

# Marshall Electronics

## OR-XDI

### HDMI / SDI Cross Converter



## Operating Instructions

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**Warranty**

Marshall Electronics warrants to the first consumer that this **OR-XDI cross converter** will, under normal use, be free from defects in workmanship and materials, when received in its original container, for a period of one year from the purchase date. This warranty is extended to the first consumer only, and proof of purchase is necessary to honor the warranty. If there is no proof of purchase provided with a warranty claim, Marshall Electronics reserves the right not to honor the warranty set forth above. Therefore, labor and parts may be charged to the consumer. This warranty does not apply to the product exterior or cosmetics. Misuse, abnormal handling, alterations or modifications in design or construction void this warranty. No sales personnel of the seller or any other person is authorized to make any warranties other than those described above, or to extend the duration of any warranties on behalf of Marshall Electronics, beyond the time period described above. Due to constant effort to improve products and product features, specifications may change without notice.

## Supported Formats

### Input Formats Supported:

- ❖ 480i60,575i50
- ❖ **480p60\*,576p50\***
- ❖ 720p60,50,30,25,24
- ❖ 1080i60,50
- ❖ 1080p60,50,30,25,24

\* For HDMI input only

### Output Formats Supported:

- ❖ 480i60, 575i50
- ❖ **480p60\*,576p50\***
- ❖ 720p60,50,30,25,24
- ❖ 1080i60,50
- ❖ 1080p60,50,30,25,24

\* For HDMI output only

\* Converted to 480i60, 575i50 for SDI output

### Audio Formats Supported:

- ❖ 48KHz PCM Audio up to 8 channels from HDMI or embedded SDI

## Physical Specifications

- ❖ Power : 5.5vDC~16vDC
- ❖ Power consumption : 3W (typ)
- ❖ Weight : 216g
- ❖ Dimension (mm) : 58 x 100 x 35
- ❖ USB Field upgradable thru One Click update.
- ❖ Case : Alloy

## Battery Options

Model	Description	Voltage
OR-XDI-CM	Cross Convertor modules with Canon batt. mount	7.2
OR-XDI-JM	Cross Convertor modules with JVC batt. Mount	7.2
OR-XDI-PM	Cross Convertor modules with Panasonic batt. mount	7.2
OR-XDI-PV	Cross Convertor modules with Panasonic batt. Mount	7.2
OR-XDI-SB	Cross Convertor modules with Sony batt. Mount	14.4
OR-XDI-SL	Cross Convertor modules with Sony batt. Mount	7.2
OR-XDI-SM	Cross Convertor modules with Sony batt. Mount	7.2

## Overview

The OR-XDI is a rugged, portable, battery powered HDMI to SDI and SDI to HDMI cross converter. This unit is designed for use with cameras that use an HDMI output to feed an external monitor while allowing the same feed to be converted from HDMI to SDI with embedded audio, in order to deliver high definition video and audio to camera assist, Directors, Producers and others in the video village that require a high quality video feed. It can also be used the other way to take the 3G, HD, SD-SDI output from production cameras to feed both the HDMI input of an external monitor while simultaneously feeding the 3G, HD, SD-SDI to other locations and equipment. The OR-XDI can be powered via a wide variety of Marshall Battery mounts, consumer type 12vDC EIA power adapter, or optional broadcast standard 4-pin XLR power connection.

## Features

- ❖ Battery operable 7.2vDC or 14.4vDC (Marshall small battery compatible) no AB or V-Mount
- ❖ Rugged Metal Alloy case
- ❖ Only 3.91" long (4.96" including BNC connectors) x 2.28" wide x 1.38 high
- ❖ Weighs Only 7.6 Ounces (without battery)
- ❖ 3G/HD/SD-SDI Input and Dual 3G/HD/SD-SDI Outputs
- ❖ HDMI Input and Output
- ❖ Dual size mounting holes (12 x 1/4-20 and 4 x M4)
- ❖ EIA 12vDC External Power Jack
- ❖ 4-pin XLR 12vDC Input available as an option
- ❖ HDMI to SDI, SDI to HDMI conversion including Audio
- ❖ Automatic input port switching
- ❖ Automatic video format detection
- ❖ Built-in SD format interlacer for DSLR while recording (480p to 480i conversion)
- ❖ USB service port for future upgrade
- ❖ Status LEDs indicate Link speed and status.
- ❖ 8 position piano switch for easy configuration. (input selection, auto mode, etc.)

## Setup

The OR-XDI requires 5.5vDC to 16vDC either through the supplied 12vAC power adapter, Marshall small battery adapter (7 or 12 volt) or optional 12vDC XLR 4pin adapter. Cross conversion is automatic when all 8 of the piano dip switches are set to the Down "Off" position.



**Optional Switch settings:**

There are 8 piano dip switches that can be used to force or set the OR-XDI to a specific function:  
(Note that switches 7 and 8 are currently reserved for future functions and have no effect at this time.)

Switches 1 & 2 are used to select the input source and are mapped as follows:

SW 1	SW 2	Source	Note
↑ On	↑ On	TPG	Color Bars
↑ On	↓ Off	HDMI	
↓ Off	↑ On	SDI	
↓ Off	↓ Off	AUTO	Default Setting

Switch 3 selects HDMI Range:

SW 3	Range	Note
↑ On	Limited	LIMITED 16~235
↓ Off	Full	FULL 0~255 Default Setting
<b>SDI</b> always has foot-room and head-room.		

Switch 4 selects Audio Enable or Disable:

SW 4	Audio	Note
↑ On	Disable	Audio will not be converted
↓ Off	Enable	Audio will be converted

Switches 5 and 6 are used to disable the HDMI or SDI outputs:

SW 5	SDI OUT	Note
↑ On	Disable	SDI Out is Disabled
↓ Off	Enable	SDI Out is Enabled

SW 6	HDMI OUT	Note
↑ On	Disable	HDMI Out is Disabled
↓ Off	Enable	HDMI Out is Enabled

Switches 7 and 8 are currently reserved for future use and have no effect on operation.

**Indicators****Input Status Indicators:**

The HDMI and SDI Green Led's will light to indicate the presence of a valid HDMI or SDI input signal.

The Error indicator will light Red when the OR-XDI detects errors in the serial bit stream of the SDI video input.

The Power indicator will illuminate Green when power is applied from any compatible 12vDC source.

**Signal Defaults:**

- ❖ If there are no inputs connected the OR-XDI will output split field color bars to both the HDMI and HDMI outputs.
- ❖ If there are both HDSDI and HDMI inputs applied at the same time the HDSDI input overrides the HDMI input.
- ❖ When only one source is applied the corresponding output will act as a loop through.

**Video Status Indicators:**

The 3G, HD, SD Green LEDs will light to indicate the current Input Video format.  
The No Sync indicator will light Red when poor or no video is present.

**Output Status Indicators:**

The HDMI led will illuminate when there is a device connected to the HDMI output port.

The SDI led will illuminate when SW 5 is in the OFF (Down) position and the unit is outputting a signal.  
The SDI led will go off when in the power save state. (No output)