WARNING: When using electronic products, basic precautions should always be followed, including:

1. Keep these instructions.
2. Read 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, conveniences 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.
14. WARNING: To reduce the risk of fire or electric shock do not place this apparatus in a position where it is exposed to dripping or splashing liquids, rain, moisture, or excessively high humidity. Objects containing liquid shall not be placed in proximity to the unit such that they present a risk of spillage onto the apparatus.

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

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

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 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.

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 Series modulators.

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).

Available Separately

Hydra Audio/Video Cables
x2 with HDb2620 and HDb2520
x4 with HDb2640 and HDb2540

What’s in the Box

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

ZeeVee Modulator

Power Cord

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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 DVB-T/C 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

Cables and their Connectors

- Hydra A/V Cables
- Hydra VGA A/V Cables
- Holy Aqua A/V Cables
- Connection to coaxial cable
- Ethernet to network or directly to computer

Factory default settings allow HDb2500/2600 Series modulators to broadcast up to 4 HD sources on RF channels 21, 22, 23, and 24 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 AC power.
2. Connect the component (or VGA) video connectors on the AV cable to the corresponding video outputs on your video source. Use the composite (yellow) connector for Teletext.
3. Connect either the Digital (orange) or Analog (red/white) audio connectors on the AV Cable to the audio outputs on your video source.
4. Run the Auto Scan through the menu system of your HDTV to find the channels.

Basic Installation

Connecting Component Video Source

Connecting VGA Video Source

Tuning your channel at the HDTV (Auto Scan)

1. Connect the coaxial output of the HDb2000 to your RF network.
2. If the RF power for your network is too high, you will observe video breakup.
3. Set the RF input on the TVs to DVB-T (default) or DVB-C with the symbol rate 6740 KS/sec.
4. Enter the RF number to tune directly to the channel. (Refer to the Default Channel Lineup for default information.)
5. 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.
6. 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 edit the highlighted 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.

**IMPORTANT NOTES**

- RF Channel numbers are applied in pairs based on the frequency map. For instance, if you enter RF Channel # “21” then RF Channel # “22” automatically populates.
- 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.”

**To update firmware:**

- If your 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
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. Note that you can choose a logical channel number that is different from the RF#. For instance, if your RF# is 21, you can choose 3 as your LCN.
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. You can also change from DVB-T to DVB-C and from CCIR to None.

THE DEVICE TAB
Allows you to change the device password and update firmware.

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.

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AV SOURCE TAB
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ADMIN TAB
Allows for creating user accounts which limit access to specific parts of Maestro including ZvShow, STB and EAS access.
The unit is broadcasting in “compatibility mode.” This means it’s receiving a resolution from your VGA/HDMI source that doesn’t match standard 1280x720 or 1920x1080 HDTV picture resolutions. When that happens, the unit fits the incoming picture inside either a 720 or 1080 window and pads the outside area with black. To resolve the issue, set your VGA source to Auto, change it to the specific video type being used (Component or VGA).

EXCLUSIVE REMEDY FOR ZEEVEE EQUIPMENT
At the option of ZeeVee, the ZeeVee Equipment will be repaired, replaced, or paid for you in accordance with the ZeeVee Equipment Terms of Service. If ZeeVee cannot reasonably repair or replace the ZeeVee Equipment, it will refund the purchase price paid to you for the ZeeVee Equipment. ZeeVee, at its sole discretion, will determine the appropriate remedy for your ZeeVee Equipment. To receive an exclusive remedy, you must prompt to log in (please refer to your ZeeVee Equipment Terms of Service for more details about information set up and account services, the ZeeVee Equipment will be repaired, replaced, or paid for you in accordance with the ZeeVee Equipment Terms of Service).

WHAT THE WARRANTIES EXCLUDE
• Shipping, labor or taxes charged for return of non-returnable or non-repairable ZeeVee Equipment.
• Any modifications or other changes to the ZeeVee Equipment or its components.
• Any ZeeVee Equipment that has been altered or missing send button.
• Any ZeeVee Equipment that has been tampered with or otherwise tempered.
• Any ZeeVee Equipment that has been subject to physical damage or altered in any manner.
• Any ZeeVee Equipment that has been returned in a condition other than its original.”

To get out of warranty service for your ZeeVee Equipment, please contact ZeeVee by calling our customer care center at (877)-4ZeeVee; (877)-493-3833 or support@zeevee.com. To obtain out-of-warranty service for your ZeeVee Equipment, please contact ZeeVee by calling our customer care center at (877)-4ZeeVee; (877)-493-3833 or support@zeevee.com. To obtain out-of-warranty service for your ZeeVee, please contact ZeeVee by calling our customer care center at (877)-4ZeeVee; (877)-493-3833 or support@zeevee.com. To obtain out-of-warranty service for your ZeeVee, please contact ZeeVee by calling our customer care center at (877)-4ZeeVee; (877)-493-3833 or support@zeevee.com.
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

Regulatory Product Number:
HDB2312
HDB2380
HDB2640
HDB2540
HDB2620
HDB2520
HDB2840
(all product options on all variants)

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 |
|        | EN55024 : 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 2006/95/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

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

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