



# **Instruction Manual**

**T**hank 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-9043**

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

**[www.oceanmatrix.com](http://www.oceanmatrix.com)**

## Contents

<b>1</b>	<b>Introduction</b>	<b>1</b>
<b>2</b>	<b>Getting Started</b>	<b>1</b>
<b>3</b>	<b>Overview</b>	<b>1</b>
<b>4</b>	<b>Your Audio Switcher</b>	<b>1</b>
<b>5</b>	<b>Connecting the Audio Switcher</b>	<b>2</b>
5.1	Connecting an OMX-9043 Audio Switcher Unit	3
5.2	Connecting an Expanded OMX-9043 Audio Switcher System	3
5.3	Connecting a Parallel Audio-Follow-Video System	3
5.4	Connecting the LINK Connector as a Remote Switch	4
<b>6</b>	<b>Technical Specifications</b>	<b>4</b>

## Figures

Figure 1: OMX-9043 Audio Switcher	2
-----------------------------------	---

## Tables

Table 1: Front Panel Features and Functions of the OMX-9043	2
Table 2: Rear Panel Features and Functions of the OMX-9043	2
Table 3: LINK Connector PIN Configuration	4
Table 4: Technical Specifications of the OMX-9043 Audio Switcher	4

## 1 Introduction

Congratulations on purchasing your OCEAN MATRIX® **OMX-9043 Audio 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 audio switching
- Video and audio production studios
- Retail stores, restaurants and sports bars

## 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 high performance **OMX-9043 Audio Switcher** routes one of up to 5 stereo audio sources to a stereo audio acceptor, using RCA connectors.

In addition, the **OMX-9043**:

- Is an independent *5x1 Audio Switcher* that can also form part of larger switching systems (for example, a *10x1 Audio Switcher*, as section 5.2 describes)
- Links with other OCEAN MATRIX® switchers, like the **OMX-9041** (for composite video) or the **OMX-9042** (for s-Video) to form a parallel audio-follow-video system

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-9043** in a location free from moisture and away from excessive sunlight and dust

## 4 Your Audio Switcher

Figure 1 and Tables 1, 2 and 3 define the **OMX-9043**:

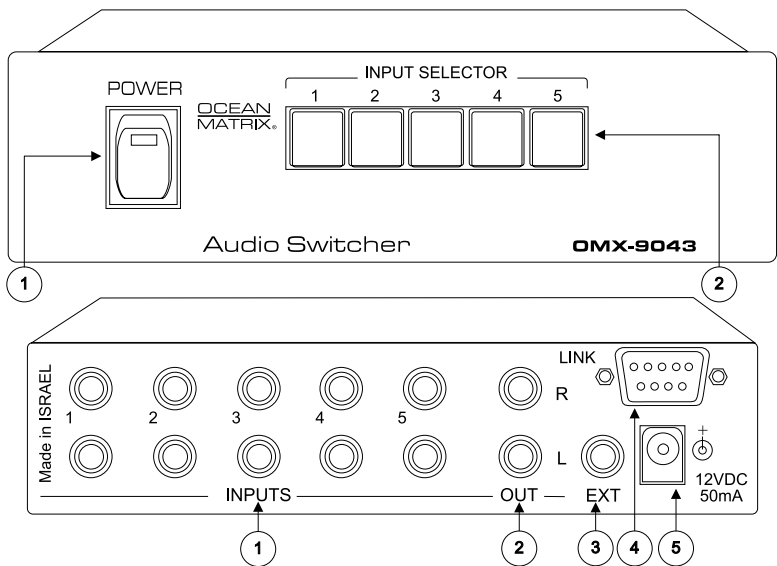


Figure 1: OMX-9043 Audio Switcher

Table 1: Front Panel Features and Functions of the OMX-9043

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

Table 2: Rear Panel Features and Functions of the OMX-9043

#	Feature	Function
1	AUDIO INPUTS (R and L) RCA Connectors	Connect to the stereo audio sources (from 1 to 5)
2	AUDIO OUT (R and L) RCA Connectors	Connect to the stereo audio acceptor
3	EXT RCA Connector	Connect to the EXT RCA connector(s) on other <b>OMX-9043</b> unit(s) to form a larger switching system
4	LINK DB 9F Connector	Connect to the LINK DB 9F connector on the <b>OMX-9041</b> or <b>OMX-9042</b> unit 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 Audio Switcher

This section describes how to connect:

- An **OMX-9043** Audio Switcher unit
- An expanded **OMX-9043** Audio Switcher system
- A parallel audio-follow-video system
- The LINK connector as a remote switch

## 5.1 Connecting an OMX-9043 Audio Switcher Unit

To connect an **OMX-9043** *Audio Switcher* unit, do the following:

1. Connect up to 5 stereo audio sources to the appropriate input AUDIO L and AUDIO R connectors.
2. Connect the appropriate output AUDIO L and AUDIO R connectors to a stereo audio 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 stereo audio input to the stereo audio output.

## 5.2 Connecting an Expanded OMX-9043 Audio Switcher System

To connect an expanded **OMX-9043** *Audio Switcher*, for example, a *10x1 Audio Switcher*, connect two **OMX-9043** units, as follows:

1. Connect each **OMX-9043** *Audio Switcher*, as section 5.1 describes.
2. Interconnect both **OMX-9043** units via their EXT connectors, using an RCA "T" connector cable.
3. Connect the OUT connectors between both **OMX-9043** units, using RCA "T" connector cables, connecting the free "T" connector outputs of the first machine to the audio acceptor.

## 5.3 Connecting a Parallel Audio-Follow-Video System

You can create a parallel audio-follow-video system by linking your **OMX-9043** *Audio Switcher* to an **OMX-9041** *Vertical Interval Composite Video Switcher* or to an **OMX-9042** *Vertical Interval s-Video Switcher*.

To connect an audio-follow-video system:

1. Connect your **OMX-9043** *Audio Switcher* as section 5.1 describes.
2. Connect the **OMX-9041** *Switcher* or the **OMX-9042** *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-9043** *Audio Switcher* and the LINK connector on the **OMX-9041** *Switcher* or **OMX-9042** *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: Technical Specifications of the OMX-9043 Audio Switcher*

Inputs:	5 audio stereo - 1Vpp / 50 k $\Omega$ on RCAs
Output:	1 audio stereo - 1Vpp / 100 $\Omega$ on RCAs EXT connector (RCA)
Audio Bandwidth:	100,000 Hz. -3 dB
THD:	Less than 0.08%
Max. Audio Output:	3 Vpp / 100 $\Omega$
Gain Range:	60 dB (via trimmers accessible from the underside)
Audio S/N Ratio:	Better than 78 dB
Control:	5 front-panel touch switches, contact closure - via the LINK connector (DB9)
Power Source:	12 VDC, 100 mA
Dimensions:	16.5 cm x 12 cm x 4.5 cm (6.5" x 4.7" x 1.7"), W, D, H
Weight:	0.62 kg. (1.4 lbs.) approx.
Accessories:	12 VDC power supply