<u>Audio Setup – Artsmesh version</u>

Configuring Artsmesh

1. Open Artsmesh and open the "Profile" panel.	
2. Under the "user" tab, enter a profile name	PROFILE USER USER GROUP PROJECT Naithan Naithan Bosse YourAffiliation BUSY YourLocation
	 This is my biography.
3. Under the "group" tab, enter a group name	PROFILE USER GROUP PROJECT Sonicarts Sonic Arts Calgary http://sonicarts.ucalgary.ca LOCK Calgary Hello World
4. Open the "preferences" panel	▲ ₩ ₱ 魚 ⊕ ⊘ ⊰ → ⊗ osc ⊵ ☆ ♪ ?
 5. Under the "general" panel, ensure that your private IPV4 and IPV6 addresses are correct. (Check your Network Preferences under Apple->System Preferences->Network Preferences) Ensure that "Mesh Use IPV6" is enabled. If any parameters are changed, click "Save" and restart Artsmesh. 	PREFERENCE GENERAL JACK SERVER MACHINE NAME naithan-bosses-macbook-pro-2.local PRIVATE IPV4: 192.166.0.148 IPRIVATE IPV6 IPRIVATE IPV6 IDISCOVER AMSERVER IPV4: 106.187.39.20 AMSERVER IPV6: [2400:8900::f03c:91ff.fedb:76fd] AMPORT: 8080



 In the "Jack Server" tab, ensure that the correct input device, output device, interface input channels, and interface output channels are correct. Sample rate and buffer size values should be agreed upon in advance. Also ensure that the virtual input and output channels are set to 12. After changing the settings, click "Save" and restart Artsmesh. 	PREFERENCE GENERAL JACK SERVER JACK SERVER: JACK SERVER: DRIVER: Coreaudio INPUT DEVICE: Built-in Microphone OUTPUT DEVICE: Built-in Output SAMPLE RATE: 48000 BUFFER SIZE: 512 HOG MODE: CLOCK DRIFT COMPENSATION: SYSTEM PORT MONITORING: ACTIVE MIDI:	
	INTERFACE INPUT CHANNELS: 2 INTERFACE OUTPUT CHANNELS: 2 ARTSMESH CLIENT:	
10. Under the "osc group" tab, set the values to the values listed on the left. Save and restart Artsmesh.	IOSC SERVER SETTINGS:IUSER PASSWORD:defaultIPORT:22242IGROUP NAME:LocalGroupITIME OUT:30IGROUP PASSWORD:defaultIMAX USERS:50IMONITOR ADDR:localhostIMAX GROUPS:50IMONITOR PORT:22230IOSC CLIENT DEFAULT SETTINGS:ISERVER ADDR:localhostISERVER PORT:22242ILOCAL PORT:22243ILOCAL PORT:57120IISTEN PORT:57120	

Creating audio connections in Artsmesh

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1. Before opening Artsmesh, ma	1. Before opening Artsmesh, make sure that the Max is not running and that you are connected to the correct network (Cybera).								
2. Open Artmesh and double ch	2. Open Artmesh and double check that the correct IPV4 and IPV6 addresses are set in the "general" tab of the "Preferences" panel.			anel.					
3. Check that the "Local" button window is green. (It may rem moments after starting Artsm	at the top-right of the ain yellow for a few esh)	\bigcirc	LOCAL	۲	SYPHON	JACK	۲	OSC	
4. Click the "Jack" button to act and make sure it turns green.	ivate the jack audio server					0.31 •			
5. Click the "Mesh" button at th	e top-left of the window.	Ċ	MESH						

- 6. If you haven't already done so, start a Skype call between all locations.
- 7. In the "groups" panel, under the "live" tab, check to see that everyone has meshed successfully. Each group name should be visible.

Whichever location has been designated "node 1" will be the main group for the session. Nodes 2 and 3 should enter the node 1 group by hovering their mouse over the node 1 group name and clicking the icon that looks like a door with an arrow pointing in.

Your group will be moved into the node 1 group.



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8.	Open the routing panel.			- S osc 🖂 🏟 🔊 ?
9	Open Max and follow the instruct	ions (Set audio in/or	to Jackrouter double check the sa	ample rate and vector size start audio)
10	 Once audio is started in Max, the appear on the routing wheel with outputs. Click the "+" button to connect au node. Connect audio in the following or Node 1 to node 2 Node 1 to node 3 Node 2 to node 3 	Max jacks should 12 inputs and 12 Idio with another der:		
	5. 1.0de 2 to node 5		SEND O RECEIVE	
12	. In the pop-up connection window	select the following	settings:	
•	If node 1:	Role: Server		CONNECT TO: ip address
•	If node 2 connecting to node 1:	Role: Client		PEER NAME
•	If node 2 connecting to node 3:	Role: Server		
•	If node 3:	Role: Client		PORT OFFSET: (4464 +)
(Note:	Connect to: [Select the appropria if the only option is 'ip address', see Channel count: 2 Port offset: any available at BOT Queue buffer length: 4 Packet redundancy: 1 Bit rate resolution: 24 Zero under run: disabled Loopback: disabled Use IPV6: enabled* ntil both you and the connecting pa	te group name] <i>e the troubleshooting</i> H sites http://www.arty.have.entered.all.t	g guide) he settings and then hit "Run"	QUEUE BUFFER LENGTH: 4 PACKET REDUNDANCY: 1 BIT RATE RESOLUTIONS: 24 ZERO UNDER RUN 24 LOOPBACK 4 USE IPV6 RUN
13	. If the connection is successful, gro appear on the routing wheel, conn system to the remote location. <i>If your mic volume is up, feedback</i> Right-click one of the cables and all"	een cables will ecting your audio <i>could occur!!</i> elick "disconnect		Connect Disconnect All

14. Once all the network connections are created, each node will create the following audio connections:				
Node 1:	Node 2:	Node 3:		
System receive 1-n => Max send 1-n	System receive 1-n => Max send 1-n	System receive 1-n => Max send 1-n		
Max receive 1-8 => System send 1-8	Max receive 1-8 => System send 1-8	Max receive 1-8 => System send 1-8		
Max receive 9-10 => Node 2 send 1-2	Max receive 9-10 => Node 1 send 1-2	Max receive 9-10 => Node 1 send 1-2		
Max receive 11-12 => Node 3 send 1-2	Max receive 11-12 => Node 3 send 1-2	Max receive 11-12 => Node 2 send 1-2		
Node 2 receive 1-2 => Max send 5-6	Node 1 receive 1-2 => Max send 5-6	Node 1 receive 1-2 => Max send 5-6		
Node 3 receive 1-2 => Max send 7-8	Node 3 receive 1-2 => Max send 7-8	Node 2 receive 1-2 => Max send 7-8		

To make a connection:

- Click the appropriate receive jack on the routing wheel.
 Right-click the corresponding send and select "connect".

Note: Sends and receives are numbered clockwise. (Sends = white, receives = blue)

15. Follow the remaining sound-check instructions in Max.

16. Mute Skype during performance.

Control-rate messaging in Artsmesh

1. Node 1 activates the OSC server by clicking the OSC button on the top-right of the window.	LOCAL SYPHON JACK OSC 0.30
2. Navigate to the OSC panel	
3. In the Server drop-down menu, select Node 1's profile name.	OSC CLIENT
 4. OSC messages can be sent over IPV4 or IPV6. Decide which protocol you will use in advance and set the IPV6 button accordingly. 5. Click On. 	OSC CONTROLLER SERVER Naithan V ON IPV6 SENDTO DEVICEIP PORT USERNAME Naithan SEARCH SEARCH CLEAR ALL GROUPNAME sonicarts

Common problems

The Jack button turns yellow instead of green

This indicates that the Jack server is not started correctly. This is mostly likely due to incorrect sample rate or buffer size settings. Turn off the the Jack button and navigate to the Jack Server tab in the Preferences panel. Reset the sample rate and buffer size values, click save, and restart Artsmesh. If the problem is not resolved, do a spotlight search for the JackPilot application. In the JackPilot menu, open Preferences and check that all the parameters match the preferences in Artsmesh. Change any mis-matched preferences then save and quit both applications.

After turning on Mesh, the other groups don't appear in the Live tab of the groups panel.

In the general tab of the preferences panel, check if the "Mesh using IPV6" button is enabled. Each group should have the same value for this parameter. Change the value to match the other groups, click save, and restart Artsmesh.

Max crashes when starting the audio

The sample rate and/or signal vector size probably don't match the Jacktrip settings.