HDbridge 2500/2600-DT
CONFIGURATION GUIDE

HDbridge 2000 SERIES
HDb2520-DT • HDb2540-DT • HDb2620-DT • HDb2640-DT
Important Safety Instructions, Save These Instructions.

WARNING: When using electronic products, basic precautions should always be followed, including:
1. Keep these instructions.
2. Heed all warnings.
3. Follow all instructions.
4. Do not use this apparatus near water.
5. Clean only with dry cloth.
6. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
7. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
8. 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 prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
9. Power cord must be accessible to allow for the removal of power from the unit.
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. Unplug the apparatus during lightning storms or when unused for long periods of time.
12. Only use attachments/accessories specified by the manufacturer.
13. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged; liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

WARNING: To reduce the risk of fire or electric shock do not remove the cover (or back). No user serviceable parts inside. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

INSTRUCTIONS PERTAINING TO A RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS

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Welcome to ZeeVee.

ZeeVee products convert your video and audio source to a digital cable channel and broadcast it over coax to all your HDTVs. This guide walks you through basic and more enhanced setup for ZeeVee’s HDbridge 2500/2600 DIRECTV Series modulators.

If you run into problems during setup, feel free to contact Technical Support at +1(877) 4-ZEEVEE (1.877.493.3833).

What’s in the Box

Here’s what you can expect to find when you open the package:

[Image of ZeeVee Modulator]

AC Power Cord
H25 Audio/Video Cables
x2 with HDb2520-DT and HDb2620-DT
x4 with HDb2540-DT and HDb2640-DT
Front and Back Panels

1. Model Number
   - Name and description of unit
2. Color Display
   - Displays configuration and system status
3. 5-Way Control
   - Navigate options on front panel display
4. Coax Output
   - Up to 2 paired, frequency-agile QAM RF CATV output channels for up to 4 video sources. Output power can be set between +45 to +25 dBmV using the Maestro web interface or the front panel.
5. Audio/Video Inputs
   - Full size DIN connector for A/V input
6. 10/100 LAN Port
   - Two symmetrical Ethernet ports for configuration and remote management
7. AC Power Input
   - 100-240VAC / 50-60Hz

Basic Installation

1. Apply power.
2. Use the A/V cable to connect the mini-DIN connector to the A/V Output on your H25 Receiver and the DIN connector to the AV Input on the HDbridge unit.

Tuning your channel at the HDTV (Auto Scan)

1. Connect the Coaxial Output of the HDbridge unit to your RF network.
2. Specify Cable (not Air or Antenna) setting in your TV menu.
3. Enter the RF number to tune directly to the channel. (Refer to the Default Channel Lineup for default information.)
   - If you cannot tune directly to the channel at this point, it is because most TVs will require you to run a full Auto Scan.
4. Run the Auto Scan through the menu system of your HDTV to find the channels.

H25 A/V Cable

The H25 Cable passes information as follows:
- Video: Component
- Closed Captioning: Composite
- Audio: Analog

H25 A/V cables are included with this product for use with DIRECTV H25 receivers. Standard Hydra A/V cables and VGA-DIN cables for use with other video sources can be purchased separately from your distributor.

Factory default settings allow HDb2500/2600-DT series modulators to broadcast up to 4HD sources on RF channels 2, 3, 5, and 6 for reception at connected HDTVs. We recommend using the most updated version of firmware. You can find the latest version on the Support section of our website.

DEFAULT CHANNEL LINEUP

<table>
<thead>
<tr>
<th>AV Input</th>
<th>RF</th>
<th>HDTV Channel</th>
</tr>
</thead>
<tbody>
<tr>
<td>AV Input 1</td>
<td>2</td>
<td>2.1</td>
</tr>
<tr>
<td>AV Input 2</td>
<td>3</td>
<td>3.1</td>
</tr>
<tr>
<td>AV Input 3</td>
<td>5</td>
<td>5.1</td>
</tr>
<tr>
<td>AV Input 4</td>
<td>6</td>
<td>6.1</td>
</tr>
</tbody>
</table>

WARNING: +45 dBmV
Do not connect directly to HDTV
Setting the RF broadcast channels

1. Unlock the panel by pressing/holding together the left and right arrow buttons (.hardware) until “Setup” lights up.
2. Press “OK” to enter the Configuration screen.
3. Press “OK” to select “RF Setup”.
4. Use the arrow buttons (keyboard) to go to each item you want to configure (such as RF Number or RF Power), then press “OK” to edit the highlighted field. Use the up and down (keyboard) arrows to scroll through the options for that field.

5. Once you’ve made changes, press “OK” to accept. You can then select the next item for configuration.

6. When finished making changes, use the arrow buttons to scroll down and select “Apply,” then click “OK” to save your changes.

Note: The front panel locks automatically after a few seconds. To make more changes, press/hold the left and right arrow buttons again to unlock front panel capabilities.

To update firmware:

- If it is connected to the internet and can communicate with our servers, select “Update Firmware from the Setup screen and press “OK”.

To reset IP address:

- When using DHCP, select “Reset IP Address to force a release/renew of your IP address, and press “OK”.

To restore factory defaults or revert firmware:

- Power down the unit.
- Unlock the panel by pressing/holding together the left and right arrows down and select (hardware) to go to the highlighted field.
- Use the up and down (keyboard) arrows to scroll through the options for the highlighted field.
- Use the left and right arrow buttons to select “Setup”.
- Hold the left and right arrow buttons again to scroll down and select “Setup” until ”RF Setup” highlights.
- Press “OK”.
- To restore factory defaults or revert firmware, press “OK”.
- To return to the front panel Configuration screen, press “OK”.

To set RF channels:

1. Power down the unit.
2. Hold the left and right arrows down and reapply power. You will be prompted with options: PRESS “UP” to reset config. PRESS “DOWN” to revert FW.

IMPORTANT NOTES

- RF numbers are paired in all the RF channels are paired and match with RF frequency.
- The RF numbers are not always paired in numerical sequence as per RF # 6, which pairs with 95, and RF # 99 which pairs with 14 and so on.
- ZV channels can be set directly adjacent to any other well-formed channel and will not cause interference.
- No channel spacing is required.

Map for configuring RF numbers and virtual channels

The Cable TV Channels vs RF Frequency (MHz) Map shows how the RF channels are paired and matched with RF frequency.

You will need to refer to this map when configuring RF numbers and virtual channels.

### Important Points:

- RF numbers are paired based on the frequency map. For instance, if you enter RF # “2,” then RF # “3” automatically populates.
- RF numbers “4” and “5” cannot be paired together because of a gap in the frequency map.
- The RF numbers are not always paired in numerical sequence as per RF # 6, which pairs with 95, and RF # 99 which pairs with 14 and so on.
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Maestro Configuration

Maestro is a configuration tool that you use optionally to customize your system beyond what is allowed in the front panel. For example, using Maestro you can assign a channel number (virtual channel) independent of the RF number and label the channels.

Connecting with Maestro
1. Connect your computer directly to the ZeeVee modulator using a standard Ethernet cable (not a cross-over cable) or connect the unit and your computer to any LAN that has a DHCP server.
2. After a few moments, an IP address will appear at the top of the front panel display.
3. Using any web browser (Chrome or Firefox preferred), enter the IP address to launch Maestro.
4. You will be directed to a login page. Your user name is always “admin”. The default password is “admin” but you can change the password. Login is case-sensitive.
5. After you log in, the Maestro Status tab appears. Here you can see the general information status.

Configuring RF numbers and virtual channels
1. Click on the Channel Plan tab.
2. Click in the RF # field and enter the RF number as you choose from the RF Frequency Map (on page 7).
3. Click in the Channel # field and enter a channel number (virtual channel). The channel number is what the TV displays. You can configure a channel number two ways:
   • As a dotted number — Enter the number with a “.” following it, for example, “5.1”. This is the default display.
   • As a dotless number — Enter the number with a “#” preceding it, for example, “#5”. Note that you can choose a channel number that is different from the RF#. For instance, if your RF# is 3, you can choose a channel number of 10.1 or #10.
4. Click Apply to save changes. Your unit stores configurations so they are not lost on power-down.
5. Run Auto Scan at TV (see Tuning your channel at the HDTV, page 5) when you have saved configuration changes.

Labeling channels with channel and content information
1. In the Channel Plan tab, click in the Name field and enter the channel short name (up to 7 characters).
2. Click in the Long Name field and enter the long or more descriptive channel name (up to 63 characters). The TV displays these names and descriptions when the channel is changed or info guide information is requested.
3. Click Apply to save changes.

Using the other Maestro tabs
Click on any other Maestro tab to configure your unit as needed. We provide brief information below. Please click on the Help button on each tab or refer to the Support section of our website for further detail on configuration options.

THE RF TAB
Allows you to change the RF power output.

THE DEVICE TAB
Allows you to change the device password and update firmware as well as configure Emergency Alerts System (EAS). You can find detailed information on EAS in the Support section of the website.

THE NETWORK TAB
Allows you to assign a static IP address.

THE SUPPORT TAB
Provides technical support contact information and allows you to send logs for troubleshooting.

AV SOURCE TAB
Allows you to specify audio and video sources as well as other configuration options for the sources.

ADMIN TAB
Allows for creating user accounts which limit access to specific parts of Maestro including ZvShow, STB and EAS access.

STB TAB
Allows for high level management of networked DirectTV H25 Set Top Boxes. For details on the network setup please see the STB application note on our website.
If the HDTV screen is not blank, but shows a purple background with the ZeeVee logo, try disabling WIFI. If that does not work, try a different web browser. We have found some older versions of Internet Explorer are not supported with the Maestro tool. Updating IE or using Firefox or Chrome should correct the issue.

If you are feeding the audio directly from the source into a distributed (whole house) audio system and not through the unit to the TV, be sure your firmware is fully updated, later versions of the firmware have made changes to how the audio is processed. If both the audio and video are being sent through the unit to the TV, be sure your firmware is fully updated, later versions of the firmware have made changes to how the audio is processed.

Keep in mind that some analog modulators may spill over to adjacent channels and cause unexpected interference.

If the page loads, but all you see is a purple background and the ZeeVee logo (and are not seeing the webpage), please try a different web browser. We have found some older versions of Internet Explorer are not supported with the Maestro tool. Updating IE or using Firefox or Chrome should correct the issue.

If you are experiencing reception or transmission problems caused by signal strength issues, try lowering the RF power on the unit to ensure you are not overdriving the HDTV tuner.

Some TVs will also show video issues if the signal strength is too high. Try lowering the RF power of the unit to ensure you are not overdriving the HDTV tuner.

Image or video break up is often caused by an issue in the RF coax network. You may have a different channel number that is broadcasting to your unit.

If you are combining a service with another broadcaster, be sure the RF signals from both the units do not conflict with each other, keep in mind that analog signals may split over to adjacent channels and cause unexpected interference.

If you are combining a service with a cable, keep in mind that they sometimes have extra signals that a TV that is not display and not testing.

There may also be a RF power balance issue. Verify the RF power of the unit is balanced with signals from other modulators and from the cable company. As a test, try removing all other signals (cable, other modulators, etc) and see if you still see similar issues.

Some AV systems use video switching; if the signal strength is too high, try lowering the RF power on the unit to ensure you are not overdriving the HDTV tuner.

The unit is broadcasting in “compatibility mode.” This means it’s receiving a resolution from your VGA/HDMI source that may not be compatible with the Maestro tool. If the Video Source (Channel Plan tab in Maestro) is set to 1280x720 or 1920x1080 resolution, for more detailed information about setting up VGA and HDMI resolutions, see the ZeeVee website.

When the warranty on the original ZeeVee Equipment expires, the ZeeVee Equipment will be repaired or replaced with a new, repaired, refurbished, or reconditioned product provided by ZeeVee at ZeeVee’s discretion. The above implied warranty of merchantability and fitness for a particular purpose is expressly limited to the warranty expressed herein.

The ZeeVee Equipment must be purchased through authorized ZeeVee distributor and dealer network. If the ZeeVee Equipment is being used (Except for the VGA and HDMI sources) and is covered by a valid warranty, the above limitation or exclusion may not apply.

ZeeVee, Inc. January 1, 2014

MAINTENANCE OF WARRANTY

The above warranties are SUBJECT TO THE TERMS OF USE AND MAINTENANCE OF WARRANTY. The terms and conditions of the ZeeVee Equipment, the Repair and Replacement Policy, and the ZeeVee Limited Warranty policy are available on the ZeeVee website.

The ZeeVee Equipment may be returned, exchanged, or replaced at the option of ZeeVee at the current retail price of the ZeeVee Equipment. ZeeVee reserves the right to refuse the repair or replacement of the ZeeVee Equipment.

In the case of a paid repair, if it's determined that the problem is not caused under the limited warranty, we will notify you and then offer you service or replacement alternatives.

Advantage repair must be purchased through an authorized ZeeVee distributor and dealer network, and is subject to the terms and conditions of the ZeeVee Equipment.

The above warranties include:

• Shipping, tax or charge for return or exchange of ZeeVee Equipment.
• Repair or replacement due to damage, lighting damage including, but not limited to, intentional or accidental damage, or other causes not within the control of ZeeVee.
• If we determine that the problem is not covered by the ZeeVee Limited Warranty, we will notify you and then offer you service or replacement alternatives.

To get service or replacement, please contact ZeeVee by calling our customer care center at (877)-4ZeeVee; (877)-493-3833. If it is determined that the product needs to be repaired or replaced, ZeeVee will inform you of service or replacement alternatives.

The ZeeVee Equipment shall be repaired, exchanged, or replaced at the factory in the United States or Canada if it is determined that the problem is caused by defects in materials or workmanship that traditionally warrant repair, exchange, or replacement on a factory-authorized basis. ZeeVee will inform you of service or replacement alternatives.

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Contact ZeeVee

**Support**

Contact us for installation and technical support, repairs, and warranty service:

+1 (877) 4-ZEEVEE (1.877.493.3833)

support@zeevee.com

Representatives are available from 9:00 AM to 6:00 PM, Monday through Friday (Eastern Time).

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