# Using HDA Audio with a L-Acoustics LS10 AVB Network Switch

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URC HDA devices and software provide countless options to configure and optimize audio settings to achieve performance and flexibility for almost any application.

In most cases, the URC HDA-SW5 switch capacity is sufficient for most installations. However, if additional  $\underline{\text{AVB}}$  ports are required the

L-Acoustics LS10 AVB Network Switches can be used in a URC HDA audio system.

The following article details the required settings needed to use the **L-Acoustics LS10 AVB Network Switches** with URC HDA Audio.

The L-Acoustics LS10 Network Switch is an AVB-enabled switch that supports eight RJ45 ports and two SFP network ports for AVB streamed over fiber.

This short guide defines the required settings needed to use the L-Acoustics LS10 Network Switch with HDA Audio. This guide was written to get you started with using this switch with URC HDA Audio. Any other custom settings you set or change in L-Acoustics LS10 Switch are up to you and may affect the performance of HDA Audio.

## \*The L-Acoustics LS10 AVB Network Switch is <u>NOT</u> compatible with the URC HDA-SW5 AVB Network Switch.

Note: <u>Tested with HDA firmware v1492 (minimum required)</u>, testing with L-Acoustics LS10 firmware version 2.11.7.6 (minimum required).

The L-Acoustics LS10 Setup Software (L-Acoustics Network Manager) can be found here.

L-Acoustics LS10 Network Switch User Manual can be found here.

#### L-Acoustics LS10 Network Switch Setup

(Starting with a factory default LS10 switch)

1. Set the IPv4 of your PC to "192.168.1.5" in the networks settings for your Ethernet adapter.

Ethernet Properties ×			Internet Protocol Version 4 (TCP)	/IPv4) Properties			
letworking s	Sharing		General				
Connect usin	g:		You can get IP settings assigned	automatically if your network supports			
PRealter	k PCIe FE Family Controller		for the appropriate IP settings.	eed to ask your network administrator			
		Configure	Obtain an IP address automatically				
This connect	ion uses the following items:		Use the following IP address:				
			IP address: Subnet mask:	192.168.1.5			
				255.255.255.0			
Physical Packet Driver (NPCAP)     One Packet Scheduler			Default gateway:	192.168.1.1			
Inter	met Protocol Version 4 (TCP/IPv4	9	Obtain DNS server address	automatically			
< Mcr	rosoft rvetwork Adapter Multiplexor	Protocol V	Use the following DNS served	er addresses:			
lostall.	Uninstal	Properties	Preferred DNS server:				
Description Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.			Alternate DNS server:				
			Validate settings upon exit	Advanced			
				OK Cancel			

- 2. Using one of the LS10 RJ45 ports, connect the LS10 switch to your PC's Ethernet port.
- 3. Open the L-Acoustics Network Manager software.



4. Open the "LS10" Manager.



5. Click "Scan". A factory default LS10 switch will appear with the IP address "192.168.1.200". Click on this device and select "Connect".

Vetwork Stat	us Config					
Network Adapter	Ethernet ~	[192.168.1.200		Connect		
IP Address	192.168.1.5 ~		Identify			
Subnet Mask	255.255.255.0			Reboot		
Default Gateway	192.168.1.1		Res	et To Factory		
	Scan		Firmware Version	2.11.7.6		
	Update Firmware		Firmware Date	03/02/2022		
	Retrieve Embedded Logs		Serial Number	1670002691		
			MAC Address	00:1B:92:05:09:C7		

6. Click on the "Config" tab. The LS10 switch requires that a Static IP is set for the switch.

Enter the desired Static IP. You are required to set a DHCP range in your router that is outside of any Static IP addresses set for the LS10 switches in your installation. Also set the Netmask and Gateway as it corresponds to the network settings in your router.

work Status	Config							
IP Settings			GPIO Configuratio	n		Neighbo	r PropDelay Threshold	
Address	192.168.1.200		Pin Function	NONE V		Port En	able Value (nsec)	
Netmask	255.255.255.0		Fault Reporting	Link Fault		1 🗹	800	Modify
Sateway	0.0.0.0			Mains Loss		2 🗹	800	Modify
		Apply		24V Input Loss		3 🖂	800	Modify
Switch Options				24V Output Error		4 🗹	800	Modify
RSTP	Ooff	() On	Link Fault Port			5 🗹	800	Modify
PTP Priority 1	246	Modify	1 2 3 4	5 6 7 8 9 10		6	1	Modify
PTP Priority 2	248	Modify	0000	000000		7 [	1	Modify
irror Auto Recovery	<ul> <li>off</li> </ul>	() On	Pin state	OPEN V		8 🗹	800	Modify
			Alive Period (sec)	60	Modify	9 🗹	800	Modify
						10 2	800	Madh

7. In the "Config" tab, set the following settings in the "Switch Options" section:

RSTP = Off

gPTP Priority 1 = 255

gPTP Priority 2 = 254

```
Error Auto Recovery = On
```

twork Status	Config							
CHURK STUDIOS	comp							
IP Settings			GP10 Configuration	on		Neighbor P	ropDelay Threshold	
Address	192.168.1.200		Pin Function	NONE ~		Port Enab	le Value (nsec)	
Netmask	255.255.255.0		Fault Reporting	Link Fault		1 🗹	800	Modify
Gateway	0.0.0.0		1	Mains Loss	2	2 🗹	800	Modify
		Apply		24V Input Loss		3 🗹	800	Modify
Switch Options			24V Output Error	4 🗹	800	Modify		
RSTP	() off	Oon	Link Fault Port			5 🗹	800	Modify
gPTP Priority 1	255	Modify	1 2 3 4	5 6 7 8 9 10		6 🗌		Modify
gPTP Priority 2	254	Modify	0000	000000		7 🗆		Modify
Error Auto Recovery	ry () off	On	Pin state	OPEN V		8 🗹	800	Modify
			Alive Period (sec)	60	Modify	9 🗹	800	Modify
						10 17	800	Madh

8. Disconnect the LS10 switch from your PC's Ethernet port.

Reboot the LS10 switch.

Connect the LS10 switch(es) to your network router.

LS10 switch setup is now complete.

#### SFP Ports

The SFP ports of the LS10 switch were tested using a Fiber adapter and a 50m fiber optic cable connecting two LS10 switches. No issues were found using this configuration.

SFP RJ45 adapters were also tested with an 8m Cat5e cable. No issues were found using this configuration.

SFP adapters used for these tests:

10Gtek Fiber SFP Adapters - product information can be found here.

10Gtek RJ45 SFP Adapters – product information can be found here.

### Additional Information & Resources:

The L-Acoustics LS10 Setup Software (L-Acoustics Network Manager) can be found here.

L-Acoustics LS10 Network Switch User Manual can be found here.

More information on using third-party AVB network switches can be found here.

More information on using Netgear AVB network switches can be found here.

More information on using PreSonus AVB network switches <u>can be found here</u>.

More information on using Luminex Gigacore AVB network switches can be found here.

To learn more about HDA products and programming, please see the HDA Programmers Guide or the Accelerator 3 online Programming Guide.