



SageTV™ HD Theater

Model STP-HD300

Introduction







Thank you for purchasing the SageTV HD Theater, model STP-HD300. This document provides an overview of how to install and setup the HD Theater, and use it as a networked media player. Further details regarding how to use SageTV when the player is connected to a SageTV server are covered in the SageTV User's Guide, found on your computer where SageTV is installed, or available for download from SageTV's website (www.sagetv.com) at:

http://download.sage.tv/SageTV_Manual.pdf

A PDF version of this manual can be downloaded from SageTV's website at:

http://download.sage.tv/SageTV_HD300_Manual.pdf

Please take a moment to check the box contents. The contents should be:

-  SageTV HD Theater model STP-HD300, with power adapter and cord
-  HDMI cable
-  Breakout cable for Composite, Component and Analog L/R Audio
-  Ethernet network cable
-  IR remote control and batteries
-  This setup guide

The STP-HD300 dimensions are approximately: 5 1/16" Wide x 1 1/2" High x 4" Deep, including the feet.

Requirements

The STP-HD300 HD Theater can be used as a networked media player, as a media extender connected to a SageTV server over a local network, or as a Placeshifter client connecting to a SageTV server from a remote location. Using SageTV Media Center software (optional) provides the highest performance access to media on your PC or Mac and also allows you to turn your PC into a HD DVR.

When used as a networked media player, the HD Theater just needs access to shared media either on a PC on the local network, on a network-attached storage (NAS) device on the local network, or on a storage device connected to the HD Theater. It can also access online content with an Internet connection.

Skip to the next section if you're not connecting to a SageTV Server. Before using the SageTV HD Theater as an extender or Placeshifter client connected to your SageTV server, make sure the following requirements are met:

- 📺 SageTV should already be installed and fully configured as a server on a Windows, Mac, or Linux computer.
- 📺 The SageTV server needs to have the **SageTV Server** and **Media Extender and Placeshifter Server** options enabled. To find those options, start at SageTV's Main Menu on your server computer, then navigate through these menus: Setup -> Detailed Setup -> Server.
- 📺 The firewall on your SageTV server computer needs to allow SageTV and the HD Theater to contact each other over your network via certain ports. On your server computer, make sure that SageTV is allowed through these ports: (UDP) **31100**; (TCP) **31099**.

Connecting the HD Theater

If the HD Theater will be used as an extender for your SageTV server, before connecting the HD Theater, please review the previous sections to make sure the SageTV server is running and has the **SageTV Server** and **Media Extender and Placeshifter Server** options enabled. Once that SageTV server is configured, you are ready to connect the HD Theater. For use as a networked media player, simply continue connecting the HD Theater.

The back of the HD Theater has connections for power, LAN, HDMI, S/PDIF, the breakout cable, and two USB2 ports.

The front of the HD Theater has a connection for the optional external IR receiver and has one LED status light. The LED is red when powered down into standby mode and blue when on.

Breakout Cable: When using the Component video, Composite video, or Analog L/R audio connections, you will need to connect the Breakout cable to the breakout connection on the back of the unit. On the breakout cable, the black (Pr), green (Pb), and blue (Y) connectors are for component video (Pr: black -> red; Y: green -> green; Pb: blue -> blue), the yellow connector is for composite video, and the white and red connectors are for analog L/R audio (white -> left audio; red -> right audio).

For now, leave the unit unplugged. Connect the Audio, Video, and Network ports on the back of the player.

Network: Connect your network cable to the 10/100 Mbps Ethernet RJ45 port.

Audio: Choose one type of audio output ports to connect: HDMI, Optical, or Analog (L/R: white/red).

Video: Choose one type of video output ports to connect: HDMI, Component (Pr,Pb,Y), or Composite.

Turn on your TV and/or home theater equipment, making sure to set those devices to use the same audio and video connections used on the player.

Once all of those connections are made, plug in the unit's power adapter. The unit will turn on and, after a delay, the startup screen should be visible on your TV.

IMPORTANT! If you see no image on your TV, make sure that the TV is set to use the same video connection used on the player. The Composite connection should always output a valid video signal, as long as the HDMI port is not connected to any device. For other video connections: if the connections are set correctly, use the Video Out button near the bottom of the player's remote to change the video output resolution used by the player. Wait a few seconds after using the Video Out button before pressing it again to try the next video output resolution. If you still have no output on your TV after using the Video Out button six times, see the Troubleshooting Guide, below.

Once the HD Theater is connected, turned on, and displaying information on your TV, see the **Configuring the HD Theater** section for more setup details.


Configuring the HD Theater

During the first time setup, prompts will be displayed to configure the network, video output, and audio output connections, described below. In addition, you will be asked whether the player should automatically scan all folders on your local network and attached devices to find media files or whether you will manually specify the import folders to be scanned.


Once at the Main Menu, choose from the following items for further configuration options:


Settings

The Settings menu is used to configure the HD Theater and has the following options:


-  **Network** – Choose whether to use **DHCP (Automatic)** or **Static (Manual)** as the method for the HD Theater to get its IP address on your local network. DHCP is recommended, if your network has a DHCP server, since it will then automatically get an address. The Static option is an advanced option: once this is selected, you will need to manually enter your network information.

If using a compatible USB wireless adapter, wireless configuration settings will also be available. Compatible wireless adapters are available from the online SageTV store at <http://store.sagetv.com>.

-  **Video Output** – Choose this option to configure which video output port to use. Select from **Composite**, **Component**, or **HDMI**. After choosing **Component** or **HDMI**, you will then be asked to select which output resolutions will be enabled. **Tips: 1)** While on the resolution selection menu, use the Video Out button on the remote to test the different output resolutions. After each resolution change, the screen will display the current resolution. For each valid resolution, check-mark its button to enable it. Then, when using the player in client mode (connected to a SageTV server), use the Video Out button to toggle the output resolution between the ones check-marked here. **2)** The current resolution set on the resolution selection menu will be used as the default resolution when connecting to a SageTV server.

-  **Audio Output** – Choose this option to configure which audio output port to use. Select from **Analog** (stereo L+R), **Digital PCM**, **Digital Bitstream** (Dolby Digital or DTS audio), or **HDMI 1.3 Bitstream** (Dolby TrueHD, DTS-HD, or DTS-MA).

If the HD300 is connected to an HDMI 1.3 receiver capable of decoding Dolby TrueHD, DTS-HD, or DTS-MA audio, then **HDMI 1.3 Bitstream** should be selected. If the receiver is only capable of decoding Dolby Digital or DTS audio, then **Digital Bitstream** should be selected. **Digital PCM** should be selected in all other cases if using HDMI or S/PDIF for digital audio output.


-  **Advanced Setup** – Displays the advanced Detailed Setup options used to configure various options for using as a networked media player. On this menu, various options can be configured to control the use of the HD Theater only as a networked media player. **Note:** When used as an extender or placeshifter client connected to a SageTV server, similar settings are available in the client's user interface. Those settings are only used when connected to a SageTV server.


As the available options are highlighted on the right side of the screen, brief text explaining the option will be shown at the bottom of the screen.


For basic configuration, please note a few options that you may wish to consider:

- **General**
 - **Import Directory Management** – Choose whether the player should automatically scan all folders on your local network and attached devices to find media files or whether you will manually specify the import folders to be scanned. **Note:** Import directories can be manually selected from the Filesystems menu.
 - **Automatic Library Rescan Frequency** – Configure the number of hours between automatic library rescans. To disable automatic rescans, enter 0.
- **Multimedia**
 - **Overscan Settings** – If the menus do not fit the TV screen properly, use this option to modify the placement of the user interface. Through a series of two full screen menus, you will first adjust the location of the upper left corner of the user interface, then you will adjust the location of the lower right corner of the user interface. When you are done, the user interface will completely fill the display.
 - **Display Aspect Ratio Settings** – If the pictures and text on the user interface appear stretched, use this option to define the aspect ratio of the TV display. After selecting this option, you may choose from a few pre-set choices, or manually adjust the circle until it appears round.
- **Server**
 - **Windows File Server** – If you would like to be able to browse the files on attached devices from a Windows PC on your local network, enable this option, then configure the Windows File Server Workgroup and Network Name.

 **System Information** – Displays status information about the HD Theater.

 **Refresh Imported Media** – Forces a scan of all the media import folders to look for new or updated media files.

 **System Update** – Use this option to check for a firmware update for the HD Theater. If an update is available, you will be asked whether to download it and update your player now. **IMPORTANT! *** DO NOT TURN THE PLAYER OFF WHILE A FIRMWARE UPDATE IS IN PROGRESS. *****

 **Back to Main Menu** – Return to the **Main Menu**.

Weather

As part of the first time use setup, choose the Weather item from the Main Menu to configure your location for local weather conditions and a 5-day forecast.

General HD Theater Use

HD Theater Startup

When the HD Theater is powered off and in standby, two different buttons on the remote can be used to power it back on:

- TV Use the **POWER** button to restart the HD Theater in standalone media player mode. **Note:** If the **Auto Connect to Server** option has been enabled, then when the HD300 starts, a dialog will appear, giving you 5 seconds to cancel the automatic connection to the last-used SageTV server.
- TV Use the **Home** button on the remote to have the HD Theater power on into the mode that was last used, either connected as an extender to a SageTV server or in standalone media player mode. This is a faster way to reconnect to a SageTV server since the HD Theater won't have to perform a full startup and wait for the duration of the auto-connect cancellation wait period.

Use as a SageTV Extender or Placeshifter Client

When the HD Theater is connected to a SageTV server as an extender or Placeshifter client, the user interface is covered in the SageTV User's Guide. That manual can be downloaded from: http://download.sage.tv/SageTV_Manual.pdf

To disconnect from the SageTV server and return to the standalone Media Player mode, use the Power button on the remote to power off, then use the Power button again to restart, as described above.

Use as a Media Player

When used as a networked media player, the user interface is similar to that used as a SageTV client, with the following menus available:

- TV **Online Services** – Watch videos from online sources, such as YouTube, Google Video, and selected podcasts.
- TV **SageTV Servers** – Choose a SageTV server to connect to as an extender or Placeshifter client. Notes:
 - If no servers are listed, or the one you are looking for is not listed, make sure the server has the **SageTV Server** and **Media Extender and Placeshifter Server** options enabled, then select **Refresh** to search for available servers again.
 - Use the **Edit Server List** option to add remote servers that the player can connect to. The STP-HD300 HD Theater can be used as a Placeshifter client when connecting to a remote SageTV server from this list.
 - If the **Auto Connect to Server** option has been enabled, then when the HD300 starts, a dialog will appear, giving you 5 seconds to cancel the automatic

connection to the last-used SageTV server. The **Auto Connect Timeout** value can be configured when the auto connect option is enabled.

 **Media Browser Tips:**

- Press Play to start playing or viewing the currently highlighted item or group of items.
- Press Info to see details info about an item or browse into a group of items.
- Use Skip Back #2 and Skip Forward #2 to quickly switch to other browser styles shown on the top category bar.
- Press Options or use the Options icon to see a list of configuration choices for the current browser. The Advanced options allow you to configure the import directories or refresh the imported media, along with the ability to set whether imported videos can be deleted.

Attached Devices

The HD Theater has two USB2 ports on the back of the unit, along with an IR minijack port on the front.

USB External Storage Devices

In addition to playing media files found on a local network, the HD Theater can access media files on USB storage devices attached directly to the player. External storage devices can be attached to the USB2 ports on the back of the unit. These connections are hot-swappable, so devices can be attached or removed while the unit remains powered on. The player will then be able to directly access the storage device.

USB Wireless Adapter

A compatible USB wireless adapter can be attached to one of the USB2 ports on the back of the unit. When a wireless adapter is connected, wireless settings can be configured on the Settings -> Network menu. Compatible wireless adapters are available from the online SageTV store at <http://store.sagetv.com>.

USB Keyboard

A USB keyboard can be attached to one of the USB2 ports on the back of the unit. Most USB keyboards should be compatible.

External IR Receiver

An external IR receiver can be connected to the minijack (2.5mm) connector on the front of the unit, allowing the HD Theater to be out of sight while still receiving IR control signals from the

remote. The external IR receiver is available from the online SageTV store at <http://store.sagetv.com>.

Supported Media Types

The HD Theater supports many current video, music and photo formats:

File formats supported: AVI, ASF, MKV, MOV, MP4, QuickTime, MPEG-1, MPEG-2 PS, MPEG-2 TS, M2TS, BDMV Folder (BluRay), BluRay ISO, DVD ISO, DVD VIDEO_TS, VOB, M4A, MP3, FLAC, OGG, FLV, WAV, WMA

Video formats supported: MPEG1, MPEG2, MPEG4, XVID, H.264 up to 1080p, WMV9/VC-1 up to 1080p, MJPEG, Flash Video

Audio formats supported: MP2, MP3, AAC, AAC-HE, ALAC, WMA, WMAPro, PCM, Vorbis (stereo only), FLAC, DolbyDigital/DolbyDigital+/DolbyTrueHD* (stereo down-mix or pass-through), DTS/DTS-HD/DTS-MA (stereo down-mix or pass-through)

* DolbyTrueHD down-mix requires the DolbyDigital core track to be present

CC/Subtitle formats supported: EIA-608(NTSC/ATSC/QAM Closed Captioning), SRT, SSA/ASS, VobSub (sub/idx, mkv), Nero MP4 VOB Subtitles, MP4 Text, SAMI, .sub (Subviewer/MicroDVD), DVD, BDMV, M2TS, multiple languages supported in all formats

Playlist formats supported: M3U, WPL, ASX, WAX, WVX

Notes:

DVDs and BluRays: Non-encrypted DVD images (VIDEO_TS folders or ISOs) imported into the video library (home-made DVDs, for example) can be played back on the media player with full use of the DVD's menus, along with chapter, subtitle, and audio track selection. Non-encrypted BD images (BDMV folders or ISOs) can be played back on the media player with chapter, subtitle, and audio track selection.

Pictures: When used as a SageTV extender, any image format that the SageTV server can load will be viewable on the extender. As a networked media player, the image formats that can be viewed include: JPEG, PNG, TIFF, and GIF.

Programmable Remote Control Buttons

The remote included with the HD Theater has three programmable buttons for **TV Power**, **TV Vol+**, and **TV Vol-**. To program these buttons for the infrared (IR) codes to control your TV, follow these steps:

- 1) Press and hold the **Rmt Setup** button on the remote until the red LED in the front emitter window shifts to a brighter output, about 2 or 3 seconds. Once the red LED is in its brighter state, the remote is in learning mode.
- 2) While in learning mode, press a button to learn the code from your TV remote: either **TV Power**, **TV Vol+**, or **TV Vol-**. After pressing one of the buttons, the red LED will begin blinking.
- 3) Hold the TV's remote so that its IR emitter is about 1 to 2 inches from the IR window on the HD Theater remote, then press and hold the button to be learned until the red LED on the HD Theater remote stops blinking. While learning the IR code, the red LED will blink faster, then stop blinking once the code is learned.
- 4) After learning an IR code, the HD Theater remote will still be in learning mode. You can repeat steps 2 and 3 to learn additional codes from the TV remote. Exit learning mode by pressing **Rmt Setup** again or wait about 10 seconds.
- 5) Once the HD Theater remote has learned the codes for your TV and has exited learning mode, test the results by using the HD Theater remote to control your TV's power and volume functions. If the buttons do not work properly, repeat the IR code learning process to try learning the IR code again.

Notes: Only infrared (IR) codes of approx 38KHz can be learned. The HD Theater remote does not support learning radio (RF) signals or 56KHz IR signals.

Troubleshooting Guide

This Troubleshooting Guide should be your first reference for any questions or problems you are having with the HD Theater. For discussions with other SageTV users, you can post in our discussion forum at forums.sagetv.com/forums. For SageTV technical support, submit a support request at www.sagetv.com/request.html and we will reply within 72 hours.

Installing a SageTV Server Upgrade

If the player is connected to a SageTV server: when SageTV is closed on the server for an upgrade install, the HD Theater will go into standby mode. After upgrading SageTV on your server, it is recommended that you use the HD Theater's startup menu and check for a firmware update before reconnecting to the server: while in standby mode, press the Power button on the remote to return to the HD Theater's startup menu. Then, see **Installing a firmware update**, below. **Note:** If the **Auto Connect to Server** option has been enabled, then when the HD300 starts, a dialog will appear, giving you 5 seconds to cancel the automatic connection to the last-used SageTV server.

Installing a firmware update

From the **Main Menu**, go to the **Settings** menu, then choose **System Update**, where there is an option to check for a firmware update. If an update is available, you will be asked whether to download it and update your player now. **IMPORTANT! *** DO NOT TURN THE PLAYER OFF WHILE A FIRMWARE UPDATE IS IN PROGRESS. *****

There is no TV output and the unit does not respond at all

Confirm that the device's power cord is plugged in.

No servers listed on the SageTV Servers menu

Check the **Requirements** section near the beginning of this guide to confirm all configuration requirements. If the player is set to use DHCP as its network configuration, make sure there is an active DHCP server on your network. If the player is set to use a Static IP address as its network configuration, confirm that those settings are correct.

No Video on the TV

If you see no image on your TV, make sure that the TV is set to use the same video connection used on the player. The Composite connection should always output a valid video signal, as long as the HDMI port is not connected to any device. For other video connections: if the connections are set correctly, use the Video Out button near the bottom of the player's remote to change the video output resolution used by the player. Wait a few seconds after using the Video Out button before pressing it again to try the next video output resolution.

If the TV is connected via component and there is no video output after changing the resolution six or more times via the Video Out button, see if the HDMI port is also connected on the player. If it is, disconnect the HDMI cable from the player and try again.

No HD Video

If the video output is not High Definition, return to the **Settings** menu from the **Main Menu** to set the Video Output option to either **Component** or **HDMI**, then check-mark the resolutions that can be used for the video output.

No Video using HDMI Connection

If there is no video output when using the HDMI connection and the Video Output option is already set to HDMI, then try enabling the **Force HDMI Display Mode** option at Settings -> Advanced Setup -> Multimedia, then try the HDMI connection again.

No Sound

If there is no sound while video or music is playing, return to the **Settings** menu from the **Main Menu** to select the correct Audio Output option, and make sure the correct audio output port is connected to your TV or home theater equipment.

The player doesn't use the default resolution I want




If the resolution is changed while using the player as a SageTV client, it will not remember to use that as the initial resolution the next time the player connects to a SageTV server. To set the default resolution, use the resolution selection menu after configuring the **Video Output** from the **Settings** menu.

Configuration Reset Procedure

If none of the other troubleshooting suggestions have solved the problem, then you can try this Configuration Reset Procedure:

1. Turn the player off by unplugging the power cable.
2. Press the Back button on the remote and continue holding it as you plug the power cable back in. Continue holding the Back button until the Service Menu appears on the TV.
3. Note that if nothing is visible on the TV when using the HDMI or Component connections, connect the HD Theater to your TV using the Composite connection instead.
4. Choose a reset option:
 - **Factory Reset** – Reload the firmware and reset the configuration. See below for more information regarding reloading the firmware.
 - **Reload Firmware** – Only reload the firmware.
 - **Config Reset / Restore / Backup** – Offers options to reset the configuration, restore the configuration previously backed up to an attached USB storage device, or save the current configuration to an attached USB storage device
5. After the reset procedure, check the above troubleshooting tips again.

When reloading the firmware, three options will be available:

-  **From SageTV Server** – Load the firmware from the SageTV installation folder on a PC connected to your local network. The firmware files should be placed in the SageTV installation folder where SageTV.exe is located.
-  **From Internet** – Load the firmware by automatically downloading the firmware files via an Internet connection.
-  **From USB** – Load the firmware from an attached USB storage device. The firmware files should be placed in the root folder of the USB storage device.

When choosing to load the firmware **From SageTV Server** or **From USB**, you will need to download the following firmware files and copy them to the locations specified above. (The firmware files are automatically downloaded and applied when using the **From Internet** option, so no separate download is needed for that option.)

<http://download.sage.tv/firmware/stp300.bin>

<http://download.sage.tv/firmware/stp300.ver>

If the player is still not functioning properly after the Configuration Reset and rechecking the troubleshooting tips, then contact SageTV technical support via www.sagetv.com/support.html.

FCC Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

Third Party Software Libraries

Source code for the third party software libraries included in this product can be downloaded from:

<http://download.sagetv.com/pubcode/hd300>

Apache License

The following software may be included in this product: Apache Regexp Java Library. Use of this software is governed by the terms of the license below:

Apache License
Version 2.0, January 2004
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```
<one line to give the program's name and a brief idea of what it does.>  
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```

```
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the Free Software Foundation, either version 3 of the License, or  
(at your option) any later version.
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```

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You should have received a copy of the GNU General Public License  
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```
<program> Copyright (C) <year> <name of author>  
This program comes with ABSOLUTELY NO WARRANTY; for details type `show w'.  
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```

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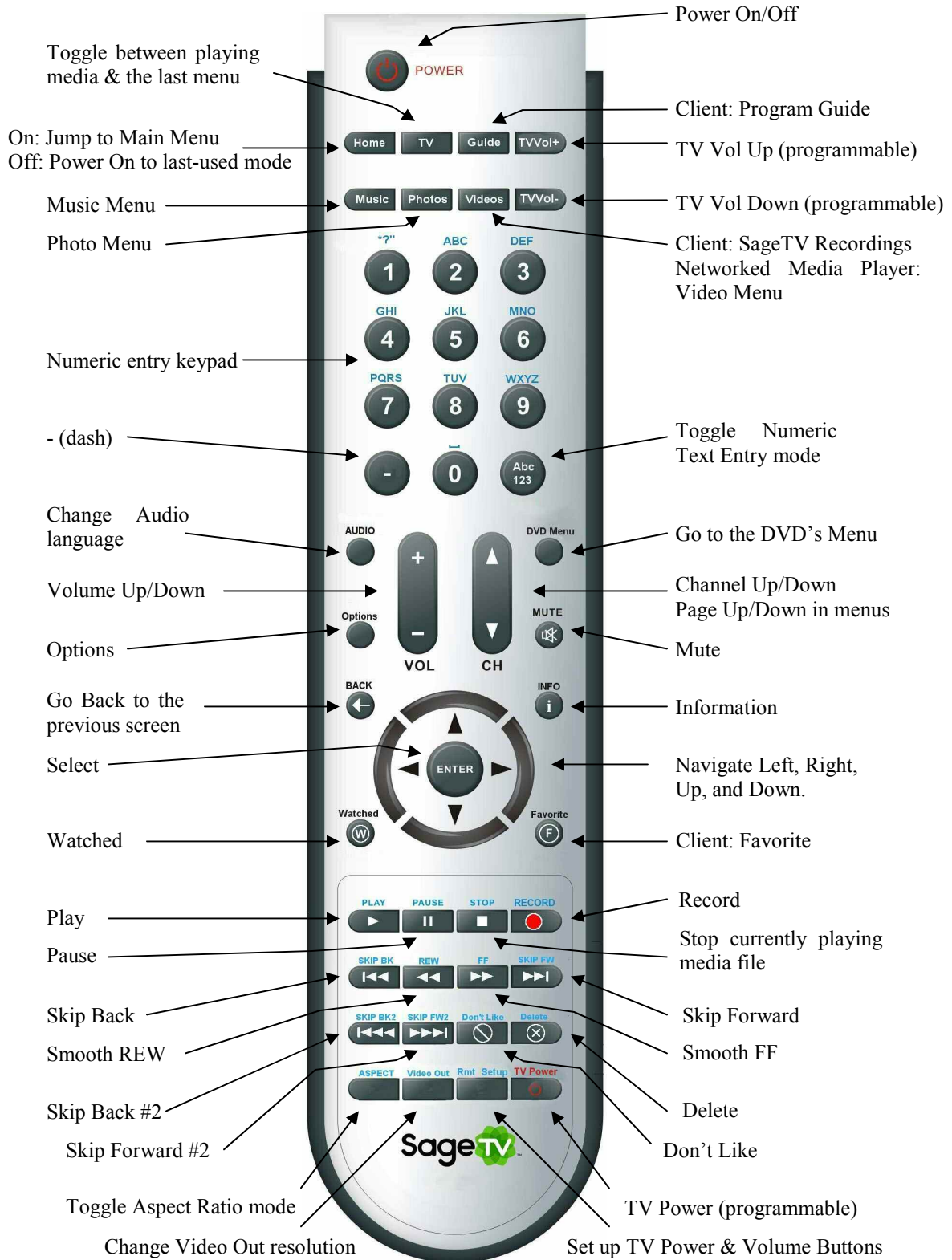
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Remote Control Layout



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