Transceive v1.0

https://islandmagic.co/transceive

2026-08-17

39 Connect with asl://

40 Add a node with asl://

1 Setup assistant

The setup assistant walks you through your callsign, authentication method, and first node connection when you launch Transceive for the first time.

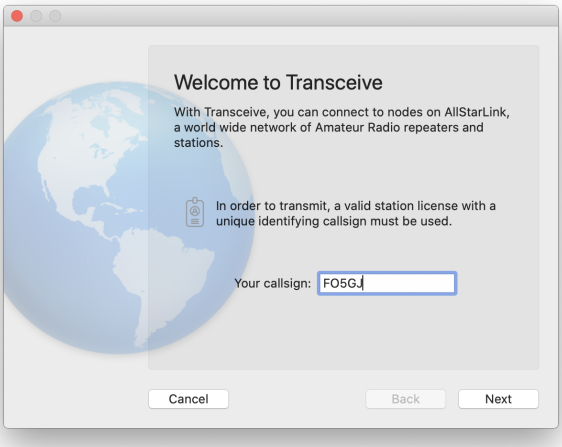
1.1 What you'll configure

1. Identification — your callsign
2. Authentication type — AllStar account or node credentials
3. Connect with public authentication or Connect with node credentials

You can run through the assistant again later from the **Connections** menu if you add another node.

2 Identification

Transceive uses your callsign to identify you when connecting to nodes.



First run callsign entry

Your callsign is stored locally and sent to nodes as part of the connection handshake.

3 Authentication type

Transceive connects to nodes in two ways. If you own a node, use node credentials. To connect to public nodes directly, use an AllStar account and public authentication.

First run authentication type

If you don’t have an AllStar account yet, you can authorize one later from **Connections → Authorize AllStar Authentication...**

Each node connection can use a different method. For example, you might connect to your own node with credentials and to a public hub with your AllStar account.

4 AllStar public authentication setup

To connect via AllStar public authentication, enter your callsign and AllStar account password. Transceive retrieves an access token and stores it securely in the macOS Keychain.

Forgot your AllStar password?

If you change your AllStar password later, the stored token becomes invalid. Re-authorize from **Connections → Authorize AllStar Authentication...**

AllStar public authentication during setup

Then enter the number of the public node you want to connect to.

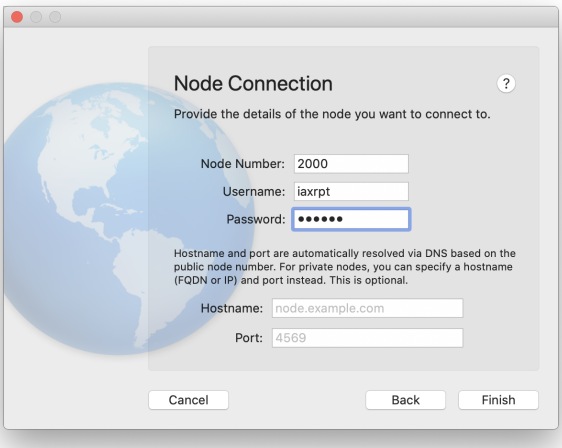
Nodes that support public authentication appear with a **(wt)** mark in the AllStar directory.

Enter a public node number

5 Node credentials setup

To connect to a registered node, enter the node number, username, and password. Passwords are stored securely in the macOS Keychain.

For private nodes that are not listed in the AllStar directory, specify a host and port number in the advanced section.



Node credentials during setup

See Node credentials for server-side configuration if you manage your own node.

6 Node connections

Node connections store the settings Transceive uses to reach each node on the AllStarLink network. Use this section when a connection fails or you need to adjust authentication or network details.

6.1 Topics

- Connection configuration
- Advanced configuration
- Status indicators
- Node credentials — server configuration for node owners
- HamVoIP 1.7
- Troubleshooting: DNS lookup, Valid route, UDP port

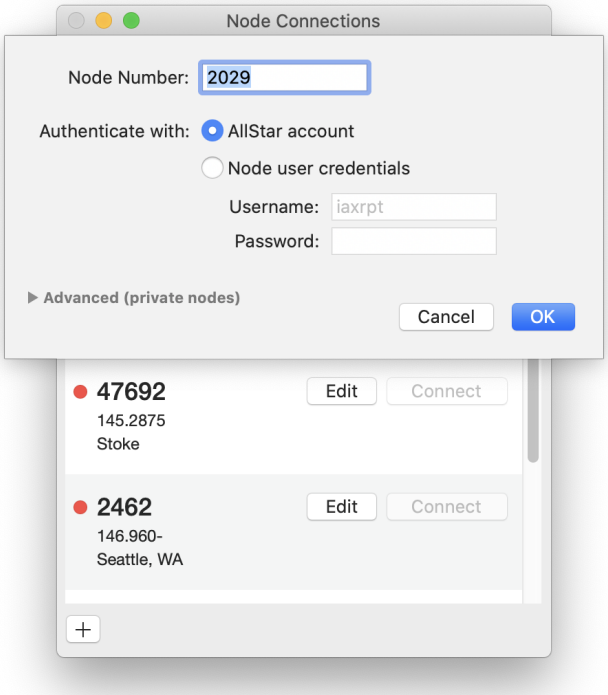
7 Connection configuration

Transceive authenticates with nodes in two ways. If you own a node, use node credentials. To connect to public nodes directly, use an AllStar account and public authentication.

Once you authorize Transceive to use your AllStar account, that option appears in the node connection edit dialog.

If you use your own node credentials, select that option and enter the node username and password. Passwords are stored securely in the macOS Keychain.

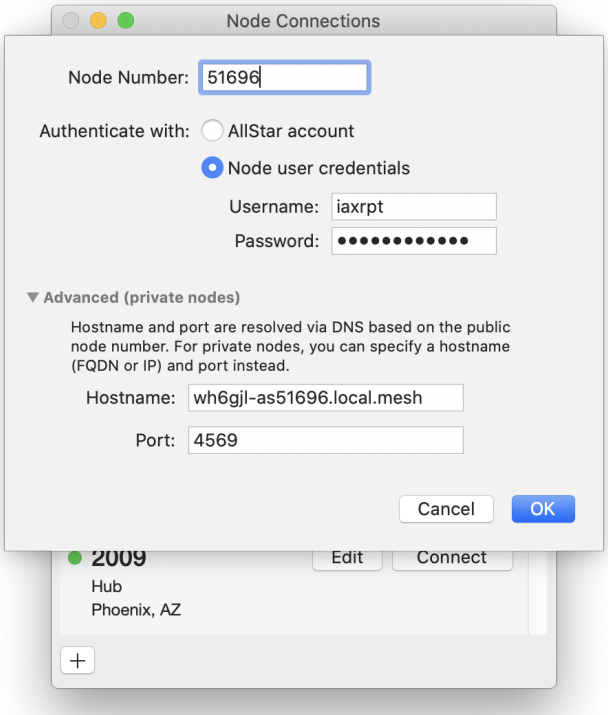
For a registered node, enter the node number. For a private node not listed in the AllStar directory, specify a hostname and port in the advanced section.



Node connection edit dialog

8 Advanced configuration

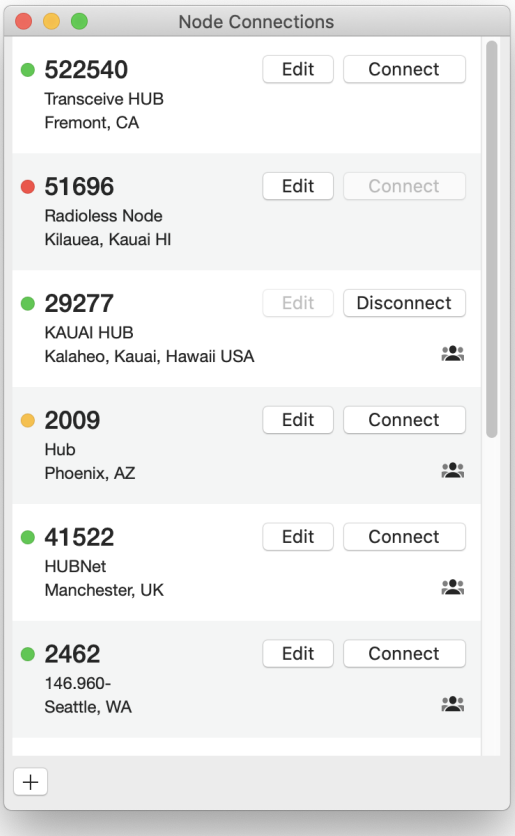
For registered nodes, Transceive resolves the IP address and port through DNS. For private nodes that are not registered in the AllStar directory, specify a host and port manually.



Advanced node connection settings

9 Status indicators

For each node in the connections window, Transceive checks whether the node can be reached on the network.



Node availability status indicators

Indicator	Meaning
Green	Node is online and reachable
Red	Node is offline or unreachable on the current network
Amber	Node is reachable but the most recent authentication attempt failed, often due to an invalid username or password

Transceive rechecks availability when your network changes, such as when you switch Wi-Fi networks, and when your Mac wakes from sleep with Transceive running.

If a node's DNS entry fails to resolve and you know the IP and port, entering them in advanced configuration may restore a green status.

10 Node credentials

Transceive requires a username and password to authenticate with a node. If you own a node, add credentials on the server. You can also verify that public authentication is configured if you want operators to connect without individual accounts.

10.1 Add a user

Add this section to `/etc/asterisk/iax.conf`:

```
[user_name] ; <- change this to desired username
type=user
context=transceive
auth=md5
secret=Sekret ; <- change this to desired password
host=dynamic
disallow=all
allow=ulaw
allow=gsm
transfer=no
```

Add this context to `/etc/asterisk/extensions.conf`:

```
[transceive]
exten => ${NODE},1,rpt(${NODE}|X) ; NODE is normally already defined as your node number
```

For AllStarLink versions prior to v3:

```
[transceive]
exten = 1234,1,Rpt,1234|X ; <- Change 1234 to your node number
```

Restart the node after you modify the configuration.

11 HamVoIP 1.7

> HamVoIP node software version 1.7 includes changes that affect IAX client applications such as Transceive. Add the following configuration for Transceive to connect.

In the client configuration section of `/etc/asterisk/iax.conf`:

```
[user_name]
requirecalltoken=no
```

And in `/etc/asterisk/rpt.conf`:

```
propagate_dtmf=yes
propagate_phonedtmf=yes
remote_dtmf_allowed=1
```

Restart the node after you modify the configuration.

12 DNS lookup

By default Transceive performs a DNS query to look up the IP address and port of the node you connect to. Verify that the address resolves on your Mac by running this command in Terminal (replace `522540` with your node number):

```
dig a +noall +answer 522540.nodes.allstarlink.org
```

If DNS and node registration are correct, you should see a response similar to this (the IP address will match your node):

```
522540.nodes.allstarlink.org. 30 IN A 66.175.217.225
```

Then run:

```
dig txt +noall +answer 522540.nodes.allstarlink.org
```

You should see a response like:

```
522540.nodes.allstarlink.org. 30 IN TXT "NN=522540" "RT=2020-10-20 02:46:01" "RB=0" "IP=66.175.217.225" "PIP=0"
"PT=4569" "RH=register2-cqf"
```

`PT=4569` is the port number configured when the node was registered in the AllStarLink database.

12.1 Tips

If your node address and port do not resolve:

- Confirm your Mac has an Internet connection.
- Verify your DNS configuration. Public DNS servers such as Cloudflare, OpenDNS, or Google DNS can help if your provider has issues.
- Check your node configuration in the AllStarLink database.
- Verify that your node is running and registering with the AllStarLink server.

13 Valid route

After DNS resolves correctly, confirm your Mac has a route to the node. In Terminal, run (replace `522540` with your node number):

```
traceroute 522540.nodes.allstarlink.org
```

After a few seconds you should see hop-by-hop results. Your output will differ. If the last line shows your node's IP address, the node is reachable.

Example:

```
traceroute to 522540.nodes.allstarlink.org (66.175.217.225), 64 hops max, 52 byte packets
 1  172.16.0.1 (172.16.0.1) 118.333 ms  138.662 ms  118.618 ms
 2  8.47.69.1 (8.47.69.1) 130.564 ms  156.421 ms  130.481 ms
 ...
 5  li512-225.members.linode.com (66.175.217.225)  91.445 ms  88.611 ms  96.509 ms
```

If traceroute does not reach the node, check firewalls, VPN settings, and your Internet connection before continuing to UDP port testing.

14 UDP port

Verify that your Mac can reach the node's UDP port (replace the IP address and port with your node's values):

```
nc -v -u -z -w 3 66.175.217.225 4569
```

You should see:

```
Connection to 66.175.217.225 port 4569 [udp/iax] succeeded!
```

If the `nc` command is not found, install netcat:

```
brew install netcat
```

If the connection fails, check that the node is running, the port is open on the node's firewall, and any router port forwarding is configured correctly.

15 AllStar public authentication

AllStar public authentication lets licensed operators connect to participating nodes using an AllStar account, without setting up their own node or receiving individual credentials from the node owner.

15.1 Topics

- How it works
- Authorize Transceive
- Revoke authorization
- AllStar account: Sign up, Forgot password, Change password
- Public authentication configuration — for node owners

16 How it works

AllStar public authentication lets client applications connect directly to a node and verify the operator through an AllStar account. Most public nodes support it unless the owner disabled it.

When you connect using public authentication, the node validates your identity with the AllStar database. Node owners can allow licensed operators without creating individual accounts. Operators can join the network without operating their own node.

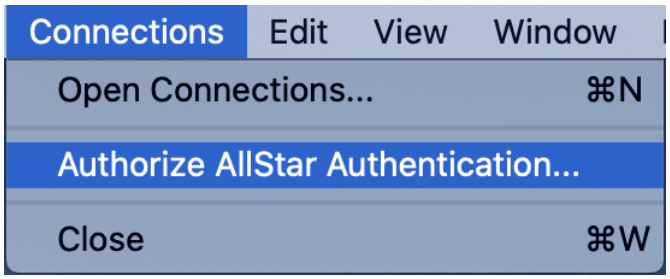
This mechanism was first used in Web Transceiver, a browser-based client on the AllStar node directory. Modern browsers no longer support that approach; Transceive provides a native replacement on the Mac.

> Public authentication is a convenience for connecting to repeaters and network hubs. When you connect this way, Transceive disables node management commands such as linking and unlinking, to protect the node owner from accidental network changes. For those operations, connect with node credentials or ask the node owner for access.

17 Authorize AllStar authentication

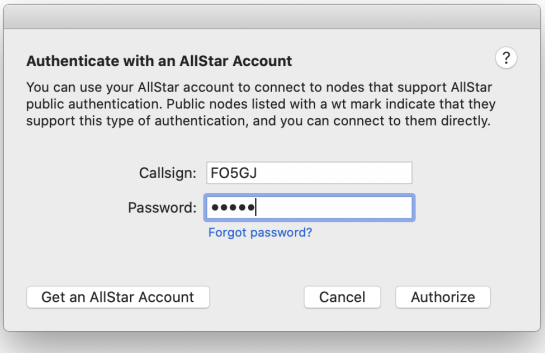
Authorize Transceive to use your AllStar account when connecting via public authentication.

1. Choose **Connections** → **Authorize AllStar Authentication...**



Authorize menu item

1. Enter your callsign and AllStar account password. Transceive retrieves an access token and stores it in the macOS Keychain.



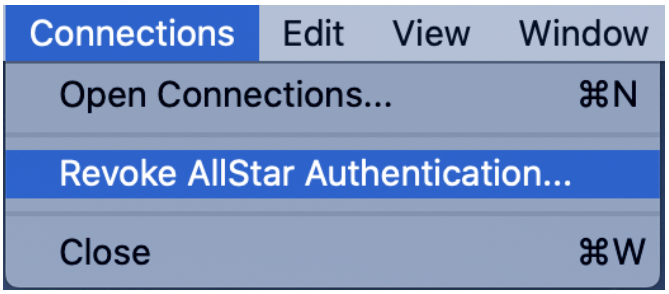
Authorize dialog

After authorization, public authentication becomes available when you edit node connections.

18 Revoke AllStar authentication

To stop Transceive from using your AllStar account for public authentication, revoke your authorization.

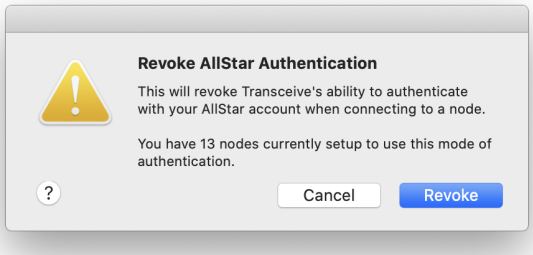
1. Choose **Connections** → **Revoke AllStar Authentication...**



Revoke menu item

Transceive lists any node connections configured for public authentication. After you revoke, those connections fail and their status indicator turns amber.

Authorizing again restores access without changing node connection settings.



Revoke confirmation

19 AllStar account sign up

An AllStar account lets you connect directly to public nodes. A valid callsign is required to sign up. The AllStar administrative team verifies your callsign before activating the account.

Once you have an account, you do not need a node number unless you plan to operate your own node.

20 AllStar forgot password

If you forgot your AllStar account password, start password recovery on the AllStarLink portal.

After you reset your password, re-authorize Transceive so it can refresh the stored access token. See Change password.

21 AllStar change password

When you change your AllStar account password, your public authentication access token in Transceive becomes invalid.

Re-authorize Transceive:

1. Revoke your current authorization
2. Authorize again with your new password

No changes to individual node connection settings are required.

22 Public authentication configuration

The default AllStar server configuration includes a public authentication section. If your installation is missing it, add the following.

In `/etc/asterisk/iax.conf`:

```
[allstar-public]
type = user
context = allstar-public
auth = md5
secret = allstar
disallow = all
allow = ulaw
allow = gsm
requirecalltoken = no
```

In `/etc/asterisk/extensions.conf`:

```
[allstar-public]
exten => s,1,Ringing
exten => s,n,Set(RESP=${CURL(https://register.allstarlink.org/cgi-bin/authwebphone.pl?${CALLERID(name)})})
exten => s,n,Set(NODENUM=${CALLERID(number)})
exten => s,n,GotoIf($["${RESP:0:1}" = "?"]?hangit)
exten => s,n,GotoIf($["${RESP:0:1}" = ""]?hangit)
exten => s,n,GotoIf($["${RESP:0:5}" != "OHYES"]?hangit)
exten => s,n,Set(CALLSIGN=${RESP:5})
exten => s,n,Wait(3)
exten => s,n,Playback(rpt/node|noanswer)
exten => s,n,Saydigits(${NODENUM})
exten => s,n,Set(CALLERID(name)=${CALLSIGN})
exten => s,n,Set(CALLERID(num)=0)
exten => s,n,Rpt(${NODENUM}|X)
exten => s,n,Hangup
exten => s,n(hangit),Answer
exten => s,n(hangit),Wait(1)
exten => s,n(hangit),Hangup
```

Restart the node after you modify the configuration.

In the AllStar portal, set your node to **Allow Web Transceiver access**. This adds the **(wt)** mark next to your node in the directory so operators know it accepts public connections.

Allow Web Transceiver access

23 Linking

Linked nodes repeat audio with each other, extending reach across the AllStarLink network. Transceive shows which nodes are connected and helps you link safely.

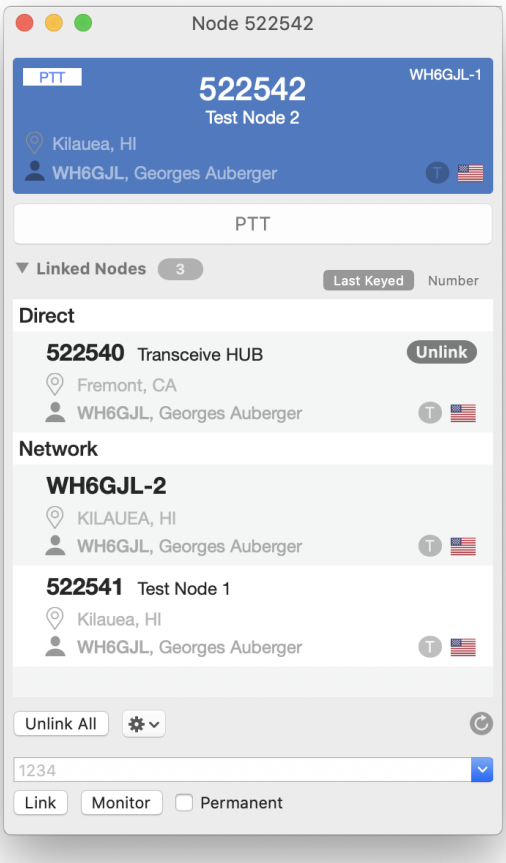
23.1 Topics

- Linked nodes
- Automatic unlinking
- Turn off automatic unlinking
- Resetting warnings
- Remember linked nodes

24 Linked nodes

When nodes are linked, they repeat audio with each other. Transceive shows every node that can communicate on your current link.

Click the **Linked Nodes** disclosure control to show or hide the list. A badge shows the total count.



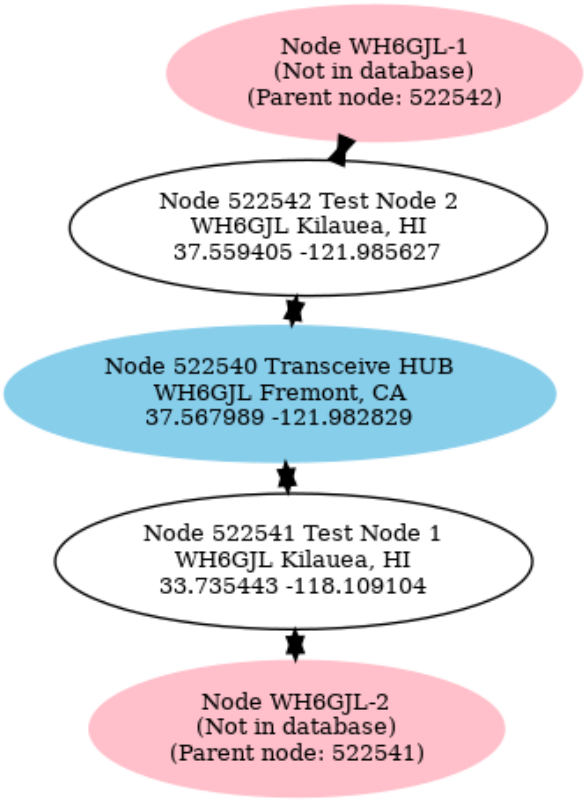
Linked nodes list

24.1 Direct

Nodes directly linked to yours appear here. This includes nodes you linked to and nodes that linked to you. Unlink individual nodes or use **Unlink All**.

24.2 Network

Network nodes are all other nodes currently connected through the link chain. They may be several hops away from your direct link.



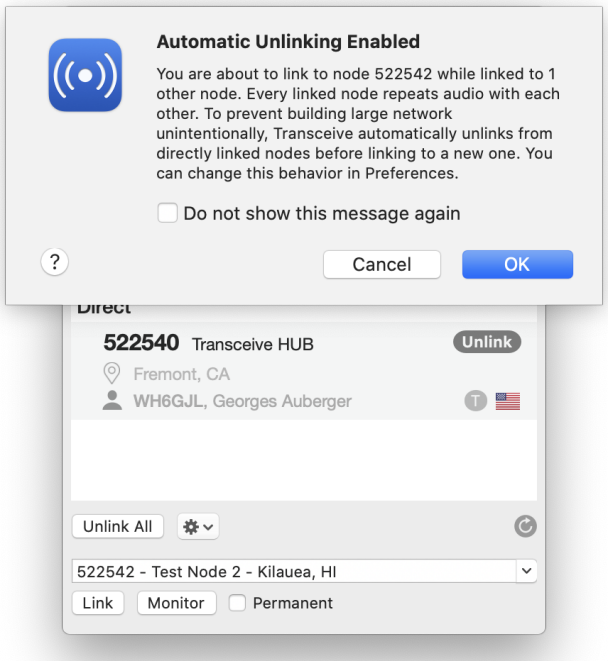
Network map example

In this example, two Transceive stations connect to their respective nodes, and both nodes connect to a shared hub.

25 Automatic unlinking

Linked nodes repeat audio with each other. Linking multiple nodes without care can bridge separate networks. Only do so with explicit permission from the node owners.

By default, Transceive assumes you want one direct link at a time. When you link to a new node while still linked to another, Transceive reminds you that the previous link will be removed first.



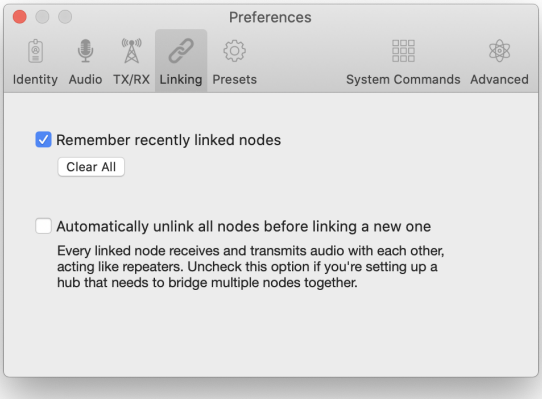
Automatic unlink confirmation

Selecting **Do not show this message again** hides the dialog. Automatic unlinking still occurs.

To link multiple nodes intentionally, see Turn off automatic unlinking.

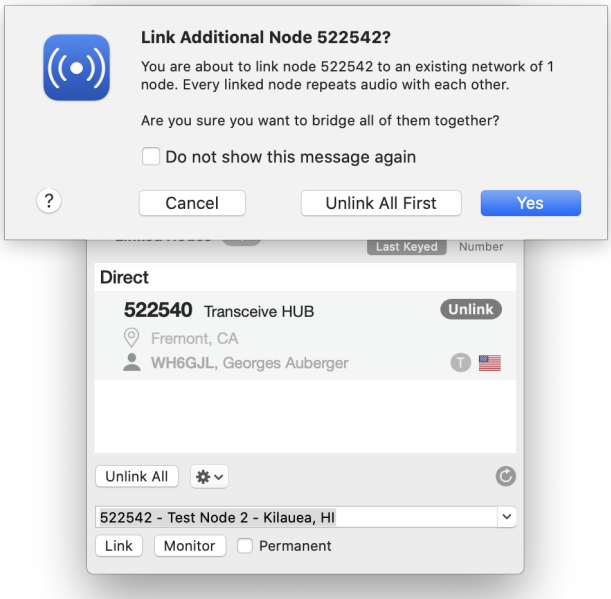
26 Turn off automatic unlinking

If you operate a hub node and need several direct links, turn off automatic unlinking in **Preferences** → **Linking**.



Automatic unlinking preference

With automatic unlinking off, Transceive still warns when you link to more than one node.



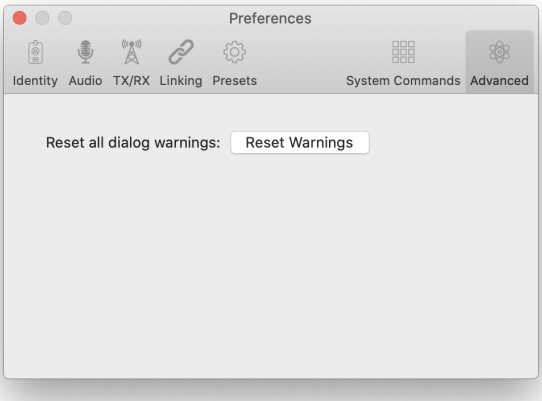
Warning with automatic unlinking off

You can still choose **Unlink All** before linking. Selecting **Do not show this message again** hides the dialog and performs no automatic unlinking.

27 Resetting warnings

If you selected **Do not show this message again** on a linking dialog, you can restore all warning dialogs.

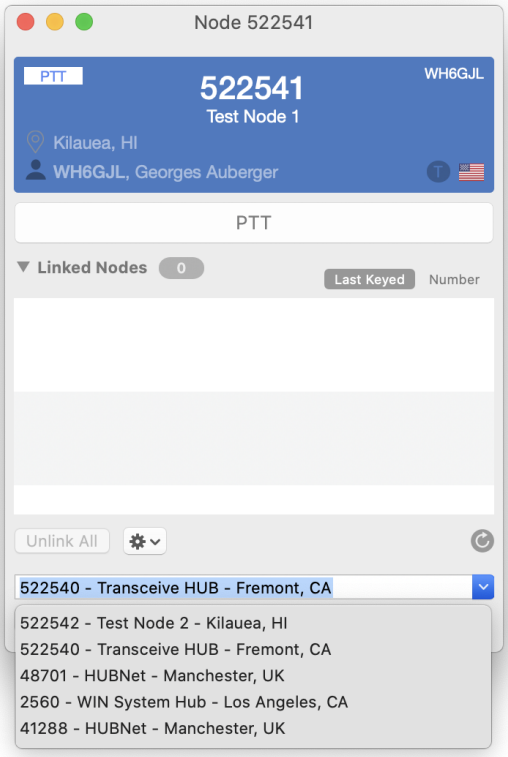
1. Open **Preferences**
2. Select the **Advanced** tab
3. Click **Reset Warnings**



Reset warnings in Preferences

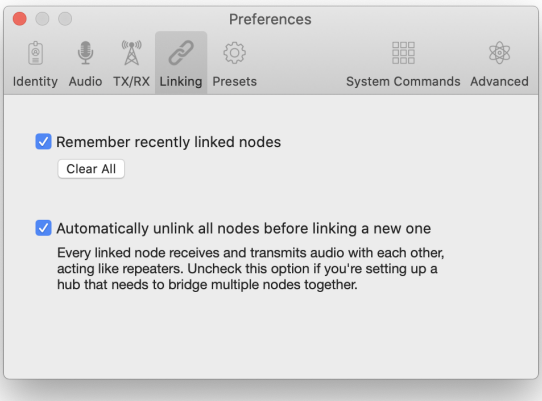
28 Remember linked nodes

Transceive keeps a history of nodes you linked to recently. Select a node from the list to link again.



Recently linked nodes

Clear the history or disable the feature from **Preferences** → **Linking**.



Recently linked preferences

29 Identification

Transceive displays node information and looks up callsign details when data is available.

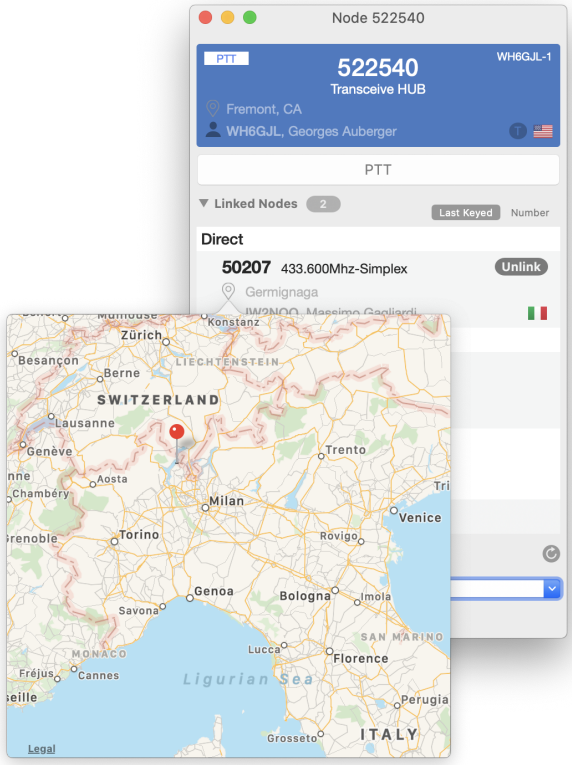
29.1 Topics

- Node location
- Owner callsign

Callsign lookup availability varies by country of license issuance.

30 Node location

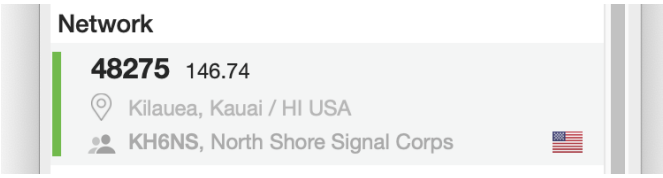
For registered nodes, Transceive displays location when available. Click the pin icon to open a map at the approximate coordinates.



Node location map

31 Owner callsign

When lookup data is available, Transceive shows the name, country, and license type for a node owner’s callsign.



Callsign information

Availability depends on the country that issued the license.

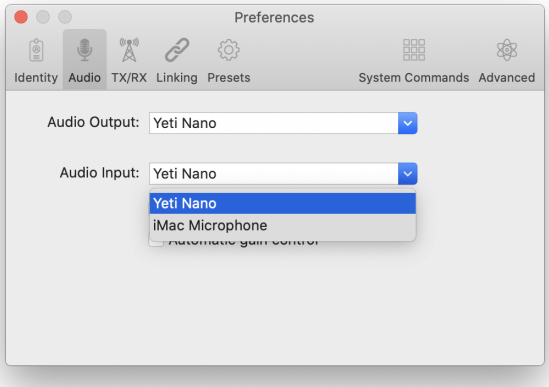
32 Audio

Transceive uses your Mac’s audio devices for receive and transmit. Configure input selection, permissions, and levels from Preferences and the Audio Monitor.

32.1 Topics

33 Audio input selection

Select an external microphone as the audio source in **Preferences**. Transceive remembers your selection and uses it on the next launch.



Audio preferences

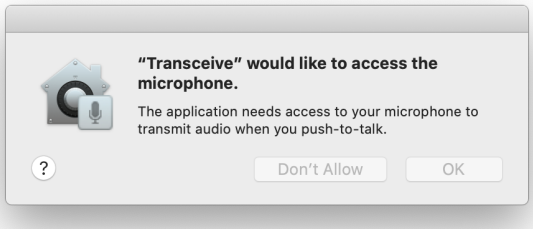
If your device does not appear, confirm it is connected and restart Transceive.

> Transceive does not detect new audio devices after launch. Restart the app if you connect hardware while it is running.

34 Allow microphone access

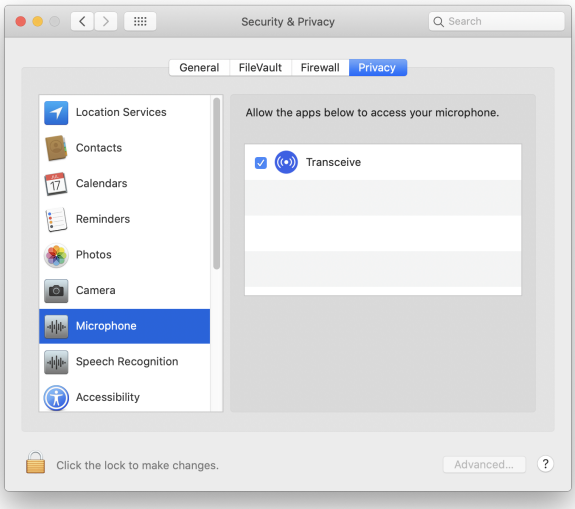
If you can transmit but other stations do not hear you, Transceive may not have microphone access.

On first launch, macOS asks for permission to use your microphone.



Microphone access prompt

Verify access in **System Settings** → **Privacy & Security** → **Microphone**. Transceive must be enabled.



Microphone privacy settings

35 Reset microphone access

If Transceive does not appear in **System Settings** → **Privacy & Security** → **Microphone**, reset the permission from Terminal:

```
tccutil reset Microphone co.islandmagic.transceive
```

Restart Transceive. macOS should prompt for microphone access again.

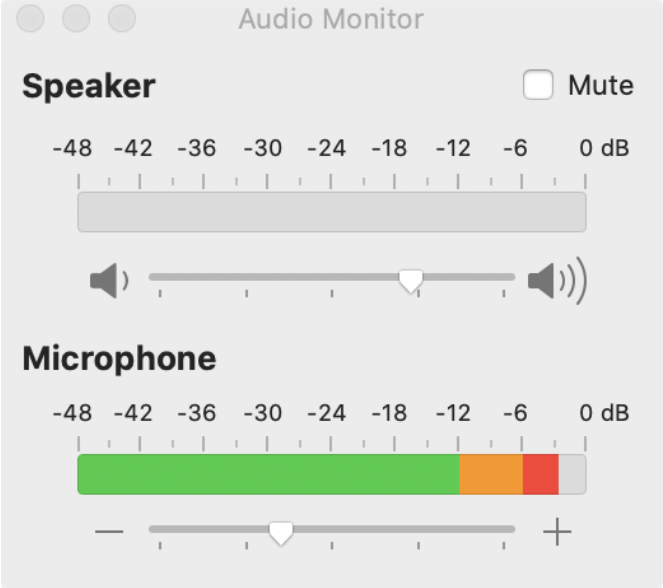
36 Audio monitor

Open the Audio Monitor from **View** → **Show Audio Monitor** or press ⌘**A**.

The monitor shows audio levels and lets you adjust speaker volume and microphone gain.

Audio monitor output levels

The bar graph turns red at saturation. Keep microphone gain below that level.



Audio monitor input levels

37 Audio test

Audio quality is hard to judge alone. If you control the node you connect to, link to a parrot node that repeats your transmission so you can listen and adjust levels.

A reliable public parrot node is **42565** from DVSwitch. Connect to node 42565 in Transceive.

Use the Audio monitor while you transmit to watch input levels.

38 Experimental

Experimental features extend Transceive beyond the main interface. They may change in future releases.

38.1 Topics

- Connect to a node with asl://
- Add a node with asl://

39 Connect with asl://

Transceive supports the `asl://` URI scheme defined for AllStarLink. Links can open Transceive and start a connection.

Example markup:

```
<a href="asl://42565">Connect to node 42565</a>
```

Connect to node 42565

> The `asl://` scheme targets publicly accessible nodes. Transceive checks that you have authorized AllStar authentication before connecting.

40 Add a node with asl://

Append `?add` to an `asl://` link to add a node to your connection list without connecting immediately.

Example markup:

```
<a href="asl://42565?add">Add node 42565</a>
```

Add node 42565

See also Connect with asl://.