor. Povežite zunanjo napravo in televizor s pretvorniškimi komponentnimi kablom, kot je prikazano.

Headphone Connection**English**

Transmits the headphone signal from the TV to an external device. Connect the external device and the TV with the headphone as shown.

! NOTE

- **AUDIO** menu items are disabled when connecting a headphone.
- Optical Digital Audio Out is not available when connecting a headphone.
- Headphone impedance: 16 Ω
- Max audio output of headphone: 0.627 mW to 1.334 mW
- Headphone jack size: 0.35 cm

Deutsch

Überträgt das Kopfhörersignal vom TV-Gerät an ein externes Gerät. Verbinden Sie die Kopfhörer, wie in der folgenden Abbildung gezeigt, mit dem TV-Gerät.

! HINWEIS

- Bei angeschlossenem Kopfhörer sind die **AUDIO**-Menüpunkte deaktiviert.
- Der optische digitale Audioausgang ist nicht verfügbar, solange Kopfhörer angeschlossen sind.
- Kopfhörerimpedanz: 16 Ω
- Max. Ausgangsleistung am Kopfhöreranschluss: 0,627 mW bis 1,334 mW
- Kopfhörerbuchsen: 3,5mm $\emptyset$

Français

Transmet le signal du casque de la TV au périphérique externe. Connectez le périphérique externe et la TV avec le casque comme indiqué sur l'illustration suivante.

! REMARQUE

- Les éléments du menu **AUDIO** sont désactivés lorsque vous branchez un casque.
- La sortie audio numérique optique n'est pas disponible lorsque vous branchez un casque.
- Impédance du casque : 16 Ω
- Sortie audio max. du casque : 0,627 mW à 1,334 mW
- Taille de la prise casque : 0,35 cm

Italiano

Consente la trasmissione del segnale delle cuffie dalla TV a un dispositivo esterno. Collegare il dispositivo esterno e la TV con le cuffie come mostrato nell'illustrazione di seguito.

! NOTA

- Le voci del menu **AUDIO** sono disabilitate se sono collegate le cuffie.
- L'uscita audio ottica digitale non è disponibile se sono collegate le cuffie.
- Impedenza cuffie: 16 Ω
- Uscita audio max delle cuffie: da 0,627 mW a 1,334 mW
- Dimensioni jack per cuffia: 0,35 cm

Español

Transmite la señal de auriculares de la TV a un dispositivo externo. Use el cable de los auriculares para conectar el dispositivo externo a la TV, tal y como se muestra en la siguiente ilustración.

! NOTA

- Al conectar los auriculares se desactivarán las opciones del menú **AUDIO**.
- La salida óptica de audio digital no estará disponible al conectar unos auriculares.
- Impedancia del auricular: 16 Ω
- Salida de audio máxima de los auriculares: de 0,627 mW a 1,334 mW.
- Tamaño de la clavija de los auriculares: 0,35 cm

Português

Transmite o sinal dos auscultadores da TV para um dispositivo externo. Ligue o dispositivo externo à TV com os auscultadores, conforme demonstrado na ilustração.

! NOTA

- Os itens do menu **AUDIO** ficam inativos quando liga os auscultadores.
- A saída digital áudio óptico não está disponível quando liga auscultadores.
- Impedância dos auscultadores: 16 Ω
- Saída de áudio máx. dos auscultadores: 0,627 a 1,334 mW
- Tamanho da tomada para auscultadores: 0,35 cm

Nederlands

U kunt het hoofdtelefoonsignaal vanaf de TV naar een extern apparaat zenden. Sluit het externe apparaat en de TV aan op de hoofdtelefoon, zoals aangegeven in de volgende afbeelding.

! OPMERKING

- Onderdelen in het menu **AUDIO** worden uitgeschakeld wanneer u een hoofdtelefoon aansluit.
- Optische Digitale Audio Uit is niet beschikbaar bij het aansluiten van een hoofdtelefoon.
- Impedantie van hoofdtelefoon: 16 Ω
- Maximale audio-uitvoer van hoofdtelefoon: 0,627 mW tot 1,334 mW
- Grootte van hoofdtelefoonaansluiting: 0,35 cm

Ελληνικά

Μεταδίδει το σήμα ακουστικών από την τηλεόραση σε μια εξωτερική συσκευή. Συνδέστε την εξωτερική συσκευή και την τηλεόραση με τα ακουστικά, όπως φαίνεται στην παρακάτω εικόνα.

ΣΗΜΕΙΩΣΗ

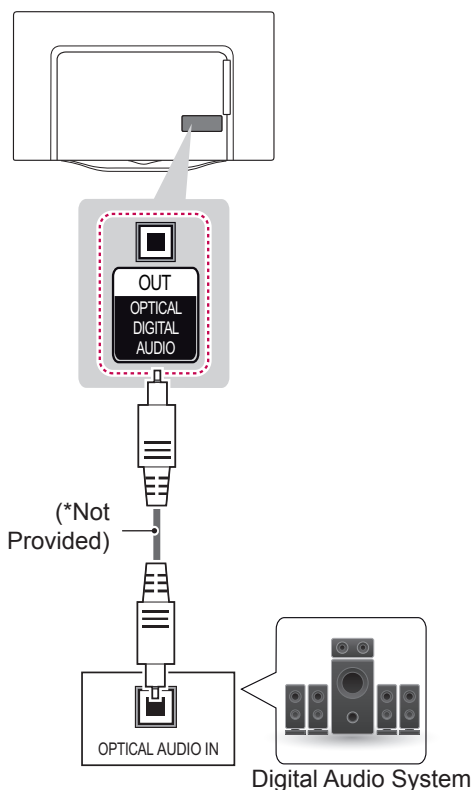
- Τα στοιχεία του μενού **ΗΧΟΣ** απενεργοποιούνται, όταν συνδέετε ακουστικά.
- Η οπτική ψηφιακή έξοδος ήχου δεν είναι διαθέσιμη, όταν συνδέετε ακουστικά.
- Σύνθετη αντίσταση ακουστικών: 16 Ω
- Μέγιστη έξοδος ήχου ακουστικών: 0,627 mW έως 1,334 mW
- Μέγεθος υποδοχής ακουστικών: 0,35 cm

Slovenščina

Prenaša signal za slušalke iz televizorja na zunanjo napravo. Povežite zunanjo napravo in televizor s kablom za slušalke, kot je prikazano na naslednji sliki.

ΟΠΟΜΒΑ

- Ko so priključene slušalke, ni mogoče uporabljati možnosti iz **ZVOK** menija.
- Ob priključenih slušalkah optični digitalni avdio izhod ni na razpolago.
- Impedanca slušalk: 16 Ω
- Največji avdio izhod slušalke: 0,627–1,334 mW
- Velikost vtiča slušalk: 0,35 cm

Audio Connection**English**

You may use an external audio system instead of the built-in speaker.

Digital optical audio connection

Transmits a digital audio signal from the TV to an external device. Connect the external device and the TV with the optical audio cable as shown.

NOTE

- Do not look into the optical output port. Looking at the laser beam may damage your vision.
- Audio with ACP (Audio Copy Protection) function may block digital audio output.

Deutsch

Sie können anstelle der integrierten Lautsprecher ein optionales externes Audiosystem verwenden.

Anschluss über ein digitales optisches Audiokabel

Überträgt ein digitales Audiosignal vom TV-Gerät an ein externes Gerät. Verbinden Sie das externe Gerät, wie in der folgenden Abbildung gezeigt, mithilfe des optischen Audiokabels mit dem TV-Gerät.

! HINWEIS

- Blicken Sie nicht in den optischen Ausgangsanschluss. Der Laserstrahl könnte Ihren Augen schaden.
- Die Funktion Audio mit ACP (Audio-Kopierschutz) blockiert möglicherweise den digitalen Audioausgang.

Français

Vous pouvez utiliser un système audio externe en option à la place d'un haut-parleur intégré.

Connexion audio optique numérique

Permet de transmettre un signal audio numérique de la TV au périphérique externe. Connectez le périphérique externe et la TV avec le câble audio optique comme indiqué sur l'illustration suivante.

! REMARQUE

- Ne regardez pas dans le port de sortie optique. Le rayon laser risquerait de vous abîmer la vue.
- La fonction Audio avec ACP (protection copie audio) peut bloquer la sortie audio numérique.

Italiano

È possibile utilizzare un sistema audio esterno opzionale al posto dell'altoparlante integrato.

Collegamento audio ottico digitale

Il segnale audio digitale viene trasmesso dal televisore su un dispositivo esterno. Collegare il dispositivo esterno e il televisore con il cavo audio ottico come mostrato nell'illustrazione di seguito.

! NOTA

- Non guardare nella porta dell'uscita ottica. Guardare il raggio laser potrebbe provocare danni alla vista.
- Contenuti audio con funzione anticopia (ACP, Audio Copy Protection) possono bloccare l'uscita audio digitale.

Español

Puede emplear un sistema de audio externo opcional en vez de los altavoces integrados.

Conexión óptica de audio digital

Transmite una señal de audio digital de la TV a un dispositivo externo. Use el cable de audio óptico para conectar el dispositivo externo a la TV, tal y como se muestra en la siguiente ilustración.

! NOTA

- No mire directamente el puerto de salida óptica. El haz de luz del láser puede dañar la vista.
- El audio con función ACP (protección de copia de audio) puede bloquear la salida de audio digital.

Português

Pode utilizar um sistema de áudio externo opcional em vez das colunas incorporadas.

Ligação de áudio óptica digital

Transmite um sinal áudio digital da TV para um dispositivo externo. Ligue o dispositivo externo à TV com o cabo de áudio óptico, conforme demonstrado na ilustração.

! NOTA

- Não olhe para a porta de saída óptica. Se olhar para o feixe laser, poderá prejudicar a visão.
- O áudio com a função ACP (protecção áudio anti-cópia) poderá bloquear a saída áudio digital.

Nederlands

U kunt een optioneel extern audiosysteem gebruiken in plaats van de ingebouwde speaker.

Digitale, optische audioverbinding

U kunt een digitaal audiosignaal vanaf de TV naar een extern apparaat zenden. Sluit het externe apparaat en de TV op elkaar aan met behulp van de optische audiokabel, zoals aangegeven in de volgende afbeelding.

! OPMERKING

- Kijk niet in de optische uitgangspoort. De laserstraal kan schadelijk zijn voor uw ogen.
- Audio met de ACP-functie (analoge kopieerbeveiliging) kan digitale audio-uitvoer blokkeren.

Ελληνικά

Αντί για το ενσωματωμένο ηχείο, μπορείτε να χρησιμοποιήσετε ένα προαιρετικό εξωτερικό ηχοσύστημα.

Ψηφιακή οπτική σύνδεση ήχου

Μεταδίδει ένα ψηφιακό σήμα ήχου από την τηλεόραση σε μια εξωτερική συσκευή. Συνδέστε την εξωτερική συσκευή και την τηλεόραση με το οπτικό καλώδιο ήχου, όπως φαίνεται στην παρακάτω εικόνα.

! ΣΗΜΕΙΩΣΗ

- Μην κοιτάτε μέσα στην οπτική έξοδο. Αν κοιτάξετε τη δέσμη λέιζερ, υπάρχει κίνδυνος βλάβης στην όρασή σας.
- Η λειτουργία Audio with ACP (Audio Copy Protection) ενδέχεται να εμποδίζει την ψηφιακή έξοδο ήχου.

Slovenščina

Namesto vgrajenih zvočnikov uporabite izbirni zunanji zvočni sistem.

Digitalni optični avdio priključek

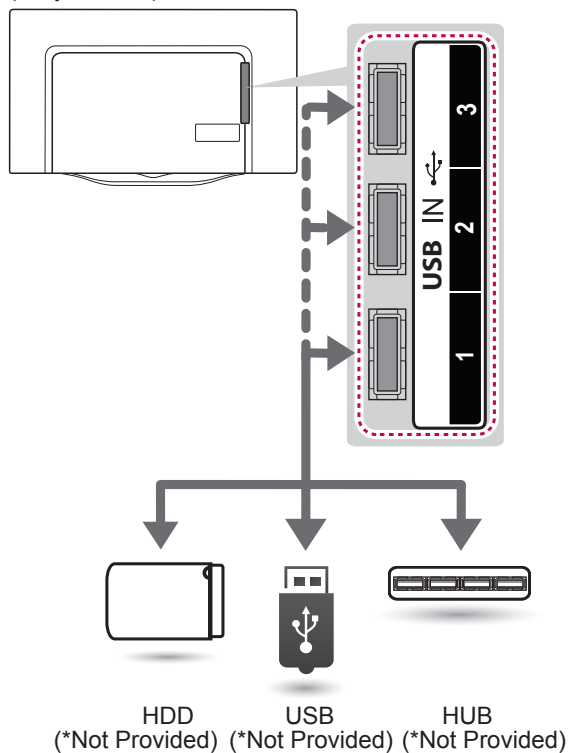
Prenaša digitalni zvočni signal iz televizorja na zunanjo napravo. Povežite zunanjo napravo in televizor z optičnim zvočnim kablom, kot je prikazano na naslednji sliki.

! OPOMBA

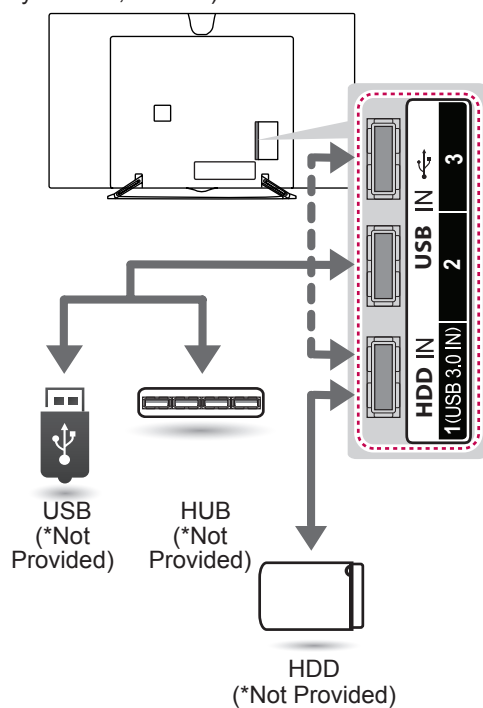
- Ne glejte v optična izhodna vrata. Če pogledate v laserski žarek, si lahko poškodujete vid.
- Zvok s funkcijo ACP (zaščita zvočne kopije) lahko blokira izhodni digitalni zvok.

USB Connection

(Only EC93**)



(Only EC97**, EC98**)



English

Connect a USB storage device such as a USB flash memory, external hard drive or a USB memory card reader to the TV and access the Smart Share menu to use various multimedia files.

NOTE

- Some USB Hubs may not work. If a USB device connected using a USB Hub is not detected, connect it to the USB IN port on the TV directly.
- Connect the external power source if your USB is needed.
- Connecting via USB 3.0:
Some USB device may not work if it does not meet USB 3.0 standard. In case, connect it to **USB IN 2** or **USB IN 3** port. (Only EC97**, EC98**)

Deutsch

Verbinden Sie ein USB-Speichergerät, z. B. USB-Flash-Speicher, eine externe Festplatte oder einen USB-Kartenleser für Speicherkarten mit dem TV-Gerät, und greifen Sie auf das Menü „Smart Share“ zu, um verschiedene Multimediadateien zu verwenden.

HINWEIS

- Einige USB-Hubs funktionieren vielleicht nicht. Falls ein über einen USB-Hub verbundenes USB-Gerät nicht gefunden wird, verbinden Sie es direkt mit dem USB IN-Anschluss am TV-Gerät.
- Schließen Sie eine externe Stromquelle an, wenn eine USB-Verbindung erforderlich ist.
- Verbindungsanleitung für USB 3.0 :
Einige USB-Geräte, die dem USB 3.0-Standard nicht entsprechen, funktionieren möglicherweise nicht. Schließen Sie Ihr Gerät in diesem Fall an einen **USB IN 2-** oder **USB IN 3-**Anschluss an. (Nur EC97**, EC98**)

Français

Connectez un périphérique de stockage USB comme une clé USB, un disque dur externe ou une carte mémoire USB à la TV et accédez au menu Smart Share pour utiliser divers fichiers multimédia.

! REMARQUE

- Certains ports USB peuvent ne pas fonctionner. Si un appareil USB branché sur un port USB IN n'est pas détecté alors connectez-le directement au téléviseur.
- Connectez la source d'alimentation externe si une connexion USB est nécessaire.
- Guide de connexion pour USB 3.0 : Certains appareils USB peuvent ne pas fonctionner s'ils ne prennent pas en charge la norme USB 3.0. Connectez l'appareil aux ports **USB IN 2** ou **USB IN 3**. (Uniquement EC97**, EC98**)

Español

Conecte un dispositivo de almacenamiento USB, como una memoria flash USB, un disco duro externo o un lector de tarjetas de memoria USB a la TV y acceda al menú Smart Share para manejar diversos archivos multimedia.

! NOTA

- Es posible que algunos concentradores USB no funcionen. Si no se detecta un dispositivo USB conectado mediante un concentrador USB, conéctelo directamente al puerto USB IN de la TV.
- Conecte la fuente de alimentación externa si necesita el USB.
- Guía de conexión para USB 3.0 : Es posible que algunos dispositivos USB no funcionen si no cumplen con el estándar USB 3.0. En ese caso, conéctelo al puerto **USB IN 2** o **USB IN 3**. (Solo EC97**, EC98**)

Italiano

Collegare una periferica di archiviazione USB, ad esempio una memoria flash USB, un hard disk esterno, o un lettore di schede di memoria USB al televisore e accedere al menu Smart Share per utilizzare diversi file multimediali.

! NOTA

- Alcuni hub USB potrebbero non funzionare. Se una periferica USB collegata tramite un hub USB non viene rilevata, collegarla direttamente alla porta USB IN della TV.
- Collegarsi all'alimentazione esterna se il dispositivo USB lo richiede.
- Guida alla connessione per USB 3.0 : È possibile che alcune periferiche USB non funzionino se non soddisfano lo standard USB 3.0. In tal caso, collegare la periferica alla porta **USB IN 2** o **USB IN 3**. (Solo EC97**, EC98**)

Português

Ligue um dispositivo de armazenamento USB, como por exemplo uma memória flash USB, uma unidade de disco rígido externa ou um leitor de cartões de memória USB, à TV e aceda ao menu Smart Share para utilizar vários tipos de ficheiros multimédia.

! NOTA

- Alguns hubs USB poderão não funcionar. Se não for detectado um dispositivo USB ligado através de um hub USB, ligue o dispositivo directamente à porta USB IN na TV.
- Ligue a fonte de alimentação externa do seu equipamento USB se for necessário.
- Guia de ligação para USB 3.0 : Alguns dispositivos USB poderão não funcionar se não forem compatíveis com o padrão USB 3.0. Se for o caso, ligue o dispositivo em questão à porta **USB IN 2** ou **USB IN 3**. (Apenas EC97**, EC98**)

Nederlands

Sluit een USB-opslagapparaat, zoals een USB-flashgeheugen, externe harde schijf of een USB-geheugenkaartlezer, aan op de TV en open het menu Smart Share om diverse multimediastanden te kunnen gebruiken.

**OPMERKING**

- Sommige USB-hubs werken mogelijk niet. Als een USB-apparaat dat via een USB-hub is aangesloten niet wordt gedetecteerd, sluit u het apparaat direct aan op de USB IN-poort van de TV.
- Sluit het USB-apparaat, indien van toepassing, op een stopcontact aan.
- Informatie met betrekking tot USB 3.0: Sommige USB-apparaten werken mogelijk niet wanneer ze niet voldoen aan de USB 3.0-standaard. In dat geval sluit u het apparaat aan op de **USB IN 2-** of **USB IN 3-poort**. (Alleen EC97**, EC98**)

Slovenščina

Na televizor priključite pomnilniško napravo USB, kot je pomnilnik USB Flash, zunanji trdi disk ali bralnik pomnilniških kartic USB in odprite meni Smart Share, da uporabite različne večpredstavnostne datoteke.

**OPOMBA**

- Nekatera zvezdišča USB morda ne bodo delovala. Če naprava USB, povezana prek zvezdišča USB, ni zaznana, jo priključite neposredno na vrata USB IN na televizorju.
- Priklopite vir zunanjega napajanja, če ga naprava USB zahteva.
- Navodila za priključitev USB 3.0 : Naprave USB, ki ne podpirajo standarda USB 3.0, ne bodo delovale. V tem primeru napravo priključite na vrata **USB IN 2** ali **USB IN 3**. (Samo modeli EC97**, EC98**)

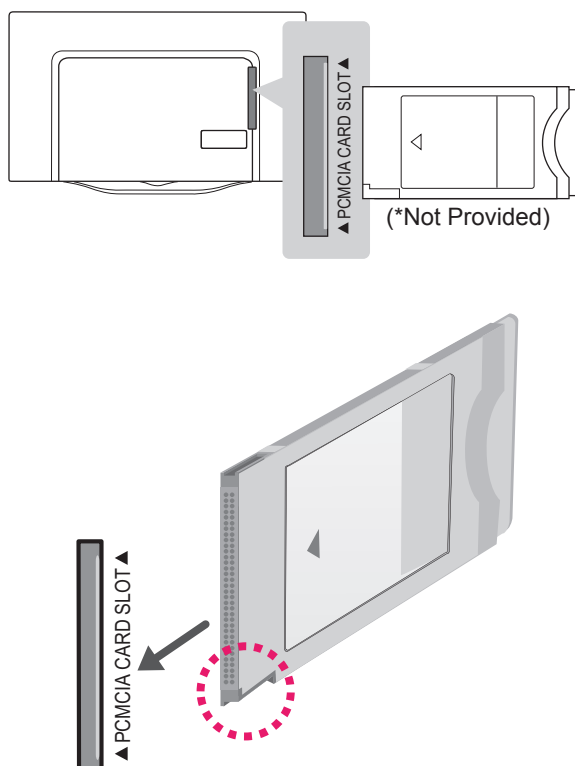
Ελληνικά

Συνδέστε μια συσκευή αποθήκευσης USB, όπως μια μνήμη flash USB, έναν εξωτερικό σκληρό δίσκο ή μια συσκευή ανάγνωσης καρτών μνήμης USB, στην τηλεόραση και μεταβείτε στο μενού Smart Share για τη χρήση διάφορων αρχείων πολυμέσων.

**ΣΗΜΕΙΩΣΗ**

- Ορισμένοι διανομείς USB ενδέχεται να μην λειτουργούν. Εάν δεν είναι δυνατή η ανίχνευση μιας συσκευής USB που έχει συνδεθεί μέσω διανομέα USB, συνδέστε την απευθείας στην υποδοχή USB IN της τηλεόρασης.
- Συνδέστε την εξωτερική πηγή τροφοδοσίας αν η εξωτερική συσκευή διαθέτει δικό της καλώδιο.
- Οδηγός σύνδεσης για USB 3.0 : Ορισμένες συσκευές USB ενδέχεται να μην λειτουργούν αν δεν πληρούν το πρότυπο USB 3.0. Σε αυτήν την περίπτωση συνδέστε σε θύρα **USB IN 2** ή **USB IN 3**. (Μόνο για τα μοντέλα EC97**, EC98**)

CI module Connection



English

View the encrypted (pay) services in digital TV mode. This feature is not available in all countries.

! NOTE

- Check if the CI module is inserted into the PCMCIA CARD SLOT in the right direction. If the module is not inserted properly, this can cause damage to the TV and the PCMCIA CARD SLOT.
- If the TV does not display any video and audio when CI+ CAM is connected, please contact to the Antenna/Cable/Satellite Service Operator.

Deutsch

Zeigen Sie verschlüsselte Dienste (Bezahldienste) im digitalen TV-Modus an. Diese Funktion ist in einigen Ländern nicht verfügbar.

! HINWEIS

- Überprüfen Sie, ob das CI-Modul richtig herum in den PCMCIA-Kartensteckplatz gesteckt wurde. Falls das Modul nicht korrekt eingesetzt wurde, können TV-Gerät und PCMCIA-Kartensteckplatz beschädigt werden.
- Wenn das Fernsehgerät keine Videos oder Audio-Dateien abspielt, während es mit der CI+ CAM verbunden ist, wenden Sie sich an den Serviceanbieter für Antenne / Kabel / Satellit.

Français

Affichez les services cryptés (payants) en mode TV numérique. Cette fonction n'est pas disponible dans tous les pays.

! REMARQUE

- Vérifiez si le module CI est inséré dans le bon sens dans la fente de la carte PCMCIA. Si le module est mal inséré, la TV pourrait subir des dommages ainsi que la fente de la carte PCMCIA.
- Si le téléviseur n'affiche aucune vidéo et n'émet aucun son lorsque l'entrée CI+ CAM est connectée, contactez votre opérateur de service antenne/satellite/câble.

Italiano

Consente la visione dei servizi codificati (a pagamento) in modalità TV digitale. Questa funzione non è disponibile in tutti i paesi.

! NOTA

- Verificare che il modulo CI sia inserito nello slot della scheda PCMCIA nel verso corretto. Se il modulo non è inserito nel modo corretto, possono verificarsi danni alla TV e allo slot stesso.
- Se il TV non visualizza o riproduce alcun contenuto video e audio quando è collegata la funzione CAM (modulo di accesso condizionale) con CI+ (Interfaccia comune plus), contattare l'operatore del servizio antenna/via cavo/satellitare.

Español

Puede visualizar los servicios de abono (de pago) en el modo de DTV. Esta función no está disponible en todos los países.

! NOTA

- Compruebe si el módulo CI se ha insertado en la ranura para tarjeta PCMCIA en la dirección correcta. Si el módulo no se ha insertado correctamente, podría causar daños en la TV y en la ranura para tarjeta PCMCIA.
- Si la TV no reproduce vídeo ni audio cuando se conecta CI+ CAM, póngase en contacto con el operador del servicio por antena/cable/digital terrestre.

Ελληνικά

Παρακολουθήστε κρυπτογραφημένες (συνδρομητικές) υπηρεσίες στη λειτουργία ψηφιακής τηλεόρασης. Αυτή η λειτουργία δεν είναι διαθέσιμη σε όλες τις χώρες.

! ΣΗΜΕΙΩΣΗ

- Ελέγξτε αν η μονάδα CI έχει τοποθετηθεί στην εσοχή κάρτας PCMCIA με τη σωστή κατεύθυνση. Αν δεν έχει τοποθετηθεί σωστά, μπορεί να προκαλέσει ζημιά στην τηλεόραση και στην υποδοχή κάρτας PCMCIA.
- Αν η τηλεόραση δεν υποστηρίζει εικόνα και ήχο κατά τη σύνδεση CI+ CAM, επικοινωνήστε με τον πάροχο κεραίας/καλωδιακών/δορυφορικών υπηρεσιών.

Português

Visualizar os serviços encriptados (pagos) no modo de TV digital. Esta função não está disponível em todos os países.

! NOTA

- Verifique se o módulo CI está inserido na ranhura de cartão PCMCIA no sentido correcto. Se o módulo não estiver inserido correctamente, pode danificar a TV e a ranhura de cartões PCMCIA.
- Se a TV não exibir qualquer vídeo e áudio com o CAM CI+ ligado, contacte o Operador de Serviços de antena/por cabo/ terrestres.

Slovenščina

Za ogled kodiranih (plačljivih) storitev v digitalnem televizijskem načinu.

! OPOMBA

- Prepričajte se, da je CI modul pravilno vstavljen v režo za PCMCIA kartice. Če modul ni obrnjen pravilno, lahko pride do poškodbe TV aparata in PCMCIA reže.
- Če se na televizorju ne predvaja video ali zvok, ko je priključen modul CI+ CAM, se obrnite na ponudnika anteno/kabelskih/satelitskih storitev.

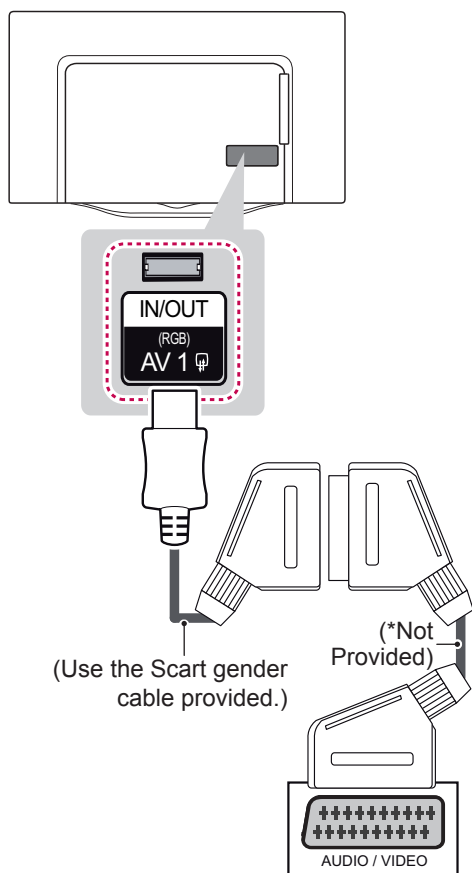
Nederlands

Bekijk gescrembelde services (betaalservices) in de digitale TV-modus. Deze functie is niet in alle landen beschikbaar.

! OPMERKING

- Controleer of de CI-module in de juiste richting is geplaatst in de PCMCIA-kaartsleuf. Indien de module niet goed is geplaatst, kan dit schade veroorzaken aan de TV en de PCMCIAkaartsleuf.
- Als de TV geen audio en video afspeelt terwijl CI+ CAM is aangesloten, neem dan contact op met de antenne-/kabel-/satelliet-exploitant.

Euro Scart Connection



English

Transmits the video and audio signals from an external device to the TV set. Connect the external device and the TV set with the Scart gender cable as shown.

Output Type	AV1 (TV Out ¹)
Current input mode	
Digital TV	Digital TV
Analogue TV, AV	Analogue TV
Component	
HDMI	

1 TV Out : Outputs Analogue TV or Digital TV signals.

! NOTE

- Any Euro scart cable used must be signal shielded.
- When watching digital TV in 3D imaging mode, only 2D out signals cannot be output through the SCART cable.
- If you use the Time Machine function on digital TV, monitor out signals cannot be output through the SCART cable.

Deutsch

Überträgt Video- und Audiosignale von einem externen Gerät an das TV-Gerät. Verbinden Sie das externe Gerät wie in der Abbildung gezeigt über ein anderes Scart-Kabel mit dem TV-Gerät.

Ausgangstyp	AV1 (TV-Ausgang ¹)
Aktueller Eingangsmodus	
Digital-TV	Digital-TV
Analog-TV, AV	Analog-TV
Component	
HDMI	

1 TV-Ausgang : Ausgang für analoge und digitale Fernsehsignale.

! HINWEIS

- Das Euro-Scart-Kabel muss signaltechnisch abgeschirmt sein.
- Bei digitalem Fernsehen im 3D-Modus können nur 2D-Ausgangssignale über ein SCART-Kabel ausgegeben werden.
- Wenn Sie die Funktion „Time Machine“ des Digital-TVs nutzen, können keine TV-Ausgangssignale über das SCART-Kabel ausgegeben werden.

Français

Transmet les signaux audio et vidéo d'un appareil externe au téléviseur. Connectez le périphérique externe et le téléviseur avec le câble PériTel mâle comme indiqué.

Type de sortie Mode d'entrée actuel	AV1 (Sortie TV ¹)
TV numérique	TV numérique
TV analogique, AV	TV analogique
Composant	
HDMI	

- 1 Sortie TV : sortie de signaux en mode TV analogique ou en mode TV numérique.

REMARQUE

- Tous les câbles Euro scart utilisés doivent être des câbles de signal blindés.
- Quand le mode 3D est sélectionné sur la TV numérique, seuls les signaux de sortie 2D peuvent être émis via le câble périTel.
- Si vous utilisez la fonction Time Machine sur le téléviseur numérique, les signaux de sortie du téléviseur ne peuvent être traités via le câble SCART.

Español

Transmite las señales de audio y vídeo de un dispositivo externo a la TV. Use el de género SCART para conectar el dispositivo externo a la TV como se muestra.

Tipo de salida Modo de entrada	AV1 (Salida de TV ¹)
TV digital	TV digital
TV analógica, AV	TV analógica
Component	
HDMI	

- 1 Salida de TV : salida de señales de TV analógica o digital.

NOTA

- Todo cable euroconector que se emplee deberá estar blindado.
- Cuando visualice la TV digital en modo de imagen 3D, sólo podrá utilizar el euroconector para las señales de salida 2D.
- Si usa la función Time Machine en la TV digital, no podrá utilizar el SCART para las señales de salida de la TV.

Italiano

Consente la trasmissione dei segnali audio e video da un dispositivo esterno al televisore. Collegare il dispositivo esterno e il TV con un cavo generico Euro Scart come mostrato.

Tipo di uscita Modalità di ingresso corrente	AV1 (Uscita TV ¹)
TV digitale	TV digitale
TV analogica, AV	TV analogica
Component	
HDMI	

- 1 Uscita TV : uscite segnali TV analogica o TV digitale.

NOTA

- I cavi Euro Scart devono essere schermati.
- Quando si guarda il TV digitale in modalità immagini 3D, solo i segnali di uscita 2D possono passare attraverso il cavo SCART.
- Se si utilizza la funzione Time Machine sul TV digitale, i segnali di uscita del TV non potranno essere trasmessi tramite il cavo SCART.

Português

Transmite os sinais de vídeo e áudio de um dispositivo externo para a TV. Ligue o dispositivo externo ao televisor com o cabo Scart macho, conforme demonstrado.

Tipo de saída Modo de entrada actual	AV1 (Saída TV ¹)
TV Digital	TV Digital
TV Analógica, AV	TV Analógica
Componentes	
HDMI	

- 1 Saída TV : Sinais de Saída de TV Analógica ou Digital.

NOTA

- Qualquer cabo Euro scart utilizado terá de ser blindado.
- Quando estiver a ver TV digital no modo de imagem em 3D, apenas os sinais de saída 2D poderão ser emitidos através do cabo SCART.
- Se utilizar a função Time Machine numa TV digital, não é possível enviar os sinais de saída da TV através do cabo SCART.

Nederlands

U kunt de video- en audiosignalen vanaf een extern apparaat naar de TV zenden. Sluit het externe apparaat en de TV op elkaar aan met behulp van de Scart-kabel (mannetje/vrouwje), zoals in de afbeelding.

Uitvoertype Huidige invoermodus	AV1 (TV Uit ¹)
Digitale TV	Digitale TV
Analoge TV, AV	Analoge TV
Component	
HDMI	

1 TV Uit : voert analoge TV-signalen of Digitale TV-signalen uit.

! OPMERKING

- Voor elke Scart-kabel moet het signaal zijn afgeschermd.
- Tijdens het kijken naar digitale TV in de modus voor 3D-beelden kunnen alleen 2D-uitsignalen worden uitgevoerd via de SCART-kabel.
- Als u de functie Time Machine op digitale TV gebruikt, kunnen TV uit-signalen niet worden uitgevoerd via de SCART-kabel.

Slovenščina

Prenaša video in audio signale iz zunanje naprave na televizor. Povežite zunanjo napravo in televizor s pretvorniškimi kablom Euro Scart, kot je prikazano.

Vrsta izhoda Trenutni način vhoda	AV1 (TV-izhod ¹)
Digitalna TV	Digitalna TV
Analogna TV, AV	Analogna TV
Komponentni	
HDMI	

1 TV-izhod : Izhod za analogne in digitalne televizijske signale.

! OPOMBA

- Kabel Euro Scart mora biti signalno zaščiten.
- Pri gledanju digitalne televizije v 3D-načinu je mogoče po kablu SCART oddajati le 2D-izhodne signale.
- Pri uporabi funkcije Time Machine pri digitalni televiziji izhodnih signalov monitorja ni mogoče oddajati po kablu SCART.

Ελληνικά

Μεταδίδει τα σήματα εικόνας και ήχου από μια εξωτερική συσκευή στην τηλεόραση. Συνδέστε την εξωτερική συσκευή και την τηλεόραση με ένα καλώδιο Euro Scart αρσενικό-θηλυκό όπως φαίνεται στην εικόνα.

Τύπος εξόδου Τρέχουσα λειτουργία εισόδου	AV1 (Έξοδος TV ¹)
Ψηφιακή τηλεόραση	Ψηφιακή τηλεόραση
Αναλογική τηλεόραση, AV	Αναλογική τηλεόραση
Component	
HDMI	

1 Έξοδος TV : Έξοδοι αναλογικού σήματος τηλεόρασης ή ψηφιακού σήματος τηλεόρασης.

! ΣΗΜΕΙΩΣΗ

- Κάθε καλώδιο Euro scart που χρησιμοποιείται πρέπει να διαθέτει θωράκιση σήματος.
- Όταν παρακολουθείτε ψηφιακή τηλεόραση στη λειτουργία απεικόνισης 3D, μόνο τα σήματα εξόδου 2D μεταδίδονται μέσω του καλωδίου SCART.
- Αν χρησιμοποιείτε τη λειτουργία Time Machine σε ψηφιακή τηλεόραση, τα σήματα εξόδου της τηλεόρασης δεν μπορούν να μεταδοθούν μέσω καλωδίου SCART.

English

Connect various external devices to the TV and switch input modes to select an external device. For more information on external device's connection, refer to the manual provided with each device. Available external devices are: HD receivers, DVD players, VCRs, audio systems, USB storage devices, PC, gaming devices, and other external devices.

! NOTE

- The external device connection may differ from the model.
- Connect external devices to the TV regardless of the order of the TV port.
- If you record a TV program on a DVD recorder or VCR, make sure to connect the TV signal input cable to the TV through a DVD recorder or VCR. For more information of recording, refer to the manual provided with the connected device.
- 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 via PC, the video or audio may have disruptions intermittently depending on your PC's performance.

Deutsch

Verbinden Sie mehrere externe Geräte mit dem TV-Gerät, und wechseln Sie die Eingangsmodi, um ein externes Gerät auszuwählen. Weitere Informationen zum Anschluss von externen Geräten entnehmen Sie bitte dem Handbuch des jeweiligen Gerätes. Verfügbare externe Geräte sind : HD-Receiver, DVD-Player, Videorekorder, Audiosysteme, USB-Speichergeräte, PCs, Spielkonsolen und weitere externe Geräte.

! HINWEIS

- Der Anschluss für externe Geräte kann von Modell zu Modell unterschiedlich sein.
- Verbinden Sie externe Geräte unabhängig von der Reihenfolge der Anschlüsse mit dem TVGerät.
- Wenn Sie eine Fernsehsendung über DVD-oder Videorekorder aufnehmen, vergewissern Sie sich, dass das TV-Gerät über das Eingangskabel für das TV-Signal mit dem DVD-oder Videorekorder verbunden ist.
Weitere Informationen zu Aufnahmen entnehmen Sie bitte dem Handbuch des verbundenen Gerätes.
- Anweisungen zum Betrieb finden Sie im Handbuch des externen Gerätes.
- Wenn Sie eine Spielekonsole mit dem TV-Gerät verbinden, verwenden Sie das mit der Konsole mitgelieferte Kabel.
- Im PC-Modus kann es hinsichtlich Auflösung, vertikalem Muster, Kontrast oder Helligkeit zu Rauschen kommen. Wenn Rauschen auftritt, stellen Sie den PC auf eine andere Auflösung ein, ändern Sie die Bildwiederholrate, oder passen Sie Helligkeit und Kontrast im Menü „BILD“ an, bis das Bild optimal ist.
- Abhängig von der Grafikkarte funktionieren im PC-Modus einige Auflösungseinstellungen möglicherweise nicht ordnungsgemäß.
- Falls Sie Ultra-HD-Inhalte über einen PC zuspiesen, ist dessen Leistungsfähigkeit entscheidend für ein störungsfreies Abspielverhalten von Bild & Ton.

Français

Connectez divers périphériques externes à la TV et changez de mode de source d'entrée pour sélectionner un périphérique externe. Pour en savoir plus sur le raccordement d'un périphérique externe, reportez-vous au manuel fourni avec ce dernier. Les périphériques externes disponibles sont les suivants : récepteurs HD, lecteurs DVD, VCR, systèmes audio, périphériques de stockage USB, PC, consoles de jeu et autres périphériques externes.

REMARQUE

- Le raccordement du périphérique externe peut différer du modèle.
- Connectez des périphériques externes à la TV sans tenir compte de l'ordre du port TV.
- Si vous enregistrez un programme TV sur un enregistreur de DVD ou un magnétoscope, veillez à raccorder le câble de source d'entrée du signal de la TV à la TV via un enregistreur de DVD ou un magnétoscope. Pour en savoir plus sur l'enregistrement, reportez-vous au manuel fourni avec le périphérique connecté.
- Veuillez consulter le manuel de l'équipement externe contenant les instructions d'utilisation.
- Si vous connectez une console de jeu à la TV, utilisez le câble fourni avec la console de jeu.
- En mode PC, un bruit peut être associé à la résolution, au modèle vertical, au contraste ou à la luminosité. En présence de bruit, changez la résolution de la sortie PC, changez le niveau du taux de rafraîchissement ou réglez la luminosité et le contraste dans le menu IMAGE jusqu'à ce que l'image soit nette.
- En mode PC, certains réglages de la résolution peuvent ne pas fonctionner correctement en fonction de la carte graphique utilisée.
- Lors de la lecture de contenu Ultra HD sur votre PC, il se peut, selon les performances de votre PC, que la lecture de contenus vidéo ou audio soit altérée.

Italiano

Collegare diversi dispositivi esterni al televisore e modificare la modalità di ingresso per selezionare un dispositivo esterno. Per ulteriori informazioni sul collegamento di un dispositivo esterno, consultare il manuale fornito in dotazione con ciascun dispositivo. È possibile collegare i seguenti dispositivi esterni : ricevitori HD, lettori DVD, VCR, sistemi audio, periferiche di archiviazione USB, PC, console per videogiochi e altri dispositivi esterni.

NOTA

- Il collegamento del dispositivo esterno può variare in base al modello.
- Collegare i dispositivi esterni al televisore a prescindere dall'ordine della porta del televisore.
- Se si registra un programma TV su un registratore DVD o VCR, accertarsi di collegare il cavo di ingresso del segnale al televisore attraverso un registratore DVD o VCR. Per ulteriori informazioni sulla registrazione, consultare il manuale fornito in dotazione con il dispositivo collegato.
- Consultare il manuale dell'apparecchiatura esterna per le istruzioni operative.
- Se si collega una console per videogiochi alla TV, utilizzare il cavo fornito con il dispositivo.
- In modalità PC, possono essere presenti interferenze relative alla risoluzione, schemi verticali, contrasto o luminosità. In caso di interferenze, modificare la modalità PC impostando un'altra risoluzione o modificando la frequenza di aggiornamento oppure regolare luminosità e contrasto sul menu IMMAGINE finché non si ottiene un'immagine nitida.
- A seconda della scheda grafica utilizzata, alcune impostazioni di risoluzione potrebbero non essere adatte alla modalità PC.
- Se i contenuti Ultra HD vengono riprodotti sul PC, il video o l'audio potrebbero interrompersi a seconda delle prestazioni del PC in uso.

Español

Puede conectar varios dispositivos externos a la TV y cambiar entre los modos de entrada para seleccionar un dispositivo externo. Para obtener más información sobre la conexión de dispositivos externos, consulte el manual que se incluye con cada dispositivo.

Los dispositivos externos disponibles son : receptores HD, reproductores de DVD, vídeos, sistemas de audio, dispositivos de almacenamiento USB, PC, consolas de juegos, etc.

! NOTA

- La conexión de dispositivos externos puede variar entre distintos modelos.
- Conecte los dispositivos externos a la TV independientemente del orden de los puertos de la TV.
- Si graba un programa de TV en un grabador de DVD o un vídeo, asegúrese de conectar el cable de entrada de señal de TV a la TV a través del grabador de DVD o del vídeo. Para obtener más información sobre la grabación, consulte el manual que se incluye con el dispositivo que se conecte.
- Consulte el manual del equipo externo para obtener las instrucciones de funcionamiento.
- Si conecta una consola de juegos a la TV, emplee el cable proporcionado con el dispositivo en cuestión.
- En el modo PC, puede que se genere ruido asociado a la resolución, al patrón vertical, al contraste o a la luminosidad. Si se produce ruido, cambie la salida PC a otra resolución, cambie la frecuencia de actualización o ajuste la luminosidad y el contraste del menú IMAGEN hasta que la imagen se muestre más clara.
- En el modo PC, puede que algunos ajustes de la resolución no funcionen correctamente en función de la tarjeta gráfica.
- Si se reproduce contenido Ultra HD en el PC, la imagen o el sonido puede interrumpirse de forma intermitente, dependiendo del rendimiento del PC.

Português

Ligue vários dispositivos externos à TV e mude os modos de entrada para seleccionar um dispositivo externo. Para mais informações sobre a ligação de dispositivos externos, consulte o manual fornecido com cada dispositivo.

Os dispositivos externos disponíveis são : receptores HD, leitores de DVD, videogravadores, sistemas de áudio, dispositivos de armazenamento USB, PC, dispositivos de jogos e outros dispositivos externos.

! NOTA

- A ligação do dispositivo externo pode ser diferente da do modelo.
- Ligue dispositivos externos à TV independentemente da ordem da porta da TV.
- Se gravar um programa de televisão num gravador de DVD ou num videogravador, não se esqueça de ligar o cabo do de entrada do sinal de TV à TV através do gravador de DVD ou do videogravador. Para mais informações sobre a gravação, consulte o manual fornecido com o dispositivo ligado.
- Consulte o manual do equipamento externo sobre instruções de funcionamento.
- Se ligar um dispositivo de jogos à TV, utilize o cabo fornecido com o dispositivo de jogos.
- No modo PC, poderá ser produzido um ruído associado à resolução, padrão vertical, contraste ou luminosidade. Se se verificar ruído, altere a saída do PC para outra resolução, altere a frequência de actualização para outra frequência ou ajuste a luminosidade e o contraste no menu IMAGEM até a imagem ficar nítida.
- No modo PC, algumas definições de resolução podem não funcionar correctamente, dependendo da placa gráfica.
- Se reproduzir conteúdo em Ultra HD no seu PC, poderá haver interrupções no vídeo ou no áudio, dependendo do desempenho do PC.

Nederlands

U kunt diverse externe apparaten aansluiten op de TV en de invoerbron wijzigen om het externe apparaat te kiezen. Zie voor meer informatie over het aansluiten van externe apparaten de handleiding die bij elk extern apparaat is geleverd.

De mogelijke externe apparaten zijn : HD-ontvangers, DVD-spelers, videorecorders, audiosystemen, USB-opslagapparaten, PC's, game-apparaten en andere externe apparaten.

! OPMERKING

- De aansluiting van externe apparaten kan per model verschillen.
- Sluit externe apparaten aan op de TV, ongeacht de volgorde van de TV-poort.
- Als u een TV-programma opneemt op een DVD-recorder of videorecorder, moet u ervoor zorgen dat de TV-signaalinvoerkabel via de DVD-recorder of videorecorder op de TV is aangesloten. Zie voor meer informatie over het opnemen de handleiding die bij het aangesloten apparaat is geleverd.
- Raadpleeg de handleiding bij het externe apparaat voor bedieningsinstructies.
- Als u een game-apparaat aansluit op de TV, gebruik dan de kabel die bij het game-apparaat is geleverd.
- Het is mogelijk dat in de PC-modus ruis aan de resolutie, het verticale patroon, het contrast of de helderheid is gekoppeld. Wijzig in dat geval de PC-uitvoer in een andere resolutie, verander de vernieuwingsfrequentie in een andere frequentie of pas de helderheid en het contrast in het menu AFBEELDING aan tot het beeld duidelijk is.
- Afhankelijk van de grafische kaart werken bepaalde resolutie-instellingen in de PC-modus mogelijk niet juist.
- Als er Ultra HD-inhoud op uw PC wordt afgespeeld, kan de video of audio mogelijk worden verstoord, afhankelijk van de prestaties van uw PC.

Ελληνικά

Για να επιλέξετε μια εξωτερική συσκευή, συνδέστε διάφορες εξωτερικές συσκευές στην τηλεόραση και αλλάξτε λειτουργίες εισόδου. Για περισσότερες πληροφορίες σχετικά με τη σύνδεση εξωτερικών συσκευών, ανατρέξτε στο εγχειρίδιο που παρέχεται με κάθε συσκευή.

Οι διαθέσιμες εξωτερικές συσκευές περιλαμβάνουν δέκτες HD, συσκευές αναπαραγωγής DVD, VCR, ηχοσυστήματα, συσκευές αποθήκευσης USB, υπολογιστές, παιχνιδιομηχανές και άλλες εξωτερικές συσκευές.

! ΣΗΜΕΙΩΣΗ

- Η σύνδεση εξωτερικών συσκευών ενδέχεται να διαφέρει ανάλογα με το μοντέλο.
- Μπορείτε να συνδέσετε εξωτερικές συσκευές στην τηλεόραση, ανεξάρτητα από τη σειρά της θύρας της τηλεόρασης.
- Για να εγγράψετε ένα τηλεοπτικό πρόγραμμα σε μια συσκευή εγγραφής DVD ή VCR, βεβαιωθείτε ότι έχετε συνδέσει το καλώδιο εισόδου τηλεοπτικού σήματος στη συσκευή εγγραφής DVD ή VCR. Για περισσότερες πληροφορίες σχετικά με την εγγραφή, ανατρέξτε στο εγχειρίδιο που παρέχεται με τη συνδεδεμένη συσκευή.
- Για οδηγίες λειτουργίας, ανατρέξτε στο εγχειρίδιο του εξωτερικού εξοπλισμού.
- Για να συνδέσετε μια παιχνιδιομηχανή στην τηλεόραση, χρησιμοποιήστε το καλώδιο που παρέχεται με την παιχνιδιομηχανή.
- Στη λειτουργία PC, ενδέχεται να υπάρχει θόρυβος λόγω της ανάλυσης, του κάθετου πλέγματος, της αντίθεσης ή της φωτεινότητας. Εάν υπάρχει θόρυβος, αλλάξτε την ανάλυση στη λειτουργία PC ή το ρυθμό ανανέωσης ή ρυθμίστε τη φωτεινότητα και την αντίθεση στο μενού EIKONA, μέχρι να είναι καθαρή η εικόνα.
- Σε λειτουργία PC, ορισμένες ρυθμίσεις ανάλυσης ενδεχομένως να μην λειτουργούν σωστά, ανάλογα με την κάρτα γραφικών.
- Αν γίνεται αναπαραγωγή περιεχομένου Ultra HD στο PC σας, το βίντεο ή ο ήχος μπορεί να διακόπτονται ανά διαστήματα, ανάλογα με την απόδοση του PC.

Slovenščina

Priključite različne zunanje naprave na televizor in vklopite vhodne načine, da izberete zunanjo napravo. Za dodatne informacije o priključitvi zunanje naprave glejte navodila za uporabo, ki so priložena posamezni napravi.

Zunanje naprave, ki so na voljo, so : HD-sprejemniki, DVD-predvajalniki, videorekorderji, zvočni sistemi, pomnilniki USB, računalniki, igralne konzole in druge zunanje naprave.

! OPOMBA

- Povezava z zunanjo napravo je lahko odvisna od modela.
- Zunanje naprave priključite na priključke televizorja v poljubnem zaporedju.
- Če televizijski program snemate na DVDsnemalnik ali videorekorder, morate DVDsnemalnik ali videorekorder priključiti na televizor s signalnim vhodnim kablom za televizor. Za dodatne informacije o snemanju glejte navodila za uporabo, ki so priložena priključeni napravi.
- Navodila za uporabo si oglejte v priročniku zunanje opreme.
- Če želite na televizor priključiti igralno konzolo, uporabite kabel, ki je bil priložen igralni konzoli.
- V načinu računalnika se lahko pojavi šum, ki je povezan z ločljivostjo, navpičnim vzorcem, kontrastom ali svetlostjo. Če se pojavi šum, spremenite izhodno ločljivost računalnika, spremenite hitrost osveževanje ali v meniju FOTOGRAFIJA prilagodite svetlost in kontrast, dokler slika ni jasna.
- V načinu računalnika nekatere nastavitve ločljivosti morda ne bodo delovale pravilno (odvisno od grafične kartice).
- Če v računalniku predvajate vsebino ultra visoke ločljivosti, sta lahko slika in zvok prekinjena, odvisno od zmogljivosti računalnika.



OWNER'S MANUAL OLED TV

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

www.lg.com

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WARNING

- If you ignore the warning message, you may be seriously injured or there is a possibility of accident or death.



CAUTION

- If you ignore the caution message, you may be slightly injured or the product may be damaged.



NOTE

- The note helps you understand and use the product safely. Please read the note carefully before using the product.

LICENSES

Supported licenses may differ by model. For more information about licenses, visit www.lg.com.



ENGLISH

OPEN SOURCE SOFTWARE NOTICE

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 open-source@lge.com. This offer is valid for three (3) years from the date on which you purchased the product.

EXTERNAL CONTROL DEVICE SETUP

To obtain the external control device setup information, please visit www.lg.com.

SAFETY INSTRUCTIONS



Please read these safety precautions carefully before using the product.

! WARNING

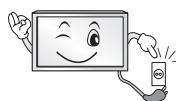


- Do not place the TV and/or remote control in the following environments:
 - A location exposed to direct sunlight
 - An area with high humidity such as a bathroom
 - Near any heat source such as stoves and other devices that produce heat
 - Near kitchen counters or humidifiers where they can easily be exposed to steam or oil
 - An area exposed to rain or wind
 - Near containers of water such as vases

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



- Do not place the product where it might be exposed to dust. This may cause a fire hazard.



- Mains Plug is the TV connecting/disconnecting device to AC mains electric supply. This plug must remain readily attached and operable when TV is in use.



- Do not touch the power plug with wet hands. Additionally, if the cord pin is wet or covered with dust, dry the power plug completely or wipe dust off. You may be electrocuted due to excess moisture.



- Make sure to connect Mains cable to compliant AC mains socket with Grounded earth pin. (Except for devices which are not grounded on earth.) Otherwise possibility you may be electrocuted or injured.



- Insert power cable plug completely into wall socket otherwise if not secured completely into socket, fire ignition may break out.



- Ensure the power cord does not come into contact with hot objects such as a heater. This may cause a fire or an electric shock hazard.



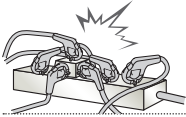
- Do not place a heavy object, or the product itself, on power cables. Otherwise, this may result in fire or electric shock.



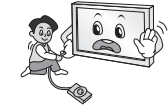
- Bend antenna cable between inside and outside building to prevent rain from flowing in. This may cause water damaged inside the Product and could give an electric shock.



- When mounting TV onto wall make sure to neatly install and isolate cabling from rear of TV as to not create possibility of electric shock/fire hazard.



- Do not plug too many electrical devices into a single multiple electrical outlet. Otherwise, this may result in fire due to over-heating.



- Do not drop the product or let it fall over when connecting external devices. Otherwise, this may result in injury or damage to the product.



- Keep the anti-moisture packing material or vinyl packing out of the reach of children. Anti-moisture material is harmful if swallowed. If swallowed by mistake, force the patient to vomit and visit the nearest hospital. Additionally, vinyl packing can cause suffocation. Keep it out of the reach of children.



- Do not let your children climb or cling onto the TV. Otherwise, the TV may fall over, which may cause serious injury.



- Dispose of used batteries carefully to ensure that a small child does not consume them. Please seek Doctor- Medical Attention immediately if child consumes batteries.



- Do not insert any metal objects/conductors (like a metal chopstick/cutlery/screw-driver) between power cable plug and input Wall Socket while it is connected to the input terminal on the wall. Additionally, do not touch the power cable right after plugging into the wall input terminal. You may be electrocuted. (Depending on model)



- Do not put or store inflammable substances near the product. There is a danger of combustion/explosion or fire due to careless handling of the inflammable substances.



- Do not drop metallic objects such as coins, hair pins, chopsticks or wire into the product, or inflammable objects such as paper and matches. Children must pay particular attention. Electrical shock, fire or injury can occur. If a foreign object is dropped into the product, unplug the power cord and contact the service centre.



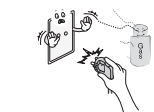
- Do not spray water on the product or scrub with an inflammable substance (thinner or benzene). Fire or electric shock accident can occur.



- Do not allow any impact, shock or any objects to fall into the unit, and do not drop anything onto the screen. You may be injured or the product can be damaged.



- Never touch this product or antenna during a thunder or lightning storm. You may be electrocuted.



- Never touch the wall outlet when there is leakage of gas, open the windows and ventilate. It may cause a fire or a burn by a spark.



- Do not disassemble, repair or modify the product at your own discretion. Fire or electric shock accident can occur. Contact the service centre for check, calibration or repair.



- If any of the following occur, unplug the product immediately and contact your local service centre.
 - The product has been impacted by shock
 - The product has been damaged
 - Foreign objects have entered the product
 - The product produced smoke or a strange smellThis may result in fire or electric shock.



- Unplug the TV from AC mains wall socket if you do not intend to use the TV for a long period of time. Accumulated dust can cause fire hazard and insulation deterioration can cause electric leakage/shock/fire.



- Apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.

⚠ CAUTION



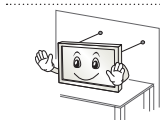
- Install the product where no radio wave occurs.



- There should be enough distance between an outside antenna and power lines to keep the former from touching the latter even when the antenna falls. This may cause an electric shock.



- Do not install the product on places such as unstable shelves or inclined surfaces. Also avoid places where there is vibration or where the product cannot be fully supported. Otherwise, the product may fall or flip over, which may cause injury or damage to the product.



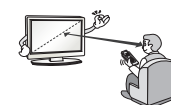
- If you install the TV on a stand, you need to take actions to prevent the product from overturning. Otherwise, the product may fall over, which may cause injury.

- 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.

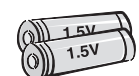
- Only use the attachments / accessories specified by the manufacturer.



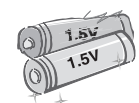
- When installing the antenna, consult with a qualified service technician. If not installed by a qualified technician, this may create a fire hazard or an electric shock hazard.



- We recommend that you maintain a distance of at least 2 to 7 times the diagonal screen size when watching TV. If you watch TV for a long period of time, this may cause blurred vision.



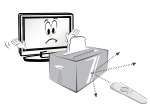
- Only use the specified type of battery. This could cause damage to the remote control.



- Do not mix new batteries with old batteries. This may cause the batteries to overheat and leak.

- Batteries should not be exposed to excessive heat. For example, keep away from direct sunlight, open fireplace and electric heaters.

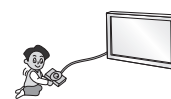
- Do not place non-rechargeable batteries in charging device.



- Make sure there are no objects between the remote control and its sensor.



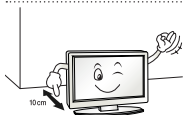
- Signal from Remote Control can be interrupted due to external/internal lighting eg Sunlight, fluorescent lighting. If this occurs turn off lighting or darken viewing area.



- When connecting external devices such as video game consoles, make sure the connecting cables are long enough. Otherwise, the product may fall over, which may cause injury or damage the product.

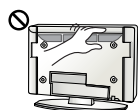


- Do not turn the product On/Off by plugging-in or unplugging the power plug to the wall outlet. (Do not use the power plug for switch.) It may cause mechanical failure or could give an electric shock.



- Please follow the installation instructions below to prevent the product from overheating.
 - The distance between the product and the wall should be more than 10 cm.
 - Do not install the product in a place with no ventilation (e.g., on a bookshelf or in a cupboard).
 - Do not install the product on a carpet or cushion.
 - Make sure the air vent is not blocked by a tablecloth or curtain.

Otherwise, this may result in fire.

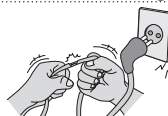


- Take care not to touch the ventilation openings when watching the TV for long periods as the ventilation openings may become hot. This does not affect the operation or performance of the product.

- Periodically examine the cord of your appliance, and if its appearance indicates damage or deterioration, unplug it, discontinue use of the appliance, and have the cord replaced with an exact replacement part by an authorized servicer.



- Prevent dust collecting on the power plug pins or outlet. This may cause a fire hazard.



- 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 appliance.



- Do not press strongly upon the panel with a hand or sharp object such as nail, pencil or pen, or make a scratch on it, as it may cause damage to screen.



- Avoid touching the screen or holding your finger(s) against it for long periods of time. Doing so may produce some temporary or permanent distortion/damage to screen.



- When cleaning the product and its components, unplug the power first and wipe it with a soft cloth. Applying excessive force may cause scratches or discolouration. Do not spray with water or wipe with a wet cloth. Never use glass cleaner, car or industrial shiner, abrasives or wax, benzene, alcohol etc., which can damage the product and its panel. Otherwise, this may result in fire, electric shock or product damage (deformation, corrosion or breakage).

- As long as this unit is connected to the AC wall outlet, it is not disconnected from the AC power source even if you turn off this unit by SWITCH.



- When unplugging the cable, grab the plug and unplug it, by pulling at the plug. Don't pull at the cord to unplug the power cord from the power board, as this could be hazardous.



- When moving the product, make sure you turn the power off first. Then, unplug the power cables, antenna cables and all connecting cables. The TV set or power cord may be damaged, which may create a fire hazard or cause electric shock.



- When moving or unpacking the product, work in pairs because the product is heavy. Otherwise, this may result in injury.



- Contact the service centre once a year to clean the internal parts of the product. Accumulated dust can cause mechanical failure.



- Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.



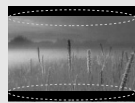
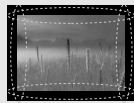
- If the product feels cold to the touch, there may be a small “flicker” when it is turned on. This is normal, there is nothing wrong with product.



- The panel is a high technology display product with resolution of two million to six million 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 (e.g., broadcasting channel logo, on-screen menu, scene from a video game or computer screen) for a prolonged time may cause damage to the screen, resulting in retention of the image, which is known as image sticking. It can remain for long time or never disappear. The warranty does not cover the product for image sticking. Avoid displaying a fixed image on your television's screen for a prolonged period (1 or more hours for OLED). Also, if you watch the TV at a ratio of 4:3 for a long time, image sticking may occur on the borders of the panel.

This phenomenon also occurs in third-party products and is not subject to exchange or refund.

• 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.

- Do not use high voltage electrical goods near the TV (e.g. electric mosquito-swatter). This may result in product malfunction.

Viewing 3D Imaging



WARNING

Viewing Environment

- Viewing Time
 - When watching 3D contents, take 5 - 15 minute breaks every hour. Viewing 3D contents for a long period of time may cause headache, dizziness, fatigue or eye strain.

Those that have a photosensitive seizure or chronic illness

- Some users may experience a seizure or other abnormal symptoms when they are exposed to a flashing light or particular pattern from 3D contents.
- Do not watch 3D videos if you feel nausea, are pregnant and/ or have a chronic illness such as epilepsy, cardiac disorder, or blood pressure disease, etc.
- 3D Contents are not recommended to those who suffer from stereo blindness or stereo anomaly. Double images or discomfort in viewing may be experienced.
- If you have strabismus (cross-eyed), amblyopia (weak eyesight) or astigmatism, you may have trouble sensing depth and easily feel fatigue due to double images. It is advised to take frequent breaks than the average adult.
- If your eyesight varies between your right and left eye, revise your eyesight prior to watching 3D contents.

Symptoms which require discontinuation or refraining from watching 3D contents

- Do not watch 3D contents when you feel fatigue from lack of sleep, overwork or drinking.
- When these symptoms are experienced, stop using/watching 3D contents and get enough rest until the symptom subsides.
 - Consult your doctor when the symptoms persist. Symptoms may include headache, eyeball pain, dizziness, nausea, palpitation, blurriness, discomfort, double image, visual inconvenience or fatigue.



CAUTION

ENGLISH

Viewing Environment

- Viewing Distance
 - Maintain a distance of at least twice the screen diagonal length when watching 3D contents. If you feel discomfort in viewing 3D contents, move further away from the TV.

Viewing Age

- Infants/Children
 - Usage/ Viewing 3D contents for children under the age of 6 are prohibited.
 - Children under the age of 10 may overreact and become overly excited because their vision is in development (for example: trying to touch the screen or trying to jump into it. Special monitoring and extra attention is required for children watching 3D contents.
 - Children have greater binocular disparity of 3D presentations than adults because the distance between the eyes is shorter than one of adults. Therefore they will perceive more stereoscopic depth compared to adults for the same 3D image.
- Teenagers
 - Teenagers under the age of 19 may react with sensitivity due to stimulation from light in 3D contents. Advise them to refrain from watching 3D contents for a long time when they are tired.
- Elderly
 - The elderly may perceive less 3D effect compared to the youth. Do not sit closer to the TV than the recommended distance.

Cautions when using the 3D glasses

- Make sure to use LG 3D glasses. Otherwise, you may not be able to view 3D videos properly.
- Do not use 3D glasses instead of your normal glasses, sunglasses or protective goggles.
- Using modified 3D glasses may cause eye strain or image distortion.
- Do not keep your 3D glasses in extremely high or low temperatures. It will cause deformation.
- The 3D glasses are fragile and are easily scratched. Always use a soft, clean piece of cloth when wiping the lenses. Do not scratch the lenses of the 3D glasses with sharp objects or clean/wipe them with chemicals.

NOTE

- 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 TV can be placed in standby mode in order to reduce the power consumption. And the TV should be turned off if it will not be watched for some time, as this will reduce energy consumption.
- The energy consumed during use can be significantly reduced if the level of brightness of the picture is reduced, and this will reduce the overall running cost.

INSTALLATION PROCEDURE

- 1 Open the package and make sure all the accessories are included.
- 2 Connect an external device to the TV set.
- 3 Make sure the network connection is available.
You can use the TV network functions only when the network connection is made.

* 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.

ASSEMBLING AND PREPARING

Unpacking

Check your product box for the following items. If there are any missing accessories, contact the local dealer where you purchased your product.

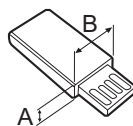
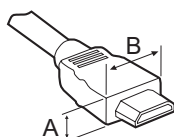
The illustrations in this manual may differ from the actual product and item.

CAUTION

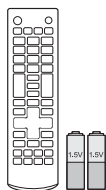
- Do not use any unapproved items to ensure the safety and product life span.
- Any damages or injuries by using unapproved items are not covered by the warranty.
- Some models have a thin film attached on to the screen and this must not be removed.

NOTE

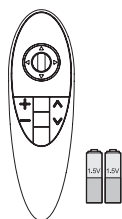
- The items supplied with your product may vary depending on the model.
- Product specifications or contents of this manual may be changed without prior notice due to upgrade of product functions.
- For an optimal connection, HDMI cables and USB devices should have bezels less than 10 mm thick and 18 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.



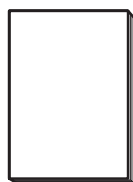
$A \leq 10 \text{ mm}$
 $B \leq 18 \text{ mm}$



**Remote control,
Batteries (AAA)**
(Depending on model)
(See p. 25, 26)



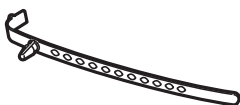
**Magic remote,
Batteries (AA)**
(See p. 27)



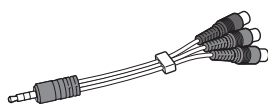
Owner's manual



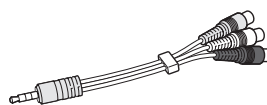
Cinema 3D glasses
The number of 3D
glasses may differ
depending on the model
or country.



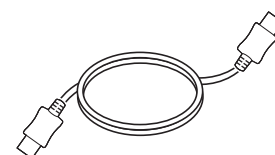
Cable Holder
(See p. A-4, A-5)



**Component gender
cable**
(See p. A-20)



**Composite gender
cable**
(See p. A-20, A-21)



HDMI Cable
(Only EC97**, EC98**)
(See p. A-8, A-9)



Scart gender cable
(See p. A-32)



AV Cover
(Only EC98**)
(See p. A-4)



AV Cover
(Only EC93**)
(See p. A-4)



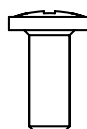
AV Cover
(Only EC97**)
(See p. A-4)



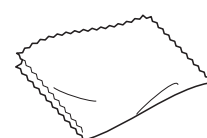
Tag on
(Depending on model)



Cable Managements
2 EA
(Only EC97**)
(See p. A-4, A-5)



**Cable Management
Screws**
2 EA, M4 x L10
(Only EC97**)
(See p. A-5)



Cleaning Cloth
(Depending on model)

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.

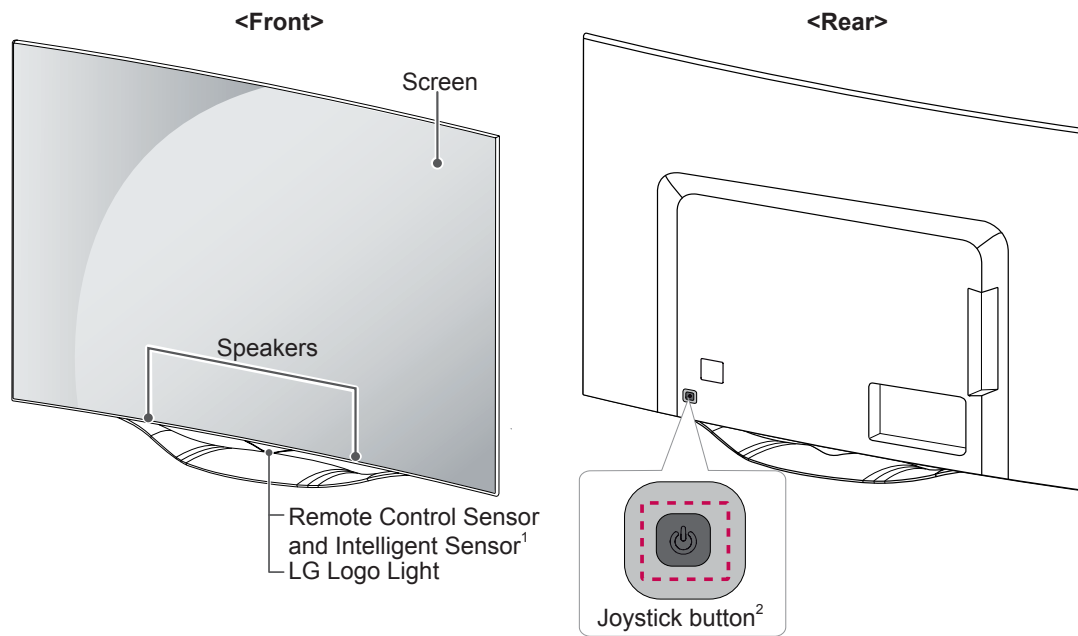
AG-F*** Cinema 3D Glasses	AN-MR500 Magic Remote	AN-VC5** Video call camera	AG-F***DP Dual Play Glasses
LG Audio Device	Tag on		

Compatibility	EC93**	EC97**	EC98**
AG-F*** Cinema 3D Glasses	•	•	•
AN-MR500 Magic Remote	•	•	•
AN-VC5** Video call camera	•		
AG-F***DP Dual Play Glasses	•	•	•
LG Audio Device	•	•	•
Tag on	•	•	•

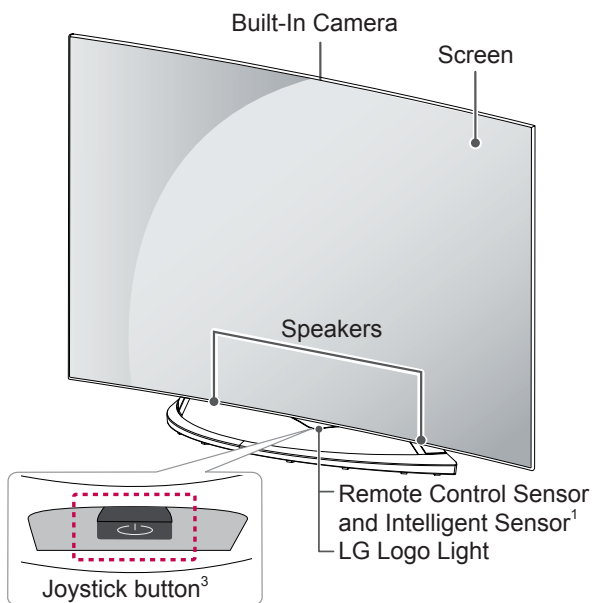
The model name or design may be changed depending on the upgrade of product functions, manufacturer's circumstances or policies.

Parts and buttons

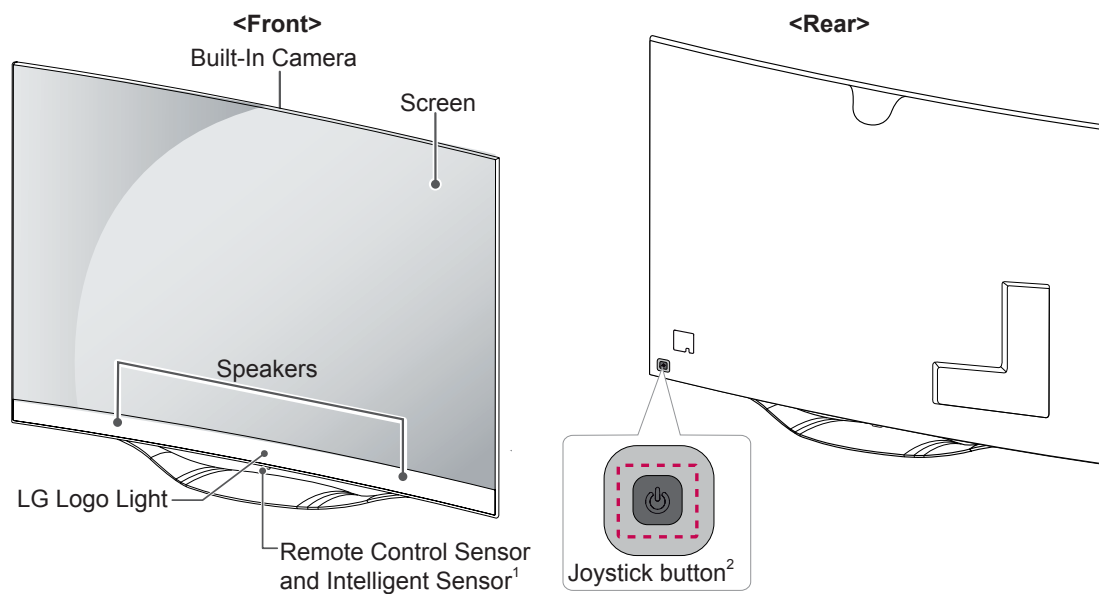
A type: EC93**



B type: EC97**



C type: EC98**



- 1 Intelligent sensor - Adjusts the image quality and brightness based on the surrounding environment.
- 2 Joystick Button - This button is located behind the TV screen.
- 3 Joystick Button - This button is located below the TV screen.

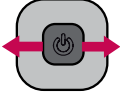
! NOTE

- You can set the LG Logo Light to on or off by selecting **GENERAL** in the main menus.

Using the joystick button

You can operate the TV by pressing the button or moving the joystick left, right, up, or down.

Basic Functions

	Power On	When the TV is turned off, place your finger on the joystick button and press it once and release it.
	Power Off	When the TV is turned on, place your finger on the joystick button and press it once for a few seconds and release it.
	Volume Control	If you place your finger over the joystick button and move it left or right, you can adjust the volume level you want.
	Programmes Control	If you place your finger over the joystick button and move it up or down, you can scrolls through the saved programmes you want.

! NOTE

- When your finger over the joystick button and push it to the up, down, left or right, be careful not to press the joystick button. If you press the joystick button first, you may not be able to adjust the volume level and saved programmes.

Adjusting the Menu

When the TV is turned on, press the joystick button one time.

You can adjust the Menu items (⏻, ✕, 📺) moving the joystick button left or right.

		TV OFF	Turns the power off.
		CLOSE	Clears on-screen displays and returns to TV viewing.
		INPUT	Changes the input source.

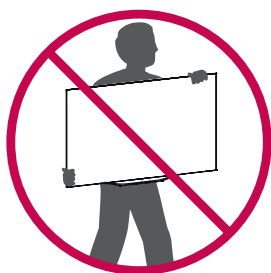
Lifting and moving the TV

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

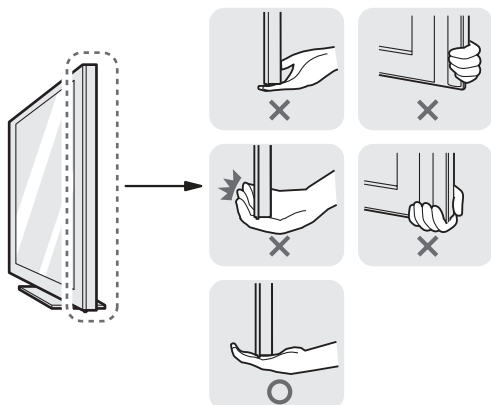


CAUTION

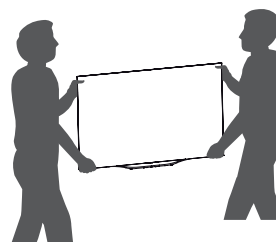
- Avoid touching the screen at all times, as this may result in damage to the screen.
- It is recommended to move the TV in the box or packing material that the TV originally came in.
- Before moving or lifting the TV, disconnect the power cord and all cables.
- When holding the TV, the screen should 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.



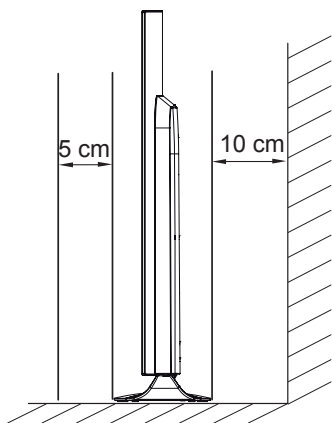
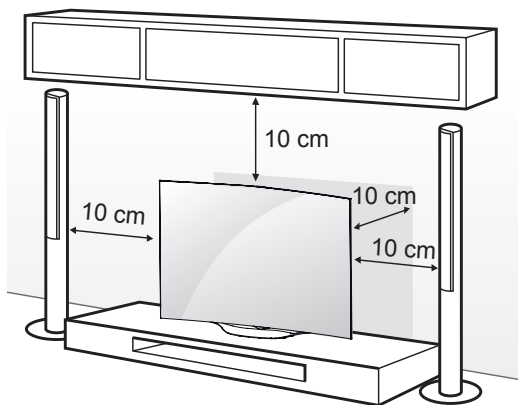
- When transporting a large TV, there should be at least 2 people.
- When transporting the TV by hand, hold the TV as shown in the following illustration.



- 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 screen.
- Be sure to keep your TV upright instead of laying or tilting it while moving the TV.
- When handling the TV, be careful not to damage the protruding joystick button.

Mounting on a table

- 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.



- 2 Connect the power cord to a wall outlet.



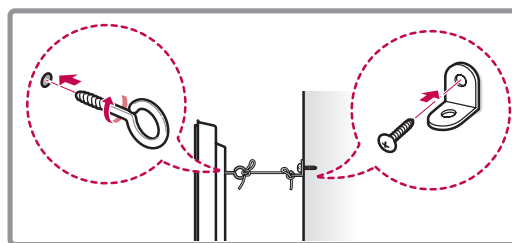
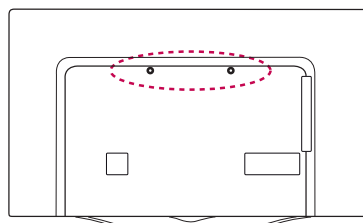
CAUTION

- Do not place the TV near or on sources of heat, as this may result in fire or other damage.

Securing the TV to a wall

(This feature is not available for all models.)

To use the desk-type stand safely, make sure to securely attach it to a wall.



- 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.



CAUTION

- Make sure that children do not climb on or hang on the TV.

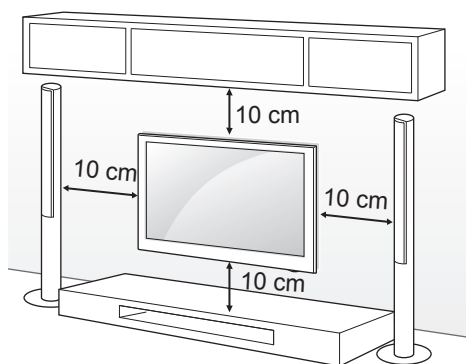


NOTE

- 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.

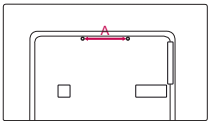
Mounting on a wall

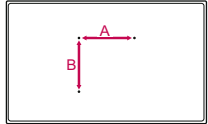
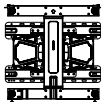
Attach an optional wall mount bracket at the rear of the TV carefully and install the wall mount bracket on a solid wall perpendicular to the floor. When you attach the TV to other building materials, please contact qualified personnel. LG recommends that wall mounting be performed by a qualified professional installer. We recommend the use of LG's wall mount bracket. 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.



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.

Separate purchase(Wall Mounting Bracket)

Model	55EC93**	65EC97**
(A)		
	210	210
Standard screw	M6	M6
Number of screws	2	2
Wall mount bracket	OSW100 	OSW200 

Model	77EC98**
VESA (A x B)	400 x 400
	
Standard screw	M6
Number of screws	4
Wall mount bracket	LSW420BX 



CAUTION

- Disconnect the power first, and then move or install the TV. Otherwise electric shock may occur.
- If you install the TV on a ceiling or slanted wall, it may fall and result in severe injury. Use an authorized LG wall mount and contact the local dealer or qualified personnel.
- Do not over tighten the screws as this may cause damage to the TV and void your warranty.
- Use the screws and wall mounts that meet the VESA standard. Any damages or injuries by misuse or using an improper accessory are not covered by the warranty.



NOTE

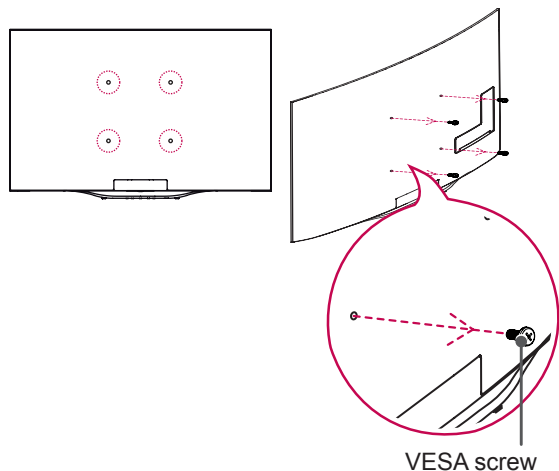
- Use the screws that are listed on the VESA standard screw specifications.
- The wall mount kit includes an installation manual and necessary parts.
- The wall mount bracket is not provided. You can obtain additional accessories from your local dealer.
- The length of screws may differ depending on the wall mount. Make sure to use the proper length.
- For more information, refer to the manual supplied with the wall mount.

Wall Type Set-up Guide

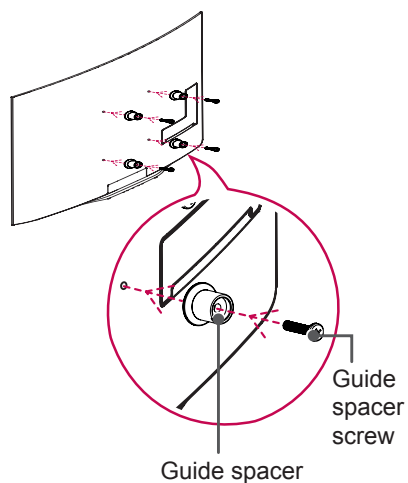
(Only EC98** - Seperate purchase)

Guide spacer assembly

- 1 Remove the VESA screws (4EA).

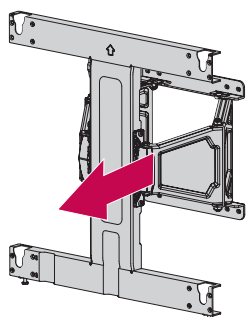


- 2 Assemble Guide spacer (4EA) and Guide spacer screws (4EA).



Wall mount bracket installation

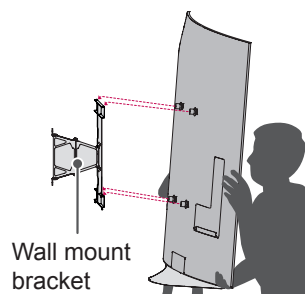
- 1 After installation, move the bracket forward.



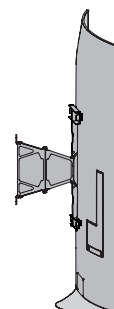
How to detach the stand

Type 1. Hanging the TV on the wall before removing a stand.

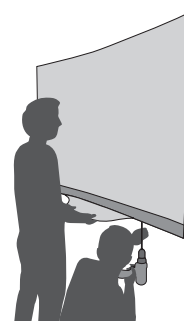
1



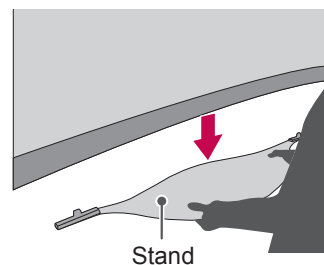
2



3



4



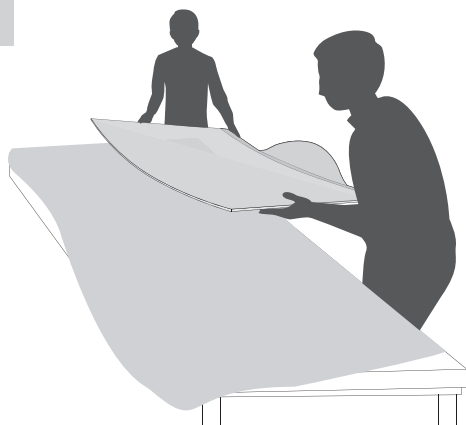
5



ENGLISH

Type 2. Hanging the TV on the wall after removing a stand.

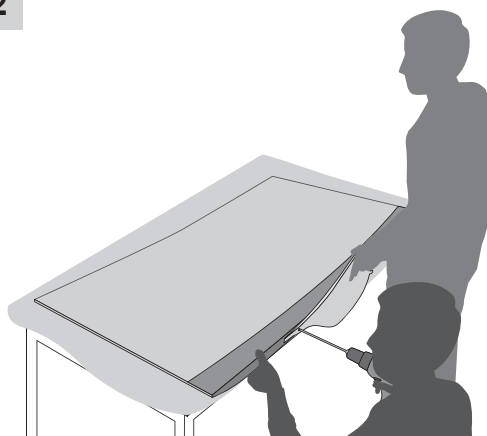
1



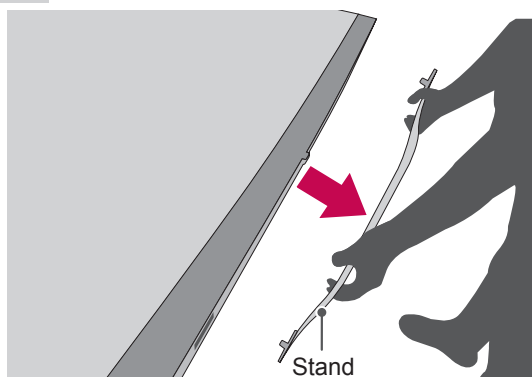
CAUTION

- When laying the TV on its back on a padded table or surface, be careful to prevent the TV from being damaged.

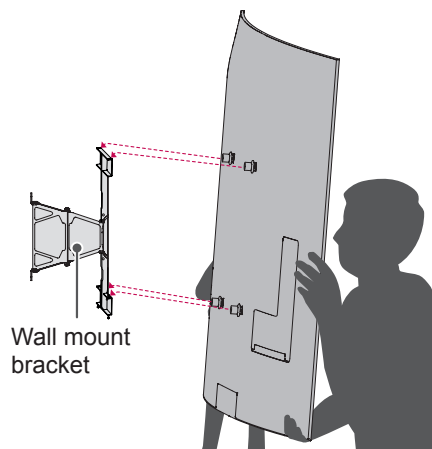
2



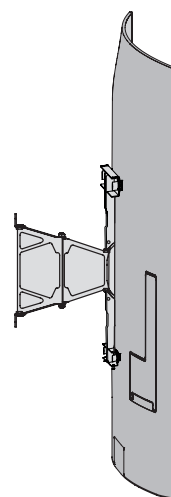
3



4



5



6



Using Built-in Camera

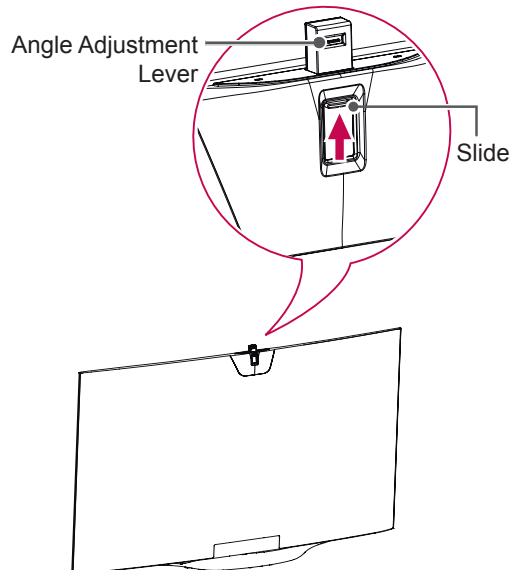
(Only EC97**, EC98**)

! NOTE

- Before using the built-in camera, you must recognize the fact that you are legally responsible for the use or misuse of the camera by the relevant national laws including the criminal law.
- The relevant laws include the Personal Information Protection law which regulates the processing and transferring of personal information and the law which regulates the monitoring by camera in a workplace and other places.
- When using the built-in camera, avoid questionable, illegal, or immoral situations. Other than at public places or events, consent to be photographed may be required. We suggest avoiding the following situations :
 - (1) Using the camera in areas where the use of camera is generally prohibited such as restroom, locker room, fitting room and security area.
 - (2) Using the camera while causing the infringement of privacy.
 - (3) Using the camera while causing the violation of the relevant regulations or laws.

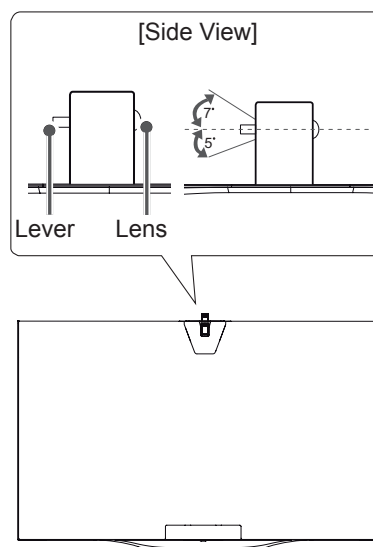
Preparing Built-in Camera

- 1 Pull up the built-in camera at the back of the TV.

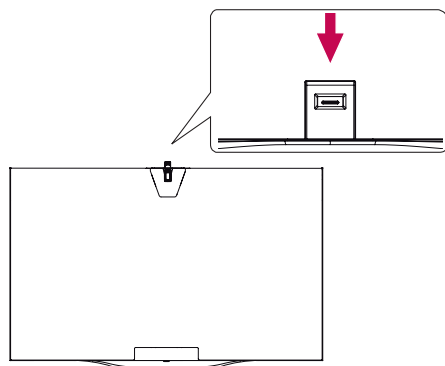


! NOTE

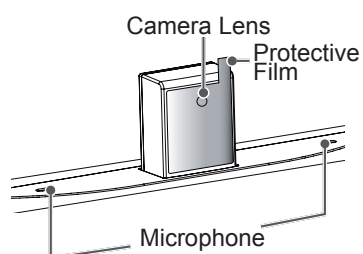
- Remove the protective film before using the built-in camera.
- 2 You can adjust the angle of the camera with the angle adjustment lever on the back on the back of the built-in camera.



- 3 Push down the built-in camera when you are not using it.



Name of Parts of Built-in camera



Checking the Camera's Shooting Range

- 1 Press the (**Home**) button on the remote control to display the **HOME** menu.
- 2 Select **Camera** and then press the **Wheel(OK)** button.

! NOTE

- The optimal distance from the camera to use the motion recognition function is between 1.5 m and 4.5 m.

REMOTE CONTROL

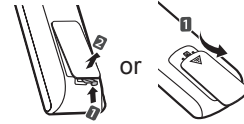
(Depending on model)

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 $\oplus$ and $\ominus$ ends to the label inside the compartment, and close the battery cover.

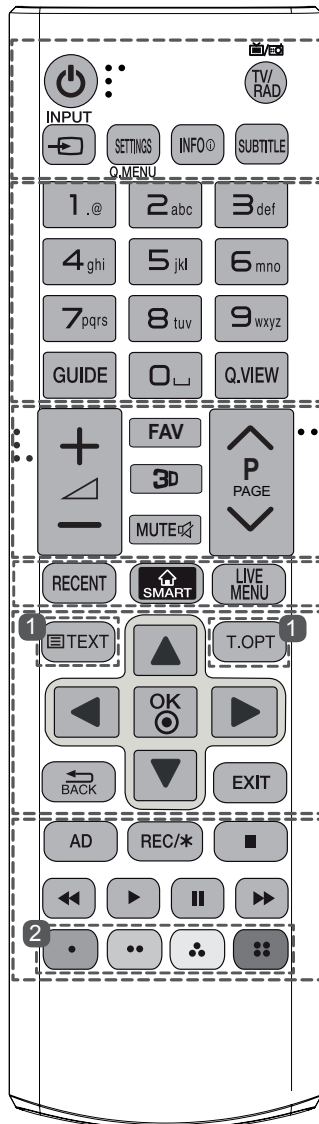
To remove the batteries, perform the installation actions in reverse.



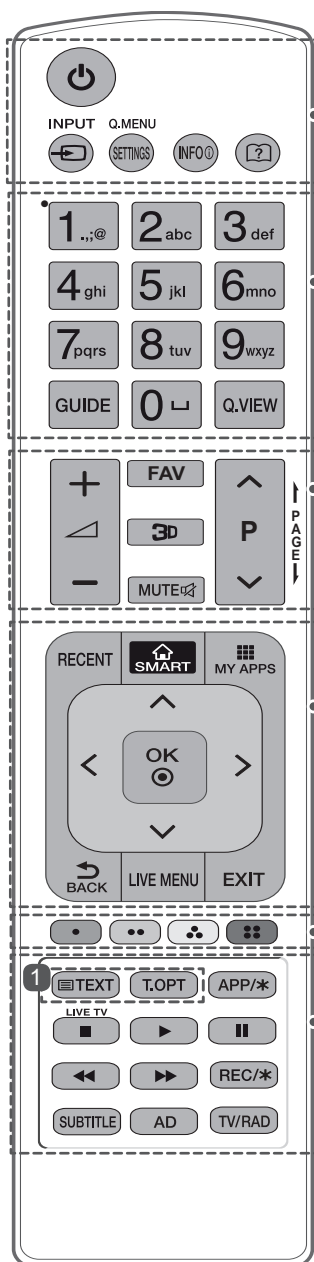
CAUTION

- Do not mix old and new batteries, as this may damage the remote control.
- The remote control will not be included for all sales market.

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



⏻ (POWER) Turns the TV on or off. ↺ INPUT Changes the input source. ⚙️ SETTINGS Accesses the main menus. Ⓚ. MENU Accesses the quick menus. ℹ️ INFO Views the information of the current programme and screen. SUBTITLE Recalls your preferred subtitle in digital mode. TV/RAD Selects Radio, TV and DTV programme.	Number buttons Enters numbers. ␣ (Space) Opens an empty space on the screen keyboard. GUIDE Shows programme guide. Q.VIEW Returns to the previously viewed programme.
+ / - Adjusts the volume level. FAV Accesses your favourite programme list. 3D Used for viewing 3D video. MUTE Mutes all sounds. ^ P v Scrolls through the saved programmes. ^ PAGE v Moves to the previous or next screen.	RECENT Shows the previous history. 🏠 SMART Accesses the Home menus. LIVE MENU Shows the list of Recommended, Programmes, Search and Recorded.
1 Teletext buttons (TEXT / T.OPT) These buttons are used for teletext. OK Selects menus or options and confirms your input. Navigation buttons (up/down/left/right) Scrolls through menus or options. ↶ BACK Returns to the previous level. EXIT Clears all on-screen displays and returns to TV viewing.	AD By Pressing AD button, audio descriptions function will be enabled. REC/* Starts to record and displays record menu. (only Time Machine^{Ready} support model) Control buttons (⏮, ⏪, ⏩, ⏭, ⏮, ⏪, ⏩, ⏭) Controls the Premium contents, Time Machine^{Ready} or SmartShare menus or the SIMPLINK compatible devices (USB or SIMPLINK or Time Machine^{Ready}).
2 Coloured buttons These access special functions in some menus. (: Red, : Green, : Yellow, : Blue)	



⏻ (POWER) Turns the TV on or off.

↺ INPUT Changes the input source.

⚙️ SETTINGS Accesses the main menus.

Q. MENU Accesses the quick menus.

ℹ️ INFO Views the information of the current programme and screen.

📖 (User Guide) Sees user-guide.

Number buttons Enters numbers.

␣ (Space) Opens an empty space on the screen keyboard.

GUIDE Shows programme guide.

Q.VIEW Returns to the previously viewed programme.

+ ▴ - Adjusts the volume level.

FAV Accesses your favourite programme list.

3D Used for viewing 3D video.

MUTE Mutes all sounds.

^ P v Scrolls through the saved programmes.

← PAGE → Moves to the previous or next screen.

RECENT Shows the previous history.

🏠 SMART Accesses the Home menus.

📺 MY APPS Shows the list of Apps.

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

OK Selects menus or options and confirms your input.

↶ BACK Returns to the previous level.

LIVE MENU Shows the list of Recommended, Programmes, Search and Recorded.

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

Coloured buttons These access special functions in some menus.

(●): Red, (●●): Green, (●●●): Yellow, (●●●●): Blue)

1 Teletext buttons (≡ **TEXT** / **T.OPT**) These buttons are used for teletext.

APP/* Selects the MHP TV menu source. (Only Italy.) (Depending on model)

Control buttons (■, ◀, ▶, ⏸, ▶▶) Controls the Premium contents, Time Machine^{Ready} or SmartShare menus or the SIMPLINK compatible devices (USB or SIMPLINK or Time Machine^{Ready}).

LIVE TV Returns to LIVE TV.

REC/* Starts to record and displays record menu. (only Time Machine^{Ready} support model)

SUBTITLE Recalls your preferred subtitle in digital mode.

AD By Pressing AD button, audio descriptions function will be enabled.

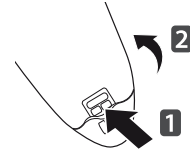
TV/RAD Selects Radio, TV and DTV programme.

MAGIC REMOTE FUNCTIONS

When the message “Magic Remote battery is low. Change the battery.” is displayed, replace the battery.

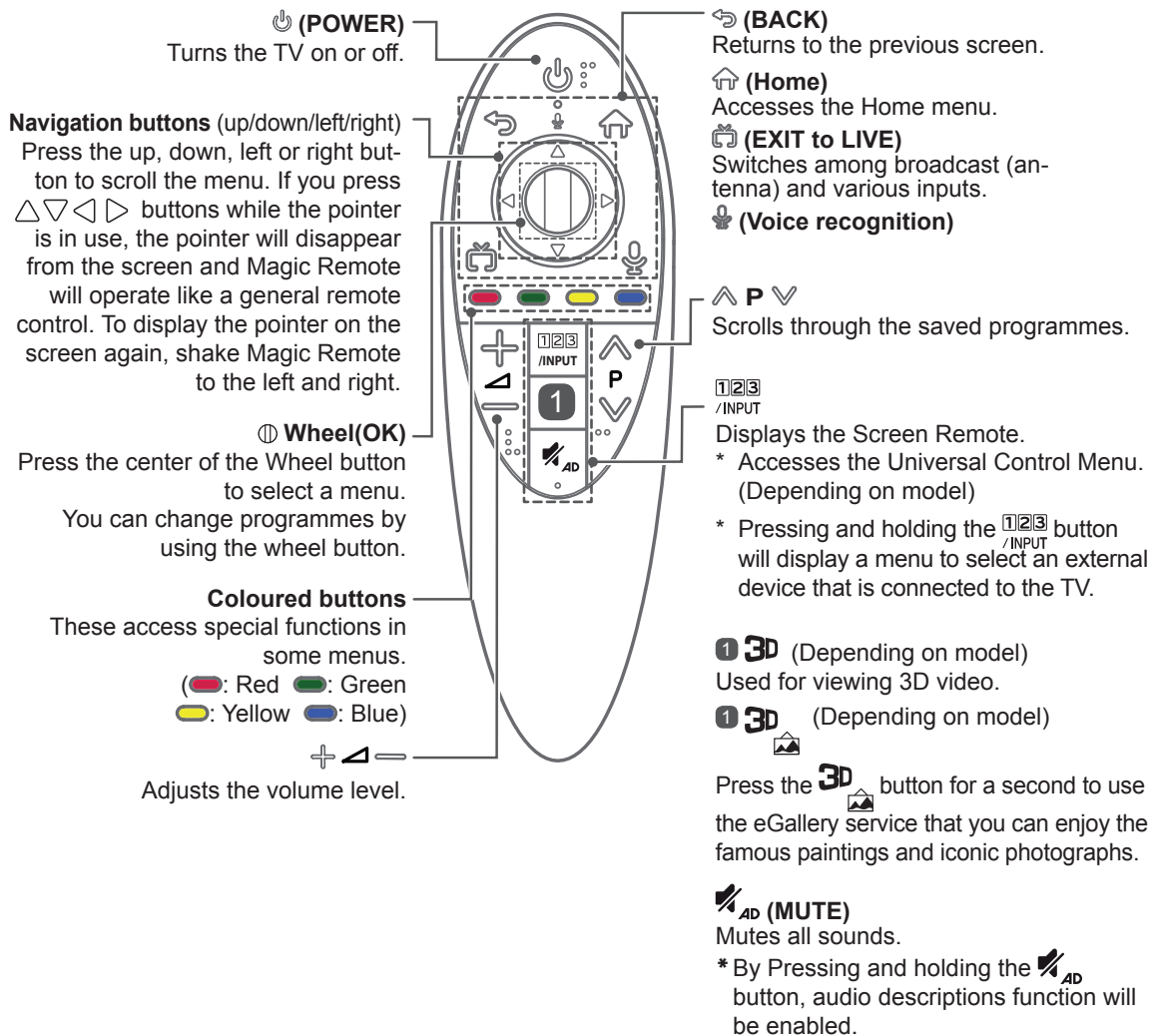
To replace batteries, open the battery cover, replace batteries (1.5 V AA) matching ⊕ and ⊖ ends to the label inside the compartment, and close the battery cover. Be sure to point the remote control toward the remote control sensor on the TV.

To remove the batteries, perform the installation actions in reverse.



CAUTION

- Do not mix old and new batteries, as this may damage the remote control.



Voice recognition

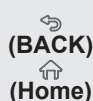
Network connection is required to use the voice recognition function.

1. Press the Voice recognition button.
2. Speak when the voice display window appears on the left of the TV screen.
 - The voice recognition may fail when you speak too fast or too slow.
 - Use the Magic remote control no further than 10 cm from your face.
 - The recognition rate may vary depending on the user's characteristics (voice, pronunciation, intonation and speed) and the environment (noise and TV volume).

Registering Magic Remote**How to register the Magic Remote**

To use the Magic Remote, first pair it with your TV.

- 1 Put batteries into the Magic Remote and turn the TV on.
 - 2 Point the Magic Remote at your TV and press the **Wheel (OK)** on the remote control.
- * If the TV fails to register the Magic Remote, try again after turning the TV off and back on.

How to deregister the Magic Remote

Press the **(BACK)** and **(Home)** buttons at the same time, for five seconds, to unpair the Magic Remote with your TV.

- * Pressing and holding the **(EXIT to LIVE)** button will let you cancel and re-register Magic Remote at once.

How to use magic remote

- Shake the Magic Remote slightly to the right and left or press **(Home)**, **/INPUT**, **3D** buttons to make the pointer appear on the screen.
(In some TV models, the pointer will appear when you turn the Wheel button.)
- If the pointer has not been used for a certain period of time or Magic Remote is placed on a flat surface, then the pointer will disappear.
- If the pointer is not responding smoothly, you can reset the pointer by moving it to the edge of the screen.
- The Magic Remote depletes batteries faster than a normal remote due to the additional features.

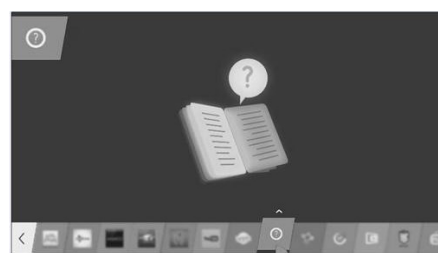
Precautions to Take when Using the Magic Remote

- Use the Magic Remote within the maximum communication distance (10 m). Using the Magic Remote beyond this distance, or with an object obstructing it, may cause a communication failure.
- A communication failure may occur due to nearby devices. Electrical devices such as a microwave oven or wireless LAN product may cause interference, as these use the same bandwidth (2.4 GHz) as the Magic Remote.
- The Magic Remote may be damaged or may malfunction if it is dropped or receives a heavy impact.
- Take care not to bump into nearby furniture or other people when using the Magic Remote.
- Manufacturer and installer cannot provide service related to human safety as the applicable wireless device has possibility of electric wave interference.
- It is recommended that an Access Point (AP) be located more than 1 m away from the TV. If the AP is installed closer than 1 m, the Magic Remote may not perform as expected due to frequency interference.

USING THE USER GUIDE

User Guide allows you to more easily access the detailed TV information.

- 1 Press the **Home** button to access the **Home** menu.
- 2 Select **User Guide** and press the **Wheel(OK)** button.



NOTE

- You can also access the User Guide by pressing **User Guide** in the remote control. (Depending on model)

MAINTENANCE

Cleaning your TV

Clean your TV regularly to keep the best performance and to extend the product lifespan.



CAUTION

- Make sure to turn the power off and disconnect the power cord and all other cables first.
- When the TV is left unattended and unused for a long time, disconnect the power cord from the wall outlet to prevent possible damage from lightning or power surges.

Screen, frame, cabinet and stand

- To remove dust or light dirt, wipe the surface with a dry, clean, and soft cloth.
- To remove major dirt, wipe the surface with a soft cloth dampened in clean water or a diluted mild detergent. Then wipe immediately with a dry cloth.



CAUTION

- Avoid touching the screen at all times, as this may result in damage to the screen.
- Do not push, rub, or hit the screen surface with your fingernail or a sharp object, as this may result in scratches and image distortions.
- Do not use any chemicals as this may damage the product.
- Do not spray liquid onto the surface. If water enters the TV, it may result in fire, electric shock, or malfunction.

Power cord

Remove the accumulated dust or dirt on the power cord regularly.

TROUBLESHOOTING

Problem	Solution
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 Automatic Standby (Depending on model) / Sleep Timer / Timer Power off feature is activated in the TIMERS settings. • 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/ DVI), 'No signal' or 'Invalid Format' is displayed.	• Turn the TV off/on using the remote control. • Reconnect the HDMI cable. • Restart the PC with the TV on.

SPECIFICATIONS

(Only EC93**)

Wireless module(LGSBW41) Specifications			
Wireless LAN		Bluetooth	
Standard	IEEE 802.11a/b/g/n	Standard	Bluetooth Version 3.0
Frequency Range	2400 to 2483.5 MHz 5150 to 5250 MHz 5725 to 5850 MHz (for Non EU)	Frequency Range	2400 to 2483.5 MHz
Output Power (Max.)	802.11a: 13 dBm 802.11b: 15 dBm 802.11g: 14 dBm 802.11n - 2.4GHz: 16 dBm 802.11n - 5GHz: 16 dBm	Output Power (Max.)	10 dBm or Lower

- Because band channel used by the country could be different, the user can not change or adjust the operating frequency and this product is set for the regional frequency table.
- This device should be installed and operated with minimum distance 20 cm between the device and your body. And this phrase is for the general statement for consideration of user environment.

CE 0197

(Only EC97**, EC98**)

Wireless module(LGSWF41) Specifications	
Standard	IEEE 802.11a/b/g/n/ac
Frequency Range	2400 to 2483.5 MHz 5150 to 5250 MHz 5725 to 5850 MHz (for Non EU)
Output Power (Max.)	802.11a: 14.5 dBm 802.11b: 16 dBm 802.11g: 13.5 dBm 802.11n - 2.4GHz: 14 dBm 802.11n - 5GHz: 15.5 dBm 802.11ac - 5GHz : 16 dBm

Bluetooth module(BM-LDS401) Specifications	
Standard	Bluetooth Version 3.0
Frequency Range	2400 ~ 2483.5 MHz
Output Power (Max.)	10 dBm or lower

- Because band channel used by the country could be different, the user can not change or adjust the operating frequency and this product is set for the regional frequency table.
- This device should be installed and operated with minimum distance 20 cm between the device and your body. And this phrase is for the general statement for consideration of user environment.

CE 0197

SPECIFICATIONS

Product specifications may be changed without prior notice due to upgrade of product functions.

MODEL		55EC93**
		55EC930V-ZA
Dimensions (W x H x D)	With stand (mm)	1225 x 753 x 204
	Without stand (mm)	1225 x 715 x 44
Weight	With stand (kg)	16.7
	Without stand (kg)	14.7
Power consumption		320 W
Power requirement		AC 100-240 V~ 50 / 60 Hz
MODEL		65EC97**
		65EC970V-ZA
Dimensions (W x H x D)	With stand (mm)	1447 x 880 x 256.6
	Without stand (mm)	1447 x 844 x 56.3
Weight	With stand (kg)	25.5
	Without stand (kg)	24.1
Power consumption		540 W
Power requirement		AC 100-240 V~ 50 / 60 Hz
MODEL		77EC98**
		77EC980V-ZA
Dimensions (W x H x D)	With stand (mm)	1718 x 1110 x 322
	Without stand (mm)	1718 x 1064 x 34.7
Weight	With stand (kg)	43.3
	Without stand (kg)	39.9
Power consumption		590 W
Power requirement		AC 100-240 V~ 50 / 60 Hz

CI Module Size (W x H x D)		100.0 mm x 55.0 mm x 5.0 mm
Environment condition	Operating Temperature	0 °C to 40 °C
	Operating Humidity	Less than 80 %
	Storage Temperature	-20 °C to 60 °C
	Storage Humidity	Less than 85 %

	Digital TV	Analogue TV
Television system	DVB-T/T2 DVB-C DVB-S/S2	PAL/SECAM B/G/I/D/K SECAM L/L'
Programme coverage	VHF, UHF C-Band, Ku-Band	VHF: E2 to E12, UHF : E21 to E69, CATV: S1 to S20, HYPER: S21 to S47
Maximum number of storable programmes	DVB-S/S2 : 6,000 DVB-T/T2/C & Analogue TV : 1,500	
External antenna impedance	75 Ω	



Record the model number and serial number of the TV.
Refer to the label on the back cover and quote this information to your dealer when requiring any service.

MODEL _____

SERIAL _____



Please contact LG First.
If you have any inquiries or comments,
please contact LG customer information centre.

LG Customer Information Centre

Country	LG Service ☎	Country	LG Service ☎
Österreich	0 810 144 131	Nederland	0900 543 5454
België	015 200 255	Norge	800 187 40
Luxembourg	0032 15 200 255	Polska	801 54 54 54
България	07001 54 54	Portugal	808 78 54 54
Česká Rep.	810 555 810	România	031 228 3542
Danmark	8088 5758	Slovensko	0850 111 154
Suomi	0800 0 54 54	España	963 649 270
France	3220 dites LG ou tapez 54	Sverige	0770 54 54 54
Deutschland	01806 11 54 11 (0,20€ pro Anruf aus dem Festnetz der DTAG; Mobil- funk: max. 0,60€ pro Anruf)	Schweiz	0848 543 543
Ελλάδα	801 11 200 900, 210 4800 564	United Kingdom	0344 847 5454
Magyarország	06 40 54 54 54	Россия	8 800 200 7676
Éire	01 686 9454	Eesti	800 9990
Italia	199600099	Украина	0 800 303 000
Беларусь	8 820 0071 1111	Казахстан	8 8000 805 805, 2255(GSM)
Latvija	80200201	Узбекистан	8 800 120 2222
Lietuva	880008081	Кыргызстан	8 0000 710 005

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OWNER'S MANUAL

EXTERNAL CONTROL DEVICE SETUP

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

KEY CODES

- This feature is not available for all models.

Code (Hexa)	Function	Note	Code (Hexa)	Function	Note
00	CH +, PR +	R/C Button	53	List	R/C Button
01	CH -, PR -	R/C Button	5B	Exit	R/C Button
02	Volume +	R/C Button	60	PIP(AD)	R/C Button
03	Volume -	R/C Button	61	Blue	R/C Button
06	> (Arrow Key / Right Key)	R/C Button	63	Yellow	R/C Button
07	< (Arrow Key / Left Key)	R/C Button	71	Green	R/C Button
08	Power	R/C Button	72	Red	R/C Button
09	Mute	R/C Button	79	Ratio / Aspect Ratio	R/C Button
0B	Input	R/C Button	91	AD (Audio Description)	R/C Button
0E	SLEEP	R/C Button	7A	User Guide	R/C Button
0F	TV, TV/RAD	R/C Button	7C	Smart / Home	R/C Button
10 - 19	* Number Key 0 - 9	R/C Button	7E	SIMPLINK	R/C Button
1A	Q.View / Flashback	R/C Button	8E	▶▶ (Forward)	R/C Button
1E	FAV (Favorite Channel)	R/C Button	8F	◀◀ (Rewind)	R/C Button
20	Text (Teletext)	R/C Button	AA	Info	R/C Button
21	T. Opt (Teletext Option)	R/C Button	AB	Program Guide	R/C Button
28	Return (BACK)	R/C Button	B0	▶ (Play)	R/C Button
30	AV (Audio / Video) Mode	R/C Button	B1	■ (Stop / File List)	R/C Button
39	Caption/Subtitle	R/C Button	BA	⏸ (Freeze / Slow Play / Pause)	R/C Button
40	Λ (Arrow Key / Cursor Up)	R/C Button	BB	Soccer	R/C Button
41	V (Arrow Key / Cursor Down)	R/C Button	BD	● (REC)	R/C Button
42	My Apps	R/C Button	DC	3D	R/C Button
43	Menu / Settings	R/C Button	99	AutoConfig	R/C Button
44	OK / Enter	R/C Button	9F	App / *	R/C Button
45	Q.Menu	R/C Button			
4C	List, - (ATSC Only)	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

- Image shown may differ from your TV.

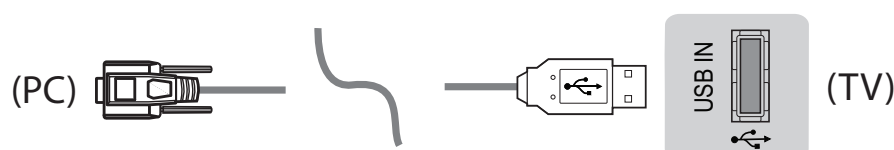
Connect the USB to Serial converter/RS-232C input jack to an external control device (such as a computer or an A/V control system) to control the product's functions externally.

Note: The type of control port on the TV can be different between model series.

- * Please be advised that not all models support this type of connectivity.
- * Cable is not provided.

USB to Serial converter with USB Cable

USB Type



- LGTV supports PL2303 chip-based (Vendor ID : 0x0557, Product ID : 0x2008) USB to serial converter which is not made nor provided by LG.
- It can be purchased from computer stores that carry accessories for IT support professionals.

RS-232C With RS232C Cable

DE9 (D-Sub 9pin) Type

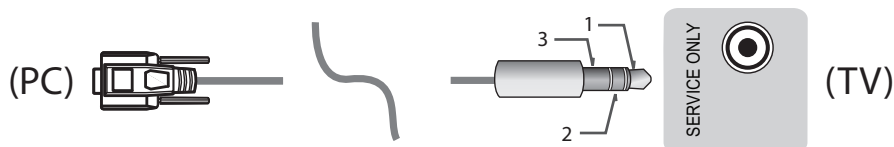
- You need to purchase the RS-232C (DE9, D-Sub 9pin female-to-female type) to RS-232C cable required for the connection between the PC and the TV, which is specified in the manual.



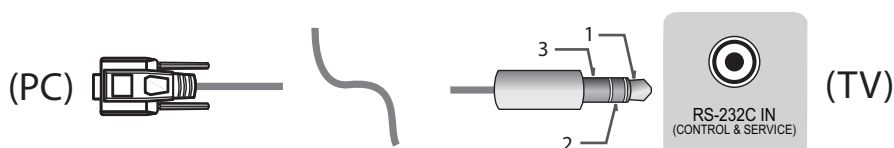
The connection interface may differ from your TV.

Phone jack Type

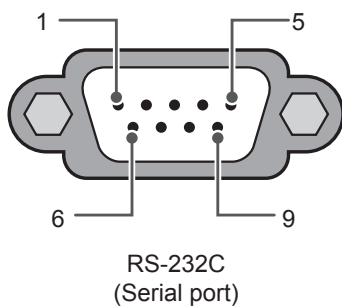
- You need to purchase the phone-jack to RS-232 cable required for the connection between the PC and the TV, which is specified in the manual.
- * For other models, connect to the USB port.
- * The connection interface may differ from your TV.



- or

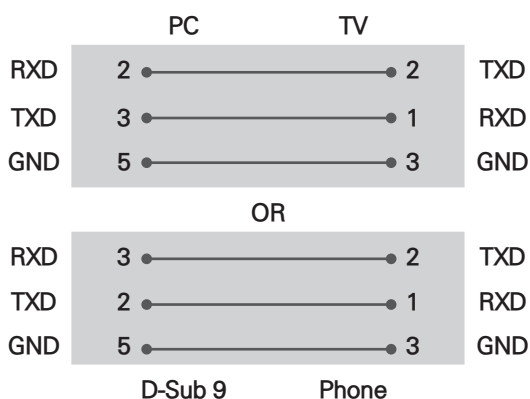


Customer Computer



RS-232C configurations

3-Wire Configurations(Not standard)



Set ID

For Set ID number, see "Real Data Mapping" on p.6

1. Press **SETTINGS** to access the main menus.
2. Press the Navigation buttons to scroll to (***General** → **About this TV or OPTION**) and press **OK**.
3. Press the Navigation buttons to scroll to **SET ID** and press **OK**.
4. Scroll left or right to select a set ID number and select **CLOSE**. The adjustment range is 1-99.
5. When you are finished, press **EXIT**.
* (Depending on model)

Communication Parameters

- Baud rate : 9600 bps (UART)
- Data length : 8 bits
- Parity : None
- Stop bit : 1 bit
- Communication code : ASCII code
- Use a crossed (reverse) cable.

Command reference list

(Depending on model)

	COMMAND1	COMMAND2	DATA (Hexadecimal)		COMMAND1	COMMAND2	DATA (Hexadecimal)
01. Power*	k	a	00 to 01	15. Balance	k	t	00 to 64
02. Aspect Ratio	k	c	(p.7)	16. Color (Colour) Temperature	x	u	00 to 64
03. Screen Mute	k	d	(p.7)	17. ISM Method (Only Plasma TV)	j	p	(p.8)
04. Volume Mute	k	e	00 to 01	18. Equalizer	j	v	(p.8)
05. Volume Control	k	f	00 to 64	19. Energy Saving	j	q	00 to 05
06. Contrast	k	g	00 to 64	20. Tune Command	m	a	(p.9)
07. Brightness	k	h	00 to 64	21. Channel (Programme) Add/Del(Skip)	m	b	00 to 01
08. Color/ Colour	k	i	00 to 64	22. Key	m	c	Key Codes
09. Tint	k	j	00 to 64	23. Control Backlight, Control Panel Light	m	g	00 to 64
10. Sharpness	k	k	00 to 32	24. Input select (Main)	x	b	(p.11)
11. OSD Select	k	l	00 to 01	25. 3D (Only 3D models)	x	t	(p.11)
12. Remote Control Lock Mode	k	m	00 to 01	26. Extended 3D (Only 3D models)	x	v	(p.11)
13. Treble	k	r	00 to 64	27. Auto Configure	j	u	(p.12)
14. Bass	k	s	00 to 64				

* Note: During playing or recording media, all commands except Power (ka) and Key (mc) are not executed and treated as NG.

With RS232C cable, TV can communicate "ka command" in power-on or power-off status. but with USB-to-Serial converter cable, the command works only if TV is on.

Transmission / Receiving Protocol

Transmission

[Command1][Command2][][Set ID][][Data][Cr]

[Command 1] : First command to control the TV. (j, k, m or x)

[Command 2] : 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 in TV is 1 to 99. If [Set ID] value is selected to '0', every connected set can be controlled.

* [Set ID] is indicated as decimal (1 to 99) on menu and as Hexadecimal (0x00 to 0x63) on transmission/receiving protocol.

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

[Cr] : Carriage Return - ASCII code '0x0D'

[] : Space - ASCII code '0x20'

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

Real data mapping (Hexadecimal → Decimal)

* When you enter the [data] in hexadecimal, refer to following conversion table.

* Channel Tune (ma) Command uses two-byte hexadecimal value([data]) to select channel number.

00 : Step 0	32 : Step 50 (Set ID 50)	FE : Step 254
01 : Step 1 (Set ID 1)	33 : Step 51 (Set ID 51)	FF : Step 255
...	...	...
0A : Step 10 (Set ID 10)	63 : Step 99 (Set ID 99)	01 00 : Step 256
...	...	...
0F : Step 15 (Set ID 15)	C7 : Step 199	27 0E : Step 9998
10 : Step 16 (Set ID 16)	C8 : Step 200	27 0F : Step 9999
...	...	...

* Commands may work differently depending on model and signal.

01. Power (Command: k a)

- To control Power *On or Off of the set.

Transmission[k][a][][Set ID][][Data][Cr]

Data 00 : Power Off 01 : *Power On

Ack [a][][Set ID][][OK/NG][Data][x]

- To Show TV is Power On or *Off

Transmission [k][a][][Set ID][][FF][Cr]

Ack [a][][Set ID][][OK][Data][x]

* Similarly, if other functions transmit 'FF' data based on this format, Acknowledgement feedback presents status about each function.

02. 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 Aspect Ratio in the Q.MENU. or PICTURE menu.

Transmission [k][c][][Set ID][][Data][Cr]

Data 01 : Normal screen (4:3)	07 : 14:9 (Europe, Colombia, Mid-East, Asia except South Korea and Japan)
02 : Wide screen (16:9)	
04 : Zoom	09 : * Just Scan
05 : Zoom 2 (Latin America except Colombia Only)	0B : Full Wide (Europe, Colombia, Mid-East, Asia except South Korea and Japan)
06 : Set by Program/ Original	10 to 1F : Cinema Zoom 1 to 16

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/Component mode (high-definition), Just Scan is available.
- * Full wide mode may work differently based on model and is supported for DTV fully, and ATV, AV partially.

03. 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
01 : Screen mute on (Picture off)
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.

04. 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)
01 : Volume mute off (Volume on)

Ack [e][][Set ID][][OK/NG][Data][x]

05. 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

Ack [f][][Set ID][][OK/NG][Data][x]

06. Contrast (Command: k g)

- To adjust screen contrast.
You can also adjust contrast in the PICTURE menu.

Transmission [k][g][][Set ID][][Data][Cr]

Data Min : 00 to Max : 64

Ack [g][][Set ID][][OK/NG][Data][x]

07. Brightness (Command: k h)

- To adjust screen brightness.
You can also adjust brightness in the PICTURE menu.

Transmission [k][h][][Set ID][][Data][Cr]

Data Min : 00 to Max : 64

Ack [h][][Set ID][][OK/NG][Data][x]

08. Color/Colour (Command: k i)

- To adjust the screen Color(Colour).
You can also adjust colour in the PICTURE menu.

Transmission [k][i][][Set ID][][Data][Cr]

Data Min : 00 to Max : 64

Ack [i][][Set ID][][OK/NG][Data][x]

09. Tint (Command: k j)

- To adjust the screen tint.
You can also adjust tint in the PICTURE menu.

Transmission [k][j][][Set ID][][Data][Cr]

Data Red : 00 to Green : 64

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 menu.

Transmission [k][k][][Set ID][][Data][Cr]

Data Min : 00 to Max : 32

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 : OSD off 01 : OSD 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 : Lock off 01 : Lock on

Ack [m][][Set ID][][OK/NG][Data][x]

- * If you are not using the remote control, use this mode.
When main power is off & on (plug-off and plug-in, after 20 - 30 seconds), external control lock is released.
- * In the standby mode (DC off by off timer or 'ka', 'mc' command), and if key lock is on, TV will not turn on by power on key of IR & Local Key.

13. Treble (Command: k r)

- To adjust treble.
You can also adjust in the AUDIO menu.

Transmission [k][r][][Set ID][][Data][Cr]

Data Min : 00 to Max : 64

Ack [r][][Set ID][][OK/NG][Data][x]

* (Depending on model)

14. Bass (Command: k s)

- To adjust Bass.
You can also adjust in the AUDIO menu.

Transmission [k][s][][Set ID][][Data][Cr]

Data Min : 00 to Max : 64

Ack [s][][Set ID][][OK/NG][Data][x]

* (Depending on model)

15. Balance (Command: k t)

- To adjust balance.
You can also adjust balance in the AUDIO menu.

Transmission [k][t][][Set ID][][Data][Cr]

Data Min : 00 to Max : 64

Ack [t][][Set ID][][OK/NG][Data][x]

16. Color(Colour) Temperature (Command: x u)

- To adjust colour temperature. You can also adjust Color(Colour) Temperature in the PICTURE menu.

Transmission [x][u][][Set ID][][Data][Cr]

Data Min : 00 to Max : 64

Ack [u][][Set ID][][OK/NG][Data][x]

17. ISM Method (Command: j p) (Only Plasma TV)

- To control the ISM method. You can also adjust ISM Method in OPTION menu.

Transmission [j][p][][Set ID][][Data][Cr]

Data Min : 02: Orbiter

08: Normal

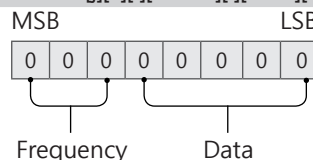
20: Color(Colour) Wash

Ack [p][][Set ID][][OK/NG][Data][x]

18. Equalizer (Command : j v)

- Adjust EQ of the set.

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	0	0	0	1	1	19(decimal)

1	0	0	5th Band	0	0	1	0	1	20(decimal)
---	---	---	----------	---	---	---	---	---	-------------

Acknowledgement [v][][Set ID][][OK/NG][Data][x]

* It depends on model, and can adjust when sound mode is EQ adjustable value.

19. Energy Saving (Command: j q)

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

Transmission [j][q][][Set ID][][Data][Cr]

Data

- 00 : Off
- 01 : Minimum
- 02 : Medium
- 03 : Maximum
- 04 : Auto (For LCD TV / LED TV) / Intelligent sensor (For PDP TV)
- 05 : Screen off

* (Depending on model)

Ack [q][][Set ID][][OK/NG][Data][x]

20. Tune Command (Command: m a)

- * This command may work differently depending on model and signal.
- For Europe, Mid-East, Colombia, Asia except South Korea and Japan Model
- Select channel to following physical number.

Transmission [m][a][][Set ID][][Data 00][][Data 01][][Data 02][Cr]

* Analog Antenna/Cable

[Data 00][Data 01] Channel Data

Data 00 : High byte channel data

Data 01 : Low byte channel data
- 00 00 ~ 00 C7 (Decimal : 0 ~ 199)

Data 02 : Input Source (Analog)

- 00 : Antenna TV (ATV)
- 80 : Cable TV (CATV)

* Digital Antenna/Cable/Satellite

[Data 00][Data 01]: Channel Data

Data 00 : High Channel data

Data 01 : Low Channel data
- 00 00 ~ 27 0F (Decimal: 0 ~ 9999)

Data 02 : Input Source (Digital)

- 10 : Antenna TV (DTV)
- 20 : Antenna Radio (Radio)
- 40 : Satellite TV (SDTV)
- 50 : Satellite Radio (S-Radio)
- 90 : Cable TV (CADTV)
- a0 : Cable Radio (CA-Radio)

* Tune Command Examples:

1. Tune to the Analog antenna (PAL) Channel 10.

Set ID = All = 00

Data 00 & 01 = Channel Data is 10 = 00 0a

Data 02 = Analog Antenna TV = 00

Result = **ma 00 00 0a 00**

2. Tune to the digital antenna (DVB-T) Channel 01.

Set ID = All = 00

Data 00 & 01 = Channel Data is 1 = 00 01

Data 02 = Digital Antenna TV = 10

Result = **ma 00 00 01 10**

3. Tune to the satellite (DVB-S) Channel 1000.

Set ID = All = 00

Data 00 & 01 = Channel Data is 1000 = 03 E8

Data 02 = Digital Satellite TV = 40

Result = **ma 00 03 E8 40**

Ack [a][][Set ID][][OK][Data 00][Data 01]

[Data 02][x][a][][Set ID][][NG][Data 00][x]

- For South Korea, North/Latin America except Colombia Model

- To tune channel to following physical/major/minor number.

Transmission [m][a][][0][][Data00][][Data01]

[][Data02][][Data03][][Data04][][Data05][Cr]

Digital channels have a Physical, Major, and Minor channel number. The Physical number is the actual digital channel number, the Major is the number that the channel should be mapped to, and the Minor is the sub-channel. Since the ATSC tuner automatically maps the channel from the Major / Minor number, the Physical number is not required when sending a command in Digital.

* Analog Antenna/Cable

Data 00 : Physical Channel Number

- Antenna (ATV) : 02~45 (Decimal: 2 ~ 69)

- Cable (CATV) : 01, 0E~7D (Decimal : 1, 14~125)

[Data 01 ~ 04]: Major/Minor Channel Number

Data 01 & 02: xx (Don't care)

Data 03 & 04: xx (Don't care)

Data 05: Input Source (Analog)

- 00 : Antenna TV (ATV)
- 01 : Cable TV (CATV)

* Digital Antenna/Cable

Data 00 : xx (Don't care)

[Data 01][Data 02]: Major Channel Number

Data 01 : High byte Channel Data

Data 02 : Low byte Channel Data

- 00 01 ~ 27 0F (Decimal: 1 ~ 9999)

[Data 03][Data 04]: Minor Channel Number

Data 03 : High byte Channel Data

Data 04 : Low byte Channel Data

Data 05 : Input Source (Digital)

- 02 : Antenna TV (DTV) – Use Physical Channel Number

- 06 : Cable TV (CADTV) – Use Physical Channel

Number

- 22 : Antenna TV (DTV) – Don't Use Physical Channel Number
- 26 : Cable TV (CADTV) - Don't Use Physical Channel Number
- 46 : Cable TV (CADTV) – Use Major Channel Number Only (One Part Channel)

Two bytes are available for each major and minor channel data, but usually the low byte is used alone (high byte is 0).

* Tune Command Examples:

1. Tune to the Analog cable (NTSC) channel 35.

Set ID = All = 00
 Data 00 = Channel Data is 35 = 23
 Data 01 & 02 = No Major = 00 00
 Data 03 & 04 = No Minor = 00 00
 Data 05 = Analog Cable TV = 01
 Total = **ma 00 23 00 00 00 01**

2. Tune to the digital antenna (ATSC) channel 30-3.

Set ID = All = 00
 Data 00 = Don't know Physical = 00
 Data 01 & 02 = Major is 30 = 00 1E
 Data 03 & 04 = Minor is 3 = 00 03
 Data 05 = Digital Antenna TV = 22
 Total = **ma 00 00 00 1E 00 03 22**

Ack [a][][Set ID][][OK][Data 00][Data 01]

[Data 02][Data 03][Data 04][Data 05]

[x][a][][Set ID][][NG][Data 00][x]

- For Japan Model

- ▶ To tune channel to following physical/major/minor number.

Transmission [m][a][][0][][Data00][][Data01]

[][Data02][][Data03][][Data04][][Data05][Cr]

* Digital Antenna/Satellite

Data 00: xx (Don't care)

[Data 01][Data 02]: Major Channel Number

Data 01: High byte Channel Data

Data 02: Low byte Channel Data

- 00 01 ~ 27 0F (Decimal: 1 ~ 9999)

[Data 03][Data 04]: Minor/Branch Channel Number
 (Don't care in Satellite)

Data 03: High byte Channel Data

Data 04: Low byte Channel Data

Data 05 : Input Source (Digital/Satellite for Japan)

- 02 : Antenna TV (DTV)
- 07 : BS (Broadcasting Satellite)
- 08 : CS1 (Communication Satellite 1)
- 09 : CS2 (Communication Satellite 2)

* Tune Command Examples:

- 1 Tune to the digital antenna (ISDB-T) channel 17-1.

Set ID = All = 00
 Data 00 = Don't know Physical = 00
 Data 01 & 02 = Major is 17 = 00 11
 Data 03 & 04 = Minor/Branch is 1 = 00 01

Data 05 = Digital Antenna TV = 02

Total = **ma 00 00 00 11 00 01 02**

2. Tune to the BS (ISDB-BS) channel 30.

Set ID = All = 00

Data 00 = Don't know Physical = 00

Data 01 & 02 = Major is 30 = 00 1E

Data 03 & 04 = Don't Care = 00 00

Data 05 = Digital BS TV = 07

Total = **ma 00 00 00 1E 00 00 07**

* This feature is varied based on the model.

Ack [a][][Set ID][][OK][Data 00][Data 01]

[Data 02][Data 03][Data 04][Data 05]

[x][a][][Set ID][][NG][Data 00][x]

21. Channel(Programme) Add/Del(Skip)
 (Command: m b)

- ▶ To skip current channel(programme) for next time.

Transmission [m][b][][Set ID][][Data][Cr]

Data 00 : Del(ATSC,ISDB)/Skip(DVB) 01 : Add

Ack [b][][Set ID][][OK/NG][Data][x]

* Set the saved channel status to del(ATSC, ISDB)/skip(DVB) or add.

22. Key (Command: m c)

- ▶ To send IR remote key code.

Transmission [m][c][][Set ID][][Data][Cr]

Data Key code - p.2.

Ack [c][][Set ID][][OK/NG][Data][x]

23. Control Backlight (Command: m g)

- For LCD TV / LED TV

- ▶ 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]

Control Panel Light (Command: m g)

- For Plasma TV

- ▶ To control the panel light.

Transmission [m][g][][Set ID][][Data][Cr]

Data Min : 00 to Max : 64

Ack [g][][Set ID][][OK/NG][Data][x]

24. Input select (Command: x b) (Main Picture Input)

- To select input source for main picture.

Transmission [x][b][][Set ID][][Data][Cr]

Data

00 : DTV 01 : CADTV
02 : Satellite DTV 10 : ATV
ISDB-BS (Japan)
03 : ISDB-CS1 (Japan)
04 : ISDB-CS2 (Japan)
11 : CATV

20 : AV or AV1 21 : AV2
40 : Component1 41 : Component2
60 : RGB

90 : HDMI1 91 : HDMI2
92 : HDMI3 93 : HDMI4

Ack [b][][Set ID][][OK/NG][Data][x]

- * This function depends on model and signal.

25. 3D(Command: x t) (only 3D models) (Depending on model)

- To change 3D mode for TV.

Transmission [x][t][][Set ID][][Data 00][][Data 01]
[][Data 02][][Data 03][Cr]

- * (Depending on model)

Data Structure

[Data 00] 00 : 3D On
 01 : 3D Off
 02 : 3D to 2D
 03 : 2D to 3D
[Data 01] 00 : Top and Bottom
 01 : Side by Side
 02 : Check Board
 03 : Frame Sequential
 04 : Column interleaving
 05 : Row interleaving
[Data 02] 00 : Right to Left
 01 : Left to Right
[Data 03] 3D Effect(3D Depth): Min : 00 - Max : 14
 (*transmit by Hexadecimal code)

- * [Data 02], [Data 03] functions depend on model and signal.
- * If [Data 00] is 00 (3D On), [Data 03] has no meaning.
- * If [Data 00] is 01 (3D off) or 02 (3D to 2D), [Data 01], [Data 02] and [Data 03] have no meaning.
- * If [Data 00] is 03 (2D to 3D), [Data 01] and [Data 02] have no meaning.
- * If [Data 00] is 00 (3D On) or 03 (2D to 3D), [Data 03] works when 3D Mode (Genre) is manual only.
- * All 3D pattern options ([Data 01]) may not be available according to broadcasting/video signal.

[Data 00]	[Data 01]	[Data 02]	[Data 03]
-----------	-----------	-----------	-----------

00	O	O	O
01	X	X	X
02	X	X	X
03	X	O	O

X : don't care

Ack [t][][Set ID][][OK][Data00][Data01][Data02]
[Data03][x]
[t][][Set ID][][NG][Data00][x]

26. Extended 3D(Command: x v) (only 3D models) (Depending on model)

- To change 3D option for TV.

Transmission [x][v][][Set ID][][Data 00][][Data 01][Cr]

[Data 00] 3D option

00 : 3D Picture Correction
01 : 3D Depth (3D Mode is Manual Only)
02 : 3D Viewpoint
06 : 3D Color Correction
07 : 3D Sound Zooming
08 : Normal Image View
09 : 3D Mode (Genre)

[Data 01] It has own range for each 3D option determined by [Data 00].

1) When [Data 00] is 00

00 : Right to Left
01 : Left to Right

2) When [Data 00] is 01, 02

Data Min: 0 - Max: 14 (*transmit by Hexadecimal code)

Data value range(0 - 20) converts Viewpoint range (-10 - +10) automatically (Depending on model)

- * This option works when 3D Mode (Genre) is manual only.

3) When [Data 00] is 06, 07

00 : Off
01 : On

4) When [Data 00] is 08

00 : Revert to 3D video from 3D-to-2D converted 2D video
01 : Change 3D video to 2D video, except 2D-to-3D video

- * If conversion condition doesn't meet, command is treated as NG.

5) When [Data 00] is 09

00 : Standard 01 : Sport
02 : Cinema 03 : Extreme
04 : Manual 05 : Auto

Ack [v][][Set ID][][OK][Data00][Data01][x]
[v][][Set ID][][NG][Data00][x]

27. Auto Configure (Command: j u)
(Depending on 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]

