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Safety Warnings and Instructions

WARNING! TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

CAUTION! TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

POWER CORD NOTICE FOR INTERNATIONAL OPERATION - Please call Williams Sound Customer Service at 800.328.6190 to order the appropriate power cord for the country of use.

Important Safety Instructions:

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Unplug this apparatus during lightning storms or when unused for long periods of time.
13. Refer all servicing to qualified service personnel.
14. The apparatus shall not be exposed to liquids.
15. Carts and Stands - The appliance should be used only with a cart or stand that is recommended by the manufacturer. An appliance and cart combination should be moved with care. Quick stops, excessive force and uneven surfaces may cause the appliance and cart combination to overturn.
16. Wall or ceiling Mounting - The appliance should be mounted to a wall or ceiling only as recommended by the manufacturer.
17. Power Sources - The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.
18. Object and Liquid Entry - Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through the openings.
19. Servicing - The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

Precautions:

1. Power – WARNING, BEFORE TURNING ON THE POWER FOR THE FIRST TIME, READ THE FOLLOWING SECTION CAREFULLY. The unit is designed for use only with the line cord of the region in which it will be operated.
2. Voltage Label (Rear Panel) – A label located at the rear panel power connection indicates the DC power input for the unit. The label will read DC 12V. Note: use the Williams Sound TFP 051 power supply for this unit.
3. Do Not Plug in the input, output, ethernet, or USB connections while the power switch is switched to the “ON” position.
4. Do Not Touch the HHS 132/132D with wet hands. Do not handle the HHS 132/132D or power cord when your hands are wet or damp. If water or any other liquid enters the HHS 132/132D cabinet, take the HHS 132/132D to qualified service personnel for inspection.
5. Place the HHS 132/132D in a well, ventilated location. Take special care to provide plenty of ventilation on all sides of the HHS 132/132D especially when it is placed in an audio rack. If ventilation is blocked, the HHS 132/132D may over heat and malfunction. Do not expose the HHS 132/132D to direct sun light or heating units as the HHS 132/132D internal components temperature may rise and shorten the life of the components. Avoid damp and dusty places.
6. Care – From time to time you should wipe off the front and side panels and the cabinet with a soft cloth. Do not use rough material, thinners, alcohol or other chemical solvents or cloths since this may damage the finish or remove the panel graphics.
System Overview


The Hearing Hotspot Server models have either analog inputs or Dante inputs, but not both.

The server is available in five configurations:

- **HHS 108** - 8 mono/4 stereo analog inputs (analog only)
- **HHS 116** - 16 mono/8 stereo analog inputs (analog only)
- **HHS 124** - 24 mono/12 stereo analog inputs (analog only)
- **HHS 132** - 32 mono/16 stereo analog inputs (analog only)
- **HHS 132 D** - 32 mono/16 stereo Dante inputs (Dante only)

There are two upgrade options available:

**HHS CH8 - 8-channel analog input expansion module.**

Analog server units can be expanded with this option. Analog models with less than 32 mono/16 stereo channels are expandable with HHS CH8 Expansion modules, which are 8 mono/4 stereo analog input cards. The Server will accept up to four expansion modules for a total of 32 mono/16 stereo channels. The server must be sent back to Williams Sound for the upgrade.

**HHS DM32 Conversion of HHS 108/116/124/132 to 32-channel Dante Input Server.**

Analog servers (any model) can be converted to a 32-channel Dante server. Ethernet port #3 is configured as the Dante input, and all analog inputs are disabled. The server must be sent back to Williams Sound for the upgrade.

**Features:**

- Expandable (card slots = 8/16/24/32 channels)
- Scalable (up to 32 channels per unit, virtually unlimited number of units)
- Very low latency
- No receiver maintenance (user supplies their own device)
- Advertising content displayed on mobile devices
- Advertising content can be managed from any location with internet access

**Ideal applications:**

- Sports Bars
- Fitness Centers
- House of Worship
- Hearing Assistance
- Public Events
- Interpretation

Input/Output Settings

The User Menu is accessed by pushing the center menu control button and navigating with the arrow buttons. The input and output settings are accessed as shown.

**Front Controls (All Models)**

Push and hold 5 seconds for Input Settings Menu.

From the Input Settings Menu, push and hold another 5 seconds for Output Settings Menu.

To access Output Settings from the Home Screen, push and hold 5 seconds, then push and hold another 5 seconds.
Input/Output Configuration

**Mono Mode**
Each channel broadcast independently (one channel packetized into one mono stream)

Possible input wiring:
- Balanced
- Unbalanced or Summed

<table>
<thead>
<tr>
<th>A/D</th>
<th>Mono</th>
<th>CPU</th>
<th>HHS output set to MONO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mono</td>
<td>1</td>
<td>One mono channel per stream</td>
</tr>
<tr>
<td>2</td>
<td>Mono</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>A/D output is always mono</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Stereo Mode**
2 channels combined for stereo broadcast (2 channels packetized into one stereo stream)

Possible input wiring:
- Balanced or Unbalanced

<table>
<thead>
<tr>
<th>A/D</th>
<th>Mono</th>
<th>CPU</th>
<th>HHS output set to STEREO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mono</td>
<td>1L</td>
<td>Two mono channels per stream</td>
</tr>
<tr>
<td>2</td>
<td>Mono</td>
<td>1R</td>
<td></td>
</tr>
<tr>
<td>A/D output always mono</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**Input wiring:**
- Balanced (Output=mono)
- Unbalanced (Output=mono)
- Summed (Output=mono)

**Input settings:**

<table>
<thead>
<tr>
<th>Ch. 1</th>
<th>Pad</th>
<th>Trim</th>
<th>Setup</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-10 dBV</td>
<td>+0 dB</td>
<td>Balanced</td>
</tr>
</tbody>
</table>

**Output settings**

<table>
<thead>
<tr>
<th>Ch. 1</th>
<th>Output</th>
<th>Trim Lock</th>
<th>Set All</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mono</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

---

**Input wiring:**
- Balanced
- Unbalanced
- Summed

**Input settings:**

<table>
<thead>
<tr>
<th>Ch. 1</th>
<th>Pad</th>
<th>Trim</th>
<th>Setup</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-10 dBV</td>
<td>+0 dB</td>
<td>Unbalanced</td>
</tr>
</tbody>
</table>

**Output settings**

<table>
<thead>
<tr>
<th>Ch. 1</th>
<th>Output</th>
<th>Trim Lock</th>
<th>Set All</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mono</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

---

**Input wiring:**
- Balanced
- Unbalanced
- Summed

**Input settings:**

<table>
<thead>
<tr>
<th>Ch. 1</th>
<th>Pad</th>
<th>Trim</th>
<th>Setup</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-10 dBV</td>
<td>+0 dB</td>
<td>Unbalanced</td>
</tr>
</tbody>
</table>

**Output settings**

<table>
<thead>
<tr>
<th>Ch. 1</th>
<th>Output</th>
<th>Trim Lock</th>
<th>Set All</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Stereo</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

---

*To enter the Input settings, push-and-hold center button for 5 seconds
**To enter Output settings - from the Input Settings - push-and-hold center button for 5 seconds
- or- starting from the Home Screen, push-and-hold center button for 5 seconds, then again for 5 seconds
Network Requirements

The Hearing HotSpot Server can work on an existing network, or it can be supplied with Ruckus access point/s and controller as a complete independent system. The Ruckus components have proven to give optimal results both for audio transmission and Wi-Fi coverage. The Hearing HotSpot Server and the access point/s along with a Wi-Fi controller, if necessary, are pre-configured for proper IP addressing and network processing. For a stand-alone system, the WAN port needs to be connected to a local network or ISP that will provide Internet access for the Hearing HotSpot Server.

Note: The Hearing HotSpot Server uses the Internet to retrieve content updates, software updates and licensing information. The system does not broadcast audio over the internet.

Connection Details

The Hearing HotSpot App discovers if there is a Hearing HotSpot Server on the network by sending join request on multicast address 239.192.0.11. The multicast group range starting at 239.192.0.8 must be kept available and allowed on the network.

The Hearing HotSpot Server then accepts the connection of the end point.

When the Hearing HotSpot App selects a channel the server begins to stream the audio on that channel to the device. The access point should be configured for multicast or multicast to unicast conversion. Refer to the access point or Wi-Fi manufacturer's documentation for more information.

The network should support: IGMP, IGMP Snooping, and Multicast.

The network and SSID should also be configured for Voice or Premium QoS, (or other priority QoS depending on Manufacturer). The Hearing HotSpot uses similar settings as most VOIP configurations.

Standard Hearing HotSpot System

The Hearing HotSpot System is comprised of a Hearing HotSpot Server and a Ruckus access point with Power of Ethernet (PoE) injector.

The Hearing HotSpot Server has its own router/switch built in. The Server has four Ethernet jacks on the rear. One of these jacks is the WAN port and is configured to receive a DHCP address from the local LAN or ISP to provide the Server and the Hearing HotSpot LAN with internet access.

On the analog models, two of the other ports are configured as Hearing HotSpot LAN ports and the PoE injector will be connected to one of these ports. On the Dante model Hearing HotSpot, port #3 is configured and reserved for Dante audio and may not be used for a LAN connection.

The access point will be connected to the PoE injector. The Server and access point are devices on the Hearing HotSpot LAN. The Server has a static IP address of 192.168.128.2. The access point has a static IP address of 192.168.128.3. The built in router/switch then assigns connected Wi-Fi devices with an IP address via DHCP server.

Hearing HotSpot Internal Router - Factory Configuration

The router in the Hearing HotSpot is configured to accept a DHCP address on the WAN port. The router is configured to be a DHCP server on the Hearing HotSpot network. It is capable of /24 notation network (class C) and can handle 254 address. The configuration reserves 1 to .6 for static addresses, and .0 and .255 are also reserved for the network. If more are needed then the built in DHCP server needs to be disabled, and a DHCP server added to the network (a network should only have 1 DHCP server).

Using an Existing Network

The Hearing HotSpot Server can purchased without Wi-Fi components for the purpose of connecting to an existing network.

The network must pass Multicast traffic from the Hearing HotSpot Server to the access points. The access points must be able to deliver multicast to multiple end points simultaneously. Access points and the network switches must be able to handle many multicast connections, many systems are defaulted to only a single or a few connections.

End points, such as user devices, must be able to communicate with the server. It is required that the Hearing HotSpot Server and the end points on the same subnet. This can be accomplished in smaller venues with smaller networks easily.

Likewise, the endpoints must not be isolated from the server. The Wi-Fi connections will need to have access to the Hearing HotSpot Server and vice versa. This can be accomplished either by creating acceptable routes from the Wi-Fi to the Hearing HotSpot server, or by making the SSID accessible from the LAN that the Hearing HotSpot Server is located on.

If making a Hearing HotSpot Server part of an existing network, the Hearing HotSpot Server should be configured with a static IP address accommodated on the existing network.

The Hearing HotSpot Server can be configured to receive a DHCP address from a DHCP server on the existing network but it NOT recommended, unless it is a reserved address in DHCP. DHCP address change from time to time and the Hearing HotSpot Server needs to maintain a consistent address to function properly.
Environment

Since the Hearing Hotspot system uses Wi-Fi as its medium for transmission, care should be taken to minimize obstructions between the access point and user devices. The more obstructions, the less consistent the audio performance will be. The number and location of the access point(s) needs to be evaluated and designed into the system.

Access points are critical to optimal performance of the Hearing HotSpot user experience. There must be adequate Wi-Fi coverage to accommodate the space where users are expected to utilizing the Hearing HotSpot App. User density must also be considered as different access points will allow different amounts of maximum client connections. The Wi-Fi network must be able to accommodate all users within the space with adequate bandwidth. Besides coverage area, signal strength is also impacted a great deal by frequency and co-channel interference. Signal strength should be kept strong in all areas required, no less than -60 dBm.

It is advisable to use manually configured and stationary channels within the Wi-Fi network. Channel hopping by the access points can cause quick audio interruptions. It is also recommended to increase the minimum allowed connection rate. Keep in mind, encryption uses bandwidth and reduces the number of successful connections substantially in a Wi-Fi environment and must be taken into account.

Also, using the 5 GHz band only may improve performance due to less network interference, but this will also eliminate devices that are only capable of utilizing the 2.4 GHz band or devices unable to recognize the higher channel frequencies within the 5 GHz band.

It is strongly recommended to have the site evaluation and wi-fi equipment configuration developed and implemented by a professional wi-fi implementation company.

Specifications

<table>
<thead>
<tr>
<th>Router</th>
<th>Ports</th>
<th>HTTP Port 80 used for the HHS Server to contact the Licensing Server</th>
</tr>
</thead>
</table>
| Operating System | End Point (receiving device) | Apple iOS 6.0 or newer  
Android 4.2 or newer  
Blackberry/Windows currently not supported |
| Bandwidth | Initial App Connect | Skin (custom background) typical = 282 Kb per device  
Banner typical = 217 Kb per device |
| Extra Content Delivery | Coupon typical = 217 Kb per coupon per device first access  
PDF typical = 1141 Kb per PDF per device first access |
| Audio | Wired Bandwidth = 8.4 Kbs/S per configured channel  
Wi-Fi Bandwidth = 11.6 Kbs/S per connected channel |

i After connecting to the Hearing HotSpot SSID, when the Hearing HotSpot App is launched there is an initial connection that will download “background” and “banner” content to the device. This initial connection happens once per device per session.

ii The Hearing HotSpot server holds extra content in the form of PDFs and coupon graphics. This content is accesses via the Hearing HotSpot App menu button. This extra content is downloaded to the device upon selecting the content from the menu in the App. Example: From the menu if a PDF is selected to view, that is when the PDF will be downloaded to the device.

iii The number of configured channels is the number of channels selected from the Audio Streaming Applet within the server. This can be different from the authorized number of channels per the license agreement. Example: If the license is authorized for 16 channels the server can be configured to use any number 16 or less, i.e. 8 at any particular time. Only the number of configured channels will show in the Hearing HotSpot App.

iv Connected channels are any channel that has at least one device actively playing the channel, (joined to the Multicast Group). It does not matter how many devices are joined to a particular channel, it is connected if one or many devices are joined.
Network Wiring

- Port 1: LAN (All models)
- Port 2: LAN (All models)
- Port 3: LAN (Analog models HHS 108/116/124/132) -or- Dante (Dante model HHS 132 D)
- Port 4: WAN (All models)

Dante models must use Port 3 to connect to the Dante network. If not connecting to an existing network, all models must use Port 4 to connect to the WAN/internet.

For Further Details

For more information on networking the Hearing HotSpot, see the Hearing Hotspot Networking Guide. This guide is available on the Williams Sound website.
Basic Connection Diagram - Standalone Analog Servers

This example shows 2 App channels, both in stereo (using 4 mono channels). The number of analog channels must be configured in the venue portal and the Server to be active in the App.

- **Audio Source 1 (Television, etc)**
  - RCA Audio Out
  - Audio Source 1 on Ch. 1
  - Use left output only when connecting to server as mono input. Use both for stereo (shown).

- **Audio Source 2**
  - 3.5mm Audio Out

- **Wi-Fi enabled devices**
  - with Hearing HotSpot App running

- **Multi-channel streaming audio over Wi-Fi**

- **HHS 108/116/124/132**
  - Either LAN ports 1 or 2 can be used for the WAP. (Analog models only)

- **Internet Modem**

- **Internet connection must use WAN port (Port #4 on all standalone models)**

- **All network connections use standard ethernet cables (CAT5e or better)**

- **POE Injector**

- **All network connections use standard ethernet cables (CAT5e or better)**

- **To AC power source**

- **Venue management portal**
Basic Connection Diagram - Dante Server (HHS 132D)

This example shows the connections necessary for 1-32 channels of Dante audio. The number of Dante channels must be configured in the venue portal and the Server to be active in the App.
User Settings

The User can adjust audio input levels. To access Audio Input Level settings, from the Main Screen, push and release the Menu button. Use the left and right arrow buttons to adjust the level for the current input. Use the up/down arrow buttons to move to the next input. This menu will time out after approximately 1 minute of non-use.

To lock this feature, see Integrator Settings - Trim Lock

Integrator Settings

This is a hidden menu with two levels, intended for Integrators. It will time out after approximately 1 minute of non-use.

Note: if the user is told how to access these menus, they could unlock the pad/trim and then adjust the input levels.
It is suggested to be discreet about the Integrator Settings access, especially if the Integrator has taken the time to set these levels correctly.

1st Menu level - Input Settings

To access this menu, push and hold the Menu button for 5 seconds.

Pad and Trim will need to be set based on the type of input used.
Setup relabels input channel names so they match each input’s wiring configuration (i.e. Stereo will rename the channels to “1L, 1R, 2L, 2R”). Setup locks the Pad and Trim together for stereo input. For possible wiring configurations, see the section Analog Audio Input Wiring.

2nd Menu level - Output Settings

To access this menu, push and hold the Menu button for 5 seconds again.

Output sets up the server as either stereo or mono output.
Trim Lock allows the Integrator to lock the User Settings so a User cannot access the Audio Input Levels from the Main UI Screen. To prevent the User from adjusting audio input levels, set this to Yes.
Set All copies the input settings from the current input to the remaining inputs. If all sources are similar (i.e. satellite receivers), the integrator can set up the first input and then copy those settings to the rest, speeding up setup time.
Connections needed for using the Server Configuration Tool

The Server Configuration Tool is needed to manually refresh content on the server from the Portal, and to view the Server License status if an internet connection is not available or access to the Portal is not available, and is needed to manage output levels, and make minor configuration changes for audio optimization.

To use the Server Configuration Tool, a VGA monitor, USB keyboard, and USB mouse are needed. Power on the server. Connect a monitor to the VGA output, and a mouse and keyboard to the USB ports. Once connected, you should see the login screen. If not, you may need to cycle the power on the server. Enter the User Name and Password and if successful, you should see the desktop. The login information was provided in the documents shipped with the unit.

Server Configuration Tool

Follow the connection instructions in the previous section to log-in to the server. Then look for the Hearing HotSpot icon on the desktop. This is the server configuration tool.

Tabs 1, 2 (Channels 1-16, 17-32)

Output level can be adjusted for each individual channel.

- **Output Level Adjust**: Enables channel output on headphone jack to test for the presence of audio. This is not the quality that end-users will hear.

- **Output Level VU**: Displays the volume unit for each channel.
Tabs 3, 4, 5 (reserved for future application)
Server models do not use tabs 3-5.

Tab 6 (Configuration)
The site information in this tab has been entered by Williams Sound and should not be changed.

Change “Inputs Used” to the total inputs with the expansion card(s) installed. Leave “Summing” and “Stereo” unchecked.

Tab 7 (Channel Info)
The Channel Info window allows certain DirecTV receivers to be configured to display channel guide information on user devices. Many factors affect the functionality of this feature, so support from the Williams Sound Tech Blue Team may be required for a successful implementation.

Tab 8 (Advanced)
All settings in the Advanced window have been set by the factory. The only setting the integrator should use (without violating the warranty) is the Refresh downloadable Content button. This forces the Server to refresh its content from the Portal. This can be useful if a recent change was made on the Portal and the integrator needs to verify the content updates on user devices. Normally the content on the Server is refreshed from the Portal every 10 minutes.
Use this to refresh content on the Server from the Portal, which then refreshes content pushed out to user devices.

Tab 9 (License)
This window provides a convenient place for the Integrator to view license status if the Server has been disconnected from the internet for a period of time or if there is no internet access currently. When the Expiration date is reached, the license expires and Valid License changes from Yes to No. The next time the server looks for a license, because Valid License is set to No, it will stop broadcasting. An annual maintenance fee is necessary to renew the license and keep the Server operating.

None of the fields in this window are editable. Computer ID is populated from by the internal server hardware. Current License Information is populated from the Venue Management Portal.

The info in this window can also be viewed in the Portal by the Venue manager or people with User Access login information.
# Specifications HHS 108/116/124/132/132D

<table>
<thead>
<tr>
<th>Category</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical</strong></td>
<td>Standard 2 RU 19&quot; rackmount, 13&quot; D (deep rack required). Weight: 14.0 lbs (6.4 kg). Color: black brushed aluminum face, case is textured black. Blue backlit LCD Screen with dark blue text. Power and control buttons backlit blue.</td>
</tr>
<tr>
<td><strong>Environment</strong></td>
<td>Storage: -40° F to 150° F (-40° C to 65° C) Operating: 30° F to 110° F (0° C to 45° C)</td>
</tr>
<tr>
<td><strong>Cooling fan</strong></td>
<td>26 dB(A), variable speed, temperature controlled.</td>
</tr>
<tr>
<td><strong>Network requirements</strong></td>
<td>Network hardware must support IGMP, IGMP Snooping, multicast (multiple simultaneous multicast clients), voice or higher QOS, and have available bandwidth. Internet access for maintenance updates and content management through venue portal. Must be on the same Layer2 Network VLAN segment as Wi-Fi clients.</td>
</tr>
<tr>
<td><strong>Mobile device requirements</strong></td>
<td>Apple iOS 6 minimum, Android 4.2 minimum</td>
</tr>
<tr>
<td><strong>Expansion slots</strong></td>
<td>(4x) sled style, to accept one 8-channel analog input expansion module (HHS CH8) each. Unused slots have blank plates installed.</td>
</tr>
<tr>
<td><strong>Audio inputs</strong></td>
<td>HHS 108/116/124/132: Analog only. Accepts balanced or unbalanced line level. Input range -10 dBV to +8 dBu. Inputs provided by 8-channel audio input expansion module HHS CH8. One module provides 8 mono inputs, and each input has a 3-position terminal block configured as +, C, -. Each server unit can accept up to 4 expansion modules or 32 mono/16 stereo input channels total. HHS 132 D: Dante™ (virtual sound card) only. Up to 32 Dante™ channels per server. Expansion card slots have (4x) blank plates installed.</td>
</tr>
<tr>
<td><strong>Ethernet jacks</strong></td>
<td>(4x) RJ-45 jacks, 10/100/1000 Mbps, provided by internal router, configured as the following: HHS 108/116/124/132: (3x) LAN, (1x) WAN. (See rear diagram for location) HHS 132 D: (2x) LAN, (1x) Dante™, (1x) WAN. (See rear diagram for location)</td>
</tr>
<tr>
<td><strong>USB port</strong></td>
<td>Version 2.0 supported.</td>
</tr>
<tr>
<td><strong>VGA port</strong></td>
<td>Supported resolutions up to 2560 x 1600.</td>
</tr>
<tr>
<td><strong>Headphone jack</strong></td>
<td>3.5 mm stereo jack, 35 mW, 33 Ω load.</td>
</tr>
<tr>
<td><strong>Data transmission method</strong></td>
<td>Proprietary Hearing Hotspot software; Live streaming IP</td>
</tr>
<tr>
<td><strong>Latency</strong></td>
<td>Server native: µs range. Packet buffer configured for 60 ms. Receiving devices: 100 ms optimum.</td>
</tr>
<tr>
<td><strong>Sampling rates supported</strong></td>
<td>48, 44.1 kHz at 24-bit resolution</td>
</tr>
<tr>
<td><strong>Audio bandwidth used</strong></td>
<td>Ethernet (wired): No more than 8 kbps, per stream Wi-Fi: No more than 12 kbps Wi-Fi, per stream</td>
</tr>
<tr>
<td><strong>Power</strong></td>
<td>External desktop power supply required (TFP 051). Input: Universal 90-240 VAC, 50/60 Hz, 60 Watt. Output: 12 VDC, 4 A, 2.1 mm plug, center positive.</td>
</tr>
<tr>
<td><strong>User control interface</strong></td>
<td>LCD screen with Left, Right, Up, Down and Select buttons. Each input can be adjusted for pad (preset attenuation level), trim, level (volume), and type (balanced mono, unbalanced mono, unbalanced stereo). Output selectable as stereo or mono. Input attenuation range adjustment ± 6 dB.</td>
</tr>
<tr>
<td><strong>Application features</strong></td>
<td>Channel naming, coupons, advertising banners, scrolling ticker, custom background, downloadable pdf's.</td>
</tr>
<tr>
<td><strong>Warranty</strong></td>
<td>2 years</td>
</tr>
<tr>
<td><strong>Approvals</strong></td>
<td>FCC, IC, CE, RCM, RoHS, WEEE. Safety certifications (UL, CB scheme) pending.</td>
</tr>
</tbody>
</table>

**NOTE: SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.**

Note: The Hearing HotSpot™ Server is designed to operate on a typical ethernet network. Except for the internal router, no other network hardware is included with the server. Each network has several factors that can affect performance of the Server. Each mobile device can also have characteristics that can affect performance. Maximum of 248 user devices (IP addresses) per server when internal router is used (one subnet). Some enterprise networks may be able to be configured to have more. Please consult your Williams Sound representative or call our Tech Blue Team for more information about optimizing a network and devices for best possible performance. If no network exists, our Tech Blue Team can help you design one to optimize performance of the Server.
2 Year Warranty

Williams Sound products are engineered, designed, and manufactured under carefully controlled conditions to provide you with many years of reliable service.

Williams Sound warrants the HHS 108/116/124/132/132D Hearing HotSpot™ Server against defects in materials and workmanship under normal use and conditions for 2 years from date of purchase.

This warranty is available to the original end purchaser of the product and CAN BE transferred to subsequent purchasers of the product.

Microphones, earphones, headphones, batteries, chargers, cables, carry cases, and most other accessory products carry a 90-day warranty.

Williams Sound has no control over the conditions under which this product is used. Williams Sound, therefore, disclaims all warranties not set forth above, both express and implied, with respect to the HHS 108/116/124/132/132D Hearing HotSpot™ Server, including but not limited to, any implied warranty of merchantability or fitness of use of such equipment including, without limitation, any warranty that the use of such equipment for any purpose will comply with applicable laws and regulations. Williams Sound shall not be liable to any person or entity for any medical expenses or any direct, incidental or consequential damages caused by any use, defect, failure or malfunctioning of the product, whether a claim for such damages is based upon warranty, contract, tort or otherwise, the sole remedy for any defect, failure or malfunction of the products is replacement of the product. No person has any authority to bind Williams Sound to any representation or warranty with respect to the HHS 108/116/124/132/132D Hearing HotSpot™ Server. Unauthorized repairs or modifications will void the warranty. This warranty is void if damage occurred because of misuse, or if the product has been repaired or modified by anyone other than a factory authorized service technician. Warranty does not cover normal wear and tear on the product or any other physical damage unless the damage was the result of a manufacturing defect. Williams Sound is not liable for consequential damages due to any failure of equipment to perform as intended. Williams Sound shall bear no responsibility or obligation with respect to the manner of use of any equipment sold by it.

This warranty does not cover reimbursement for your costs of removing and transporting the product for warranty service evaluation or installation of any replacement product provided under this warranty.

The exclusions and limitations set out above are not intended to, and should not be construed so as to contravene mandatory provisions of applicable law. If any part or term of this Disclaimer of Warranty is held to be illegal, unenforceable, or in conflict with applicable law by a court of competent jurisdiction, the validity of the remaining portions of this Disclaimer of Warranty shall not be affected, and all rights and obligations shall be construed and enforced as if this Limited Warranty did not contain the particular part or term held to be invalid. The terms of the warranty are governed by the laws of the State of Minnesota.

Prices and the specifications of the products are subject to change without notice.

*For Complete Warranty Statement go to: www.williamssound.com/warranty-statement

NOTICE: Williams Sound products are NOT designed for use in extreme temperature, humidity or chemical environments. The introduction of chemicals such as chlorine, salt water or human sweat into the product will cause damage to the circuitry. Damage due to these causes is NOT covered under the Product Warranty.

If you experience difficulty with your system, call Toll-Free for Customer Assistance  1-800-843-3544 (U.S.A.) or +1 952 943 2252 (Outside the U.S.A.)

If it is necessary to return the system for service, your Customer Service Representative will give you a Return Authorization Number (RA) and shipping instructions.