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 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 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). There are no user serviceable parts inside. Return the apparatus 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.

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.

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

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. This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a commercial 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 by the Federal Communications Commission 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.

Available Separately

ZeeVee products convert your video and audio source to a digital cable channel and broadcast it over coax to your HDTVs. This guide walks you through basic and more enhanced setup for ZeeVee’s hBridge 2312 modulator. For support, repairs, and warranty service contact the distributor where you purchased the product. For additional questions call +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:

Available Separately

Welcome to ZeeVee.

What’s in the Box

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

Available Separately

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Factory default settings allow HDb2312 series modulators to broadcast up to 125D sources on RF channels 21, 22, 23, 24, 25, and 26 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 a Composite Video source to any Composite Video Input of the HDb2312.
3. Connect the Analog Audio.
4. Run the Auto Scan through the menu system of your HDTV to find the channels.

WARNING: +45 dBmV
Do not connect directly to HDTV
IMPORTANT NOTES

• RF Channel numbers are applied in threes based on the frequency map. For instance, if you enter RF Channel # “21” then RF Channel # “22” and “23” automatically populate.

• ZV channels can be set directly adjacent to any other well-formed channel and will not cause interference. No channel spacing is required.

• DVB-T defaults to using specific channels and frequency bands on the CCIR table. You can change those settings from CCIR to None and enter a frequency directly using Maestro. For instance, instead of entering RF channel 21, you could enter a frequency such as “474 MHz.”

<table>
<thead>
<tr>
<th>RF Channel</th>
<th>Band (MHz)</th>
<th>RF Channel</th>
<th>Band (MHz)</th>
<th>RF Channel</th>
<th>Band (MHz)</th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td>470-478</td>
<td>41</td>
<td>630-638</td>
<td>61</td>
<td>790-798</td>
</tr>
<tr>
<td>22</td>
<td>478-485</td>
<td>42</td>
<td>638-646</td>
<td>62</td>
<td>798-806</td>
</tr>
<tr>
<td>23</td>
<td>484-494</td>
<td>43</td>
<td>646-654</td>
<td>63</td>
<td>804-814</td>
</tr>
<tr>
<td>24</td>
<td>484-502</td>
<td>44</td>
<td>654-662</td>
<td>64</td>
<td>814-832</td>
</tr>
<tr>
<td>25</td>
<td>502-510</td>
<td>45</td>
<td>662-670</td>
<td>65</td>
<td>822-830</td>
</tr>
<tr>
<td>26</td>
<td>502-510</td>
<td>46</td>
<td>670-678</td>
<td>66</td>
<td>830-838</td>
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<tr>
<td>27</td>
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<td>678-686</td>
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<td>518-526</td>
<td>48</td>
<td>686-694</td>
<td>68</td>
<td>846-854</td>
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<tr>
<td>29</td>
<td>526-534</td>
<td>49</td>
<td>694-702</td>
<td>69</td>
<td>854-862</td>
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<tr>
<td>30</td>
<td>534-542</td>
<td>50</td>
<td>702-710</td>
<td>70</td>
<td>862-870</td>
</tr>
<tr>
<td>31</td>
<td>542-550</td>
<td>51</td>
<td>710-718</td>
<td>71</td>
<td>870-878</td>
</tr>
<tr>
<td>32</td>
<td>550-558</td>
<td>52</td>
<td>718-726</td>
<td>72</td>
<td>878-886</td>
</tr>
<tr>
<td>33</td>
<td>558-566</td>
<td>53</td>
<td>726-734</td>
<td>73</td>
<td>886-894</td>
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<tr>
<td>34</td>
<td>566-574</td>
<td>54</td>
<td>734-742</td>
<td>74</td>
<td>894-902</td>
</tr>
<tr>
<td>35</td>
<td>574-582</td>
<td>55</td>
<td>742-750</td>
<td>75</td>
<td>902-910</td>
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<tr>
<td>36</td>
<td>582-590</td>
<td>56</td>
<td>750-758</td>
<td>76</td>
<td>910-918</td>
</tr>
<tr>
<td>37</td>
<td>590-598</td>
<td>57</td>
<td>758-766</td>
<td>77</td>
<td>918-926</td>
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<tr>
<td>38</td>
<td>598-606</td>
<td>58</td>
<td>766-774</td>
<td>78</td>
<td>926-934</td>
</tr>
<tr>
<td>39</td>
<td>606-614</td>
<td>59</td>
<td>774-782</td>
<td>79</td>
<td>934-942</td>
</tr>
<tr>
<td>40</td>
<td>614-622</td>
<td>60</td>
<td>782-790</td>
<td>80</td>
<td>942-950</td>
</tr>
</tbody>
</table>
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 (logical 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 logical channel numbers (LCN)
1. Click on the Channel Plan tab.
2. Click in the RF # field and enter the RF number as you choose from the CCIR Table (on page 7). Make sure you've reviewed the CCIR Table Important Notes before completing this task.
3. Click in the LCN field and enter a logical channel number. The LCN is what the TV displays.
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. 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 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 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.

THE ADMIN TAB
Allows for creating user accounts which limit access to specific parts of Maestro including ZvShow, STB and EAS access.
Audio and video break-up is often caused by an issue in the RF/coax network. You may have chosen a channel number that is already in use.

If you are combining with other modulators, be sure the RFIF selected on the unit does not conflict with any other channel. Keep in mind that some analog modulators may spill over to adjacent channels and cause interference.

If you are combining with a cable service, keep in mind that they sometimes have extra signals that a TV will not have access to, but may interfere with your HDbridge2000.

There may also be an RF power balance issue. Verify that the RF power of the unit is balanced with signals from other modulators. Connect the output from the HDbridge2000 to a single channel in a multi-channel RF system to verify the power balance is optimum.

If you are combining with other modulators, be sure the RF# selected on the unit does not conflict with any other channel. Keep in mind that some analog modulators may spill over to adjacent channels and cause interference.

If you are adding to your HDbridge2000, please verify the HDTV has a DVB-T (or DVB-C) tuner. Verify that you have performed a full channel scan on the HDTV with the DVB-T (or DVB-C) tuner.

If you are combining with other modulators, be sure the RF# selected on the unit does not conflict with any other channel. Keep in mind that some analog modulators may spill over to adjacent channels and cause interference.

Example of Remedies for ZeeVee Equipment

If the ZeeVee equipment has a problem, contact ZeeVee customer care at (877)-4ZeeVee; (877)-493-3833. If it is determined that the product needs to be repaired or replaced, ZeeVee customer care will direct you to where to send the equipment. It is the responsibility of the customer to return the equipment to ZeeVee. ZeeVee will pay for the return shipment of a product that is defective within the warranty period. ZeeVee will pay for the return shipment of a product that is defective within the warranty period.

WHAT THESE WARRANTIES EXCLUDE

Your warranties DO NOT COVER:

• Any ZeeVee Equipment that has been opened or altered by anyone other than ZeeVee, including but not limited to the customer, customer care center, or service representative.
• Any ZeeVee Equipment that has been sold or transferred to a third party.
• Any ZeeVee Equipment that has been repaired, reconditioned, or modified by a person other than ZeeVee.
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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**
- **End User Address 1**
- **End User Address 2**
- **State / Province (if US or Canada)**
- **Country**
- **Dealer / Installer Company Name**
- **Telephone**
- **Email**

Contact +1.877.493.3833 or warranty@zeevee.com with any questions.

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### Ways to Register
- **Maestro**...
- **Mobile**...
- **Online**...
- **Email**...
- **Mail**...

Contact +1.877.493.3833 or warranty@zeevee.com with any questions.

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### Declaration of Conformity

**Manufacturer’s Name:** ZeeVee, Inc.

1 Monarch Drive, Suite 200
Littleton, Massachusetts
01460 - USA

declares that the product

**Product Name:** HDbridge 2000 Series

conforms to the following Product Specifications:

#### Safety:
- IEC 60065: Audio, Video and similar electronic apparatus

#### EMC:
- RF Emissions per FCC Part 15 / Canada CS-03 / European EN55022 : Class A
- EN500204: European Union (RF Immunity/Susceptibility)
- EN61000-4-2: Electrostatic Discharge
- EN61000-4-3: Radio Frequency Interference
- EN61000-4-4: Electrical Fast Transients
- EN61000-4-5: Surge
- EN61000-4-6: Conducted Radio Frequency Interference
- EN61000-4-8: Magnetics
- EN61000-4-11: Dips and Interrupts

The listed products herewith comply with the requirements of the EMC Directive 2004/108/EC and the Low Voltage Directive 2—6/95/EC and carry the CE-Marking accordingly.

All listed products meet the RoHS guidelines for electronic components, and hardware. This complies with the requirements of the (RoHS 2) DIRECTIVE 2011/65/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 8 June 2011 governing the use of the substances: Lead, Mercury, Hexavalent Chromium, Cadmium, Polybromated Biphenyls, Polybromated Diphenyl Ether, Pentabromodiphenyl Ether, Octabromodiphenyl Ether, Decabromodiphenyl Ether.

Stephen Metzger
Vice President of Engineering
Direct all specific inquires to the ZeeVee, Inc. Engineering Department

September 2014

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### Contact ZeeVee

#### Support
For support, repairs, and warranty service contact the distributor where you purchased the product. For additional questions call +1(877) 4-ZEEVEE (1.877.493.3833) or e-mail 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

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![EU](image) Proudly designed and built in the USA