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 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.

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 or 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 ZvPro 600 modulators. If you run into problems during setup, feel free to contact Technical Support at +1(877) 4-ZEEVVEE (1.877.493.3833).

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

ZeeVee Modulator

Power Brick and Cord

Available Separately

Hydra Audio/Video Cables

Hydra VGA A/V Cables

 Hydra VGA A/V Cables

 Hydra Audio/Video Cables
Front and Back Panels

1. Model Number  
   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  
   One channel or one channel pair, frequency-agile QAM RF CATV output channels for up to 2 video sources. Output power can be set between +45 to +25 dBmV using the Maestro web interface or the front panel.

5. SD Card Slot  
   For use with ZvShow

6. Audio/Video Inputs  
   Full size DIN connector for A/V input

7. Delay Matched Output  
   For matching audio to external audio system (first port only, requires analog audio as input)

8. 10/100 LAN Port  
   One Ethernet port for configuration and remote management

9. DC Power Input  
   +12 Volts
**Basic Installation**

Factory default settings allow ZvPro 600 series modulators to broadcast up to two sources on RF channels 2 and 3 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 the cables according to your cable choice:**
   - **HYDRA AV CABLE**—Connect the Component (RED/GREEN/BLUE) Video connectors on the A/V Cable to the corresponding Video Outputs on your video source. Use the Composite (YELLOW) connector for closed captioning. Connect either the Digital (ORANGE) or Analog (RED/WHITE) Audio connectors on the A/V Cable to the Audio Outputs on your video source. Connect the DIN to the A/V Input on the ZvPro. *If you want to implement the delay matched audio feature, you need to use analog audio.*
   - **VGA/DIN CABLE**—Connect the VGA connector to the VGA Output on your video source. Use the Analog Audio connector with the Audio Out on the Video Source. Connect the DIN to the A/V Input on the ZvPro.

### Tuning your channel at the HDTV (Auto Scan)

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

#### 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>
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</tbody>
</table>
Front Panel Configuration

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

**Setting the RF broadcast channel, RF power or audio delay**

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.

**Note:** The front panel locks automatically after a few seconds. To make more changes, press/hold the left and right arrow buttons again to re-enter the setup screen.

---

**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 DCHP, 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
### Cable TV Channels vs RF Frequency (MHz) Map

<table>
<thead>
<tr>
<th>RF Ch.</th>
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<td>27</td>
<td>240-246</td>
<td>57</td>
<td>420-426</td>
<td>87</td>
<td>600-606</td>
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<td>246-252</td>
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<td>426-432</td>
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<td>432-438</td>
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**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 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.

The highlighted areas in the frequency map show 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 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.

AV SOURCE TAB

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

AV SOURCE TAB with Advanced Controls

Delayed Audio Out found on the AV Source tab allows for matching audio to external audio system (first port only).
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 RF TAB
Allows you to change the RF power output.

THE NETWORK TAB
Allows you to assign a static IP address.
ADMIN TAB
Allows for creating user accounts which limit access to specific parts of Maestro including ZvShow, STB and EAS access.

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

## Unable to Connect to Maestro

If unable to connect, try one of the following:

- **If you are getting a page not found error when directly connected to a PC**, try disabling WIFI. If that does not correct it, make sure your PC is not using a static IP address. The PC and the HDbridge2000 unit must be on the same IP subnet for them to communicate. For details on how to check for a static IP address, please see the FAQ section of our website.

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

## No picture or channel found at TV

Verify the HDTV has a QAM (digital cable) tuner. Verify that you have performed a full channel scan on the HDTV with “cable mode” selected. Lower the power on the unit, then verify that the modulator is not conflicting with any other channel by connecting the unit directly to the HDTV.

## Idle Screen (bouncing logo)

One reason this may happen is when the unit does not detect video input. Verify the source is on and producing a video signal, then verify the source is outputting a supported resolution. If the Video Source (Channel Plan tab in Maestro) is set to Auto, change it to the specific video type being used (Component or VGA).

## Image Breakup

Image or video break up is often caused by an issue in the RF/coax network. You may have chosen a channel number that is not completely vacant.

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

There may also be an RF power balance issue. Verify that 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 TVs will also show video issues if the signal strength is too high. Try lowering the RF power on the unit to ensure you are not overdriving the HDTV tuner.

## VGA or HDMI video does not fill HDTV screen

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 output 1280x720 or 1920x1080 resolution. For more detailed information about setting up VGA and HDMI resolutions, see the FAQ section of our website.

*continued next page*
Audio and video are not synchronized

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 firmware may have lip sync corrections.

If you are feeding the audio directly from the source into a distributed (whole house) audio system and not through the ZeeVee unit, it will arrive to the speakers before the video arrives to the HDTV. This happens because the video is being encoded into a digital signal, modulated by the unit and then demodulated at the HDTV. Each of these steps adds latency that will not be reflected in the audio because it is traveling a shorter path.

To work around the issue, you can try one of the following:

► Use an audio delay device that allows you to add a delay to the audio stream before it reaches the sound system.
► Feed the audio to the ZeeVee unit and send it to the HDTV with the video. Then take the audio out from an HDTV or external QAM tuner (such as the ZvSync) and connect it to your audio system. The audio should have a similar amount of delay since it has gone through the encoding and decoding process just as the video did.
WARRANTY
HDBC2hidge 2000 Series and ZvPro Product Lines
ZeveVee, Inc. January 1, 2014

LIMITED FIVE YEAR WARRANTY
ZeveVee warrants your ZeveVee Equipment (defined to include only HDBC2hidge Series and ZvPro Series of equipment) against defects in materials and workmanship for a period of five years from the date of purchase. ZeveVee’s limited warranty extends only to the original end user purchaser or any person receiving the ZeveVee Equipment as a gift from the original end user purchaser and to no other purchaser or transferee. All warranties implied by law, including any implied warranties of merchantability and fitness for a particular purpose, are expressly limited to the duration of this express limited warranty. Some countries or states of the U.S. do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

EXCLUSIVE REMEDY FOR ZEEVEE EQUIPMENT
At the option of ZeveVee, the ZeveVee Equipment will be repaired or replaced with a new, repaired or refurbished product (whichever ZeveVee deems as necessary) if it becomes defective or improper use. If ZeveVee cannot reasonably repair or replace the ZeveVee Equipment then ZeveVee may, at its sole discretion, refund the original purchase price or the current retail price of the ZeveVee Equipment. If ZeveVee chooses to repair or replace the ZeveVee Equipment, or to refund the purchase price, this will be the exclusive remedy. With the exception of any warranties implied by the law of any country or state of the U.S., this express limited warranty is exclusive and in lieu of all other warranties, guarantees, agreements and similar obligations of ZeveVee.

THE ABOVE WARRANTIES ARE SUBJECT TO THE FOLLOWING CONDITIONS
• You must have proof of purchase from an authorized ZeveVee dealer to receive warranty service. A sales receipt or other document showing that you purchased the ZeveVee Equipment is considered proof of purchase.
• Warranty coverage begins the day the original end user purchaser or any person receiving the ZeveVee Equipment as a gift from the original end user purchaser purchased the ZeveVee Equipment.
• All ZeveVee Equipment, including replacement products, are covered only for the original warranty period. When the warranty on the original product expires, the warranty on the replacement product also expires.
• If we determine that the problem is not covered under the limited warranty, we will notify you and inform you of service or replacement alternatives that are available to you on a fee basis.
• In the case of a paid repair: at the option of ZeveVee, the ZeveVee Equipment will be repaired or replaced with a new, repaired, refurbished, or comparable product (whichever ZeveVee deems as necessary).
• ZeveVee Equipment must be purchased through an authorized ZeveVee distribution partner and dealer/ reseller. Check zeevee.com for a list of authorized distributors and a list of any expressly excluded dealer/resellers. ZeveVee does not warrant equipment purchased through grey market resellers or certain internet resellers.

WHAT THESE WARRANTIES EXCLUDE
Your warranties do NOT cover:
• Shipping, tax or duty charges for return or replacement of unit.
• Labor charges for installation or set-up of the ZeveVee Equipment.
• Repairs or replacement due to misuse, accident, lightning damage, unauthorized repair, power surges, or other causes not within the control of ZeveVee.
• Any modifications or other changes to the ZeveVee Equipment, including but not limited to software or hardware modification in any way other than as expressly authorized by ZeveVee, will void these limited warranties. Except in the case of hardware or software provided by ZeveVee, installing modifications, “hacks,” or utilizing service access or “back doors” will void these limited warranties.
• Reception or transmission problems caused by signal conditions, Internet connection problems, or any other communication systems outside the unit.
• Expendable accessories included in ZeveVee Equipment such as batteries.
• Any ZeveVee Equipment that has been modified or adapted to enable it to operate in any country other than the country for which it was designed, manufactured, approved, and/or authorized.
• Any ZeveVee Equipment that has altered or missing serial numbers.
• Any ZeveVee Equipment that has been opened or otherwise tampered with.
• Problems that are directly caused as a result of using any third party accessories, parts or components.

MATERIALS REQUIRED FOR WARRANTY
Please keep your sales receipt and any other documentation showing proof of purchase. Also, keep the original box and packaging material in case you need to return your ZeveVee Equipment.

TO GET WARRANTY SERVICE
Warranty service will be provided by ZeveVee. If you believe you need service for your ZeveVee Equipment, please contact ZeveVee by calling our customer care center at (877)-4ZeeVee; (877)-493-3833. If it is determined that the product needs to be returned for service or exchange, you will receive a Return Material Authorization (RMA) number. Our agents will help you through the process through which you can return the product. ZeveVee is not responsible for customer products received without an RMA number and may reject such products.

TO GET OUT-OF-WARRANTY SERVICE
To obtain out-of-warranty service for your ZeveVee Equipment, please contact ZeveVee by calling our customer care center at (877)-4ZeeVee; (877)-493-3833 for information on the possibility of and any costs for repair or replacement of out-of-warranty products. No agent, company, dealer, distributor, or person is authorized to change, modify, or extend the terms of these warranties in any manner.

LIMITATION OF LIABILITY
In no event will ZeveVee be liable for any amount greater than the retail price of the ZeveVee Equipment. ZeveVee shall not be liable for any incidental or consequential damages (including lost profits) for breach of any express or implied warranty on the ZeveVee Equipment. Some countries and states of the U.S. do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights and you may also have other rights, which vary from country to country and state to state.
Contact ZeeVee

Support

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

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support@zeevee.com

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