HDMI® 1x3 SPLITTER
over Cat5e/Cat6 Cable
with additional HDMI output

**Vanco Part Number:
EVSP1013**

**HDMI® 1x3 Splitter
over Category 5e/6
Cable with additional
HDMI output**

EVOLUTION
BY VANCO®
ADVANCING DIGITAL CONNECTIVITY

www.vanco1.com • 800.626.6445

DEAR CUSTOMER

Thank you for purchasing this product.
For optimum performance and safety, please
read these instructions carefully before connecting, operating or
adjusting this product. Please keep this manual for future reference.

This product is 100% inspected and tested in the United States to verify
HDMI performance parameters.

WARNING

1. Do not expose this unit to water, moisture, or excessive humidity.

2. Do not install or place this unit in a built-in cabinet, or other confined space without adequate ventilation.

3. To prevent risk of electrical shock or fire hazard, due to overheating do not obstruct unit's ventilation openings.

4. Do not install near any source of heat, including other units that may produce heat.

5. Do not place unit near flames.

6. Only clean unit with a dry cloth.

7. Unplug unit during lightening storms or when not used for an extended period of time. A surge protector is strongly recommended.

8. Protect the power cord from being walked on or pinched, particularly at the plugs.

9. Use unit only with accessories specified by the manufacturer.

10. Refer all servicing to qualified personnel.

CAUTION

HDMI is a very complex technology requiring continuous authentication of the signal and the same video resolution and audio settings on all electronic equipment in the system. When there are multiple sources and displays, the video resolution and audio setting on all connected units must be adjusted to correspond with that of the display having the lowest video and audio capability.

INTRODUCTION

The Evolution EVSP1013 is a HDMI splitter that allows for 1 HDMI input to be split and sent to 4 different displays. The 3-UTP output ports can connect to the EVRX2006 POE receiver (sold Separately) over Cat5e/6 cable to transmit 1080p60 video with audio and control up to 50m. The single HDMI output can be used for a local display or cascaded into another splitter for an even larger distribution system. It supports 20k - 60K wideband bi-direction IR communication and dynamic or manual EDID management. The user can manually select the best compatible EDID or automatically blend EDID of 4 connected HDMI sinks. It also provides power over the Cat5e/6 so that the EVRX2006 do not require a power supply.

HDMI® 1x3 Splitter over Cat5e/Cat6 Cable with Additional HDMI® output
Part # EVSP1013

- Allows for 1 HDMI input to be split and sent to 4 different displays
- (3) RJ45 output ports with POE Functionality can connect to the EVRX2006 POE receiver (sold separately) over Cat5e/6 cable to transmit 1080p @60Hz video with audio and control up to 164 ft/50m
- Power over the Cat5e/Cat6 so that the EVRX2006 receivers do not require a power supply
- Features an additional HDMI output which can be used for a local display or to cascade to another splitter for a larger distribution system
- Supports 20-60KHZ wideband bi-direction IR communication
- Dynamic or manual EDID management. The user can manually select the best compatible EDID or automatically blend EDID of 4 connected HDMI sinks.
- Supports multiple audio formats including Dolby True HD, DTS-master, etc.
- Supports all 3D Signal Formats
- Supports manual or dynamic EDID management
- HDCP2.0 compatible
- Dimensions: 8.1" W x 1" H x 3.5" D
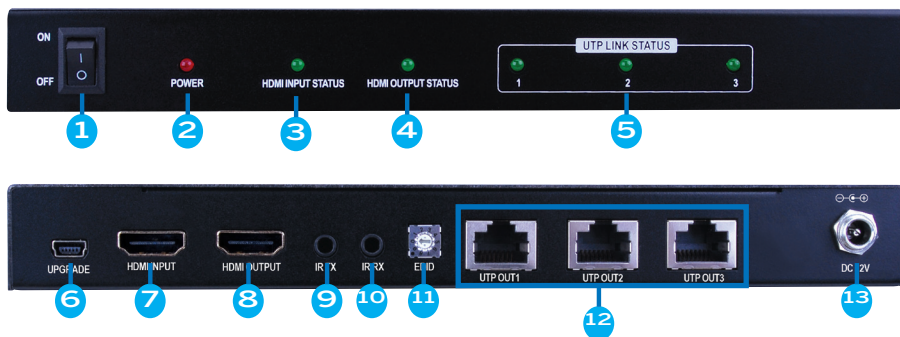
SPECIFICATIONS

Power .... Maximum 9W (include POE power)

Net Weight 494g

Video Bandwidth .... Maximum TMDS clock frequency 148.5MHZ, 4.95Gbps

Resolution and distance .... 50m cat5e @ 1080p60 24bits

Audio formats .... 8-channel,support Dolby True HD and DTS master

TMDS input signal .... 1.2 volts(pointer to pointer)

DDC input signal .... 5 volts(pointer to pointer)

Indicator .... Power-Red, Video status – Green, Link status - Green

HDMI interface standard .... HDMI 1.3 standard and HDMI1.4 3D,HDCP 2.0,EDID

Remote IR .... 20~60KHZ wide frequency carrier

Maximum HDMI input

cable length .... ≤15m AWG26 cable at maximum video resolution 1080p60

Maximum HDMI output

cable length .... ≤15m AWG26 cable at maximum video resolution 1080p60

ESD level .... HBM +/- 4kv (contact discharge)

Temperature Range .... 0-40 degrees C (Operate), -20-60 degrees C (stock)

Compliance .... FCC;CE;RoHS

PACKAGE CONTENTS
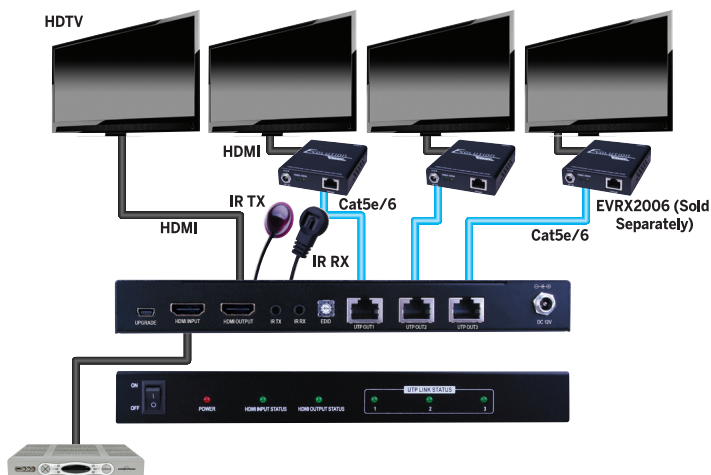
- EVSP1013 Splitter
- (1) IR Blasters (TX)
- (1) IR Receiver (RX)
- (1) DC 12V 2A power supply
- Product Manual

# PANEL DESCRIPTIONS

1. Power Switch
2. Power on indicator
3. HDMI input video status indicator
4. HDMI loop-through output video status indicator
5. Remote extender RX link status
6. ISP Firmware update port, Connect to PC with USB cable
7. HDMI INPUT, Connect to HDMI source with HDMI cable
8. HDMI loop through output, Connect to HDMI sink with HDMI cable
9. IR TX, IR transmitter
10. IR RX, IR Receiver
11. EDID selection switch
12. UTP video extender ports
13. Power adapter input 12v

CONNECTION DIAGRAM

HDTV

HDMI

IR TX   **Cat5e/6**

HDMI

IR RX   **EVRX2006 (Sold Separately)**

Cat5e/6

Single HDMI Source

CONNECT AND OPERATE

1. With no power going to the splitter, connect the HDMI from your source to the HDMI input

2. Connect the Cat5e/6 cables to the RJ45 Output Ports of the splitter and the HDMI output using known working cables.

3. We recommend terminating the Cat5e/6 cable(s) using the 568B standard.

4. Apply the provided power supply to the 12V input port and wall.

5. Turn on and test

NOTE: IF YOU ARE EXPERIENCING ANY AUDIO/VIDEO ISSUES, PLEASE UTILIZE THE MANUAL EDID DIAL FOUND ON THE UNIT
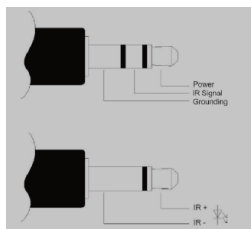
The bi-directional IR system allows you to control the source that is connected to the extender unit, from the display; or the display from the source, not simultaneously. There are two important things to note when setting up the IR system:

1. The IR Receiver (IR RX) is always what you point your remote at to send an IR signal. This pigtail is placed at the display for controlling the source; or at the source for controlling the display.

2. The IR Blaster (IR TX) is what sends the IR signal to what you are intending to control, whether it's the source or the display. This pigtail is placed at the source; either pointed at the source, or placed on the front panel of the source, see below for placement tips. Or placed at the display to control the display from the source.

IR RECEIVER   **IR BLASTER**

EDID

Manual EDID mode

Splitter works at Manual EDID mode when EDID knob switch configure setting is from 0 to 6 as following. MAKE SURE THAT POWER AND HDMI CABLES ARE REMOVED FROM THE SPLITTER BEFORE MAKING CHANGES

0 - EDID Full-HD (1080p@60) (1080p@30) (1080p@24) (1080i@60) (720p@60) - 24bit 2D video & 7.1ch audio

1 - EDID Full-HD (1080p@60) - 24bit 2D video & 2ch audio

2 - EDID Full-HD (1080p@60) - 24bit 3D video & 7.1ch audio

3- EDID Full-HD (1080p@60) - 24bit 3D video & 2ch audio

4- EDID HD (1080p@30) (1080i@60) (720p@60) - 24bit 2D video & 7.1ch audio

5- EDID HD (1080p@30) (1080i@60) (720@60) - 24bit 2D video & 2ch audio

6- EDID Full-HD (1080p@60) - 24bit 2D video & 7.1ch audio

Dynamic EDID mode

Splitter works at dynamic EDID mode when the EDID knob switch set from 7 to 9. When all sinks are connected to splitter, the splitter will generate a mixture EDID of all sinks to ensure HDMI source's video format can meet all sinks.

When a new sink joins the splitter, a short time blink will happen, as dynamic EDID function will generate a new EDID different with last, HDMI source will output a new format video according to the new EDID

FIRMWARE UPDATE
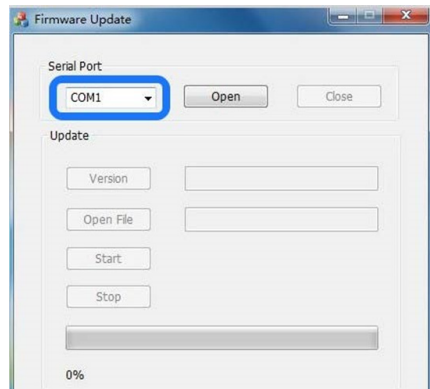
This unit can connect to PC with a USB cable for update firmware purpose, Update port of Unit use mini USB type.

CH340 USB driver need be install on user's PC first, After driver installed, please check which COM number it is,
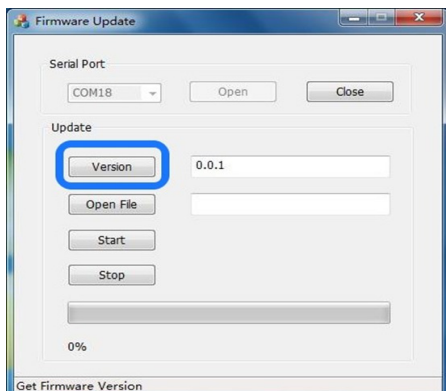
The following is update operation of GUI

1. Select COM port

Please select correct COM number, and click open button to connect the serial port
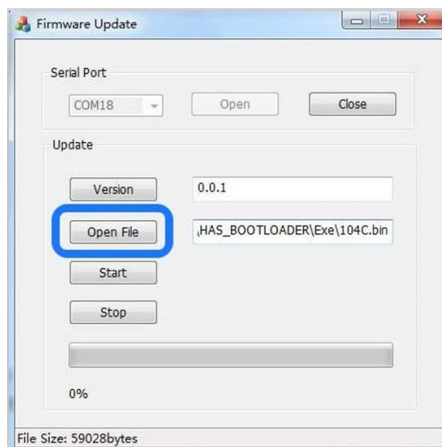
2. Click Version button to get firmware version

3. Open Bin File
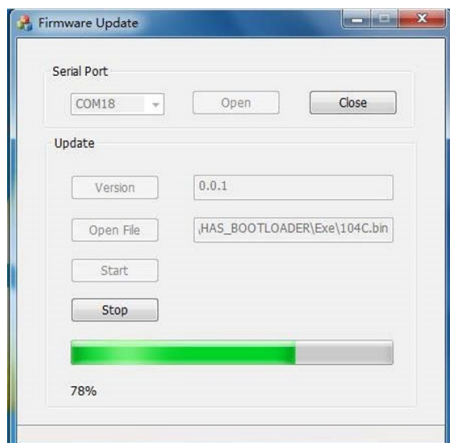
Click "Open File" button to open a bin file for update

Status bar on lower left corner will display file size


4. Start to update
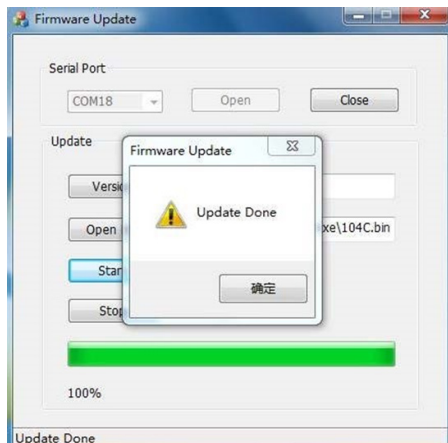
Click "Start" Button to update firmware

Then progress bar will display update's progress status

5. Update successful

When update is successful, A message box will pop up to indicate update completed

NOTICE

1. Vanco HDMI and Cat5e/6 cables are strongly recommended for use with this product to ensure best results.

2. Incorrect placement of IR Blaster and Receiver may result in the failure of the IR extenders. Please check carefully before plugging in the IR extender to the respective IR sockets.

3. The transmission length is largely affected by the type of Cat5e/6 cables utilized, the type of HDMI sources, and the type of HDMI display. The testing result shows solid UTP cables (usually in the form of 300m [1,000ft] bulk cables) can transmit a lot longer signals than stranded UTP cables (usually in the form of fixed length patch cords). Shielded STP cables are better suited than unshielded UTP cables. A solid UTP Cat5e/6 cable shows longer transmission range than stranded STP Cat-6 cable. For long extension applications, use solid UTP/STP category cables.

4. EIA/TIA-568-B termination (T568B) for Cat5e/6 cables is recommended for better performance.

5. To reduce the interference among the unshielded twisted pairs of wires in Cat5e/6 cables, one can use shielded STP cables to improve EMI problems, which worsens in long cable transmission.

6. The quality of Cat5e/6 cables can have a major effect on how long the transmission limit can achieve and quality of picture, the actual transmission range is subject to the Cat5e/6 cable utilized. For the best results, Cat6 is recommended.

7. If your HDMI display has multiple HDMI inputs, it is found that the first HDMI input [HDMI input #1] generally can produce better transmission performance among all HDMI inputs.

Performance Guide for HDMI over Category Cable Transmission

Performance rating		Type of category cable		
Wiring	Shielding	CAT5	CAT5e	CAT6
Solid	Unshielded (UTP)	★★★	★★★★	★★★★★
Solid	Shielded (STP)	★★★	★★★	★★★★
Stranded	Unshielded (UTP)	★	★★	★★
Stranded	Shielded (STP)	★	★	★★
Termination		Please use **EIA/TIA-568-B** termination (**T568B**) at any time		

Problems	*Causes*	*Solutions*
Color losing or no video signal output in HDMI display	The connecting cables may not be connected correctly or it may be broken.	Check whether the cables are connected correctly and in working condition.
	The display is not compatible with the present output resolution.	Make sure the resolution of the display(s) is compatible with the present resolution.
No HDMI signal output while local HDMI input is in normal working state	The connecting cables may not be connected correctly or it may be broken.	Check whether the cables are connected correctly and in working condition.
Splash screen in output devices	Poor quality of the connecting cable	Change for another cable of good quality.
Static becomes stronger when connecting the video connectors	Bad grounding	Check the grounding and make sure it is connected well.

TROUBLE-SHOOTING

1. Best results are usually achieved when the source and display resolutions are the same. If resolutions differ, the extenders will try to adjust the signal to match the resolution of the HDTV with the lowest resolution. This will result in a picture with a lower resolution on the other HDTV sets.

2. If you do not get audio and video, access the "setup" menu on the TV to adjust the audio and video settings. If the HDMI control circuit cannot establish a handshake, then there usually will be no audio or video in addition to a blue or black screen with a statement similar to "this protocol not supported" or "weak signal".

3. If the above mentioned messages display, reset the receiver by disconnecting the power supply. You can also disconnect all of the HDMI and power cables, wait 15 minutes for any voltages to decay and then reconnect all of the cables.

4. If you are still encountering issues, attempt the "hot-plug concept. With all of the HDMI cables disconnected, turn on the source and plug in the HDMI cable into it's output, then power up the Vanco unit and plug the HDMI cable into it's input, finally turn on the display and plug the HDMI cable from the receiver into it. This activates all of the devices in corresponding order and results in a signal being plugged into a device that is on and will attempt to connect the signal.

5. Most of the major source and display manufacturers employ a proprietary control channel to communicate between devices from the same manufacturer. Sometimes this can interfere with the HDMI control circuit or the authentication of the signal. Call the manufacturer if you experience this issue. Sometimes a player, an audio/video receiver, or a cable/satellite box may not have the latest software update, usually this can be downloaded from the manufacturer's website.

6. If you have problems with the IR control circuit, make sure that the IR RX pigtail is plugged into extender receiver and pointed at the display, and the IR TX pigtail is attached to the extender sender and pointed at the source.

SAFETY AND NOTICE

This splitter has been tested for conformance to safety regulations and requirements, and has been certified for international use. However, like all electronic equipment, these splitters should be used with care. Please read and follow the safety instructions to protect yourself from possible injury and to minimize the risk of damage to the unit.

- Follow all instructions and warnings marked on this unit.
- Do not attempt to service this unit yourself, except where explained in this manual.
- Provide proper ventilation and air circulation and do not use near water.
- Keep objects that might damage the device and assure that the placement of this unit is on a stable surface.
- Use only the power adapter and power cords and connection cables designed for this unit.
- Do not use liquid or aerosol cleaners to clean this unit.
- Always unplug the power to the device before cleaning.

LIMITED WARRANTY

With the exceptions noted in the next paragraph, Vanco warrants to the original purchaser that the equipment it manufactures or sells will be free from defects in materials and workmanship for a period of two years from the date of purchase. Should this product, in Vanco's opinion, prove defective within this warranty period, Vanco, at its option, will repair or replace this product without charge. Any defective parts replaced become the property of Vanco. This warranty does not apply to those products which have been damaged due to accident, unauthorized alterations, improper repair, modifications, inadequate maintenance and care, or use in any manner for which the product was not originally intended.

Items integrated into Vanco products that are made by other manufacturers, notably computer hard drives and liquid crystal display panels, are limited to the term of the warranty offered by the respective manufacturers. Such specific warranties are available upon request to Vanco. A surge protector, power conditioner unit, or an uninterruptible power supply must be installed in the electrical circuit to protect against power surges.

If repairs are needed during the warranty period the purchaser will be required to provide a sales receipt/sales invoice or other acceptable proof of purchase to the seller of this equipment. The seller will then contact Vanco regarding warranty repair or replacement.

TECHNICAL SUPPORT

In case of problems, please contact Vanco Technical Support by dialing 1-800-626-6445. You can also email technical support issues to techsupport@vanco1.com.

When calling, please have the Model Number, Serial Number (affixed to the bottom of the unit) and Invoice available for reference during the call.

Please read this Instruction Manual prior to calling or installing this unit, since it will familiarize you with the capabilities of this product and its proper installation.
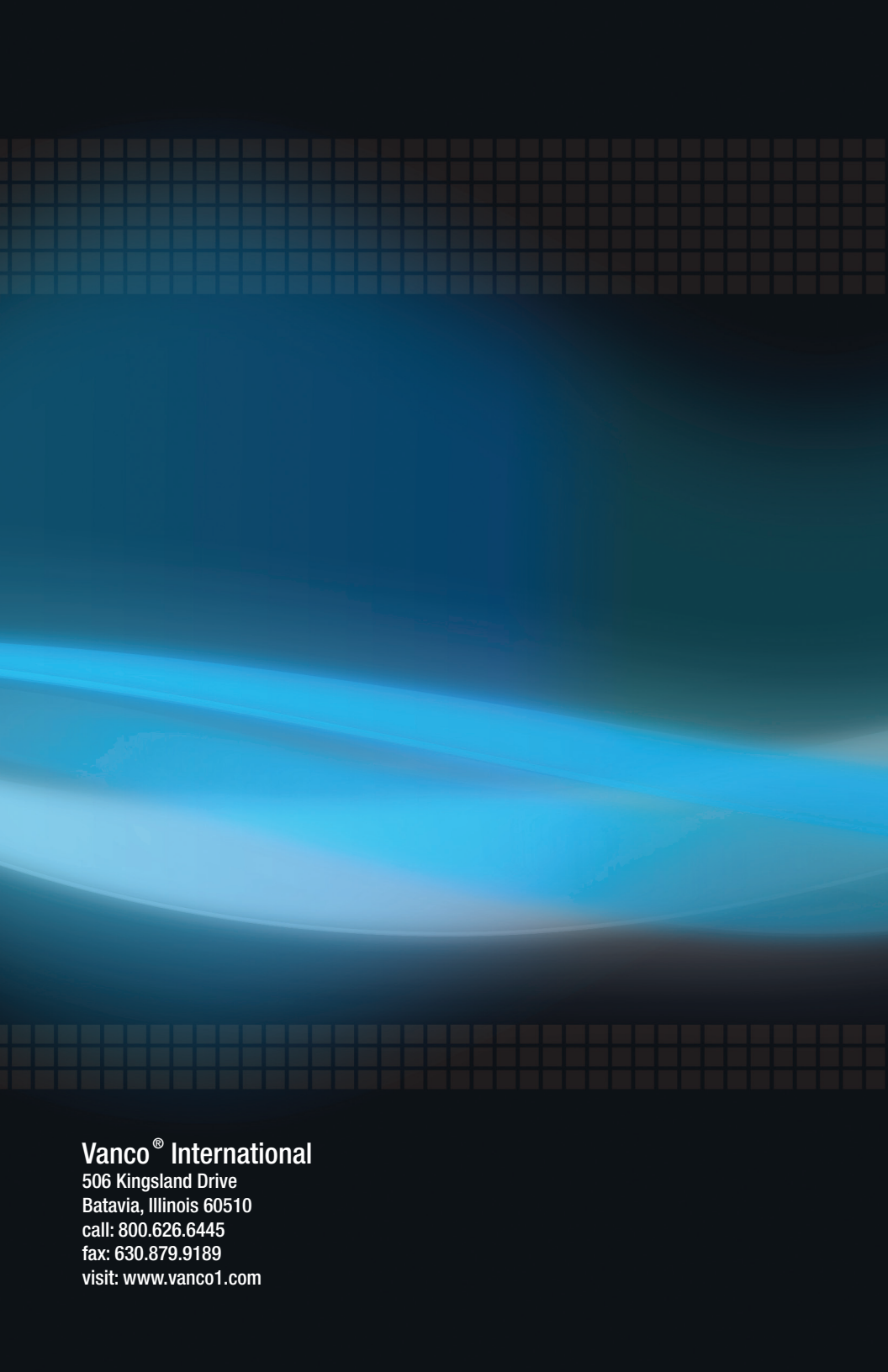
All active electronic products are 100% inspected and tested to insure highest product quality and trouble-free installation and operation. The testing process utilizes the types of high-definition sources and displays typically installed for entertainment and home theater applications.

For additional information, such as helpful installation videos, etc. please visit www.vanco1.com

LIABILITY STATEMENT

Every effort has been made to ensure that this product is free of defects. The manufacturer of this product cannot be held liable for the use of this hardware or any direct or indirect consequential damages arising from its use. It is the responsibility of the user and installer of the hardware to check that it is suitable for their requirements and that it is installed correctly. All rights are reserved. No parts of this manual may be reproduced or transmitted by any form or means electronic or mechanical, including photocopying, recording or by any information storage or retrieval system without the written consent of the publisher.

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