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

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 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.
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 exposed to rain or moisture, does not operate normally, or has been dropped.
14. WARNING: To reduce the risk of fire or electric shock do not remove the cover (or back). There are no user serviceable parts inside. Refer servicing to qualified service personnel.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT REMOVE THE COVER (OR BACK). NO USER SERVICABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

FCC Statement

FCC Compliance and Advisory Statement: This hardware 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.

Caution: Changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment. 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. 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: 1) reorient or relocate the receiving antenna; 2) increase the separation between the equipment and the receiver; 3) connect the equipment to an outlet on a circuit different from that to which the receiver is connected; 4) consult the dealer or an experienced radio/TV technician for help. Any changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment. Where shielded interface cables have been provided with the product or specified additional components or accessories elsewhere defined to be used with the installation of the product, they must be used in order to ensure compliance with FCC regulations.

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 2840 modulator. If you run into problems during setup, feel free to contact Technical Support at +1(877) 4-ZEEVEE (1.877.493.3833).

Welcome to ZeeVee.

What’s in the Box

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

ZeeVee Modulator

Available Separately

HDMI Cables

AC Power Cord

Available Separately

HDMI Cables

Contact ZeeVee

Available Separately

HDMI Cables

Contact ZeeVee

Page 2

HDbridge 2840 Configuration Guide

www.zeevее.com

Page 3

HDbridge 2840 Configuration Guide
Front and Back Panels

1. HDBridge 2840 - Name and description of unit
2. Color Display - 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 - Digital Audio/Video: Unencrypted HDMI. Closed Caption: Composite Analog Audio: 3.5mm Audio
6. Delay Matched Audio Out - For matching audio to external audio system (first port only, requires analog audio as input)
7. Event Detection - This function is not implemented yet
8. 10/100 LAN Port - Two symmetrical Ethernet ports for configuration and remote management
9. AC Power Input - 100-240VAC / 50-60Hz
10. SD Card Slot - For use with ZvShow

Basic Installation

Factory default settings allow HDBridge units to broadcast up to 4 unencrypted HDMI 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.

Beginning setup
1. Apply power.
2. Connect an HDMI video source to the HDMI input port of the HDBridge, using an HDMI cable (which is sold separately). For Closed Captioning, connect a composite (yellow) cable from the video source to the Caption port.
3. Optional - Connect the Analog Audio if the digital audio is not present on HDMI or if you want to implement the delay matched audio feature.

Tuning your channel at the HDTV (Auto Scan)
1. Connect the Coaxial Output of the HDBridge to your RF network.
2. If the RF power for your network is too high, you will observe video breakup.
3. Specify Cable (not Air or Antenna) setting in your TV menu.
4. Enter the RF number to tune directly to the channel. For default channel lineup information, refer to the Default Channel Lineup table.

WARNING: +45 dBmV Do not connect directly to HDTV

Coax cable connects to coax network
Optional Delay Matched Analog Audio Out to audio system
Ethernet to network or directly to computer

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>

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.
Front Panel Configuration

You can set the RF broadcast channels using the front panel controls. In many cases, your ZeeVee modulator will require only these configurations.

Setting the RF broadcast channels or power
1. Unlock the panel by pressing/holding together the left and right arrow buttons (➡➡) until “Setup” lights up.
2. Press “OK” to enter the Configuration screen.
3. Press “OK” to select “RF Setup.”
4. Use the arrow buttons (➡➡) to go to each item you want to configure (such as RF Number or RF Power), then press “OK” to highlight the field. Use the up and down (⬆⬇) arrow buttons 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.

To update firmware:
• If unit 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:
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
   • DOWN to revert FW
   • OK to boot normally
3. When finished making changes, use the arrow buttons to scroll down and select “Apply,” then click “OK” to save your changes.

IMPORTANT NOTES
• RF numbers are applied in pairs 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 frequencies (MHz).
• The RF numbers are not always paired in numerical sequence (as with RF # 6, which pairs with 5, 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.

Cable TV Channels vs RF Frequency (MHz) Map

<table>
<thead>
<tr>
<th>RF Ch</th>
<th>Band</th>
<th>RF Ch</th>
<th>Band</th>
<th>RF Ch</th>
<th>Band</th>
<th>RF Ch</th>
<th>Band</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>105</td>
<td>27</td>
<td>740</td>
<td>25</td>
<td>420</td>
<td>426</td>
<td>87</td>
</tr>
<tr>
<td>3</td>
<td>105</td>
<td>27</td>
<td>740</td>
<td>25</td>
<td>420</td>
<td>426</td>
<td>88</td>
</tr>
<tr>
<td>4</td>
<td>105</td>
<td>27</td>
<td>740</td>
<td>25</td>
<td>420</td>
<td>426</td>
<td>89</td>
</tr>
<tr>
<td>5</td>
<td>105</td>
<td>27</td>
<td>740</td>
<td>25</td>
<td>420</td>
<td>426</td>
<td>90</td>
</tr>
<tr>
<td>6</td>
<td>105</td>
<td>27</td>
<td>740</td>
<td>25</td>
<td>420</td>
<td>426</td>
<td>91</td>
</tr>
<tr>
<td>9</td>
<td>105</td>
<td>27</td>
<td>740</td>
<td>25</td>
<td>420</td>
<td>426</td>
<td>92</td>
</tr>
<tr>
<td>10</td>
<td>105</td>
<td>27</td>
<td>740</td>
<td>25</td>
<td>420</td>
<td>426</td>
<td>93</td>
</tr>
</tbody>
</table>

The highlighted area in the frequency map shows the RF numbers that can be paired together but are not numerically sequential.
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). Make sure you’ve reviewed the RF Frequency Map Important Notes before completing this task.

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 33 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 Maestro tabs

Click on the Maestro tabs to configure your unit as needed. We provide brief information here. 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 upload 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.
To work around the issue, you can try one of the following:

1. Use an audio delay device that allows you to add a delay to the audio stream before it reaches the sound system.

2. If you are combining with a cable service, keep in mind that they sometimes have extra signals that a TV will not display and may cause interference. If you are combining with a cable service, keep in mind that they sometimes have extra signals that a TV will not display and may cause interference.

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

4. Verify the HDTV has a QAM (digital cable) tuner. Verify that you have performed a full channel scan on the HDTV with “cable” selected. The audio should have a similar amount of delay since it is traveling a shorter path.

5. In the case of a paid repair: at the option of ZeeVee, the ZeeVee Equipment will be repaired or replaced (where necessary) if it becomes defective or inoperative.

WARRANTY

HDMI video logo (bouncing Idle Screen)

The warranty on the ZeeVee Equipment will be for five years from the date of purchase. The limited warranty extends only to the original end user purchaser and does not cover any products, components, or parts which are altered or repaired by anyone except ZeeVee. The warranty does not cover any software, including any software that may be loaded onto your ZeeVee Equipment. The warranty does not cover any software, including any software that may be loaded onto your ZeeVee Equipment.

If ZeeVee cannot reasonably repair or replace the ZeeVee Equipment, ZeeVee will, at its option, credit or refund the purchase price, this will be at the current retail price of the ZeeVee Equipment. ZeeVee’s limited warranty extends only to the original end user purchaser and to no other purchaser or person acquiring from it by way of gift, inheritance, or otherwise.

ZeeVee warrants your ZeeVee Equipment (defined hereafter) with the ZeeVee products in the ZeeVee Equipment, and ZvPro Product Lines (collectively “the ZeeVee Equipment”) to be free from defects in material and workmanship under normal use and conditions, for a period of five years from the date of purchase by the original end user purchaser. ZeeVee’s liability under this warranty is limited to, at ZeeVee’s option, either repair or replacement of the ZeeVee Equipment, which ever gives the best overall value of ZeeVee Equipment, or to refund to the original end user purchaser of the ZeeVee Equipment an amount equivalent to the purchase price of the ZeeVee Equipment.

If ZeeVee determines that the ZeeVee Equipment is not defective, ZeeVee’s liability under this warranty shall be limited to the return of the purchase price of the ZeeVee Equipment. In no event will ZeeVee be liable for any amount greater than the retail price paid by the original end user purchaser for the ZeeVee Equipment.

ZeeVee Equipment will no longer be sold in the U.S. or Canada in 2014, and is scheduled to be discontinued in all other markets by the end of 2014. The warranty on the replacement product expires, the warranty on the replacement product expires three years from the date of purchase by the original end user purchaser of the ZeeVee Equipment.

ZeeVee warrants your ZeeVee Equipment (defined hereafter) with the ZeeVee products in the ZeeVee Equipment, and ZvPro Product Lines (collectively “the ZeeVee Equipment”) to be free from defects in material and workmanship under normal use and conditions, for a period of five years from the date of purchase by the original end user purchaser. ZeeVee’s liability under this warranty is limited to, at ZeeVee’s option, either repair or replacement of the ZeeVee Equipment, which ever gives the best overall value of ZeeVee Equipment, or to refund to the original end user purchaser of the ZeeVee Equipment an amount equivalent to the purchase price of the ZeeVee Equipment.

In no event will ZeeVee be liable for any amount greater than the retail price paid by the original end user purchaser for the ZeeVee Equipment.
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).

Sales
North America:
+1 (347) 851-7364 Phone
sales@zeevee.com
EMEA:
+44 1494 956677 Phone
EMEAsales@zeevee.com

If you choose to register by mail, complete the form below and mail to ZeeVee at the address on the back. Be sure to PRINT CLEARLY and attach a postcard stamp.

Customer Details
- End User Company Name
- Contact Name
- Telephone
- Email
- Contact Name
- Telephone
- Email

Product Details
- Serial Number (an 11 or 12 digit number)
- Model Number
- Date of Purchase/Installation
- State / Province (if US or Canada)
- Country
- Invoice or PO Number

Fill out the form, attach a stamp, and mail to ZeeVee +1.877.493.3833 or warranty@zeevee.com with any questions.