User's Manual

ZvSync - EU
HD Digital Tuner/Decoder
DVB-T / DVB-T2

Notice

Warnings Cautions and Notes

Throughout the entire user's manual, pay special attention to the following marks that indicate hazardous situations:

Warning
Indicates a hazardous situation which could result in serious injury

Caution
Indicates a situation which could damage the equipment or other apparatus.

Note
Indicates additional information to make the user aware of possible problems and important information to help understand, use and maintain the installation.

Important Symbols

To reduce risk of electric shock, do not open unit or breach power supply enclosure. There are no user serviceable parts inside. Contact ZeeVee support at +1.877.493.3833.

DANGEROUS VOLTAGE
This symbol indicates dangerous voltage inside the receiver that presents a risk of electric shock or personal injury.

IMPORTANT INSTRUCTIONS
This symbol indicates important instructions accompanying the receiver.

Safety Instructions and Precautions

This receiver has been manufactured to comply with international safety standards. Please read the safety precautions carefully.

1. Main Supply (100-240V ~50-60Hz AC)

- Operate this product only from the type of power source indicated on the marking label. If you are not sure of the type of power supplied to the location where the receiver is to be used, consult your local power company. Disconnect the product from the main power source before you start any maintenance or installation procedures.

2. Connection to the Cable Feed or Aerial

- Disconnect the product from the AC mains before connecting or disconnecting the cable from the aerial jack.

3. Connection to the Television

- Disconnect the product from the AC mains before connecting or disconnecting a cable from the receiver to the attached television. Failure to do so can damage the television.

4. Overloading

- Do not overload a wall outlet, extension cord or adapter as this may result in electric fire or shock hazard.

5. Liquids

- This product should not be exposed to liquid of any kind. In addition, no objects filled with liquid should be placed on the apparatus.

6. Cleaning

- Disconnect the product from the wall outlet prior to cleaning.
- Use a light, damp cloth (no solvents) to dust or clean the product.

7. Ventilation
- The slots and openings on the case of the product must be left uncovered to allow for air to pass in and out for proper cooling.
- Do not operate the product on soft furnishings or carpet.
- Do not stack anything on top of the product.

8. Attachments
- Do not use unsupported attachments as these may be hazardous or cause damage to the product.

9. Extraneous Objects
- Do not insert anything into the openings of the unit.

10. Location
- Place the product indoors and avoid exposing it to lightning, rain, or direct sunlight.
- Do not place the product near a radiator or heat register.
- Try to place the unit at least 2 inches (~10cm) from any appliance susceptible to electromagnetic influences, such as a television or radio.
- Insure the ventilation considerations are followed when the unit is in service.
- Do not place the product on an unstable cart, stand, tripod, or bracket where it can fall. A falling object can cause injury and may cause serious damage to the product.

11. Lightning, Storm, or Not in Service
- Unplug the product from the wall outlet and disconnect the aerial during a thunderstorm or when left unattended and unused for long periods of time. This will prevent damage due to lightning or power surges.

12. Replacement Parts
- Replacement parts should be purchased through an authorized ZeeVee distributor and approved by the manufacturer. Unauthorized parts may result in damage to the units and will void any warranty.
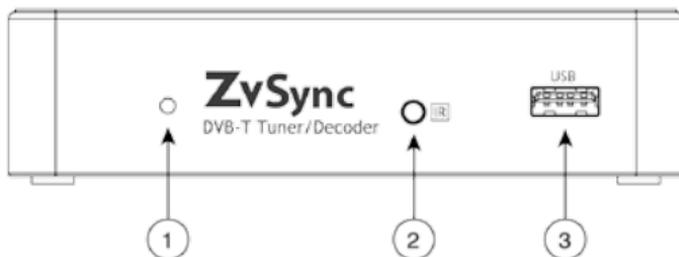
Contents

1 Before Using the Product

This section provides detailed descriptions of the product and included accessories.

1.1 FRONT PANEL

① **LED Status Indicator –** Indicates state of unit.
   RED – Power is available, but the unit is DEACTIVATED.
   GREEN – The unit is powered-up and ACTIVATED.

② **Infrared Jack –** Input for the installation of the remote infrared sensor.
③ **USB –** Input for installation of USB storage device used for firmware upgrade or activation of the advanced media functions. Use is strictly optional.

1.2 REAR PANEL
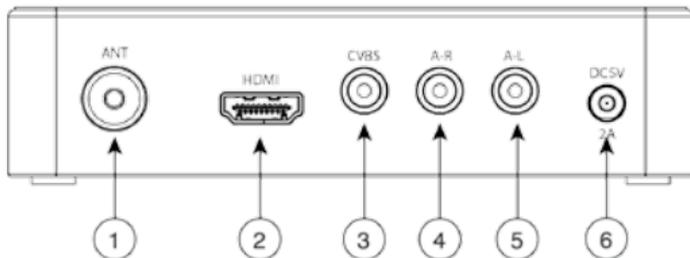
① **Aerial/Cable/RF Input –** Connect to the antenna for over-the-air reception or to a cable feed for DVB-T reception

② **HD Video Output –** The video output most commonly used from the receiver unit. Connect to the HDMI digital input of the display device (typically a television). Both high definition video and digital audio are carried.l

③ **CVBS Video Output –** For composite video output, connect the CVBS Video output to the appropriate composite video input of the display device (typically a television or monitor).

④ **Right Audio Output –** For analog audio, connect to the appropriate 'Right' analog audio input on the display device (typically a television or amplifier)

⑤ **Left Audio Output –** For analog audio, connect to the appropriate 'Left' analog audio input on the display device (typically a television or amplifier).

⑥ **Power Connector –** Connect to the plug on the supplied wall-mount power supply.

1.3 REMOTE CONTROL

LED Indicator

Learning Buttons

Active Definitions

Color Buttons
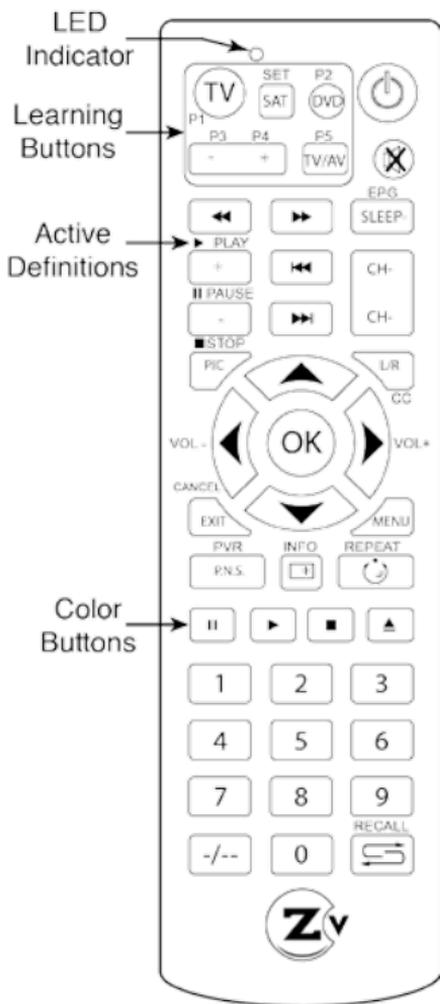
The ZvSync receiver/decoder is supplied with a partial learning remote control device. Buttons P1-P5 can be programmed to mimic the functions of a select set of buttons from another remote control unit.

The intention is that the TV viewing experience can be controlled from a single handset to include power and volume control of the television set and all other functions directed at controlling the ZvSync receiver/decoder.
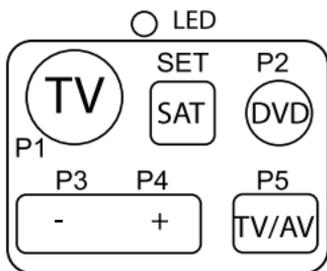
As the design of the remote control device is used in multiple applications some buttons have multiple legends or marks.

In general for the ZvSync application, the markings shown on the silkscreen (white marks above or beside buttons) are the active definitions of the key function.

Button Definitions

| Key	Definition
⏻	Power. Pressing once turns on ZvSync. Again turns it off
🔇	Mute. Disables/Enables audio
◀◀	Reverses playback while in PVR mode
▶▶	Fast Forwards playback while in PVR mode
▶ PLAY / +	Starts Playback when using PVR mode
◀◀	Back up to division in PVR mode.
⏸ PAUSE / -	Pauses playback in PVR mode
▶▶|	Advances to division when using PVR mode
EPG / SLEEP-	Displays Electronic Program Guide information
CH+ / CH+	Quick channel up and down buttons when watching television programs.
■ STOP / PIC	Stops playback when using PVR mode. Causes PVR mode to be entered during normal playback.
L/R / CC	Enables/disables Closed Captioning
CANCEL / EXIT	Cancels/Exits menu levels when navigating interface.
PVR / P.N.S.	Activates PVR mode. Displays options.
INFO	Displays current playback information
REPEAT / ↻	Causes repeat mode to be entered when playing stored media
⏸ ▶ ■ ▲	Color buttons. Program specific meaning
-/—	Dash button for entering digital channel numbers (ie: "23-1")
RECALL	Recall last channel being played
0-9	Numeric digits for entering channel numbers
(navigation pad OK)	Navigation buttons when driving configuration interface. During normal playback Up/Down sets channels, Left/Right sets volume and OK displays channel list.

Programmable Buttons

The upper-left portion of the remote houses a set of programmable keys. The intent is to allow for common television functions to be programmed so the user only needs to use a single remote control device to manage their television experience when using the ZvSync receiver/decoder.

Keys P1 though P5 can be set to any function the user desires. The labeling is present only to provide visual cues the user may use to help remember which key has been programmed to which function.

The "SET" key has a fixed function that is not programmable. It initiates the programming process for setting the P1-P5 key functions.

Programming P1-P5 Buttons

The ZvSync remote has been tested to be compatible with a large number of remotes. However, some manufacturers use infrared codes that are obscure and cannot be "copied" into the programmable keys of the ZvSync remote.

ZvSync Remote

User Remote to be copied

2 inches or 5cm
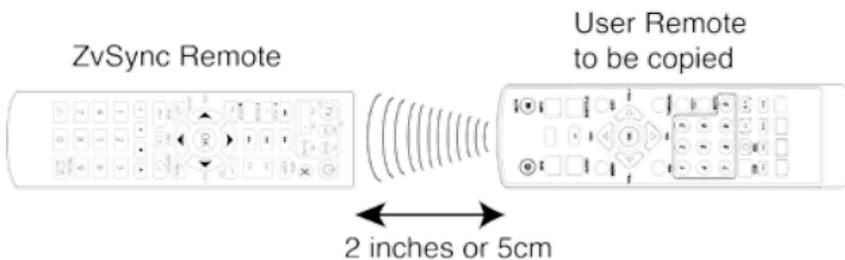
To program a key the following sequence shall be executed:

Step1: Press and hold the "SET" button for three seconds

- ➢ The RED LED lights immediately when the button is pressed
- ➢ After 3 seconds the LED changes to a very bright state

Step 2: Press the key you wish to program (P1-P5)

- ➢ The RED LED changes to a slow flash (1/second)

Step 3: Press the key on the remote that you are copying

- ➢ The RED LED performs three quick flashes to acknowledge
- ➢ RED LED turns on solid again.
- ➢ Repeat steps 2 and 3, or simply wait for light to extinguish

### Step 4: Test Programmed key on television or device to be controlled

If command is not executing properly, repeat steps 1-3

2 Setup

This chapter describes how to connect your ZvSync Receiver to the television and receiving apparatus appropriately. The receiver has various options and interface for connectivity. Select the method appropriate to your application.

2.1 CONNECTING TO AN AERIAL

Connect your antenna to the ZvSync receiver's 'RF IN' jack for over-the-air reception, as follows:

Connect ANT jack on ZvSync to:

Aerial for O.T.A. content
or
Cable feed from wall jack
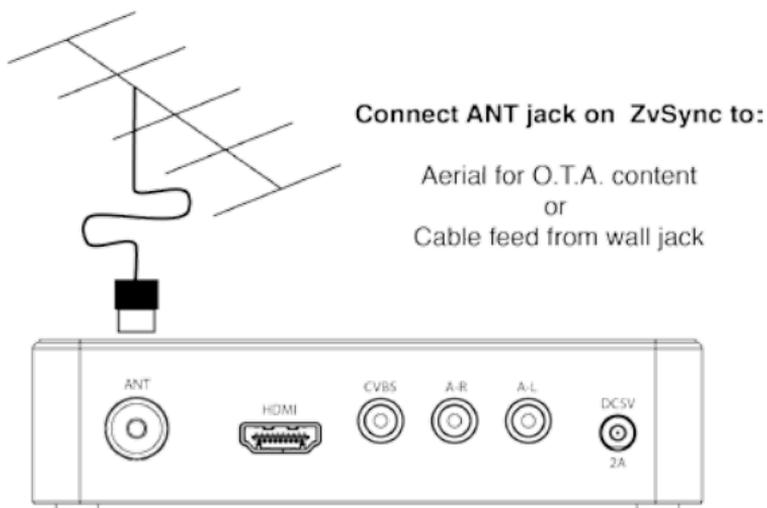
2.2 CONNECTING TO A CABLE FEED

To receive a cable signal (or a channel generated by ZeeVee's encoder/modulator products) connect to the 'RF IN' jack on the rear face with a cable to the source feed.

2.3   CONNECTING TO THE TELEVISION

HDMI Cable

A connection to the HDMI input of a television, if so equipped, is the recommended method to get visual content on to the television display. Both visual content and audio content are carried over the single cable from the ZvSync to the television display.

The digital connection presents the highest resolution, sharpest picture possible from the ZvSync receiver.

User-supplied HDMI cable
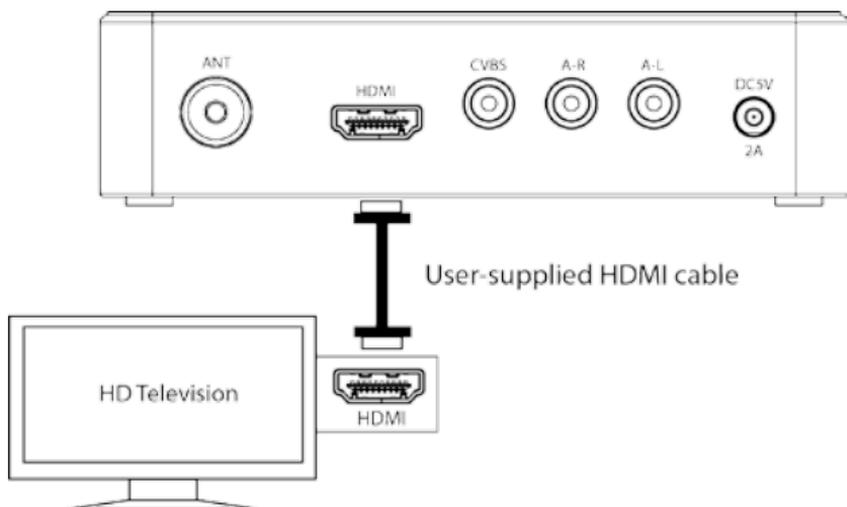
RCA Cables

Certain televisions or applications do not have digital video inputs. The ZvSync will output standard definition representations of the programming over the CVBS port. Both the CVBS output and the HDTV digital output are active simultaneously.

All content will be scaled down to 576i regardless of the incoming resolution prior to being sent out the CVBS port.
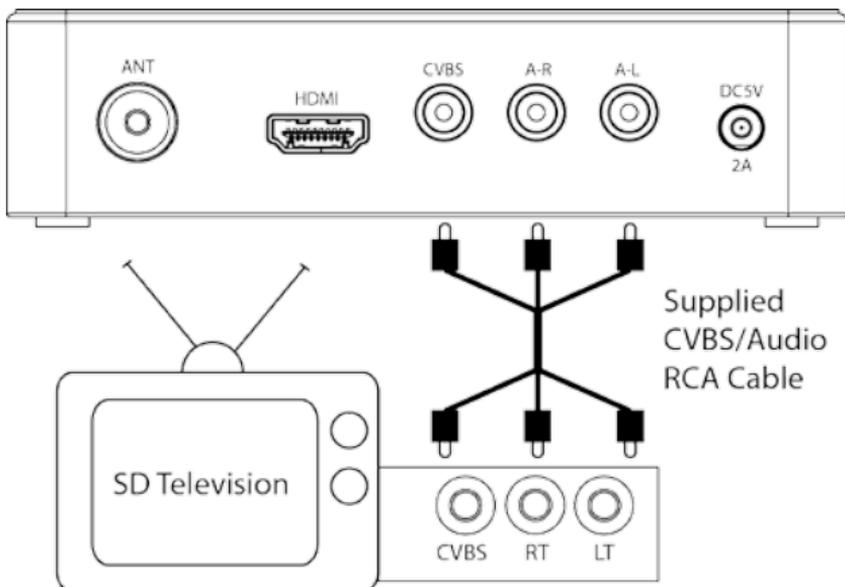
2.4 INFRARED REMOTE CONTROL RECEIVER

The ZvSync-EU receiver/decoder is supplied with an external IR receiver. This is in the form of a cable with an IR receiver at the end.

The pigtail MUST be installed for the ZvSync to receive commands from the remote and is required for proper operation.

By separating the infrared receiver from the base unit, the main body of the ZvSync receiver/decoder can be installed in an unobtrusive location with only the IR sensor showing.

IR Sensor

1 Meter (+/-10cm)
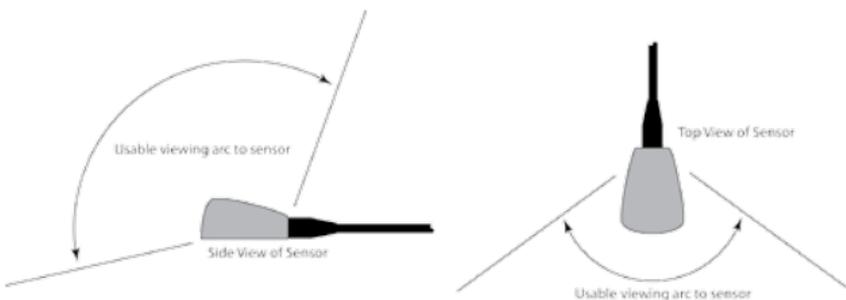
Connecting to ZvSync

The 3.5mm plug on the infrared pigtail must be plugged in to the front "IR" port on the ZvSync main unit for proper operation.

Usable Angles

The remote control must have a relatively unobstructed "line-of-sight" to the infrared sensor. The usable angles are quite flexible, yielding many possible mounting options. Common is to use the included double-sided tape to mount the IR sensor to bottom or side bezel of the attached television.

At the user's discretion the main body of the ZvSync-EU receiver/decoder may be placed out of sight, providing the proper ventilation considerations are observed.

2.5 CONNECTING TO THE POWER SUPPLY

The wall-mount power supply (included) provides the power for the ZvSync receiver. Any other method of powering the ZvSync may void the warranty.

Configuring the Power Supply

The AC wall mount power supply has a number of adapter plates for use in a variety of locations with different provisions for connections to the AC mains. Before deployment, select the appropriate adapter and install it securely on the supply body.

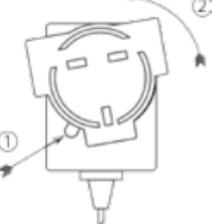|	
	As supplied, the power supply will likely be delivered with no adapter plate installed.
	Several different plates are provided for a variety of different AC mains plug types. Select the one appropriate for your AC mains supply outlet (UK shown).
	Insert the plug into the wall-mount supply body Turn the plate clockwise about 10 degrees until it "clicks" into place
	Insure that the plate is secure before any attempt is made to plug in to the AC mains.
	A different type of adapter plate may be installed later on. To install a new plate: • Press the release button • While holding the button, rotate the installed plate approx. 10 degrees counterclockwise • Remove the currently installed plate

Connecting Power Supply to ZvSync

The wall-mount power supply (included) provides power for the ZvSync receiver. Other methods of powering the ZvSync may void the warranty.

The DC input is rated at 5VDC at a maximum peak consumption of 10W, nominal consumption of 6W during operation, and a standby power draw of 0.8W.

Included AC to 5VDC
Wall Mount Power Supply

ANT   HDMI   CVBS   A-R   A-L   DC5V
2A
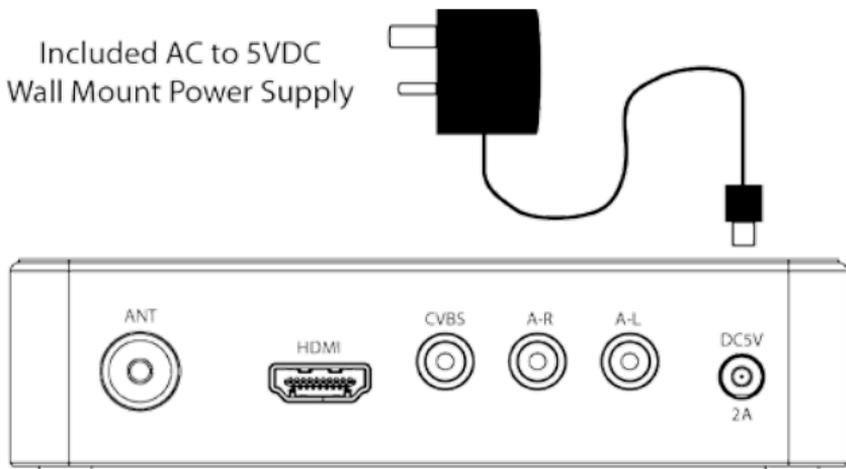
3 Installation Wizard

If you are using the receiver for the first time, or have restored it to factory defaults, the installation guide menu will appear on your screen.

Installation Guide

OSD Language	English
Country	Austria
Channel Search ▶	

EXIT EXIT   OK Confirm   ◀ ▲ ▶ ▼

- ➢ Select the desired language for the On Screen Display interface

- ➢ Select the country (or closest match to the country) in which you will be operating the ZvSync-EU device

  - • This is important for properly find the broadcast channels

- ➢ Navigate to the "Channel Search" option and the press "OK"

  - • The ZvSync unit will then begin searching for channels. Allow it to run to completion. This can take several minutes.

  - • On completion the ZvSync should be ready for use viewing programs.

After exiting the "Installation Guide" screen, the following screen will appear:

➤ Use the **RIGHT** arrow key to navigate to the **"Channel Search"** page
➤ Use the **DOWN** arrow key to navigate to **"Signal Type"**
➤ Use the **RIGHT** arrow key bring up the **"Air"** option

With the **"Air"** option highlighted:

  ➢ Use the **UP** arrow to navigate to the **"Auto Search"** option
  ➢ Use the RIGHT arrow key to activate a channel search

A scanning status screen showing the progress of the initial channel scan will appear.

Channel Search

63.0MHz/6MHz

| DTV: 000 | Radio: 000 |

Progress

EXIT EXIT   **MENU** Skip
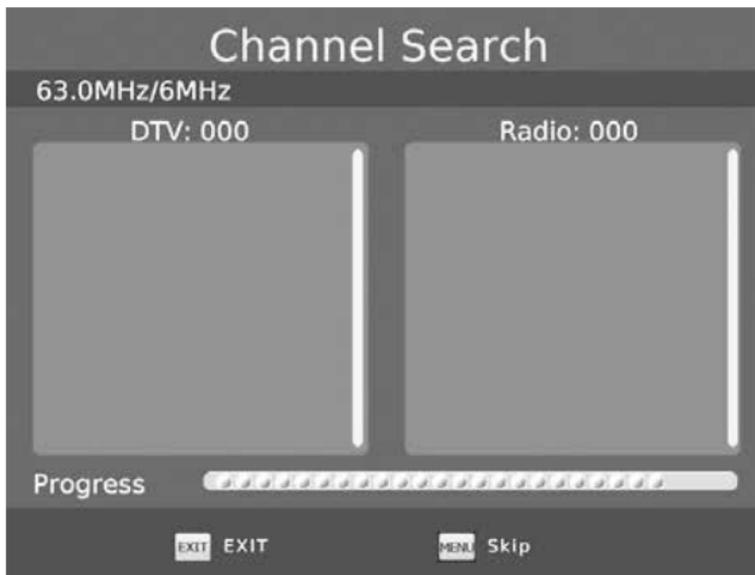
Allow the scanning process to run to completion (several minutes).

Once the initial scan is complete (OTA or Cable) ZvSync may be used to start watching television programs.

4 Basic Operation

To access the general setup menu, press the "Menu" button. The user will see with this top-level navigation screen.

Major categories may be selected by navigating left and right using the arrow keys. Once a category is selected, the options may be explored by navigating down into the page and selecting the appropriate page item.

After selecting a page item, "stepping into" it by navigating to the RIGHT presents the unique options for that particular item.

4.1 PROGRAM MANAGEMENT

Program Edit
To edit your program preferences (lock, skip, favorite, move, or delete), you will need to enter the Program Edit Menu item. **This menu requires a password to access. The default password is '000000', while the master unlock password is '888888'.**

Set Favorite Channels

You can create a short list of favorite programs/channels that you can easily access. Set Favorite TV Program:

(1) Select your desired channel then press the **FAV** button. A symbol will appear and the channel is marked as a favorite.
(2) Repeat the previous step to select more favorite channels.
(3) Confirm and exit the menu by pressing the **EXIT** key.

Disable Favorite TV Program

Select the Favorite channel and press the **FAV** button on the remote to bring up the menu that allows cancelling of a favorite.

View Favorite Channel

(1) While in normal viewing mode, press the **FAV** button and the favorite program menu will appear.
(2) Press the up and down arrows to browse to a selection
(3) Press the **OK** button to select that program.

Delete a TV Program

(1) Select the program and then press the **BLUE** button. A warning message will appear.
(2) Press **OK** to delete the channel
(3) Repeat the process if more channels need to be deleted
(4) Hit **EXIT** to complete

Lock Program

You can lock certain channels for restricted viewing using ZvSync.

(1) Select a particular channel and then press the **YELLOW** button. A lock-shaped symbol is displayed. The channel is now locked from selection.
(2) Repeat the process as needed for all desired channels.
(3) To confirm your selections and actions, press the **EXIT** button.
(4) Press the **YELLOW** button to disable the locked channels function.
(5) **To view the locked channels, you will be required to enter your password. The password can be a user-set password. The default of '000000'. The master unlock password is '888888'.**

EPG (Electronic Program Guide)

The Electronic Program Guide is an on-screen TV guide that shows scheduled programs for every tuned channel. Press the **EPG** button to access the information.

You can use the arrow buttons to select a preferred program. If there is more than one page of information on the program, use the **BLUE** and **YELLOW** buttons for page up and page down respectively.

Sort

Sort your channels using the following options:
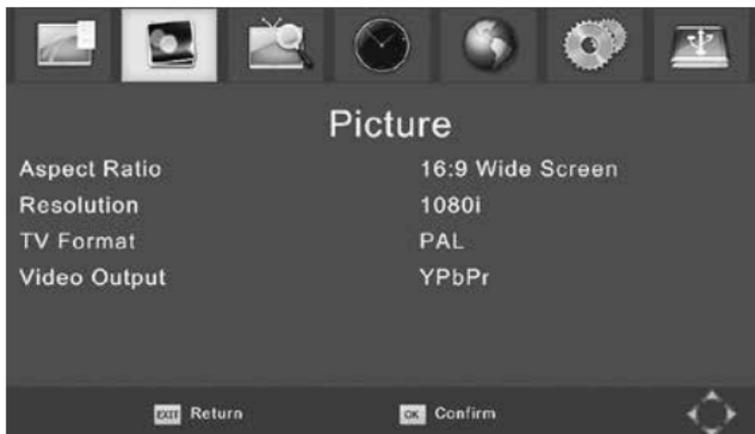
    LCN – sorts by Logical Channel Number in ascending order
    Service Name – Sort in alphabetical order
    Service ID – Ascending Order according to the station ID
    ONID – Sorts by ascending order by the Original Network Identifier

4.2 PICTURE SETTINGS

The allowed output video settings can be adjusted at the "Picture" top-level settings page.

When the HDTV port is connected via HDMI to the display television all the settings are honored. If component video (CVBS) or RF modulation are being used to send the video to the display device the only supported resolution is 576i regardless of the setting on the resolution item.

4.3 CHANNEL SEARCH

The "Channel Search" top-level navigation page allows the ZvSync tuner/
decoder to rescan for channels and change settings relevant to the
attached reception method.

Auto Search

Automatically searches for channels and saves them once the scan is
complete. All previous entries will be deleted.

> Select "Auto Search" and press **OK** or **RIGHT** arrow to start

> To cancel press **EXIT**. Only found channels will be saved.

Manual Search

Allows for the addition of individual channels without deleting the
previously saved channels and settings. User must know the exact center
frequency of the channel of interest.

Antenna Power

Disable if an external powered antenna is employed

Signal Type

Select "AIR" if receiving from an Antenna. Select "Cable" if receiving from a
Cable Provider or ZeeVee encoder/modulator product.

4.4 TIME SETTING

Time Offset
Automatic or manual GMT time offset adjustments.

Country Region
Select country of interest for use with Auto Time Offset adjustments.

Time Zone
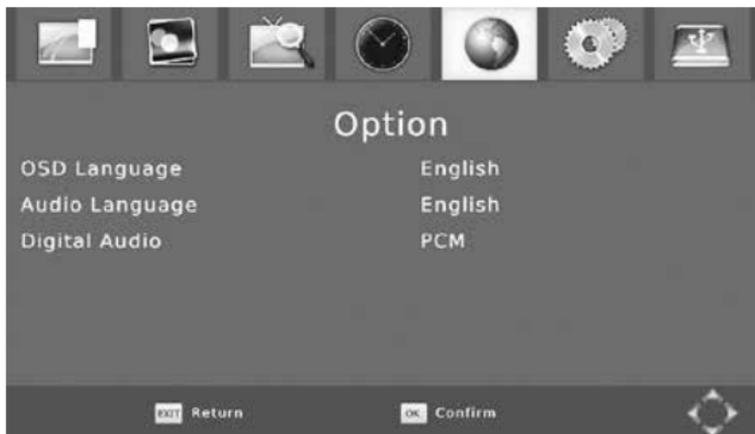Time zone when Time Offset is set to manual.

Sleep
Allows setting of an interval after that the ZvSync will automatically shut off

Power On/Off
Allows setting a schedule for time-of-day activation and shutdown of the
ZvSync device.

4.5 WORLD OPTION SETTINGS

The Option screen allows for setting the On Screen Display language and the audio language to be played if the incoming program allows for those options.

Digital Audio
Allows setting various types of audio to be output over the HDTV port.

4.6 SYSTEM SETTINGS

Various System Parameters
Default user password is '000000'. Master unlock password is '888888'.

4.7   USB & MULTIMEDIA

The ZvSync device supports a rich set of features enabled through the use of a USB. In order to support the PVR functions of time shifting and recording, a storage device must be present.

It is recommended that a high-performance USB storage device be used if these functions are to be utilized. The format must be FAT32. NTFS is not supported.

Use of the PVR and media storage functions is freely available and encouraged. This set of features is not actively supported by ZeeVee and support is not available for the time-shifting, media playing, or PVR functions.

Media types of AVI, MP3, WMA, JPEG, BMP, etc. are supported.

5 Troubleshooting

Problem	Potential Reason	Possible Action
No picture	Power is not connected	Connect power supply Check wall source
	The power is switched off	Switch on power to ZvSync
Screen shows "No Signal"	Cable feed is not connected	Check/Connect power cable
	Aerial cable is faulty	Check aerial and connections
No sound from speaker	Incorrect or faulty connection with audio cable	Correctly connect the audio cables
	Sound on mute	Select the mute/unmute on the remote
Only sound, no image on screen	Incorrect A/V cable connection	Check cable connections
	Program is a radio program	The program being tuned may be audio only
	Incorrect setting in digital audio	Set a different audio type in World Options
Remote control is not working	The battery is exhausted	Replace the remote control's batteries.
	Remote control is not facing or visible to ZvSync sense window	Reorient ZvSync sense window and remote control
The picture is breaking up	The input signal is too weak	Check aerial cable and connections

6 Technical Specifications

Item	Sub-Item	Parameter
Tuner	Input Frequency	48-862MHz
	RF Input Level	-20 to -82dBm
	IF Bandwidth	6,7, and 8MHz
	Modulation	QPSK, 16QAM, 64QAM, 256QAM, DVB-T, DVB-T2
Video	Decoder Format	MPEG4 AVC/H.264 HP@l4 MPEG2 MP@ML/HL
	Output Format	480i, 480p, 576i, 576p, 720p, 1080i, 1080p60Hz
	Aspect Ratio	4:3, 16:9, Auto
	Output Port	HDMI(v1.3C), CVBS
Audio	Decoder Format	MPEG-1(layer 1 & 2 & 3), WMA, AC-3
	Audio Output	Digital Audio over HDMI, RCAx2(L/R)
USB2.0	Supported Capacity	Unlimited
	Supported Media	MP3, WMA, JPEG, BMP, AVI
Power	Supply Voltage (wall)	100-240VAC 50-60Hz
	Supply Voltage (ZvSync unit)	5VDC
	Maximum Power Consumption	10W
	Standby Power Consumption	<0.8W
	Nominal Power Consumption	5W

7 Declaration of Conformity

The Original Equipment Manufacturer herewith declares the conformity of the product with the following directives and standards:

Low Voltage Directive 2006/95/EC

EN 60065:2002+A1:2006

EMC Directive 2004/108/EC

EN 55 013:2001+A1:2003+A2:2006

EN 55 020:2007

EN 61 000-3-2:2006

EN 61 000-3-3:2008

FCC, CE, C-Tick

Dispose of Properly

This symbol on the product or in the instructions means that your electrical and electronic equipment should be disposed of at the end of its life separately from normal household waste. There are separate collection systems for proper recycling of the constituent elements. For more information, please contact your local environmental authority or the retailer where you purchased the product.

Contact ZeeVee

Support

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

+1 (877) 4ZEEVEE (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