

# LAIRD<sup>®</sup>

DIGITAL CINEMA

**LCD-3D-2D-HD**

# ***3D Demultiplexer and Converter***

*Operation Manual*



## **SAFETY PRECAUTIONS**

Please read all instructions before attempting to unpack, install or operate this equipment and before connecting the power supply.

Please keep the following in mind as you unpack and install this equipment:

- Always follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.
- Never spill liquid of any kind on or into this product.
- Never push an object of any kind into this product through any openings or empty slots in the unit, as you may damage parts inside the unit.
- Do not attach the power supply cabling to building surfaces.
- Use only the supplied power supply unit (PSU). Do not use the PSU if it is damaged.
- Do not allow anything to rest on the power cabling or allow any weight to be placed upon it or any person walk on it.
- To protect the unit from overheating, do not block any vents or openings in the unit housing that provide ventilation and allow for sufficient space for air to circulate around the unit.

# CONTENTS

<b>1. Introduction</b>	<b>1</b>
<b>2. Applications</b>	<b>1</b>
<b>3. Package Contents</b>	<b>1</b>
<b>4. System Requirements</b>	<b>1</b>
<b>5. Features</b>	<b>2</b>
<b>6. Operation Controls and Functions</b>	<b>3</b>
6.1 Front Panel	3
6.2 Rear Panel	4
<b>7. Connection Diagram</b>	<b>5</b>
<b>8. Specifications</b>	<b>8</b>
<b>9. Acronyms</b>	<b>8</b>

## 1. INTRODUCTION

The 3D Demultiplexer is a device used to separate a 3D signal into its left and right signals for sending to two 2D projectors. The 3D signal must be sent via a 1 to 2 HDMI splitter and each of the two 3D signals must be passed through a 3D Demultiplexer whereby the left or right signal can then be outputted to be passed through to each of the two 2D projectors. When aligned correctly, the two 2D projectors can then display each signal to produce a 3D image which can be viewed using polarized 3D glasses.

In addition, the 3D Demultiplexer can convert 3D signals to 2D for use with 2D screens. The device automatically detects the 3D or 2D content, and checks if 3D content is in either Side-by-Side or Frame Packing format.

## 2. APPLICATIONS

- 3D source signal display on 2D TV
- 3D source signal display through 2D projectors (one unit per display)

## 3. PACKAGE CONTENTS

- 1 x Demultiplexer
- 1 x 5 V DC Power Adaptor
- Operation Manual

## 4. SYSTEM REQUIREMENTS

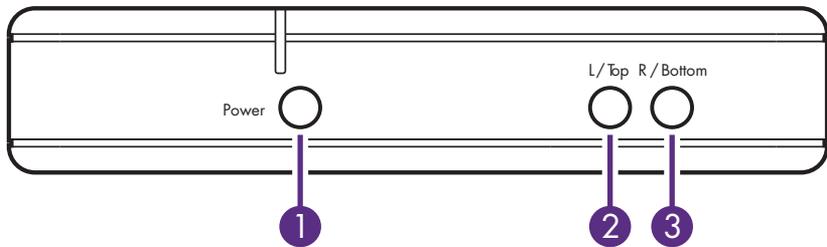
- 3D source signal with HDMI splitter and output to two projectors with polarized glasses.
- 3D source signal with connection cable and output to 2D Display.

## 5. FEATURES

- Supports 3D content separations for Left/Right fields
- Automatically detects 2D or 3D contents
- Automatically detects if 3D content is Side-by-Side or Frame Packing
- Input resolution supports:
  - 2D: 480i/p, 576i/p, 720p@50/60, 1080i@50/60 and 1080p@50/60
  - 3D: 720p@50/60 (Frame Packing and Side-by-Side), 1080p@24 (Frame Packing)
- Output supports 1080p@60 Hz only
- Push button selection of Left or Right side fields
- Convert 3D signal to 2D for display on non-3D TVs/monitors/projectors

## 6. OPERATION CONTROLS AND FUNCTIONS

### 6.1 Front Panel



#### 1 Power

Press this button to switch on the device, the LED will illuminate in green. Press it again to set the device to standby mode, the LED will illuminate in red.

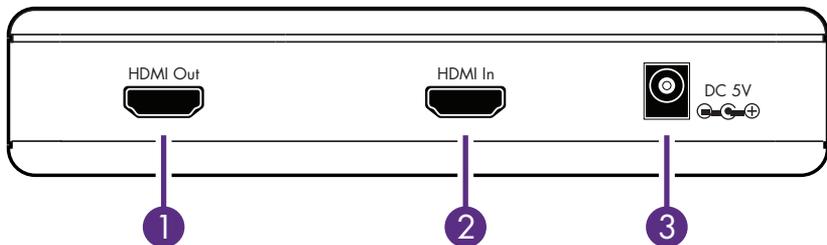
#### 2 L/Top

Press this button to set the output to Left/Top side signal to the projector when displaying 3D contents through the 2D projectors. When input signal is 2D, this button has no effect.

#### 3 R/Bottom

Press this button to set the output to Right/Bottom side signal to the projector when displaying 3D contents through the 2D projectors. When input is with 2D signal, this button has no effect.

## 6.2 Rear Panel



### 1 HDMI Out

Connect to the HDMI input of a TV/projector with an HDMI cable or HDMI to DVI cable or adaptor.

### 2 HDMI In

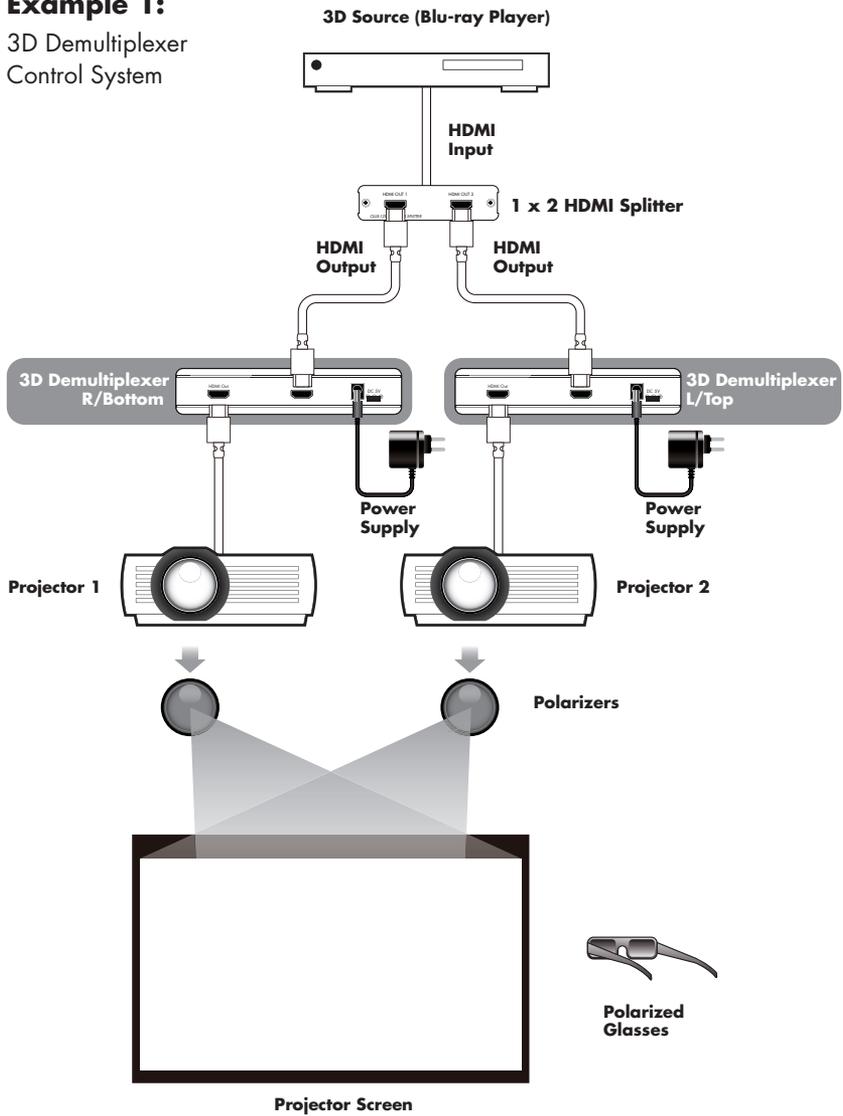
Connect to a 3D source such as Blu-ray player with HDMI cable or DVI to HDMI cable or adaptor.

### 3 DC 5V

Plug the 5V DC power adaptor included in the package into an AC wall outlet.

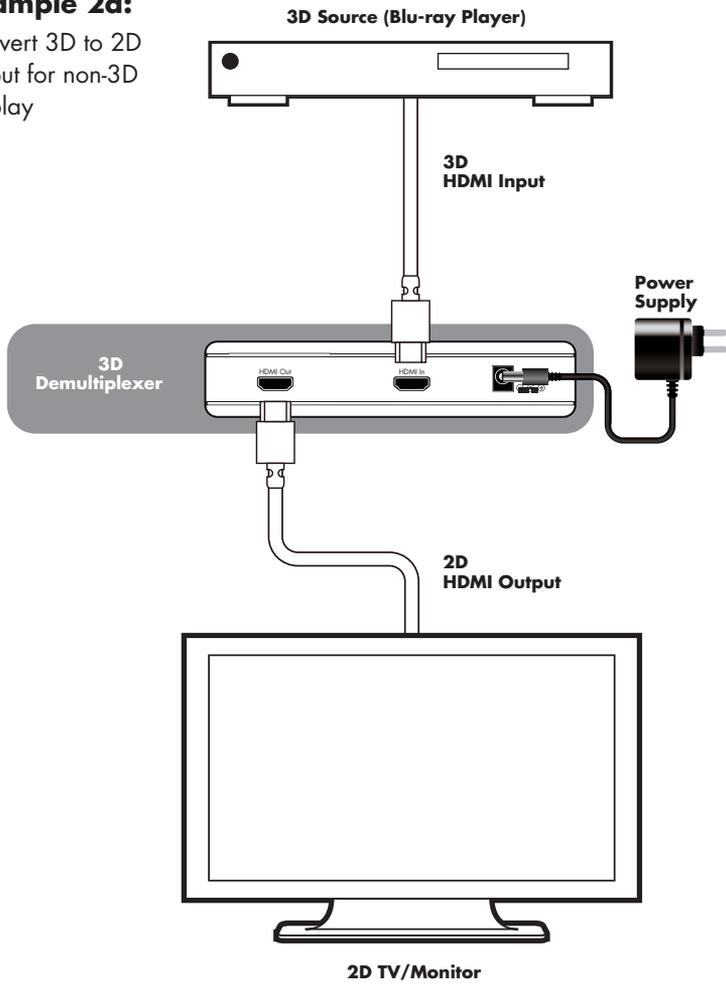
# 7. CONNECTION DIAGRAM

**Example 1:**  
3D Demultiplexer  
Control System



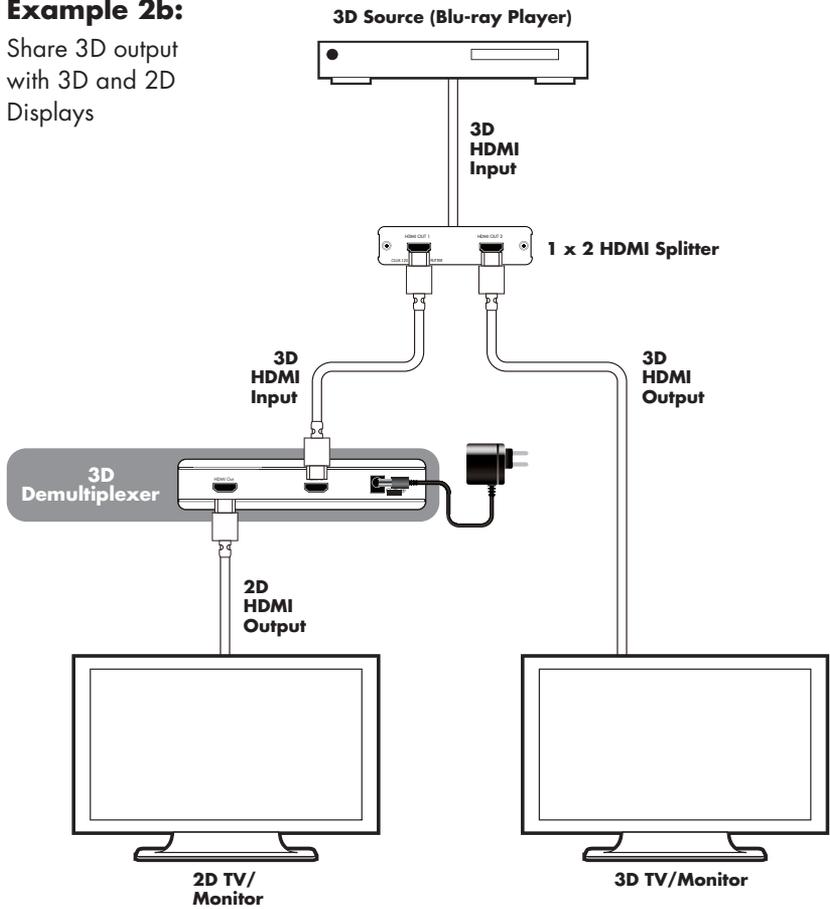
**Example 2a:**

Convert 3D to 2D output for non-3D Display



**Example 2b:**

Share 3D output  
with 3D and 2D  
Displays



## 8. SPECIFICATIONS

<b>Input</b>	1xHDMI
<b>Output</b>	1xHDMI
<b>Input Resolution</b>	2D: 480i/p, 576i/p, 720p@50/60, 1080i@50/60 & 1080p@50/60 3D: 720p@50/60 (Frame Packing and Side-by-Side) & 1080p@24 (Frame Packing)
<b>Output Resolution</b>	1080p@60 Hz
<b>ESD Protection</b>	Human-body Model: ± 8kV (air-gap discharge) ± 4kV (contact discharge)
<b>Power Supply</b>	5 V / 3 A DC (US/EU standards, CE/FCC/UL certified)
<b>Dimensions</b>	163 mm (W)x165 mm (D)x34 mm (H)
<b>Weight</b>	300 g
<b>Chassis Material</b>	Plastic
<b>Silkscreen Color</b>	Black
<b>Operating Temperature</b>	0 °C~40 °C/32 °F~104 °F
<b>Storage Temperature</b>	-20 °C ~ 60°C /-4 °F~140 °F
<b>Relative Humidity</b>	20~90 % RH (non-condensing)
<b>Power Consumption</b>	8.5 W

## 9. ACRONYMS

ACRONYM	COMPLETE TERM
<b>DVI</b>	Digital Visual Interface
<b>HDMI</b>	High Definition Multimedia Interface

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