

USING SKOOKUMNET

ABOUT SKOOKUMNET

SkookumNet is the name of a macOS network service that SkookumLogger creates for interconnecting different computers running SkookumLogger within your local network. When a member of SkookumNet logs a QSO, that QSO is added to the logs of all other members. SkookumNet also handles editing of logged QSOs and deletion of logged QSOs. It is expected that each member's log is configured to use the same contest rules. Any SkookumNet member can synchronize the logs of all members using a merge function.

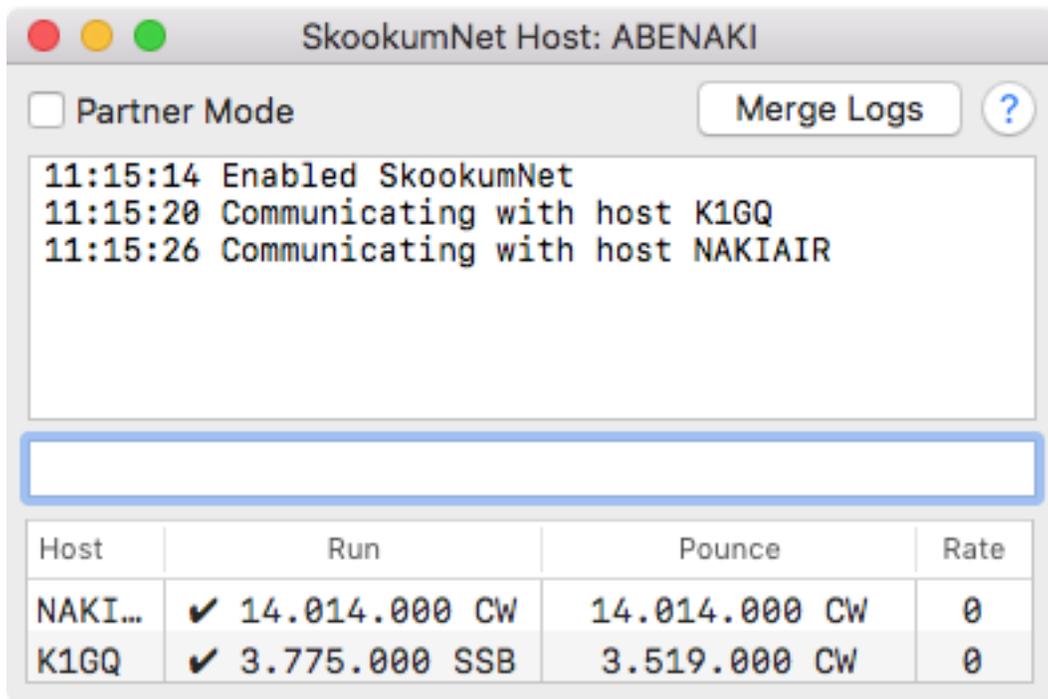
SkookumNet also synchronizes activities created by SkookumLogger (but not activities added by DXCluster), as well as synchronizing deletion of activities.

You can send brief *Gab* messages to all SkookumNet members, and see where other members are operating in a *Host Information* table. These features are helpful when passing needed QSOs from band to band, and when entertaining others with puns, limericks, or haikus.

Partner Mode is available for the special case of two network members where one member is logging QSOs and the second member is assisting the first in copying calls.

SkookumNet functions as long as SkookumLogger is running and the computer CPU is not in sleep mode. That is, SkookumLogger does not need to be the active application.

TASKS



The screenshot shows a macOS window titled "SkookumNet Host: ABENAKI". At the top left, there are three colored window control buttons (red, yellow, green). Below them is a checkbox labeled "Partner Mode" which is currently unchecked. To the right of the checkbox is a button labeled "Merge Logs" and a circular help icon containing a question mark. Below these controls is a text area containing the following log entries:

```
11:15:14 Enabled SkookumNet
11:15:20 Communicating with host K1GQ
11:15:26 Communicating with host NAKIAIR
```

Below the text area is a blue-outlined empty text input field. At the bottom of the window is a table with four columns: "Host", "Run", "Pounce", and "Rate".

Host	Run	Pounce	Rate
NAKI...	✓ 14.014.000 CW	14.014.000 CW	0
K1GQ	✓ 3.775.000 SSB	3.519.000 CW	0

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ENABLING SKOOKUMNET

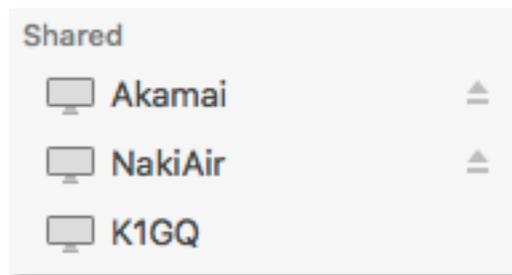
To participate in the network, tick the **Enable SkookumNet** checkbox in Logging preferences. Enabling the network opens the SkookumNet window. You can hide and show the window with the **Window ► SkookumNet** command. Normally you should leave window open when the network is enabled.

The window title identifies the host name for your computer, which is the same as the (uppercased) Computer Name that you set in the Sharing pane of your System Preferences. The host name is saved in each QSO record and displayed in the Station column of the log table.

When SkookumNet discovers another computer on your LAN that has enabled SkookumNet, a “Communicating with host” message is printed in the SkookumNet window.

CONFIRMING NETWORK CONNECTIVITY

In the Finder sidebar on one of your logging computers, confirm that the Shared group lists the names of the others hosts that you intend to become members of your SkookumNet network. In the example, the Finder on Abenaki shows this list:



This test assumes that File Sharing is enabled in the Sharing panel of System Preferences. However, none of the services listed in that panel are needed to use SkookumNet.

SkookumNet can operate in a local network without a router, via an ethernet switch. Configure **IP Address** and **Subnet Mask** in in the Network panel of System Preferences. For a network with two computers, you can eliminate the ethernet switch and directly connect the computers with a single standard ethernet cable – a cross-over cable is not needed.

USING GAB

Type into the single-line gab entry text field below the text messages box (this entry field has the focus ring in the example window) and tap the return key to send what you have typed to all network hosts. The messages are prefixed by the callsign of the active operator at the host that sent the message. Use **View ► Toggle Gab** to quickly alternate between the gab entry field and your Log window. When a gab message is posted, the background color of the gab entry field changes to your Myself & Buddies color for 10 seconds.

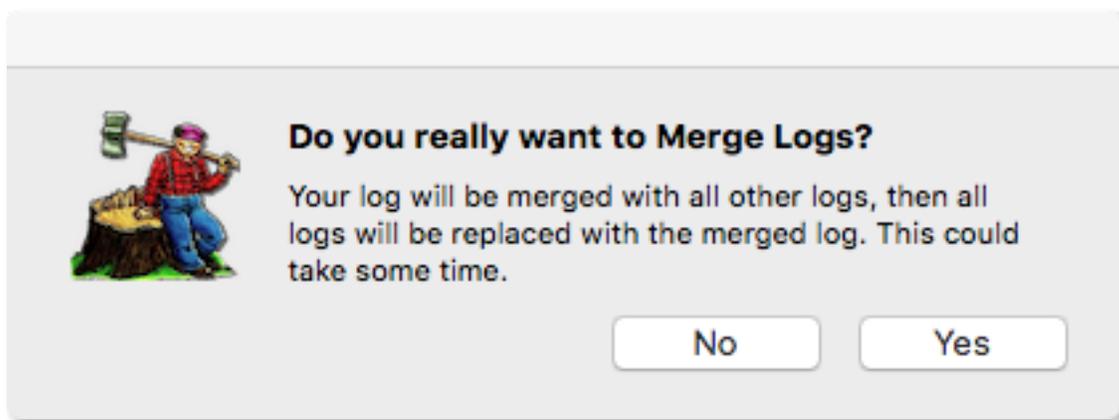
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UNDERSTANDING THE HOST INFORMATION TABLE

The table at the bottom of the SkookumNet window tracks information for each of the other members of the network, one row per host name. The transmit frequency and mode for each of the two QSO entry boxes are displayed, with a checkmark identifying which QSO entry box has transmit focus. The Rate column displays QSOs per hour for the last ten QSOs on each host. The Rate Tracker window must be open on the host in order to compute the rate.

MERGING LOGS

Tap the Merge Logs button to begin merge processing:



When you choose **Yes**, the alert closes and you may see the SPOD (spinning pizza of death). Be patient, eventually status messages will appear in the SkookumNet window.

The **Merge Logs** command merges the logs of other computers into the log of the computer that started the processing, then replaces the other logs with the merged log. Typically you would use this command after a contest if you notice that logs have different numbers of QSOs or different scores. You can run the command at any time, but it takes some time to complete and blocks SkookumLogger while running. You may want to merge during a lull in a contest if logs are different enough that duplicate checking becomes a problem.

In the special case of merging two logs with one of them empty, run the Merge Logs command on the computer with the not-empty log. Since there are no QSOs to be merged into that log, the processing simply replaces the empty log, which is very fast.

USING PARTNER MODE

When two computers running SkookumLogger have joined SkookumNet and both have ticked the **Partner Mode** checkbox, a call typed into the call field of the Run QSO Entry box appears as prompt text next to the Run call field of the other computer. Two operators listening to the same frequency can help each other copy call signs without need for intercoms or shouting. The **Log ► Grab Partner Call** command copies the prompt text into the call field of the active QSO entry box. The prompt text has a translucent yellow background to attract attention. The background is hidden when there is no prompt.

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There is no default shortcut key assignment for the **Grab Partner Call** command. When using this feature, it is likely that you will prefer a single-key shortcut, which must be a function key. But F1 through F12 are already in use, which consumes all of the available function keys on a laptop or the wireless Apple keyboard. To work around this shortage, assign F9 as the shortcut for **Grab Partner Call**, which will remove the assignment of F9 to the **2T2R ► Switch Transmit Radio** command. You aren't likely to be using the 2T2R configuration if you are working with a partner.

To prevent accidentally logging QSOs on the partner computer, enable the **Refuse to log any QSOs** option in Logging preferences.

To ensure that the partner computer is on the same band and mode as another computer on the network, select a QSO in the Log table that was made by that other computer and choose **Log ► Set Radio from QSO**. You can skip the select-a-QSO step if you want to "net" to the most recent QSO in the Log.

TECHNICAL DETAILS

SkookumNet uses zero-configuration (Bonjour) networking. Members of the network are equal peers with reliable (TCP) communications; there is no master computer, and there is no unreliable broadcasting (UDP). Although there is no inherent limit to the number of peers, SkookumNet has not been tested with more than four members. Communication among the network members is accomplished using Distributed Objects (DO). All but one of the DO methods are oneway – each host broadcasts to the others and does not require a response. The exception occurs when merging; behavior is undefined if a host does not respond in that case.

Establishing communication sometimes fails for no apparent reason. Apple support is unlikely to be helpful because DO has quietly been deprecated, without an alternative as far as I can tell. The failure is reported as an exception in the SkookumNet window. The work-around is to leave the network on the computer that reported the failure, then enable the network again.

There are two deliberate delays that anecdotally reduce the occurrence of the exception. First, when starting SkookumLogger with SkookumNet enabled, the network connection setup is delayed for 10 seconds after SkookumLogger has completed all other startup activity. Second, the timeout value associated with the exception is set to 30 seconds. The SPOD may appear while this timeout is counting down.

MERGING

Merging combines unique QSOs from all logs into a master log, then replaces the logs on each network member with the master. Two QSOs are unique unless their timestamps are equal, so you should not edit that QSO field. The resolution of the timestamp is less than a nanosecond, so it is very unlikely that QSOs logged at "nearly" the same time on different computers will have the same timestamp.

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SkookumLogger is blocked while doing the merge to prevent changing the log content while merging. The procedure can be time-consuming, but there is no progress indicator in order to avoid making the procedure even more lengthy. Example: a merge of three logs that resulted in a master log of about 3000 QSOs took about 40 seconds.

BONJOUR EXAMPLE

This is what iNet Network Scanner reports for a host (Naki) publishing the SkookumNet service:

Details	
Service Name:	SkookumNet@naki.local
Service Type:	No description in database...
DNS-SD Name:	_skookum._tcp.
Host:	Naki.local.
Service Addresses:	192.168.0.8 fe80::54:3142:e855:f3f5
Port:	7388
TXT Data:	No TXT data available...