STREAMWEAVER LITE

User Guide

VERSION 1.1.0

OVERVIEW

Thank you for downloading StreamWeaver Lite, a program for establishing data streams between remote locations.

Out of the box, the application supports the transportation of OSC, sACN, ArtNet, and VISCA protocols. It also has the option to transport generic UDP data streams.

StreamWeaver Lite (SW:L) is intended to be used for remote control and decentralized collaboration between users on different networks, creating a “virtual booth” where protocols can be exchanged.

For example, a lighting designer in New York could control lighting fixtures in Los Angeles, Seoul, and Montreal by using SW:L to transport DMX via ArtNet.

Thanks to its approachable visual interface and flexible transport technology, StreamWeaver Lite is an incredibly useful tool for using control protocols usually used on a LAN, but now in a decentralized context over the internet.

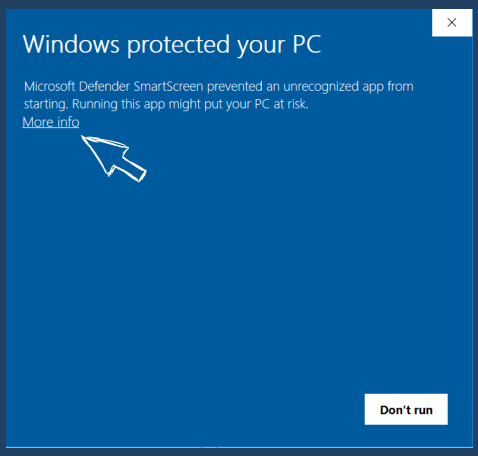
INSTALLATION

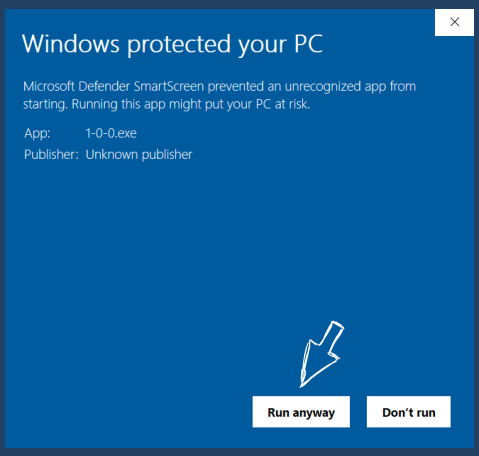
Windows 10

1) Unzip the download you received for StreamWeaver Lite.

2) Inside, run the “StreamWeaver Lite v1.1.0 Installer.exe” file.

If you receive this screen when launching the installer
Please click More Info, then click Run Anyway

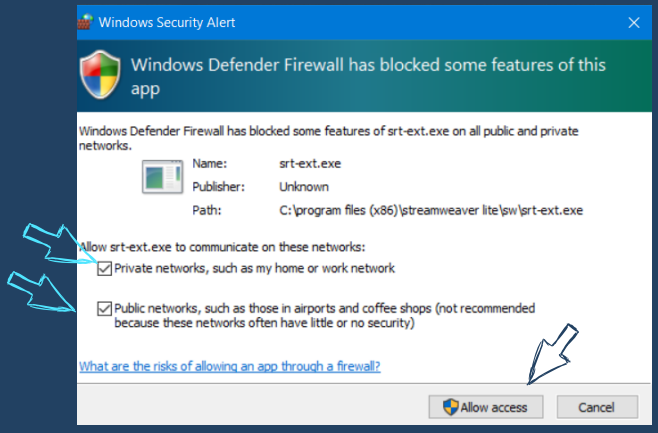




3) Follow the prompts on screen to install the program and its dependencies.

When first running StreamWeaver Lite, or when connecting your first stream, you may be prompted to allow the program **srt-ext.exe** or **StreamWeaver Lite.exe** through the firewall. Please allow the program through **BOTH the private AND public firewalls**.

If you forget to do so, you can set this permission through the Windows Control Panel -> System and Security -> Windows Defender Firewall -> Allow an app through Windows Firewall (check the boxes for public and private networks).



INSTALLATION

MacOS Mojave and Catalina

Liminal will streamline this process in future updates as we work through Apple's complicated security and validation systems. We apologize for any inconvenience.

Click here for a Video Tutorial

If you are having trouble with copying or pasting these commands on this page, please see the terminal_commands.txt file included with the macOS download.

1) Unpack the download you received for StreamWeaver Lite.

2) Move the StreamWeaver Lite.app and SWLiteSetup.sh files to the desired operating location on disk (like Documents). Make sure both files are in the same location. Then, open a **Terminal window** at that location. Run the command:

chmod +x ./SWLiteSetup.sh && sh ./SWLiteSetup.sh && chmod -R +x "./StreamWeaver Lite.app"

3) Enter your password when prompted in Terminal (you will not see the characters of your password as you type it). When prompted, confirm installation with the ENTER key. This will install and authorize StreamWeaver Lite and its dependencies for use on your Mac, and it may take some time to complete.

4) After the script completes, open the **options menu** on StreamWeaver Lite and click **Open**.

5) Then, click **Open** again when prompted with a warning that the app is not validated.

6) If you still cannot launch the app, you may consider running it from Terminal with:

./StreamWeaver\ Lite.app/Contents/MacOS/StreamWeaver\ Lite

INTERFACE

StreamWeaver Lite contains four menus, accessed from the left side of the application window: Transmit, Receive, Profiles, and Settings.

Transmit

Transmit allows you to send protocol streams from your network to other networks.

In this view, you **construct a Stream** by entering a name and identifying the Mode (OSC, ArtNet, VISCA, sACN, or Generic). You then select the location of the Internal source data for this protocol (which is set in the Profiles view), enter the Protocol port, set the destination External profile, and the shared Transmission port.

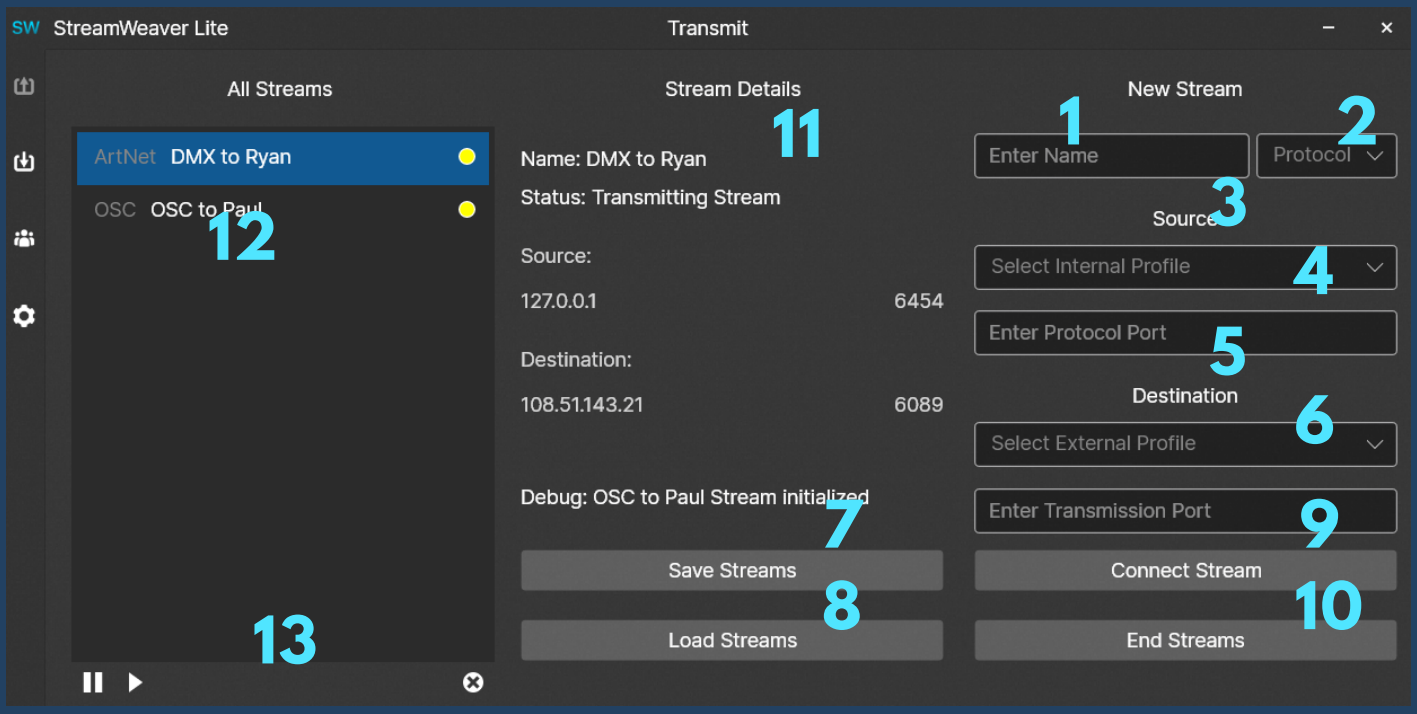
At the bottom of the right column are buttons for **Creating a Stream** from the fields above and **Ending all Streams**.

In the center column are **details for a selected Stream**. At the bottom are **Save** and **Load** buttons to locate .wvr files, which contain presets for StreamWeaver's views.

The right column contains **a list of the current streams that have been created**. They can be **paused, resumed, or deleted** with the three buttons at the bottom of the right column.

Each stream has a status light that indicates if the stream is in a state of **Error (Red), Standy (Yellow), Active (Green), Pause (Blue), or Cancellation (Orange).**

Transmit



1. Name for the Protocol Stream, which is used for identification
2. Protocol Mode Selection (OSC, ArtNet, sACN, VISCA, Generic)
3. Internal Profile Selection for selecting the SOURCE LOCATION of the protocol stream, configured in Profiles View
4. Protocol Port is the UDP port where the protocol packets are posted.
5. External Profile Selection for selecting the DESTINATION LOCATION of the protocol stream, configured in Profiles View
6. Transmission Port is a shared port between the Transmitter and Receiver. The port must match on both the Transmitter's and Receiver's stream.
7. Saves the current configuration to a .wvr file
8. Loads a saved configuration from a .wvr file
9. Creates a new transmission based on the fields from boxes 1-6
10. Ends all streams
11. Details about the selected stream
12. Stream List, with indicator lights for stream status. Select a stream to see details or use a button to control
13. Stream Control Buttons, for pausing, resuming, and deleting the selection stream

INTERFACE

StreamWeaver Lite contains four menus, accessed from the left side of the application window: Transmit, Receive, Profiles, and Settings.

Receive

Receive allows you to receive protocol streams into your network from other networks.

In this view, you **construct a Stream** by entering a name and identifying the Mode (OSC, ArtNet, VISCA, sACN, or Generic). You then select the location of the External source data for this protocol (which is set in the Profiles view), enter the Protocol port, set the destination Internal profile, and the shared Transmission port.

You can optionally enter a **Local Forwarding Profile and Port** if you wish to post the incoming packets to another location on LAN, such as an ArtNet DMX Interface.

At the bottom of the right column are buttons for **Creating a Stream** from the fields above and **Ending all Stream**.

In the center column are **details for a selected Stream**.

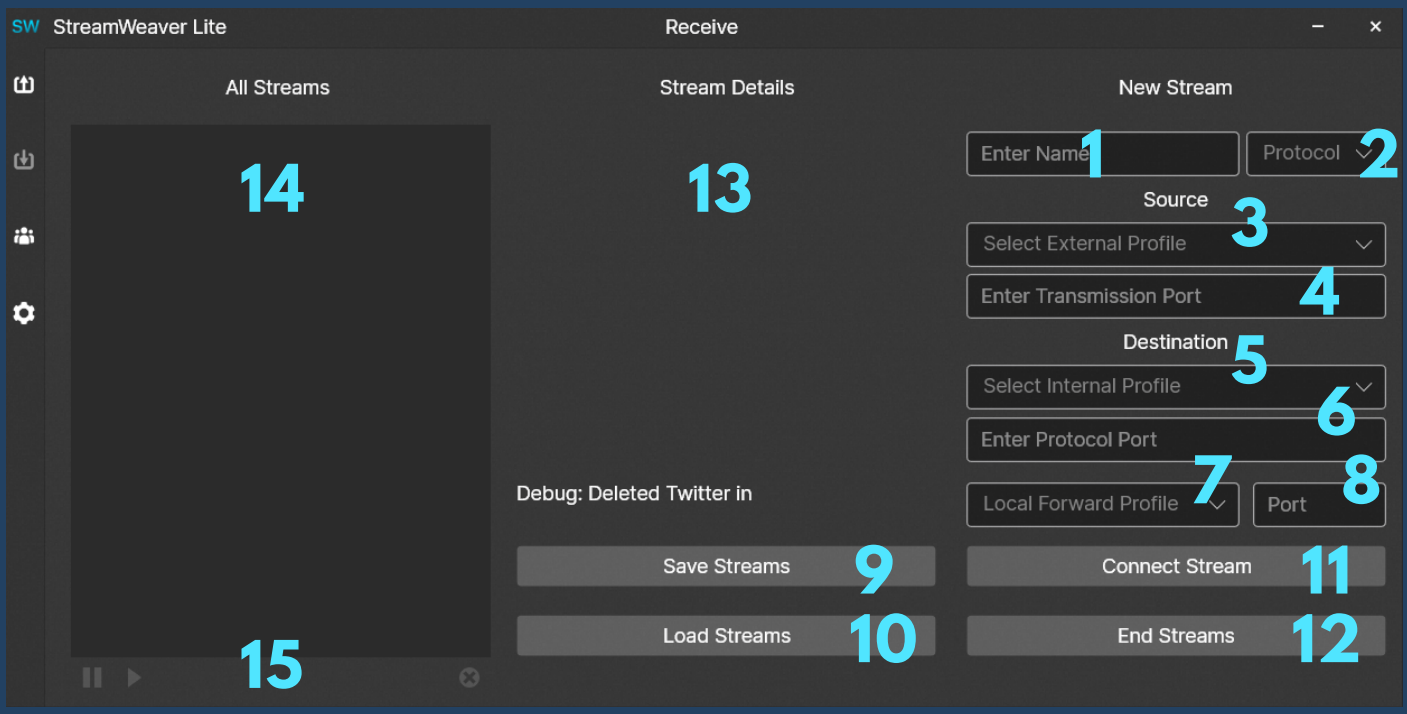
At the bottom are **Save** and **Load** buttons to locate .wvr files, which contain presets for StreamWeaver's views.

The right column contains **a list of the current streams that have been created**. They can be **paused, resumed, or deleted** with the three buttons at the bottom of the right column.

Each stream has a status light that indicates if the stream is in a state of **Error (Red), Standy (Yellow), Active (Green), Pause (Blue), or Cancellation (Orange).**

ArtNet by default uses UDP Port 6454
sACN by default uses UDP Port 5568

Receive



1. Name for the Protocol Stream, which is used for identification
2. Protocol Mode Selection (OSC, ArtNet, sACN, VISCA, Generic)
3. External Profile Selection for selecting the SOURCE LOCATION of the protocol stream, configured in Profiles View
4. Transmission Port is a shared port between the Transmitter and Receiver. The port must match on both the Transmitter's and Receiver's stream.
5. Internal Profile Selection for selecting the DESTINATION LOCATION of the protocol stream, configured in Profiles View
6. Protocol Port is the UDP port where the protocol packets are to be posted.
7. (Optional) Local Forward Profile selection offers the option of committing a UDP forward to the broadcast or unicast IP address associated with the Local Profile as configured in Profiles View.
8. (Optional) Port for the UDP forward
9. Saves the current configuration to a .wvr file
10. Loads a saved configuration from a .wvr file
11. Creates a new transmission based on the fields from boxes 1-6
12. Ends all streams
13. Details about the selected stream
14. Stream List, with indicator lights for stream status. Select a stream to see details or use a button to control
15. Stream Control Buttons, for pausing, resuming, and deleting the selection stream

INTERFACE

StreamWeaver Lite contains four menus, accessed from the left side of the application window: Transmit, Receive, Profiles, and Settings.

Profiles

The Profiles view allows you to manage the three types of profiles used by StreamWeaver Lite: Internal, External, and Local.

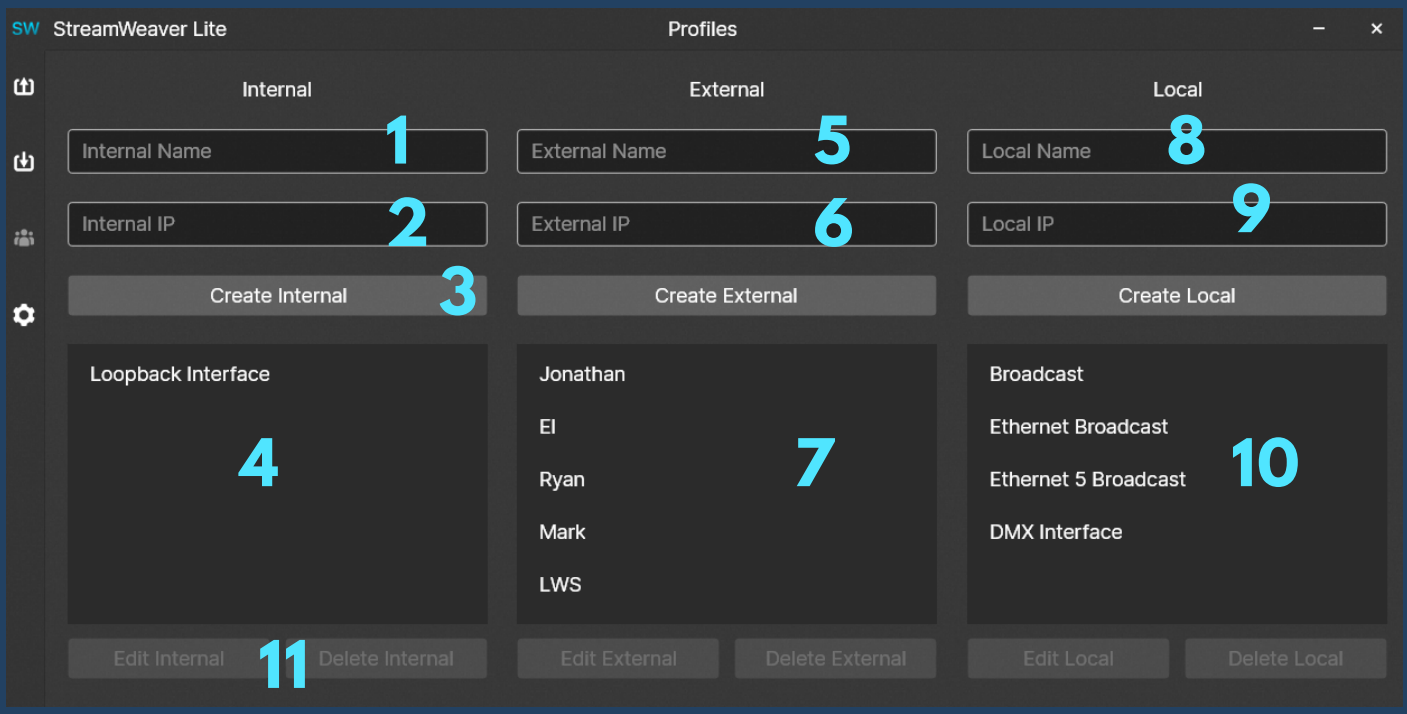
Internal profiles are for use within the computer on which StreamWeaver is running. It is pre-populated with the **Loopback Interface**, which is otherwise known as the localhost IP address 127.0.0.1.

External profiles represent other networks and are identified by public IP addresses.

Local profiles are the IP addresses of other devices on LAN. By default, it is populated with broadcast addresses for each IP address assigned to the computer on which SW:L is running. This is done to make it easy to access other devices on LAN, such as an ArtNet DMX Interface, without needing to look up the IP address of the interface on LAN directly.

Once these profiles are created, they can be used by other Views in the app. Each profile has buttons for editing, deleting, and creating.

Profiles



1. Internal Profile Name, used for identification in other views of the application
2. Internal IP, a domestically-bindable IP address internal to the computer running StreamWeaver, like the local software loopback 127.0.0.1.
3. Create the internal profile
4. View the internal profiles
5. External Profile Name, used for identification in other views of the application
6. External IP, a public IP address that identifies another network where StreamWeaver Lite is also running. This can be found via the Settings View or by a Google Search for “my ip”
7. List of External Profiles
8. Local Profile Name, used for identification in other views of the application
9. Local IP, an IP address on the LAN where StreamWeaver Lite is running. It is used for the purpose of forwarding streams to other devices or computers, and can be either unicast or broadcast.
10. List of Local Profiles
11. Edit and Delete buttons for profiles

INTERFACE

StreamWeaver Lite contains four menus, accessed from the left side of the application window: Transmit, Receive, Profiles, and Settings.

Settings

In the Settings view, you can view some basic information about the app and manage your data and licenses.

Your **public IP address** is displayed in blue for your convenience to pair with other endpoints via entry into External Profiles. Clicking on the IP address **copies it to the clipboard.**

Refresh Addresses ensures that the public IP address is current if it had changed after launching the app.

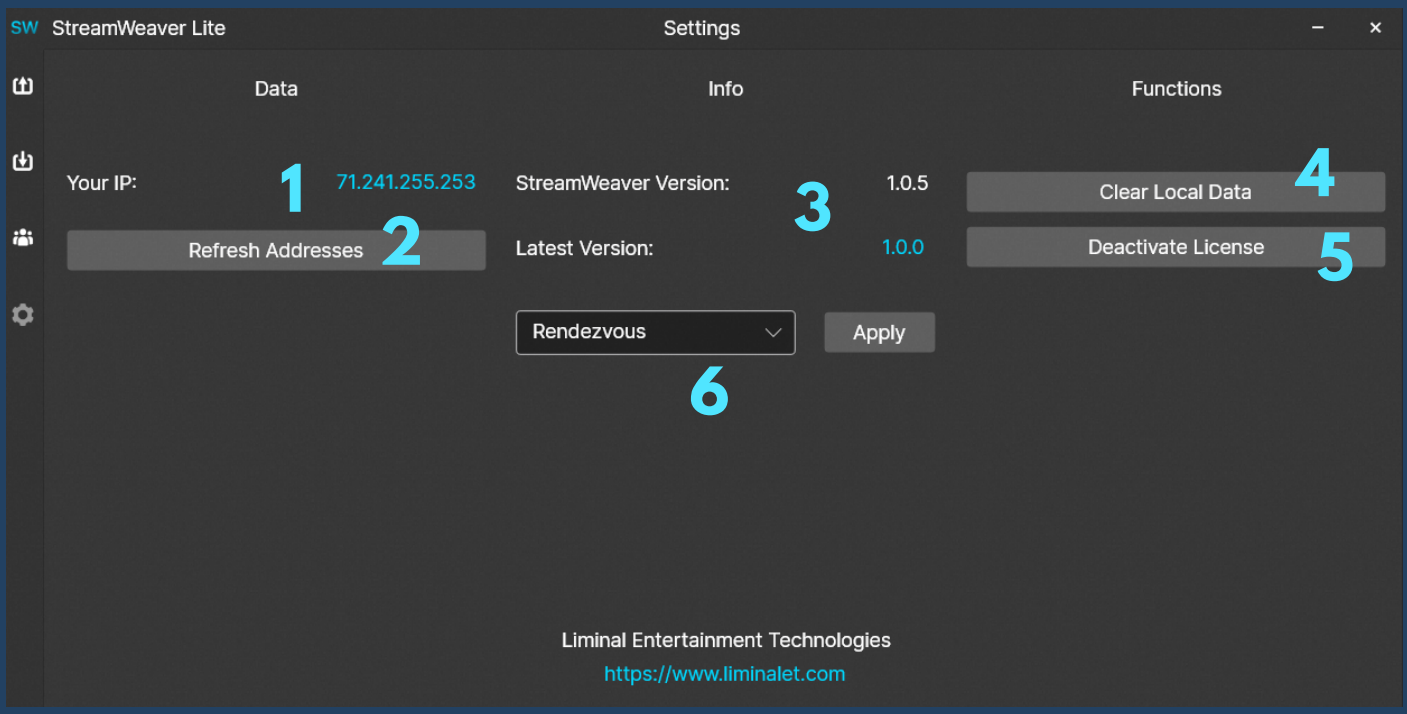
Version info is displayed in the center column.

Clicking on the latest version number will direct you to Liminal's website, where you can **download the update**. Be sure to keep StreamWeaver Lite up to date!

Finally, on the right, you can **clear local data**, which deletes the .wvr files loaded at launch, or **deactivate your licens**e, which will free up an authorization on another computer.

You can always contact **info@liminalet.com** for assistance with license management.

Settings



1. Displays your public IP address, for ease of sharing when distributing IP addresses to other endpoints. Click to copy to clipboard
2. In case the public IP has changed since launching the app, this refreshes the address to make sure it is current
3. Version comparison. Blue version number will link to Liminal's website, where the latest version can be downloaded
4. Clear Local Data deletes the autosaved .wvr files
5. Deactivate License removes authorization for the current endpoint and allows a new computer to be authorized with its license
6. Paring Mode Selection. Click Apply to set. See next page for details

PAIRING MODES

Connecting StreamWeaver Lite

StreamWeaver Lite has three modes of connection:
Rendezvous, Caller, and Listener.
There are different circumstances in which you may wish you change modes.

IMPORTANT: There is no relationship between connection modes and Transmitter / Listener. You can transmit or listen using any of these modes.

Rendezvous Mode

This is the default connection mode, as it is the easiest to use. When using Rendezvous Mode, neither the sender nor the receiver needs to port-forward in their routers. Parties agree on a shared port to use instead. Ports that work best in Rendezvous Mode appear to vary by ISP and region, but generally 5 digit numbers beginning with a 2 (like 24601) are suggested. While Rendezvous Mode works well in the majority of cases, some routers or network configurations may block it.

Caller Mode

Endpoints in Caller Mode can only communicate with endpoints running in Listener Mode. The Caller does not require any router configuration or port-forwarding, just like in Rendezvous Mode. The port used for communication is dictated by which ports are forwarded on the endpoint in Listener Mode. If Rendezvous mode is not working on a network, this is a good option to use for talent computers as no port-forwarding is required.

Listener Mode

Endpoints in Listener Mode can only communicate with endpoints running in Caller Mode. The network where a Listener Mode endpoint is running must be port-forwarded for the ports SW:L will use. When using Listener Mode, Local Forwarding Profiles are disabled in the Receive View. If Rendezvous Mode is not working on a network, this is a good option to use for technician computers, as it will allow the talent to run in Caller Mode, preventing them from needing to port-forward.

GETTING STARTED

Example Stream

Click here for a Video Tutorial

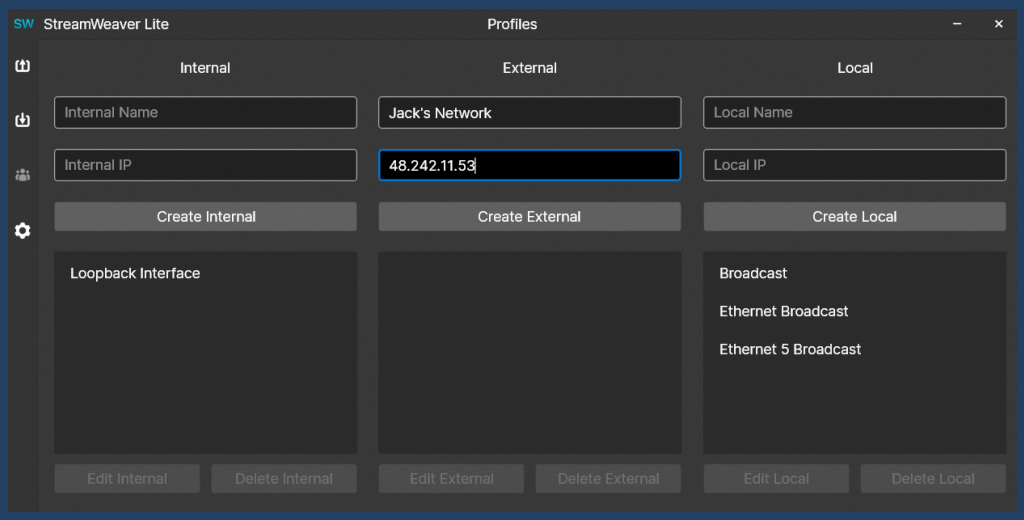
In this example, we have two users: Jack, an actor, and Jill, a lighting technician. Jack has IP address 48.242.11.53 and Jill has IP address 24.763.43.22.

Jill is generating ArtNet DMX control packets on 127.0.0.1:6454. Jack has an ArtNet DMX adapter connected to the same network as his computer, a laptop with a WiFi network and an Ethernet Network. Jack and Jill have agreed to use shared port 24601. Jack and Jill are running in Rendezvous Mode.

We are going to use StreamWeaver Lite to give Jill control of Jack's lights.

1) Jack and Jill run StreamWeaver Lite and enter their license key

2) Jill goes to the **Profiles View** and creates a new External Profile by entering:
EXTERNAL NAME: Jack's Network
EXTERNAL IP: 48.242.11.53
and clicks **Create External**



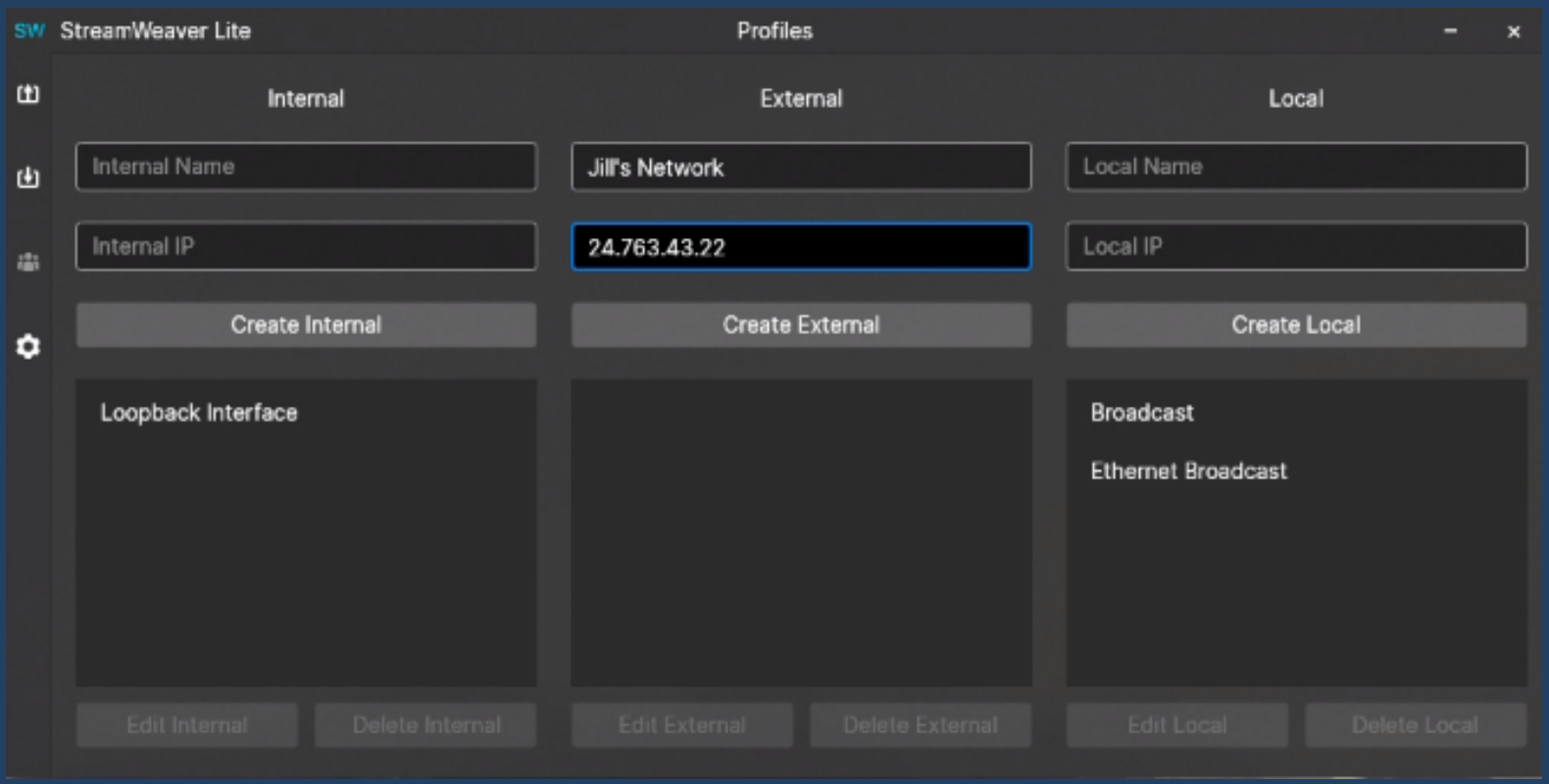
GETTING STARTED

Example Stream

3) Jack goes to the **Profiles View** and creates a new External Profile by entering:

EXTERNAL NAME: Jill's Network

EXTERNAL IP: 24.763.43.22



GETTING STARTED

Example Stream

4) Jill goes to the **Transmit tab** and configures the following:

NAME: Jack DMX

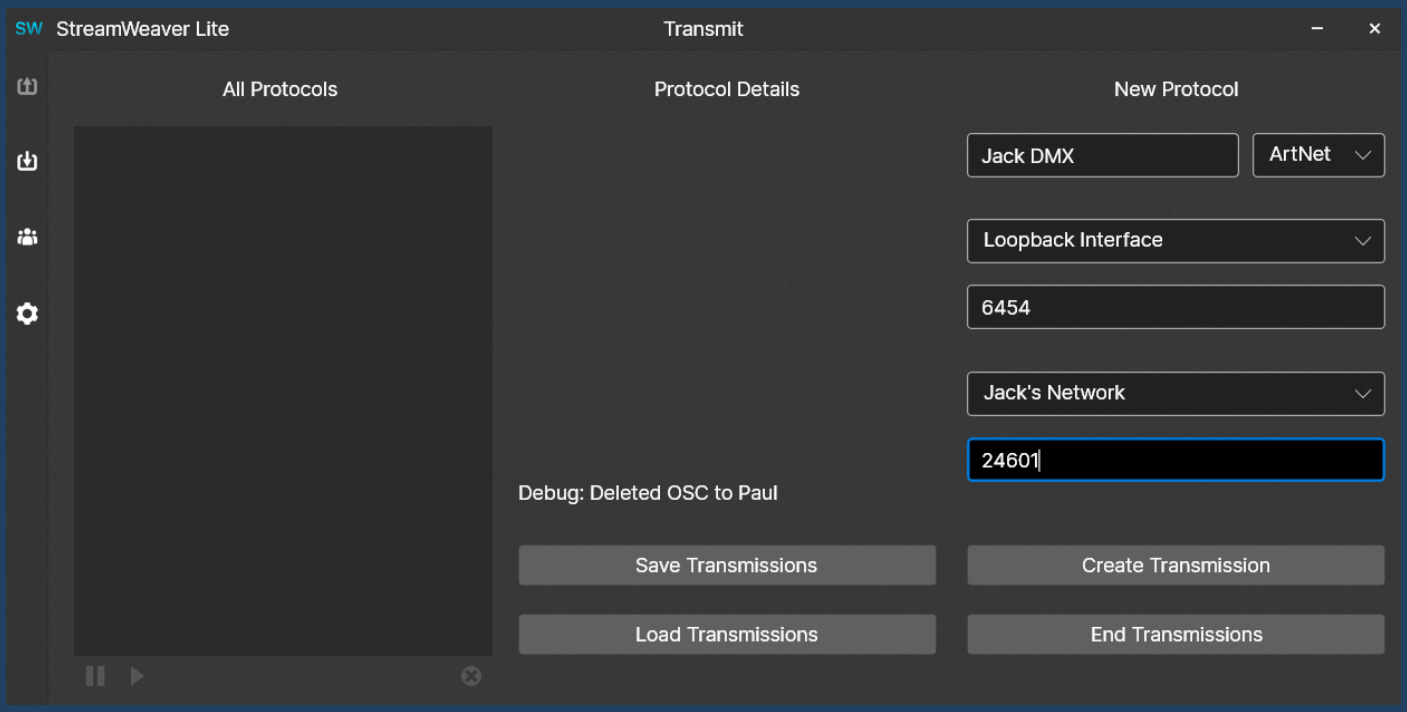
MODE: ArtNet

Internal Profile: Loopback Interface

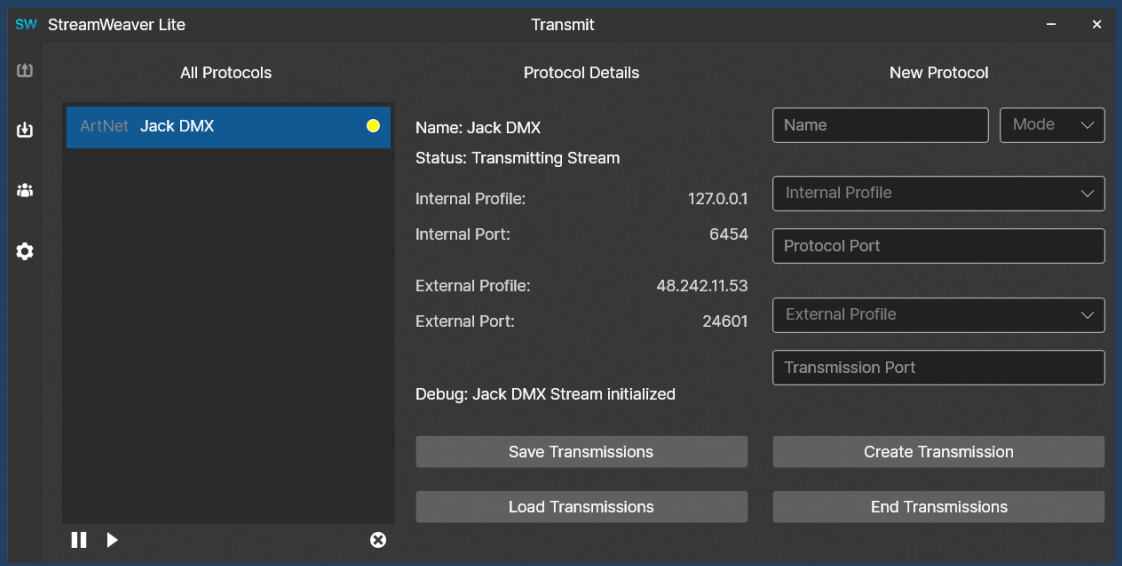
Protocol Port: 6454

External Profile: Jack's Network

Transmission Port: 24601



Jill clicks **Create Transmission**, logging a new ArtNet stream in the left column with a yellow light



GETTING STARTED

Example Stream

5) Jack goes to the **Receive tab** and configures the following:

NAME: DMX from Jill

MODE: ArtNet

External Profile: Jill's Network

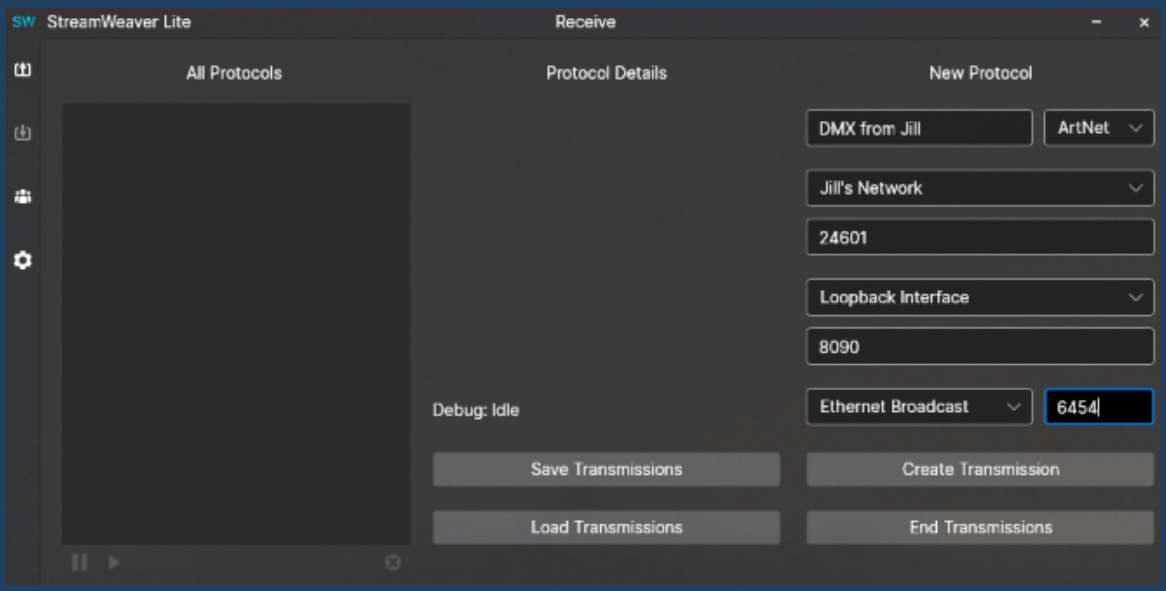
Transmission Port: 24601

Internal Profile: Loopback Interface

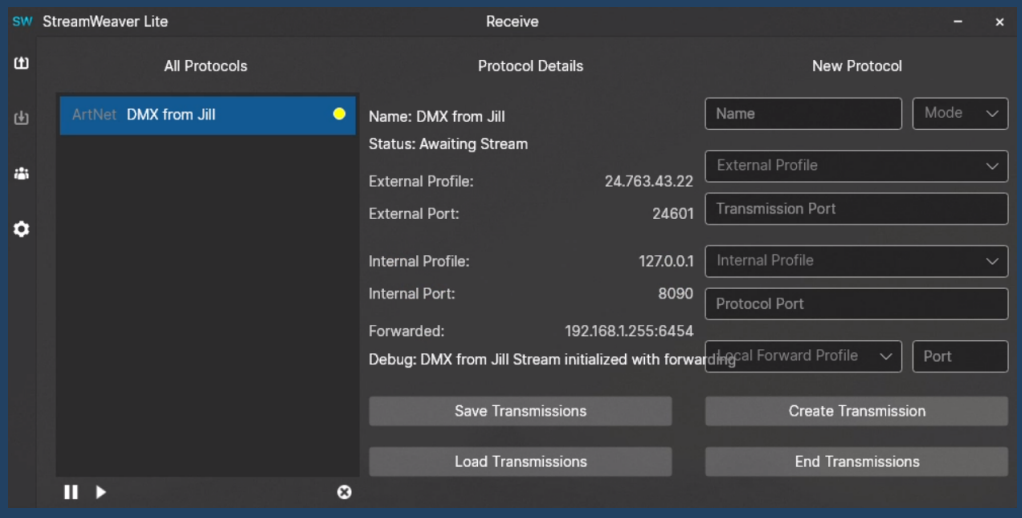
Transmission Port: 8090 (we set this in case Jill wants to see packets in Wireshark later, for example)

Local Forward Profile: Ethernet Broadcast

Port: 6454



Jack hits **Create Transmission**, logging a new ArtNet stream with a yellow light on the left column.



6) Jill begins to **send ArtNet packets** from her light board.

Both yellow lights turn green, and **Jill has control of Jack's lighting**.