



KAON Set-Top Box & Remote

KSTB2020

User Guide



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WHAT'S IN THE BOX?



KSTB2020
Set-Top Box
(STB)



HDMI Cable



KURV Remote
KURV 2.0 Voice
Remote Control Shown



AA Batteries



Power Adapter



RCA Analog
Composite
Breakout Cable
(Optional)

SET-TOP BOX AT A GLANCE

Top View



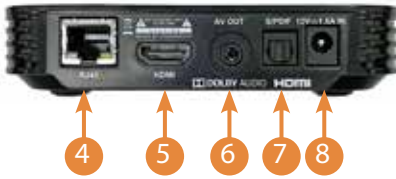
- 1** Power Button:
Used to power the Kaon STB On or Off.

Front View



- 2** Status Indicator LED:
Indicates power status of STB (Red = Off, Green = On).
- 3** Infrared (IR) Sensor:
Used to communicate with the KURV Remote Control.

Rear View



- 4 RJ45:
10/100 Ethernet port used to connect to a home router.
- 5 HDMI:
Digital A/V output, used to connect to a TV via HDMI cable.
- 6 AV Out:
SD Analog A/V output, used to connect to older-style TVs that do not support HDMI connections. Ask your installer for an RCA composite breakout cable if one was not included.
- 7 S/PDIF:
Optical Audio output, used to connect to external Sound bar or Surround Sound system. An optical cable with TOSLINK connectors is required (not included).
- 8 DC Power port, used to connect via the power adapter.

Side View



- 9 USB:
This port has an output power capability of 5V DC @ 1 amp.

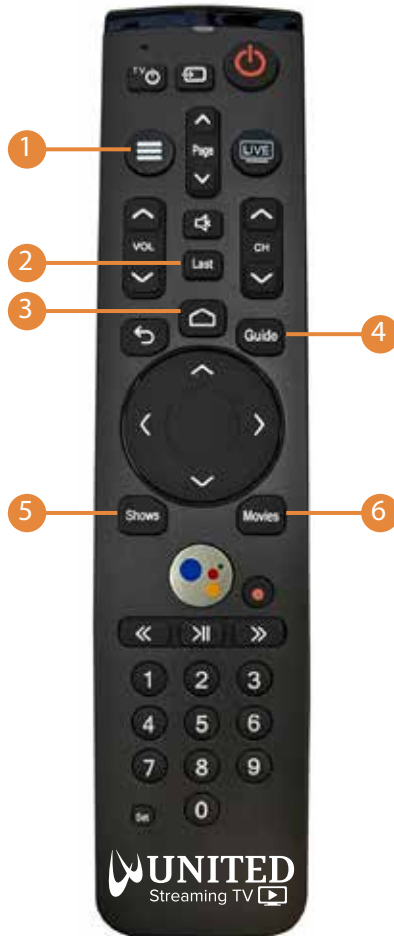
REMOTE CONTROL FUNCTIONALITY

Backlighting

The remote control is a motion detecting device and will backlight when the remote is picked up or moved.

Backlighting will remain on for 3 seconds.

Hot Keys



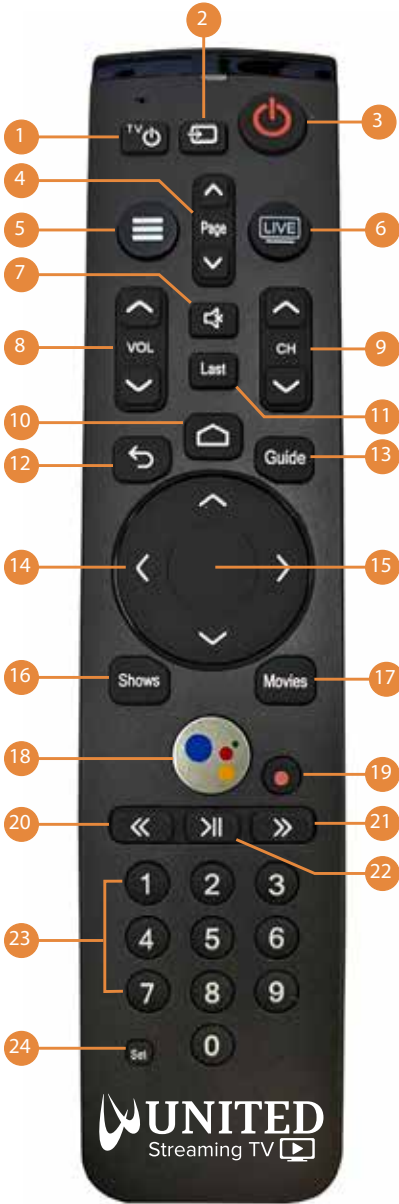
KURV 2.0 Voice
Remote Control Shown

Hot Keys

The following Hot Keys are dedicated short cuts to return the user to the video service regardless of the content or App being viewed.



- 1 MENU:
Displays the Main Menu.
- 2 LAST:
Displays the last 15 items that have been watched.
- 3 HOME:
Displays the main Android TV menu including access to Apps.
- 4 GUIDE:
Displays the Electronic Program Guide (EPG).
- 5 SHOWS:
Displays the shows that are presently available for viewing On Demand (VOD).
- 6 MOVIES:
Displays the movies that are presently available for viewing On Demand (VOD).

Button Functionality



KURV 2.0 Voice
Remote Control Shown

- 1 **TV POWER:**
Powers on or off TV if remote is programmed with a TV infrared code.
- 2 **TV INPUT:**
Changes video input on TV if remote is programmed with a TV infrared code.
- 3 **POWER:**
Switches STB power on or into standby or off mode. Will also control TV power and audio system after remote has been programmed with a TV/Audio Infrared code.
- 4 **PAGE (Up or Down):**
In the GUIDE or MENU screens, scrolls one page up or down.
- 5 **MENU:**
Launches the MAIN MENU within the App with Live Video or last viewed On-Demand program.
- 6 **LIVE TV:**
Tunes to the last content viewed in the App.
- 7 **MUTE:**
Mutes the audio on your audio device(s) (TV, Audio System, or STB).
- 8 **VOLUME (Up or Down):**
Increases or decreases volume levels on your audio device(s).
- 9 **CHANNEL (Up or Down):**
Selects the previous and next available channels. (Hold for rapid advance.) Within MENU or GUIDE acts the same as Page Up/ Page Down.


- 10 **GOOGLE HOME:**
Launches AndroidTV main menu including access to Apps.
- 11 **LAST:**
Displays the last 15 items that have been watched.
- 12 **BACK / EXIT:**
Returns to previous menu or state within current App. From live video, this key opens the Main Menu.
- 13 **GUIDE:**
Launches the Channel GUIDE (EPG) within the App.
- 14 **ARROWS:**
Moves to highlight items in respective direction.
- 15 **OK / SELECT:**
Short Press - Confirms a selection. When watching video in the App, info on the current video playing appears, including the time shift bar.
Long Press - Invokes the App search menu. This is the same function as the magnifying glass in the Main Menu.
- 16 **SHOWS:**
Launches the SHOWS play list in the App.
- 17 **MOVIES:**
Launches the MOVIES play list in the App.
- 18 **SEARCH / VOICE:**
 Launches text-based Google Assistant search.  Launches voice-based Google Assistant search.
- 19 **RECORD:**
Begin recording selected content in the App.
- 20 **REWIND:**
Fast rewinds VOD, or live TV.
- 21 **FAST FORWARD:**
Fast forwards VOD, or live TV.
- 22 **PAUSE / PLAY:**
Play or Pause toggle of VOD, or live TV.
- 23 **0-9:**
Enters channel numbers in the GUIDE or full screen video.
- 24 **SET:**
Setup the remote to control the TV, and to program an audio device with Infrared (IR) commands.

KURV 1.0 SEARCH REMOTE

Remote Pairing Operation

STB / Remote IR – RF Mode Conversion

For customers who wish to place the STB in a non-line of sight position (with respect to the remote control) the remote must operate in RF mode. As the remote operates in IR mode by default the user will have to convert the remote operation from IR mode to RF mode by the following sequence:

- While in the same room with the STB, press and hold **Set** on the remote for approximately 3 seconds. The remote LED will initially display red.
- After 3 seconds the remote LED will turn green. Immediately press the home button ().
- A 3-digit code will be displayed on the TV screen.
- Enter the 3-digit code shown on the TV.
- If successful, “Connected” will be displayed on the TV screen and the remote now operates via RF mode.

If “Connected” is not displayed, wait 3 minutes, then try the above procedure again.

Once successfully paired (Connected), the STB may be placed in a non-line of sight location such as behind the TV or in a cabinet.

To return the remote to the line of sight IR mode of operation perform the following steps:

- On the remote press and hold **Set** for 3 seconds, until the LED turns green.
- On the remote Press **9** **8** **1**.
- Successful completion is signaled by 2 green blinks.



TV / Remote Programming

By default, the remote controls the Volume and Power on the STB. To program the remote to the TV, such that remote Master Power key presses adjust Power and Volume on the TV by Infrared commands directly follow the instructions below:

- Press and hold the **Set** key until the remote LED turns green.
- Enter the 5-digit code as shown in Appendix A.
- Successful programming is indicated by two green blinks of the LED.
- Unsuccessful programming is indicated by two red blinks of the LED.


TV Code Auto-Search Method

If a code cannot be located in Appendix A or B, use this method to find control programming:


- Press and hold the **Set** key for 3 seconds, until the LED turns green.
- On the remote Press **9 9 1** .
- Press the **CH**  sequentially until the TV turns off.
- Press the OK / SELECT  key to enter this control into the remote.
- Successful programming is indicated by two green blinks of the LED.

Volume and Mute Controlling Device Link


By default, the remote controls the Volume and Mute on the STB. To program the remote to control Volume and Mute on the TV follow the instructions below:


- Press and hold the **Set** key until the remote LED turns green.
- Press the **VOL**  key.
- Successful programming is indicated by two green blinks of the LED.
- Unsuccessful programming is indicated by two red blinks of the LED.


To return remote to default for Volume and Mute control on the STB, follow the instructions below:

- Press and hold the **Set** key until the remote LED turns green.
- Press the **VOL**  key.
- Successful programming is indicated by two green blinks of the LED.
- Unsuccessful programming is indicated by two red blinks of the LED.

Remote Behavior

If the remote has been programmed to the TV as described on the previous page, the remote's TV power button () will control the TV power only.

This will not affect the powered state of the STB. The "all devices" power button () will control the TV power as well as the STB power states if remote has been fully programmed with TV and Audio system.

The "all devices" power button () may be used in two ways while system is fully powered on:

Short Press: Will turn off TV and put the STB into a standby mode.


Long Press: User will be prompted if they want STB to be powered down (non-standby) mode. If OK is selected, the TV and STB will all be powered down. The STB will be fully powered down and not be in standby mode.

KURV 2.0 VOICE REMOTE

Remote Pairing Operation

STB / Remote IR – RF Mode Conversion

For customers who wish to place the STB in a non-line of sight position (with respect to the remote control) the remote must operate in RF mode. As the remote operates in IR mode by default the user will have to convert the remote operation from IR mode to RF mode by the following sequence:

- While in the same room with the STB, press and hold **Set** on the remote for approximately 3 seconds. The remote LED will initially display red.
- After 3 seconds the remote LED will turn green. Immediately press the home button ()
- A 3-digit code will be displayed on the TV screen.
- Enter the 3-digit code shown on the TV.
- If successful, "Connected" will be displayed on the TV screen and the remote now operates via RF mode.

If "Connected" is not displayed, wait 3 minutes, then try the above procedure again.

Once successfully paired (Connected), the STB may be placed in a non-line of sight location such as behind the TV or in a cabinet.

To return the remote to the line of sight IR mode of operation perform the following steps:

- On the remote press and hold **Set** for 3 seconds, until the LED turns green.
- On the remote Press **9 8 1**.
- Successful completion is signaled by 2 green blinks.

NOTE: Remote must be in RF Paired (Bluetooth) Mode for Remote Voice Functionality to work correctly.

TV / Remote Programming

By default, the remote controls the Volume on TV, and Power on the STB. To program the remote to the TV, such that remote Master Power key presses adjust Power and Volume on the TV by Infrared commands directly follow the instructions below:

- Press and hold the **Set** key until the remote LED turns green.
- Enter the 5-digit code as shown in Appendix A.
- Successful programming is indicated by two green blinks of the LED.
- Unsuccessful programming is indicated by two red blinks of the LED.



Audio System - Sound Bar / Remote Programming

By default, the remote controls the Volume on TV, and Power on the STB. To program the remote to the Sound Bar, such that remote Master Power key presses adjust Volume on the Sound Bar by Infrared commands directly, follow the instructions below:

- Press and hold the **Set** key until the remote LED turns green.
- Enter the 5-digit code as shown in Appendix B.
- Successful programming is indicated by two green blinks of the LED.
- Unsuccessful programming is indicated by two red blinks of the LED.


TV Code Auto-Search Method

If a code cannot be located in Appendix A or B, use this method to find control programming:


- Press and hold the **Set** key for 3 seconds, until the LED turns green.
- On the remote Press **9 9 1** .
- Press the **CH**  sequentially until the TV turns off.
- Press the OK / SELECT  key to enter this control into the remote.
- Successful programming is indicated by two green blinks of the LED.

Volume and Mute Controlling Device Link


By default, the remote controls the Volume and Mute on the TV or Sound Bar. To program the remote to control Volume and Mute on the STB, such that remote can adjust volume on the Sound Bar by Infrared commands directly, follow the instructions below:


- Press and hold the **Set** until the remote LED turns green.
- Press the **VOL**  key.
- Successful programming is indicated by two green blinks of the LED.
- Unsuccessful programming is indicated by two red blinks of the LED.


To return remote to default for Volume and Mute control on the TV or Sound Bar, follow the instructions below:

- Press and hold the **Set** key until the remote LED turns green.
- Press the **VOL**  key.
- Successful programming is indicated by two green blinks of the LED.
- Unsuccessful programming is indicated by two red blinks of the LED.

Remote Behavior

If the remote has been programmed to the TV and Audio Systems as described on the previous page, the remote's TV power button () will control the TV power only.

This will not affect the powered state of the STB. The "all devices" power button () will control the TV power as well as the STB and audio system power states if remote has been fully programmed with TV and Audio system.

The "all devices" power button () may be used in two ways while system is fully powered on:

Short Press: Will turn off TV and Audio sub-system and put the STB into a standby mode.

Long Press: User will be prompted if they want STB to be powered down (non-standby) mode. If OK is selected, the TV, Audio system, and STB will all be powered down. The STB will be fully powered down and not be in standby mode.

KURV 1.0 / KURV 2.0 REMOTE OK BUTTON FUNCTIONALITY



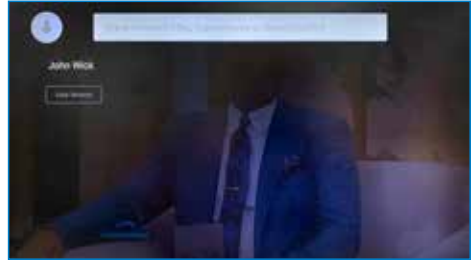
When pressing the OK/Select key for an extended time, on either the KURV 1.0 or KURV 2.0 remote controls, the Operator in app search screen appears on the TV.

The KURV 1.0 SEARCH remote control is only capable of a manual text search using the keyboard. Arrow right to the Search Box and press OK to display the on screen keyboard to type out search string.

The KURV 2.0 VOICE remote control is capable of searching by talking into the remote. When activated, speak into the remote.



KURV 1.0 SEARCH SCREEN



KURV 2.0 SEARCH SCREEN

Once Search has been selected by a long press and release of OK button, the search window will appear, allowing the user to type in (or speak) search keywords for content titles (series, movies, episodes) and channel titles across live, upcoming, lookback and VOD content within the Operator App.

When using a KURV 2.0 VOICE enabled remote for in App searching, ensure that the on screen microphone is highlighted. This signifies that voice input is enabled. If you are in the search screen and the voice microphone is not highlighted in red, a short press of the OK button will enable the voice input.

Once a search term has been typed or spoken, the results will be populated, and may contain results that fall into one or more of the following categories:

Shows (e.g. Type/Speak "Wheel of Fortune")
Movies (e.g. Type/Speak "Lost in Space")
Channels (e.g. Type/Speak "MSNBC")

Live & Upcoming (e.g. Type/Speak "Tennis")
Episodes (e.g. Type/Speak "The One Where Joey Tells Rachel")

The user may select any of the results in order to access additional information about the program.

Note: The channel search is not yet supported (e.g. "Tune to Channel 7" or "Tune to MSNBC")

KURV 1.0 / KURV 2.0 REMOTE BATTERY INSTALLATION

The remote requires two AA batteries.

Hold the remote with keys facing the floor. Battery cover is the entire back of the remote.



Using the ridges, slide the back cover towards the bottom of the remote, remove the cover and insert batteries in the direction shown.

Battery Monitoring

The remote has ability to output battery status. Follow the steps below to check Batteries:

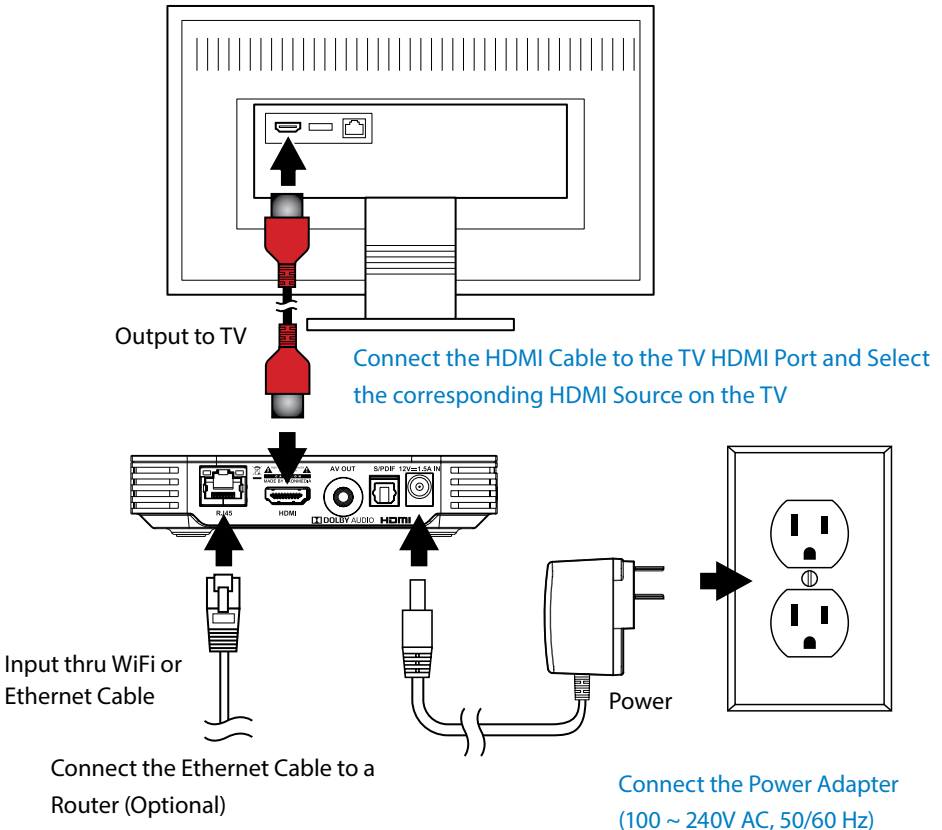
- Press and hold the **Set** key until the remote LED turns green.
- On the remote Press **9 9 9**.
- If the Green LED blinks 4 times, battery status is excellent.
- If the Green LED blinks 3 times, battery status is good.
- If the Green LED blinks 2 times, battery status is low.
- If the Red LED blinks 1 time, battery status is very low and need to be replaced.

SELF-INSTALL GUIDELINES

HDMI Cable Connection

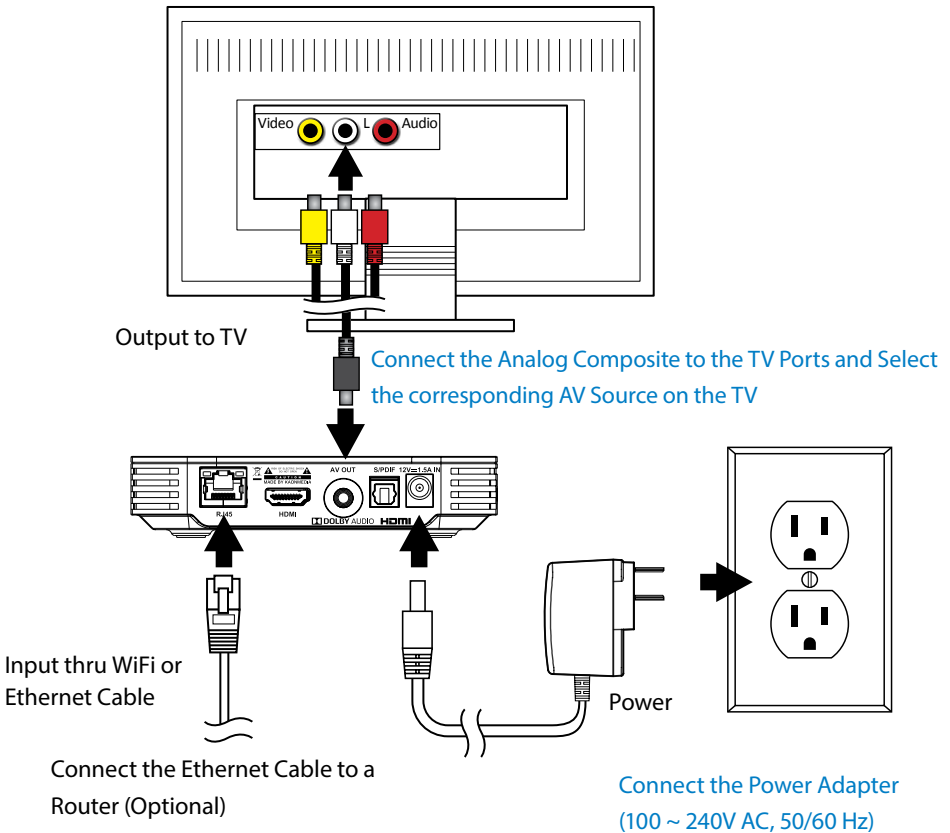
What You Need

- An HD or Ultra High Definition (UHD) TV that can support 720p, 1080p or 4K UHD.
- A broadband Internet connection that supports a wired or WiFi wireless home network (802.11 g, n, or ac).
- Pay TV Operator login credentials (mandatory).
- Google login credentials (optional).



Analog Composite Breakout Cable Connection

Connect the analog composite cable as shown below. This connection scheme should only be used if the TV does not have a working HDMI port.

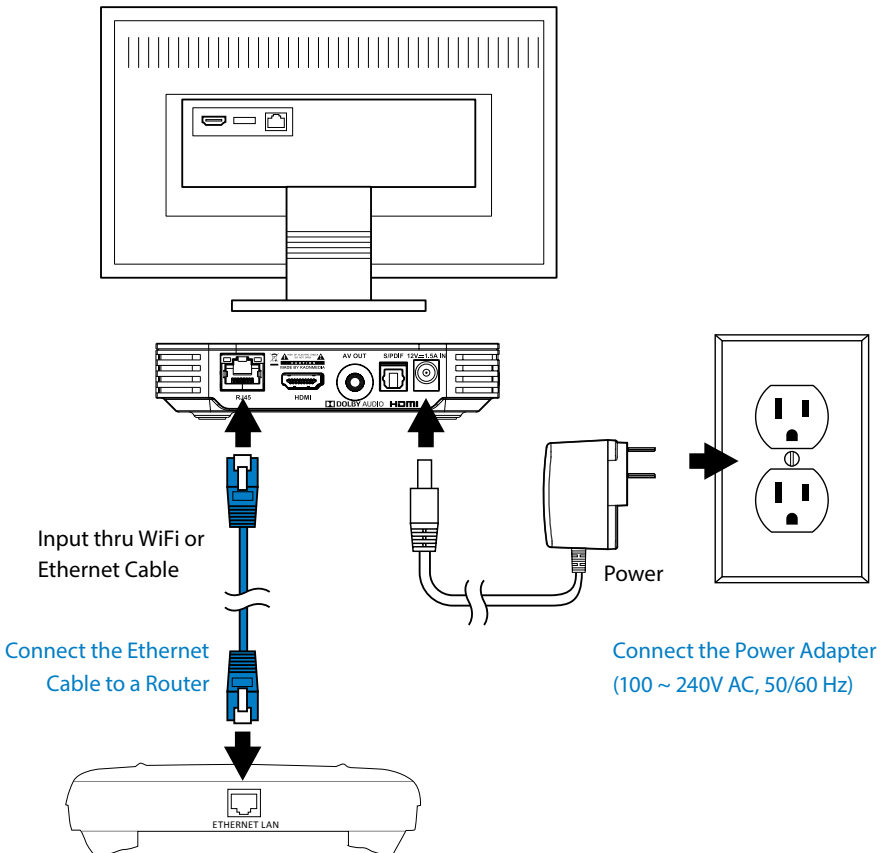


Network Connection

You must connect your new STB to an internet connection through either a WiFi wireless connection or a wired Ethernet connection.

Wired Network Connection

If your home router is near the STB location, a CAT-5/5e/6 Ethernet cable may be used for internet connectivity. Plug one end of the CAT-5/5e/6 cable into the STB RJ45 port. Plug the other end of the cable into any LAN port of your home router.



WiFi Network Connection



Connect Automatically Using WPS

Navigate to the Android main menu by pressing the following key sequences:

 Home →  Settings →  Network →  WiFi → Select to enable.

Once WiFi has been enabled, using the remote scroll down and select "Connect via WPS".

Once selected press the WPS button on your home router. The Set-Top Box will automatically connect to the WiFi network.



Ensure that WiFi network signal strength is strong  or very strong .

Connect Manually





If your home WiFi router does not have a WPS button, you can connect manually. Navigate to the Android main menu by pressing the following key sequences:

 Home →  Settings →  Network →  WiFi → Select to enable.

Once WiFi has been enabled, using the remote scroll down and select the required network and press OK. When prompted, enter your WiFi password using the remote. Alternately a USB keyboard may be plugged into the USB port of the Set-Top Box. Type password on keyboard as required.

Ensure that WiFi network signal strength is strong  or very strong .

TROUBLESHOOTING

| Observation | Things to Check | Remediation |
|--|--|---|
| Video/audio quality is poor on STB or network connection error is displayed. | WiFi signal strength in STB Network connection menu. Ideal for consistent video:  Strong WiFi signal  Very Strong WiFi signal Video may buffer frequently or will not be consistent:  Weak WiFi signal  Medium WiFi signal | Relocate router and STB closer in proximity with each other if possible, such that signal is strong or very strong. Connecting the STB to home router with a CAT-5/5e/ cable will also resolve poor WiFi connectivity issues. If video or audio quality is still poor after correcting network, contact United technical support. |
| | Ethernet cable integrity | If wired Ethernet connectivity is used, reset/replace Ethernet cable as required. |
| | Router integrity | Power cycle STB and router. |
| | HDMI/Analog composite cable integrity and connection. | Reset/replace cables as needed. |
| | TV HDMI port integrity. | Use different TV HDMI port if possible. |
| | If possible, compare suspect STB A/V quality to another device such as a Blu-ray player. | If the STB is found to show issues while no other devices do, contact United technical support. |
| Video is not visible on the TV. | HDMI port connection is aligned with the TV's HDMI port selection. | Ensure HDMI port connection and HDMI port selection are the same. |
| Remote does not control STB, TV, or audio equipment. | Battery charge | Replace batteries if charge is low. |
| | Remote is not programmed to TV or Audio system. | Refer to pages 8 or 11 for KURV remote pairing instructions. |
| | A Remote Control button press always lights up the LED at the top of the remote. Red = an IR command sent. Green = an RF command sent. | If NO LED lights on button presses, the batteries should be changed. |

USAGE CONSTRAINTS

External DVR via USB Drive

The USB port cannot be used to connect an external USB drive to support local DVR capability.

APPENDIX A

TV Codes for Remote Pairing

- Top 10 US TV Brands -

| TV Maker / Brand | Code Number | | | | | | | | | | |
|------------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| SAMSUNG | 10305 | 10265 | 10001 | 10012 | 10051 | 10092 | 10011 | 10118 | 10124 | 10132 | 10145 |
| | 10176 | 10221 | 10306 | 10542 | 10315 | 10439 | 10479 | 10408 | 10543 | | |
| LG (GOLDSTAR) | 10011 | 10093 | 10103 | 10113 | 10118 | 10132 | 10346 | 10315 | 10439 | | |
| SONY | 10043 | 10075 | 10117 | 10130 | 10067 | 10170 | 10238 | 10247 | 10309 | 10409 | 10452 |
| VIZIO | 10011 | 10315 | 10351 | 10530 | | | | | | | |
| PANASONIC | 10076 | 10010 | 10038 | 10057 | 10005 | 10148 | 10150 | 10169 | 10308 | 10359 | 10485 |
| SHARP | 10260 | 10020 | 10025 | 10028 | 10033 | 10034 | 10132 | 10151 | 10235 | 10236 | 10361 |
| | 10375 | 10436 | 10011 | | | | | | | | |
| TOSHIBA | 10021 | 10013 | 10035 | 10041 | 10052 | 10063 | 10092 | 10142 | 10146 | 10178 | 10179 |
| | 10393 | 10303 | 10464 | 10419 | 10517 | | | | | | |
| DYNEX | 10091 | 10347 | 10366 | | | | | | | | |
| TCL | 10256 | 10371 | 10267 | | | | | | | | |
| SKYWORTH | 10522 | | | | | | | | | | |

| TV Maker / Brand | Code Number | | | | | | | | | | |
|------------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 3M | 10368 | | | | | | | | | | |
| A MARK | 10103 | 10132 | 10388 | | | | | | | | |
| ACTION | 10370 | | | | | | | | | | |
| ADMIRAL | 10436 | 10431 | | | | | | | | | |
| ADVENT | 10135 | 10339 | | | | | | | | | |
| ADVENTURA | 10372 | | | | | | | | | | |
| AFTRON | 10373 | | | | | | | | | | |
| AIKO | 10374 | | | | | | | | | | |
| AIWA(R-44A) | 10082 | 10183 | | | | | | | | | |
| AKAI | 10148 | 10160 | 10001 | 10317 | 10318 | 10348 | 10352 | 10542 | 10439 | 10476 | 10517 |
| ALARON | 10376 | | | | | | | | | | |
| ALBATRON | 10377 | | | | | | | | | | |
| AMBASSADOR | 10378 | | | | | | | | | | |
| AMERICA ACTION | 10380 | | | | | | | | | | |
| AMPRO | 10070 | 10164 | 10249 | 10381 | | | | | | | |
| AMSTRAD | 10053 | | | | | | | | | | |
| ANAM | 10045 | 10055 | 10057 | 10076 | 10095 | 10099 | 10103 | 10109 | 10112 | 10143 | 10380 |
| AOC | 10088 | 10363 | 10367 | 10001 | 10011 | 10103 | 10330 | 10439 | | | |
| AOMNI | 10354 | | | | | | | | | | |
| APEX | 10302 | 10303 | 10282 | | | | | | | | |
| APEX DIGITAL | 10303 | 10373 | 10384 | | | | | | | | |
| ARCHER | 10388 | | | | | | | | | | |

| TV Maker / Brand | Code Number | | | | | | | | | | | |
|----------------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| ASTAR | 10390 | | | | | | | | | | | |
| AUDIOVOX | 10345 | 10319 | 10380 | 10374 | 10388 | | | | | | | |
| AURORA SYSTEMS | 10391 | | | | | | | | | | | |
| AVENTURA | 10311 | | | | | | | | | | | |
| BELCOR | 10001 | 10011 | 10315 | | | | | | | | | |
| BELL & HOWELL | 10393 | | | | | | | | | | | |
| BENQ | 10395 | 10396 | | | | | | | | | | |
| BLAUPUNKT | 10084 | | | | | | | | | | | |
| BLU: SENS | 10476 | 10455 | 10499 | | | | | | | | | |
| BRADFORD | 10380 | | | | | | | | | | | |
| BRILLIAN | 10398 | | | | | | | | | | | |
| BROCKWOOD | 10011 | 10315 | | | | | | | | | | |
| BROKSONIC | 10143 | 10166 | 10174 | 10431 | | | | | | | | |
| BUSH | 10399 | | | | | | | | | | | |
| BYD: SIGN | 10400 | | | | | | | | | | | |
| CANDLE | 10001 | 10002 | 10003 | 10011 | 10439 | 10372 | 10543 | | | | | |
| CANON | 10402 | 10403 | | | | | | | | | | |
| CAPEHART | 10059 | | | | | | | | | | | |
| CARNIBALE | 10001 | 10439 | | | | | | | | | | |
| CARVER | 10415 | 10405 | | | | | | | | | | |
| CASIO | 10406 | 10407 | | | | | | | | | | |
| CCE | 10408 | | | | | | | | | | | |
| CELEBRITY | 10409 | | | | | | | | | | | |
| CELERA | 10303 | | | | | | | | | | | |
| CETRONIC | 10045 | | | | | | | | | | | |
| CHANGHONG | 10303 | | | | | | | | | | | |
| CITIZEN | 10001 | 10002 | 10003 | 10011 | 10045 | 10092 | 10094 | 10132 | 10439 | 10374 | 10372 | |
| | 10543 | 10517 | | | | | | | | | | |
| CLARION | 10380 | | | | | | | | | | | |
| CLASSIC | 10045 | | | | | | | | | | | |
| COBY | 10412 | 10011 | 10275 | | | | | | | | | |
| COMMERCIAL SOLUTIONS | 10413 | | | | | | | | | | | |
| COMPAQ | 10414 | | | | | | | | | | | |
| CONCERTO | 10011 | 10543 | | | | | | | | | | |
| CONTEC | 10041 | 10045 | 10051 | 10052 | 10380 | | | | | | | |
| CORENA SYSTEM | 10301 | | | | | | | | | | | |
| CORONADO | 10132 | | | | | | | | | | | |
| CRAIG | 10045 | 10055 | 10157 | 10049 | 10159 | 10380 | 10258 | | | | | |
| CROSLEY | 10415 | | | | | | | | | | | |
| CROWN | 10045 | 10132 | 10380 | | | | | | | | | |
| CURTIS MATHES | 10001 | 10092 | 10011 | 10132 | 10365 | 10413 | 10415 | 10393 | 10319 | 10436 | 10542 | |
| | 10439 | 10368 | 10504 | 10543 | 10271 | | | | | | | |
| CXC | 10045 | 10380 | | | | | | | | | | |
| CYBERHOME | 10416 | | | | | | | | | | | |
| CYTRON | 10417 | 10418 | | | | | | | | | | |

| TV Maker / Brand | Code Number | | | | | | | | | | |
|-------------------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| DAEWOO | 10011 | 10022 | 10023 | 10038 | 10045 | 10046 | 10056 | 10068 | 10073 | 10094 | 10098 |
| | 10102 | 10105 | 10108 | 10111 | 10114 | 10116 | 10118 | 10119 | 10127 | 10132 | |
| | 10246 | 10319 | 10374 | 10315 | 10188 | | | | | | |
| DAYTRON | 10011 | 10132 | 10315 | | | | | | | | |
| DELL | 10148 | 10314 | | | | | | | | | |
| DELTA | 10419 | | | | | | | | | | |
| DENON | 10368 | 10421 | | | | | | | | | |
| DIAMOND VISION | 10422 | 10423 | | | | | | | | | |
| DIGI LINK | 10172 | | | | | | | | | | |
| DIGISTAR | 10424 | | | | | | | | | | |
| DIGITAL LIFESTYLES | 10425 | 10426 | | | | | | | | | |
| DIGITAL PROJECTION INC. | 10427 | 10429 | | | | | | | | | |
| DREAM VISION | 10430 | | | | | | | | | | |
| DUMONT | 10011 | | | | | | | | | | |
| DURABRAND | 10431 | 10380 | 10315 | 10311 | 10434 | 10388 | 10435 | | | | |
| DWIN | 10436 | | | | | | | | | | |
| DYNASTY | 10045 | | | | | | | | | | |
| DYNATECH | 10063 | | | | | | | | | | |
| DYNEX | 10091 | 10347 | 10366 | | | | | | | | |
| EIKI | 10253 | 10402 | | | | | | | | | |
| ELECTROGRAPH | 10354 | | | | | | | | | | |
| ELECTROHOME | 10074 | 10132 | 10431 | | | | | | | | |
| ELECTROBAND | 10409 | | | | | | | | | | |
| ELECTROGRAPH | 10486 | 10354 | | | | | | | | | |
| ELEMENT | 10335 | 10259 | 10273 | 10283 | | | | | | | |
| EMERSON | 10001 | 10012 | 10013 | 10029 | 10033 | 10045 | 10048 | 10049 | 10051 | 10052 | 10091 |
| | 10011 | 10132 | 10137 | 10139 | 10141 | 10157 | 10140 | 10184 | 10185 | 10186 | 10187 |
| | 10188 | 10190 | 10192 | 10193 | 10194 | 10195 | 10196 | 10197 | 10198 | 10199 | 10200 |
| | 10201 | 10202 | 10355 | 10393 | 10319 | 10431 | 10380 | 10315 | 10311 | 10505 | |
| EMPREX | 10425 | | | | | | | | | | |
| ENVISION | 10439 | 10358 | 10330 | | | | | | | | |
| ENVIXION | 10001 | | | | | | | | | | |
| EPSON | 10364 | | | | | | | | | | |
| ERAЕ | 10442 | | | | | | | | | | |
| ESA | 10317 | 10318 | 10311 | | | | | | | | |
| FISHER | 10013 | 10058 | 10393 | | | | | | | | |
| FUJITSU | 10149 | 10228 | 10333 | 10334 | 10376 | | | | | | |
| FUNAI | 10033 | 10045 | 10380 | 10311 | 10376 | 10452 | | | | | |
| FUTURETECH | 10045 | 10380 | | | | | | | | | |
| GATEWAY | 10310 | 10486 | | | | | | | | | |
| GE | 10001 | 10014 | 10015 | 10038 | 10057 | 10070 | 10083 | 10011 | 10121 | 10133 | 10141 |
| | 10145 | 10413 | 10319 | 10315 | 10489 | 10484 | | | | | |
| GILBRALTER | 10001 | 10011 | 10439 | 10315 | | | | | | | |
| GO VIDEO | 10443 | 10479 | 10476 | | | | | | | | |
| GOODMANS | 10445 | | | | | | | | | | |
| GPX | 10276 | | | | | | | | | | |

| TV Maker / Brand | Code Number | | | | | | | | | | |
|------------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| GRADIENTE | 10040 | | | | | | | | | | |
| GRUNDIG | 10288 | 10289 | | | | | | | | | |
| GRUNPY | 10380 | 10376 | | | | | | | | | |
| GVA | 10278 | | | | | | | | | | |
| H & B | 10301 | | | | | | | | | | |
| HAIER | 10026 | 10322 | 10323 | 10324 | 10325 | 10326 | 10434 | 10373 | 10067 | | |
| HALL MARK | 10011 | 10315 | | | | | | | | | |
| HANNS.G | 10447 | | | | | | | | | | |
| HANNSPREE | 10448 | 10449 | 10447 | 10263 | 10264 | | | | | | |
| HARLEY DAVIDSON | 10451 | 10376 | 10452 | | | | | | | | |
| HARMAN KARDON | 10034 | 10180 | 10181 | 10415 | | | | | | | |
| HARVARD | 10380 | 10453 | | | | | | | | | |
| HAVERMY | 10436 | | | | | | | | | | |
| HELIOS | 10301 | | | | | | | | | | |
| HELLO KITTY | 10319 | | | | | | | | | | |
| HEWLETT PACKARD | 10456 | 10330 | 10458 | | | | | | | | |
| HISENSE | 10266 | 10011 | 10279 | 10280 | 10373 | 10459 | 10462 | | | | |
| HITACHI | 10017 | 10011 | 10015 | 10016 | 10001 | 10018 | 10029 | 10043 | 10072 | 10132 | 10144 |
| | 10147 | 10203 | 10204 | 10206 | 10207 | 10208 | 10210 | 10211 | 10368 | 10452 | 10543 |
| HP | 10357 | | | | | | | | | | |
| HUMAX | 10143 | | | | | | | | | | |
| HYPERION | 10011 | | | | | | | | | | |
| HYUNDAI | 10460 | 10461 | | | | | | | | | |
| I-INC | 10463 | | | | | | | | | | |
| ILO | 10091 | 10343 | 10362 | 10356 | | | | | | | |
| INFINITY | 10415 | 10148 | | | | | | | | | |
| INFOCUS | 10464 | 10364 | 10466 | 10467 | | | | | | | |
| INITIAL | 10356 | | | | | | | | | | |
| INKEL | 10120 | | | | | | | | | | |
| INSIGNIA | 10091 | 10366 | 10311 | 10417 | 10274 | | | | | | |
| JBL | 10148 | 10415 | | | | | | | | | |
| JCPENNY | 10001 | 10011 | 10014 | 10015 | 10030 | 10035 | 10092 | 10132 | 10145 | | |
| JENSEN | 10019 | 10234 | | | | | | | | | |
| JVC | 10261 | 10270 | 10038 | 10040 | 10079 | 10239 | 10550 | | | | |
| KAWASHO | 10470 | | | | | | | | | | |
| KDS | 10335 | | | | | | | | | | |
| KEC | 10045 | 10380 | | | | | | | | | |
| KENWOOD | 10001 | 10229 | 10011 | 10439 | 10315 | | | | | | |
| KLEGG | 10354 | | | | | | | | | | |
| KLH | 10341 | 10303 | | | | | | | | | |
| KLOSS | 10002 | 10060 | 10001 | 10372 | | | | | | | |
| KMC | 10132 | | | | | | | | | | |
| KNOLL SYSTEMS | 10467 | | | | | | | | | | |
| KONKA | 10473 | 10475 | 10476 | 10477 | | | | | | | |
| KOST | 10478 | 10479 | | | | | | | | | |

| TV Maker / Brand | Code Number | | | | | | | | | | |
|------------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| KREISEN | 10480 | 10479 | | | | | | | | | |
| KT | 10001 | 10045 | 10132 | 10140 | 10308 | | | | | | |
| KTV | 10380 | 10439 | | | | | | | | | |
| LG (GOLDSTAR) | 10011 | 10093 | 10103 | 10113 | 10118 | 10132 | 10346 | 10315 | 10439 | | |
| LLOYD'S | 10452 | | | | | | | | | | |
| LODGENET | 10069 | | | | | | | | | | |
| LOEWE | 10481 | | | | | | | | | | |
| LOGIK | 10069 | | | | | | | | | | |
| LUCE | 10358 | 10483 | | | | | | | | | |
| LUXMAN | 10011 | 10543 | | | | | | | | | |
| LXI | 10013 | 10021 | 10053 | 10034 | 10145 | 10148 | 10413 | 10415 | 10393 | 10303 | 10315 |
| MAGNASONIC | 10001 | 10011 | 10348 | | | | | | | | |
| MAGNAVOX | 10001 | 10003 | 10011 | 10060 | 10061 | 10062 | 10064 | 10065 | 10066 | 10086 | 10088 |
| | 10118 | 10132 | 10145 | 10148 | 10192 | 10212 | 10236 | 10244 | 10312 | 10332 | 10415 |
| | 10439 | 10356 | 10505 | 10452 | 10330 | 10376 | 10126 | | | | |
| MAGNIN | 10484 | | | | | | | | | | |
| MARANTZ | 10001 | 10074 | 10148 | 10415 | 10439 | | | | | | |
| MATSUI | 10148 | | | | | | | | | | |
| MATSUSHITA | 10485 | | | | | | | | | | |
| MAXENT | 10486 | 10487 | | | | | | | | | |
| MB QUART | 10315 | | | | | | | | | | |
| MEGATRON | 10315 | 10368 | 10388 | 10435 | | | | | | | |
| MEMOREX | 10013 | 10069 | 10091 | 10011 | 10393 | 10431 | 10315 | 10376 | 10516 | | |
| METZ | 10084 | | | | | | | | | | |
| MGA | 10001 | 10011 | 10033 | 10044 | 10050 | 10074 | 10315 | 10439 | 10484 | | |
| MIDLAND | 10413 | | | | | | | | | | |
| MINERVA | 10084 | | | | | | | | | | |
| MINTEK | 10356 | | | | | | | | | | |
| MITSUBISHI | 10216 | 10011 | 10030 | 10033 | 10034 | 10041 | 10044 | 10089 | 10115 | 10160 | 10167 |
| | 10168 | 10214 | 10001 | 10245 | 10436 | 10315 | | | | | |
| MONIVISION | 10377 | | | | | | | | | | |
| MONTGOMERY WARD | 10185 | 10217 | 10218 | 10219 | 10220 | | | | | | |
| MOTOROLA | 10436 | 10335 | | | | | | | | | |
| MOXELL | 10335 | | | | | | | | | | |
| MTC | 10001 | 10011 | 10439 | 10315 | 10543 | | | | | | |
| MULTITECH | 10380 | | | | | | | | | | |
| NAD | 10021 | 10031 | 10303 | 10315 | 10543 | | | | | | |
| NAKAMICHI | 10491 | | | | | | | | | | |
| NAXA | 10492 | | | | | | | | | | |
| NEC | 10001 | 10013 | 10022 | 10025 | 10030 | 10041 | 10057 | 10121 | 10125 | 10011 | 10235 |
| | 10439 | 10315 | 10543 | 10405 | | | | | | | |
| NETTV | 10486 | | | | | | | | | | |
| NIKEI | 10045 | | | | | | | | | | |
| NIKKO | 10001 | 10315 | 10439 | 10374 | | | | | | | |

| TV Maker / Brand | Code Number | | | | | | | | | | |
|------------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| NIKO | 10493 | | | | | | | | | | |
| NOBLEX | 10494 | | | | | | | | | | |
| NORCENT | 10373 | 10330 | 10495 | 10493 | | | | | | | |
| NORWOOD MICRO | 10362 | 10498 | | | | | | | | | |
| NTC | 10374 | | | | | | | | | | |
| NUVISION | 10502 | | | | | | | | | | |
| OLEVIA | 10011 | 10342 | 10535 | 10315 | | | | | | | |
| OLYMPUS | 10503 | | | | | | | | | | |
| ONWA | 10045 | 10380 | | | | | | | | | |
| OPTONICA | 10025 | 10034 | 10235 | | | | | | | | |
| OPTIMUS | 10485 | 10393 | 10504 | 10505 | | | | | | | |
| OPTOMA | 10506 | 10448 | | | | | | | | | |
| OPTONICA | 10436 | | | | | | | | | | |
| ORION | 10431 | 10376 | 10516 | | | | | | | | |
| PANASONIC | 10076 | 10010 | 10038 | 10057 | 10005 | 10148 | 10150 | 10169 | 10308 | 10359 | 10485 |
| PENNEY | 10001 | 10011 | 10413 | 10303 | 10315 | 10439 | 10484 | 10489 | 10388 | | |
| PHILCO | 10001 | 10003 | 10011 | 10030 | 10045 | 10057 | 10060 | 10061 | 10064 | 10065 | 10118 |
| | 10132 | 10148 | 10415 | 10439 | 10315 | | | | | | |
| PHILIPS | 10148 | 10321 | 10011 | 10040 | 10060 | 10067 | 10132 | 10145 | 10001 | 10222 | 10003 |
| | 10371 | 10415 | 10479 | | | | | | | | |
| PILOT | 10001 | 10011 | 10439 | 10315 | | | | | | | |
| PIONEER | 10504 | 10024 | 10029 | 10031 | 10032 | 10011 | 10248 | 10254 | 10304 | 10001 | |
| POLAROID | 10335 | 10338 | 10339 | 10340 | 10341 | 10303 | 10417 | 10362 | 10478 | 10301 | 10476 |
| PORTLAND | 10011 | 10132 | 10374 | 10315 | 10335 | 10424 | 10476 | | | | |
| PROSCAN | 10133 | 10249 | 10413 | 10262 | 10257 | 10268 | 10067 | 10269 | | | |
| PROTON | 10059 | 10011 | 10103 | 10132 | 10165 | 10251 | 10315 | 10388 | | | |
| PROTRON | 10507 | 10508 | | | | | | | | | |
| PROVIEW | 10335 | | | | | | | | | | |
| PULSAR | 10011 | 10315 | | | | | | | | | |
| PUNEET | 10425 | | | | | | | | | | |
| PVISION | 10442 | | | | | | | | | | |
| QUASAR | 10038 | 10057 | 10243 | 10308 | 10485 | | | | | | |
| RADIO SHACK | 10025 | 10045 | 10048 | 10011 | 10118 | 10132 | 10001 | 10235 | | | |
| RCA | 10001 | 10004 | 10006 | 10011 | 10029 | 10030 | 10057 | 10083 | 10133 | 10145 | 10161 |
| | 10171 | 10232 | 10371 | 10413 | 10484 | 10315 | 10256 | 10272 | | | |
| REALISTIC | 10013 | 10025 | 10045 | 10048 | 10001 | 10011 | 10235 | 10393 | 10380 | 10315 | 10439 |
| | 10543 | | | | | | | | | | |
| REVOLUTION HD | 10354 | | | | | | | | | | |
| ROCTEC | 10237 | | | | | | | | | | |
| RUNCO | 10152 | 10153 | 10001 | 10250 | 10252 | 10336 | 10337 | 10439 | | | |
| SAMPO | 10001 | 10059 | 10011 | 10486 | 10439 | | | | | | |
| SAMSUNG | 10305 | 10265 | 10001 | 10012 | 10051 | 10092 | 10011 | 10118 | 10124 | 10132 | 10145 |
| | 10176 | 10221 | 10306 | 10542 | 10315 | 10439 | 10479 | 10408 | 10543 | | |
| SANSUI | 10431 | 10452 | 10516 | 10517 | | | | | | | |
| SANYO | 10013 | 10026 | 10027 | 10037 | 10041 | 10054 | 10058 | 10078 | 10253 | 10393 | 10402 |

| TV Maker / Brand | Code Number | | | | | | | | | | | |
|-------------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| | 10484 | | | | | | | | | | | |
| SCEPTRE | 10313 | 10067 | | | | | | | | | | |
| SCIMITSU | 10011 | 10315 | | | | | | | | | | |
| SCOTT | 10033 | 10045 | 10049 | 10011 | 10132 | 10380 | 10315 | 10376 | | | | |
| SCOTCH | 10315 | | | | | | | | | | | |
| SEARS | 10011 | 10013 | 10021 | 10033 | 10035 | 10058 | 10078 | 10092 | 10132 | 10145 | 10244 | |
| | 10413 | 10415 | 10393 | 10303 | 10315 | 10311 | 10543 | 10376 | 10452 | | | |
| SEIKI | 10259 | 10283 | 10284 | 10285 | 10286 | 10287 | | | | | | |
| SELECO | 10368 | 10430 | | | | | | | | | | |
| SHARP | 10260 | 10020 | 10025 | 10028 | 10033 | 10034 | 10132 | 10151 | 10235 | 10236 | 10361 | |
| | 10375 | 10436 | 10011 | | | | | | | | | |
| SHARPER IMAGE | 10518 | | | | | | | | | | | |
| SHERWOOD | 10120 | | | | | | | | | | | |
| SHOGUN | 10011 | 10315 | | | | | | | | | | |
| SIEMENS | 10084 | | | | | | | | | | | |
| SIGNATURE | 10069 | 10011 | | | | | | | | | | |
| SIGNATURE 2000 | 10011 | | | | | | | | | | | |
| SIGNET | 10519 | 10478 | 10520 | | | | | | | | | |
| SIM2 MULTIMEDIA | 10430 | | | | | | | | | | | |
| SIMPSON | 10001 | | | | | | | | | | | |
| SKYWORTH | 10522 | | | | | | | | | | | |
| SOLARISM | 10523 | | | | | | | | | | | |
| SOLE | 10358 | 10483 | 10301 | 10479 | 10354 | | | | | | | |
| SONY | 10043 | 10075 | 10117 | 10130 | 10067 | 10170 | 10238 | 10247 | 10309 | 10409 | 10452 | |
| SOUNDESIGN | 10003 | 10033 | 10045 | 10011 | 10380 | 10315 | 10376 | | | | | |
| SOVA | 10507 | | | | | | | | | | | |
| SOYO | 10425 | 10463 | 10524 | 10525 | 10476 | | | | | | | |
| SPECTRICON | 10103 | 10011 | 10388 | | | | | | | | | |
| SPECTRONIQ | 10335 | | | | | | | | | | | |
| SQUAREVIEW | 10311 | | | | | | | | | | | |
| SSS | 10011 | 10045 | 10380 | 10315 | | | | | | | | |
| STARLITE | 10011 | 10380 | | | | | | | | | | |
| STUDIO EXPERIENCE | 10377 | | | | | | | | | | | |
| SUNBRITE | 10528 | 10529 | | | | | | | | | | |
| SUPERSCAN | 10436 | 10530 | | | | | | | | | | |
| SUPREMACY | 10002 | 10372 | | | | | | | | | | |
| SUPREME | 10409 | | | | | | | | | | | |
| SVA | 10373 | 10479 | 10301 | 10532 | 10533 | | | | | | | |
| SYLVANIA | 10001 | 10003 | 10008 | 10011 | 10060 | 10061 | 10064 | 10118 | 10126 | 10065 | 10145 | |
| | 10148 | 10155 | 10311 | 10355 | 10415 | 10439 | | | | | | |
| SYMPHONIC | 10380 | 10311 | 10452 | 10505 | | | | | | | | |
| SYNTAX | 10342 | 10535 | 10315 | | | | | | | | | |
| TANDY | 10034 | 10436 | | | | | | | | | | |
| TASHIKO | 10537 | | | | | | | | | | | |
| TATUNG | 10057 | 10063 | 10388 | 10458 | 10362 | | | | | | | |

| TV Maker / Brand | Code Number | | | | | | | | | | |
|---------------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| TCL | 10256 | 10371 | 10267 | | | | | | | | |
| TEAC | 10379 | 10281 | | | | | | | | | |
| TECHNICS | 10080 | 10076 | 10485 | | | | | | | | |
| TECHNOL ACE | 10376 | | | | | | | | | | |
| TECHVIEW | 10539 | 10541 | | | | | | | | | |
| TECHWOOD | 10011 | 10388 | 10543 | | | | | | | | |
| TELEMAGIC | 10402 | | | | | | | | | | |
| TEKNIKA | 10001 | 10002 | 10003 | 10011 | 10030 | 10033 | 10036 | 10045 | 10069 | 10074 | 10092 |
| | 10094 | 10132 | 10415 | 10380 | 10374 | 10315 | 10543 | 10376 | | | |
| TELEFUNKEN | 10039 | 10047 | 10241 | 10242 | 10542 | 10543 | 10544 | | | | |
| TELERENT | 10069 | | | | | | | | | | |
| TERA | 10156 | | | | | | | | | | |
| THOMAS | 10452 | | | | | | | | | | |
| TMK | 10011 | 10315 | 10543 | 10378 | | | | | | | |
| TOSHIBA | 10021 | 10013 | 10035 | 10041 | 10052 | 10063 | 10092 | 10142 | 10146 | 10178 | 10179 |
| | 10393 | 10303 | 10464 | 10419 | 10517 | | | | | | |
| TOTEVISION | 10132 | | | | | | | | | | |
| TRUTECH | 10353 | | | | | | | | | | |
| TVS | 10431 | | | | | | | | | | |
| ULTRA | 10547 | 10508 | | | | | | | | | |
| UNIVERSAL | 10014 | 10015 | | | | | | | | | |
| UPSTAR | 10277 | | | | | | | | | | |
| US LOGIC | 10362 | | | | | | | | | | |
| VECTOR RESEARCH | 10001 | 10439 | | | | | | | | | |
| VENTURER | 10315 | | | | | | | | | | |
| VICTOR | 10550 | | | | | | | | | | |
| VIDEO CONCEPTS | 10160 | | | | | | | | | | |
| VIDIKRON | 10255 | 10415 | | | | | | | | | |
| VIDTECH | 10011 | 10315 | | | | | | | | | |
| VIEWSONIC | 10363 | 10088 | 10330 | 10331 | 10349 | 10486 | 10530 | 10503 | | | |
| VIKING | 10372 | | | | | | | | | | |
| VIORE | 10316 | | | | | | | | | | |
| VISART | 10551 | | | | | | | | | | |
| VITO | 10360 | | | | | | | | | | |
| VIZIO | 10011 | 10315 | 10351 | 10530 | | | | | | | |
| WARDS | 10011 | 10014 | 10015 | 10025 | 10033 | 10061 | 10062 | 10064 | 10065 | 10069 | 10071 |
| | 10132 | 10148 | 10001 | 10235 | 10415 | 10315 | 10439 | 10489 | 10543 | 10376 | |
| WAYCON | 10303 | | | | | | | | | | |
| WHITE WESTING HOUSE | 10091 | 10319 | 10320 | 10327 | 10328 | 10329 | 10067 | 10431 | 10409 | | |
| WINBOOK | 10362 | | | | | | | | | | |
| WOOYOUNG | 10307 | | | | | | | | | | |
| WYSE | 10330 | | | | | | | | | | |
| XOCECO | 10552 | | | | | | | | | | |
| YAMAHA | 10001 | 10011 | 10439 | 10315 | | | | | | | |
| YORK | 10011 | | | | | | | | | | |
| ZENITH | 10009 | 10069 | 10070 | 10090 | 10094 | 10431 | 10315 | 10374 | 10452 | 10516 | |

| TV Maker / Brand | Code Number | | | | | | | | | | | |
|---------------------|----------------|-------|--|--|--|--|--|--|--|--|--|--|
| ZONDA | 10103 | 10388 | | | | | | | | | | |

APPENDIX B

Audio System Codes for Remote Pairing

| Audio Maker / Brand | Code Number | | | | | | | | | | |
|---------------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| ADCOM | 20088 | 20098 | 20218 | 20147 | 20233 | | | | | | |
| AIWA | 20142 | 20182 | 20025 | 20141 | 20022 | 20110 | | | | | |
| AKAI | 20128 | | | | | | | | | | |
| ANAM | 20026 | 20188 | 20189 | | | | | | | | |
| ANTHEM | 20004 | | | | | | | | | | |
| B&K | 20102 | 20103 | | | | | | | | | |
| BOSE | 20007 | 20185 | 20131 | | | | | | | | |
| CARVER | 20253 | 20013 | 20037 | 20060 | 20068 | 20148 | 20221 | 20226 | 20245 | 20250 | 20015 |
| CLARION | 20132 | | | | | | | | | | |
| COBY | 20010 | 20017 | | | | | | | | | |
| DENON | 20041 | 20234 | 20111 | 20149 | 20150 | 20152 | 20232 | 20003 | | | |
| ENLIGHTENED | 20105 | | | | | | | | | | |
| EVERQUEST | 20032 | | | | | | | | | | |
| FISHER | 20037 | 20015 | 20083 | 20207 | | | | | | | |
| FOSGATE AUDIONIC | 20153 | | | | | | | | | | |
| HAIER | 20019 | 20023 | | | | | | | | | |
| HARMAN KARDON | 20205 | 20208 | 20153 | 20228 | 20229 | 20249 | | | | | |
| HITACHI | 20035 | 20040 | 20027 | 20202 | | | | | | | |
| ILIVE | 20049 | 20050 | | | | | | | | | |
| INKEL | 20012 | | | | | | | | | | |
| INSIGNIA | 20061 | | | | | | | | | | |
| JCPENNY | 20016 | 20108 | | | | | | | | | |
| JENSEN | 20065 | | | | | | | | | | |
| JVC | 20112 | | | | | | | | | | |
| KENWOOD | 20012 | 20206 | 20231 | 20033 | 20015 | 20211 | 20212 | 20213 | 20214 | 20215 | 20222 |
| | 20230 | 20134 | 20246 | | | | | | | | |
| LEXICON | 20125 | 20156 | 20158 | 20159 | | | | | | | |
| LG (GOLDSTAR) | 20069 | 20077 | 20018 | 20192 | | | | | | | |
| LOTTE | 20191 | 20193 | | | | | | | | | |
| LUXMAM | 20042 | | | | | | | | | | |
| LXI | 20084 | | | | | | | | | | |
| MAGNAVOX | 20013 | 20092 | | | | | | | | | |
| MARANTZ | 20013 | 20093 | 20047 | 20072 | 20063 | 20203 | 20221 | 20250 | | | |

| Audio Maker / Brand | Code Number | | | | | | | | | | | |
|---------------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| MAXELL | 20078 | | | | | | | | | | | |
| MCINTOSH | 20160 | | | | | | | | | | | |
| MCS | 20016 | | | | | | | | | | | |
| MITSUBISHI | 20164 | 20165 | | | | | | | | | | |
| NAD | 20036 | | | | | | | | | | | |
| NAKAMICHI | 20167 | 20047 | | | | | | | | | | |
| NILES | 20168 | | | | | | | | | | | |
| ONKYO | 20178 | 20053 | 20113 | 20114 | 20024 | 20177 | 20179 | 20223 | 20224 | 20251 | | |
| OPTIMUS | 20029 | 20033 | 20048 | | | | | | | | | |
| OUTLAW | 20183 | | | | | | | | | | | |
| PANASONIC | 20126 | 20014 | 20039 | 20094 | 20194 | 20200 | | | | | | |
| PARASOUND | 20254 | | | | | | | | | | | |
| PHILIPS | 20009 | 20301 | 20302 | 20303 | 20093 | 20013 | 20172 | 20124 | | | | |
| PIONEER | 20082 | 20021 | 20046 | 20051 | 20057 | 20073 | 20076 | 20096 | 20001 | 20054 | 20237 | |
| | 20238 | 20239 | 20240 | 20241 | 20242 | 20243 | 20244 | | | | | |
| PROCEED | 20006 | 20248 | 20252 | | | | | | | | | |
| QUASAR | 20014 | 20094 | | | | | | | | | | |
| RCA | 20062 | 20106 | 20120 | 20138 | 20056 | 20123 | | | | | | |
| REALISTIC | 20011 | 20030 | 20084 | 20002 | 20026 | 20101 | | | | | | |
| ROTEL | 20089 | 20080 | 20091 | | | | | | | | | |
| SAMSUNG | 20304 | 20197 | 20198 | 20199 | 20306 | | | | | | | |
| SANSUI | 20116 | 20013 | 20124 | 20047 | | | | | | | | |
| SANYO | 20187 | | | | | | | | | | | |
| SCOTT | 20026 | 20097 | | | | | | | | | | |
| SHARP | 20139 | 20058 | 20033 | 20100 | 20132 | 20133 | 20134 | 20127 | | | | |
| SHERWOOD | 20045 | 20031 | 20247 | | | | | | | | | |
| SONY | 20008 | 20176 | 20005 | 20025 | 20107 | 20145 | 20090 | 20170 | 20195 | 20209 | 20216 | |
| | 20305 | | | | | | | | | | | |
| SOUNDESIGN | 20043 | | | | | | | | | | | |
| SSI | 20075 | | | | | | | | | | | |
| TAEKWANG | 20128 | 20186 | 20195 | | | | | | | | | |
| TEAC | 20066 | 20067 | 20026 | 20190 | | | | | | | | |
| TECHNICS | 20126 | 20094 | 20109 | 20014 | 20137 | | | | | | | |
| THOMSON | 20217 | | | | | | | | | | | |
| TOSHIBA | 20155 | 20118 | 20237 | 20255 | | | | | | | | |
| VICTOR | 20020 | 20112 | | | | | | | | | | |
| VIZIO | 20180 | | | | | | | | | | | |
| WARDS | 20015 | | | | | | | | | | | |

| Audio Maker / Brand | Code Number | | | | | | | | | | |
|---------------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| YAMAHA | 20140 | 20166 | 20201 | 20028 | 20033 | 20038 | 20074 | 20132 | 20175 | 20204 | 20210 |
| | 20219 | 20220 | 20227 | 20235 | 20236 | | | | | | |
| ZANTEK | 20174 | | | | | | | | | | |

