

## Yamaha LS9-16

Caprica can support up to 240 audio mixer faders. Source mapping is not available for audio mixers.

### Requirements

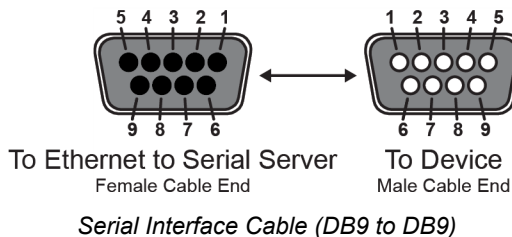
- Large Audio Mixer Interface Software Option
- Serial Interface Cable (DB9 to DB9)
- SMC-9901 Serial to MIDI Converter
- Control DeviceMaster or Sealevel SeaLINK
- If the cable connection between the DeviceMaster or SeaLINK and the SMC-9901 Serial to MIDI Converter is longer than 50 feet, an RS-232 to RS-422 converter is required at the SMC-9901 Serial to MIDI Converter.
- Ethernet Cable

### Port Connections

The Yamaha LS9-16 audio mixer connects to the network through an SMC-9901 Serial to MIDI Converter and an Ethernet to serial server. Two MIDI interface cables connect the Yamaha LS9-16 audio mixer to the SMC-9901 Serial to MIDI Converter, and a single DB9 to DB9 serial RS-422 cable connects the SMC-9901 to the Ethernet to serial server.

Communications	
Audio Mixer RS-422	> DeviceMaster or SeaLINK RS-422
DeviceMaster or SeaLINK Ethernet	> Local Area Network Ethernet

### Serial Interface Cable Pinouts



### DeviceMaster

DeviceMaster		Yamaha LS9-16	
Pin	Signal	Pin	Signal
2	RxA (Rx-)	2	TxA (Tx-)
7	TxB (Tx+)	3	RxB (Rx+)
8	RxB (Rx+)	7	TxB (Tx+)
3	TxA (Tx-)	8	RxA (Rx-)

### SeaLINK

SeaLINK		Yamaha LS9-16	
Pin	Signal	Pin	Signal
2	RxA (Rx-)	2	TxA (Tx-)
4	TxB (Tx+)	3	RxB (Rx+)
1	RxB (Rx+)	7	TxB (Tx+)
3	TxA (Tx-)	8	RxA (Rx-)

- ★ When using a SeaLINK Ethernet to serial server in your OverDrive system, terminate any control signals that are not going to be used. The most common way to do this is connect RTS to CTS, connect positive to positive and negative to negative.

### Configuring the Ethernet to Serial Server

The Ethernet to serial server in an OverDrive system handles the communication between your Yamaha LS9-16 audio mixer and Caprica Server. OverDrive systems can contain a DeviceMaster or SeaLINK Ethernet to serial server. Use one of the following sections to configure the Ethernet to serial server in your OverDrive System:

- “DeviceMaster” on page 4-2
- “SeaLINK” on page 4-2

## DeviceMaster

The Yamaha LS9-16 audio mixer connects to a serial port on the DeviceMaster. Use the following procedure to configure the DeviceMaster for your Yamaha LS9-16 audio mixer:

1. Use a web browser to open the **Server Status** web page for your DeviceMaster. The default IP address for a DeviceMaster is 192.168.250.250.  
The **Server Status** web page opens in the web browser.
2. Click **Port #** link, where # is the port number on the DeviceMaster to which you connect your Yamaha LS9-16.  
The **Edit Port # Configuration** web page opens for the selected port.
3. In the **Port Name** box, enter SMC-9901.
4. In the **Serial Configuration** section, use the **Mode** list to select **RS-422**.
5. Use the **Baud** list to select **38400**.
6. Use the **Parity** list to select **none**.
7. Use the **Data Bits** list to select **8**.
8. Use the **Stop Bits** list to select **1**.
9. Use the **DTR** list to select **off**.
10. Use the **EOL** list to select **disabled**.
11. In the **TCP Connection Configuration** section, select the **Enable** check box.
12. Select the **Listen** check box.
13. In the **Port** box, enter the port number that the DeviceMaster uses to listen for communication from the SMC-9901 Serial to MIDI Converter.
14. Click **Save**.  
The **Port Configuration Updated** web page opens.
15. Click **OK**.  
The **Server Status** web page opens.
16. Click **Reboot**.  
The DeviceMaster reboots with the new configuration.

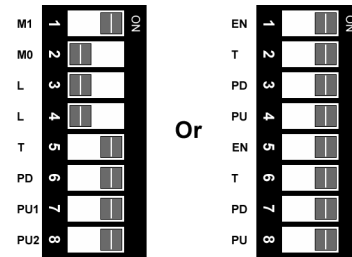
## SeaLINK

The Yamaha LS9-16 audio mixer connects to a serial port on the SeaLINK. You must configure the connected SeaLINK serial port to communicate with the Yamaha LS9-16 audio mixer.

### Hardware Configuration

The SeaLINK Ethernet to serial server is primarily configured using the web interface. Before using the web interface, the SeaLINK DB9 port that connects the Yamaha LS9-16 audio mixer to your OverDrive system requires DIP Switch configuration.

Inside the SeaLINK each DB9 serial port has a set of eight DIP Switches. To communicate with the Yamaha LS9-16 audio mixer the RS Mode of the DB 9 serial port that connects the audio mixer must be set to RS-422. Set the DIP Switches associated with the connected port as follows:



DB9 DIP Switch Settings for RS-422

### For More Information on...

- configuring the DIP Switches for SeaLINK DB9 ports, refer to the **Hardware Configuration** section in the *SeaLINK User Manual | Ethernet Serial Server Family*.

### Web Interface Configuration

After setting the DIP Switches associated with the DB9 port on the SeaLINK used to connect the Yamaha LS9-16 audio mixer, you can use the SeaLINK web interface to complete the SeaLINK configuration.

Use the following procedure to configure the SeaLINK for your Yamaha LS9-16 audio mixer:

1. Use a web browser to open the **Summary** web page for your SeaLINK. The URL of the Summary web page is the IP address of the SeaLINK.  
The **Summary** web page opens in the web browser.
  2. Click the **Port Settings** tab.  
The **Port Settings** web page opens.
  3. In the **Port # Defaults Section** section, where # is the port number on the SeaLINK to which you connect your Yamaha LS9-16 audio mixer, enter 38400 in the **Baud Rate** box.
  4. Use the **Data Bits** list to select **8**.
  5. Use the **Stop Bits** list to select **1**.
  6. Use the **Parity** list to select **None**.
  7. Use the **Flow Control** list to select **None**.
  8. Use the **RS Mode** list to select **RS 422/488**.
  9. Use the **Protocol** list to select **Ignored**.
  10. Click **Submit**.
  11. Click the **Administration** tab.  
The **Administration** web page opens.
- ★ Values set for settings on the **Administration** web page are set for all SeaLINK serial ports.
12. In the **General Settings** section, enter a name to identify the SeaLINK in the **Name** box.
  13. Use the **Connection Protocol** list to select **Raw Data**.
  14. At the bottom of the **Administration** web page, select the **Reboot** check box.
  15. Click **Submit**.  
The SeaLINK reboots with the new configuration.

## Remote Device Port Configuration Settings

Use the following procedure to configure a remote device for your Yamaha LS9-16 audio mixer on the Caprica Server:

1. Use the current version of **DashBoard** software to connect to your **Caprica Server**.
2. In the **DashBoard Tree View**, double-click the **Port Configuration** node of your Caprica Server.
3. In the **Port Configuration Summary** table, double-click a **REMOTE#** port in the **Port** column.
4. In the **Configure REMOTE#** panel, click **Audio Mixer**.
5. Click **Ya LS9-16**.
6. Click **Network Settings**.
7. Use the following settings to configure the network settings for your Yamaha LS9-16:
  - **Ethernet Role** — Client
  - **Remote IP Address** — IP address of the Ethernet to serial server in your OverDrive system
  - **Remote Port** — Port number on the Ethernet to serial server to which you connect your Yamaha LS9-16 audio mixer.

When using a SeaLINK Ethernet to serial server in your OverDrive system the Remote Port number is associated with the SeaLINK serial port number to which you connected your Yamaha LS9-16 audio mixer. The SeaLINK serial port to Remote Port associations are as follows:

**Table 4.1**

SeaLINK Serial Port	Remote Port
1	4680
2	4681
3	4682
4	4683

- **Local IP Address** — 0.0.0.0
  - **Local Port** — 0
  - **Protocol** — TCP
8. Click **Device Settings**.
  9. Click **Apply Changes** to save the network settings.

## Device Settings

Use the following procedure to configure the device settings for your Yamaha LS9-16 audio mixer on the Caprica Server:

1. Click **Device Settings**.
2. Use the following settings to configure the device settings for your Yamaha LS9-16:
  - **Converter** — click to select the device that converts and mixes sound files in Caprica. The available options are as follows:
    - › **None**
    - › **MDIator**
    - › **SMC**
  - **Version** — enter or select the version of the Yamaha LS9-16 to operate, version **1** or **2**.
  - **Pairing** — click the field orientation for your frame. The available options are as follows:
    - › **Horizontal**
    - › **Vertical**
  - **Mixers** — enter or select the number of mixers the Yamaha LS9-16 is paired with, **1** or **2** mixers.
  - **Delay** — enter or select the amount of frame delayed, **1** to **60** frames.
  - **PFL** — click the pre-fade listening option to use. The available options are as follows:
    - › **Primary**
    - › **Alternate**
3. Click **Apply Changes** to save the device settings.
4. Click **Done** to close the Configure REMOTE# Panel.

### For More Information on...

- configuring remote devices for OverDrive systems that contain a Caprica Server, refer to the *Caprica User Guide*.

## Device Setup

- ★ The information in this section is provided as a guide and is based on the version of hardware and software that was available at the time of testing. For the most up-to-date information, refer to the documentation that came with your Yamaha LS9-16 audio mixer.

Use the following procedure to configure the serial communication setup of your Yamaha LS9-16:

1. Ensure the port on the Ethernet to serial server that is connected to the SMC-9901 Serial to MIDI Converter is configured for RS-422.
2. On your Yamaha LS9-16, press the **SETUP** function button on the **Display Access Group**.
3. Use the cursor buttons to select **MIDI Setup**.

4. Press **ENTER**.
5. Use the cursor buttons to configure the following settings (press **ENTER** after each selection):

Table 4.2

Setting	Tx	Rx	Echo
Port	MIDI	MIDI	--
CH	1	1	--
Program Change	ON	ON	OFF
Control Change	OFF	ON	--
Parameter Change	ON	ON	OFF
Other Commands	--	--	OFF

6. Use the cursor buttons to set the **MODE** to **MULTI**, **OMNI**, and **NRPN**.

## Compatibility

Audio Mixer	Version
Yamaha LS9-16	-

Automation	Version
OverDrive	15.0 or higher
Caprica Server	1.0a or higher

Port Expanders	Support
Control DeviceMaster	Yes
Sealevel SeaLINK	Yes

## Contacting Technical Support

Technical Support is staffed by a team of experienced specialists ready to assist you with any question or technical issue.

Ross Video has technical support specialists strategically located around the globe to ensure a prompt response to technical inquiries. Our primary technical support center is located in Ottawa, Ontario, Canada. In addition, we have offices in The United Kingdom (London), Australia (Sydney), and Singapore with satellite locations in New York City, The Netherlands, and China. As we expand our presence globally, we are constantly evaluating other key locations to have a local technical support specialist in order to better service our customers.

## North America

Our North America center located in Ottawa, Ontario, Canada and is open Monday to Friday 8:30 a.m. to 6:00 p.m. EST, with 24/7/365 on-call service after hours.

Our telephone number is: +1-613-686-1557

Toll free within North America: +1 833-859-0499

## EMEA

Our EMEA center is open Monday to Friday 8:30 a.m. to 5:00 p.m. GMT. After hours support is provided by our North America location.

Our telephone number is: +44 (0)1189502446

International toll free: +800 3540 3545

If the local support specialist is not available, your call will be transferred automatically to our North America center.

## Australia

Our Sydney, Australia office is located in Alexandria, NSW.

Our local support telephone number is: 1300 007 677

If the local support specialist is not available, your call will be transferred automatically to our North America center.

## Online

E-mail: [techsupport@rossvideo.com](mailto:techsupport@rossvideo.com)

Website: open a support request using the link <https://support.rossvideo.com/> to open a support request.

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