



Instruction Manual

Thank you for purchasing an Ocean Matrix component. This unit is designed to give you years of trouble free professional operation for your most demanding applications. It is our goal to develop long term partnerships with our customers through our commitment to exceed their expectations.

OMX-9042

For Repair Information and to view the entire Ocean Matrix product line, please visit our web site.

www.oceanmatrix.com

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1 Introduction

Congratulations on purchasing your OCEAN MATRIX® **OMX-9042** *Vertical Interval s-Video (Y/C) Switcher*. This product, which comes with a power adapter and this instruction manual, is ideal for the following applications:

- Any professional display system requiring high quality s-Video switching
- Video and audio production studios
- Security, CCTV, and home theater systems

2 Getting Started

We recommend that you:

- Unpack the equipment carefully and save the original box and packaging materials for possible future shipment
- Review the contents of this instruction manual

3 Overview

The **OMX-9042** *Vertical Interval s-Video Switcher* routes one of up to 5 sources to a monitor, projector, or other receiving device, using 4p connectors.

In addition, the high performance **OMX-9042**:

- Is an independent *5x1 Vertical Interval s-Video Switcher* that can also form part of larger switching systems (for example, a *10x1 Vertical Interval s-Video Switcher*, as section 5.2 describes)
- Links with the OCEAN MATRIX® audio switcher, the **OMX-9043**, to form a parallel audio-follow-video system
- Produces glitch-free transitions, when sources share a common reference sync, as it switches during the vertical interval

Achieving the best performance means:

- Connecting only good quality connection cables, thus avoiding interference, deterioration in signal quality due to poor matching, and elevated noise levels (often associated with low quality cables)
- Avoiding interference from neighboring electrical appliances that may adversely influence signal quality and positioning your **OMX-9042** in a location free from moisture and away from excessive sunlight and dust

4 Your Vertical Interval s-Video Switcher

Figure 1 and Tables 1 and 2 define the **OMX-9042**:

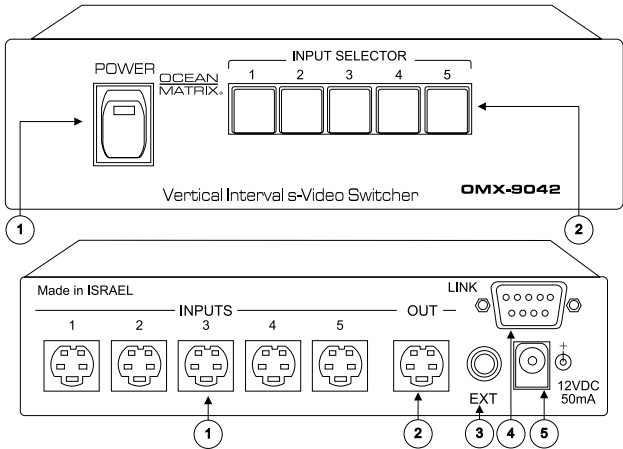


Figure 1: OMX-9042 Vertical Interval s-Video Switcher

Table 1: OMX-9042 Front Panel Features and Functions

#	Feature	Function
1	POWER Switch	Illuminated switch supplying power to the unit
2	INPUT SELECTOR Buttons	Select the s-Video source (from 1 to 5)

Table 2: OMX-9042 Rear Panel Features and Functions

#	Feature	Function
1	s-Video INPUTS 4p Connectors	Connect to the s-Video (Y/C) sources (from 1 to 5)
2	s-Video OUT 4p Connector	Connect to the s-Video (Y/C) acceptor
3	EXT RCA Connector	Connect to the EXT RCA connector(s) on other OMX-9042 unit(s) to form a larger switching system
4	LINK DB 9F Connector	Connect to the LINK DB 9F connector on the OMX-9043 audio switcher for parallel AFV operation of 2 machines; or connect as a remote switch
5	Power Socket	+12V DC connector for powering the unit

5 Connecting the Vertical Interval s-Video Switcher

This section describes how to connect:

- An **OMX-9042** Vertical Interval s-Video Switcher
- An expanded **OMX-9042** Vertical Interval s-Video Switcher system
- A parallel audio-follow-video system
- The LINK connector as a remote switch

5.1 Connecting a Vertical Interval s-Video Switcher

To connect an **OMX-9042** *Vertical Interval s-Video Switcher* unit, do the following:

1. Connect up to 5 s-Video (Y/C) sources to the s-Video input 4p connectors.
2. Connect the s-Video (Y/C) output 4p connector to an s-Video (Y/C) acceptor.
3. Connect the 12V DC power adapter to the power socket and connect the adapter to the mains electricity.
Pressing an INPUT SELECTOR button routes that s-Video (Y/C) input to the s-Video (Y/C) output.

5.2 Connecting an Expanded OMX-9042 s-Video Switcher System

To connect an expanded **OMX-9042** *Vertical Interval s-Video Switcher*, for example, a *10x1 Vertical Interval s-Video Switcher*, connect two **OMX-9042** units, as follows:

1. Connect each **OMX-9042** *Vertical Interval s-Video Switcher*, as section 5.1 describes.
2. Interconnect both **OMX-9042** units via their EXT connectors, using an RCA "T" connector cable.
3. Connect the OUT connectors on both **OMX-9042** units, using a 4p "T" connector cable, connecting the free "T" connector output of the first machine to the s-video acceptor.

5.3 Connecting a Parallel Audio-Follow-Video System

You can create a parallel audio-follow-video system by linking your **OMX-9042** *Vertical Interval s-Video Switcher* to an **OMX-9043** *Audio Switcher*.

To connect an audio-follow-video system:

1. Connect your **OMX-9042** *Vertical Interval s-Video Switcher* as section 5.1 describes.
2. Connect the **OMX-9043** *Audio Switcher* to the sources, acceptor and to the power.
3. Connect a DB 9M to DB 9M flat cable between the LINK connector on your **OMX-9042** *Vertical Interval s-Video Switcher* and the LINK connector on the **OMX-9043** *Audio Switcher*.

5.4 Connecting the LINK Connector as a Remote Switch

Connecting the LINK DB 9F connector to a dry contact switch lets you route an input to the output by remote control. To do so, touch (momentarily) the PIN corresponding to that input to PIN 3, as Table 3 describes. For example, to connect input # 1 to the output, touch PIN 5 to PIN 3; to connect input # 2 to the output, touch PIN 9 to PIN 3.

Table 3: LINK Connector PIN Configuration

DB 9 PIN #	Connected to:
1	Not Connected
2	Ground
3	VCC = 8V
4	Not Connected
5	Switch # 1
6	Switch # 5
7	Switch # 4
8	Switch # 3
9	Switch # 2

6 Technical Specifications

Table 4 includes the technical specifications:

Table 4: OMX-9042 Vertical Interval s-Video Switcher Technical Specifications

Inputs:	5 s-Video 1Vpp / 75 Ω (Y), 0.3Vpp / 75 Ω (C) on 4p type connectors
Output:	1 s-Video 1Vpp / 75 Ω (Y), 0.3Vpp / 75 Ω (C) on a 4p type connector
Video Bandwidth (Y):	120 MHz. - 3 dB
Switching:	During vertical interval of source No. 1
Diff. Gain:	<0.03 %
Diff. Phase (C):	<0.07 Deg
K-Factor:	<0.05%
Max. Video Output (Y):	>1.4 Vpp/75 Ω (Y)
Video S/N Ratio (Y):	Better than 78 dB
Control:	5 front-panel touch switches, contact closure - via the LINK connector (DB9)
Power Source:	12 VDC, 125 mA
Dimensions:	16.5 cm x 12 cm x 4.5 cm (6.5" x 4.7" x 1.7"), W, D, H
Weight:	0.64 kg. (1.4 lbs.) approx.
Accessories:	12 VDC power supply