RUMlogNG <-> Icom via Network

Foreword

The following Icom transceivers have a network server for remote control included: IC-705, IC-7300MK2, IC-7610, IC-7760 and IC-9700. The IC-705 has a WLAN interface, all others have a LAN connecter. The network server is officially only intended for connection with the Icom remote control software RS-BA1. The connection protocol between RS-BA1 and the transceiver **is not publicly documented** by Icom and therefore it is not provided by Icom that other software uses this interface for control! Resourceful developers have explored and published functions of this interface in order to be able to use them now in programs such as wfview or SDR-Control. This procedure is not authorised by Icom and is in no way supported, but obviously tolerated.

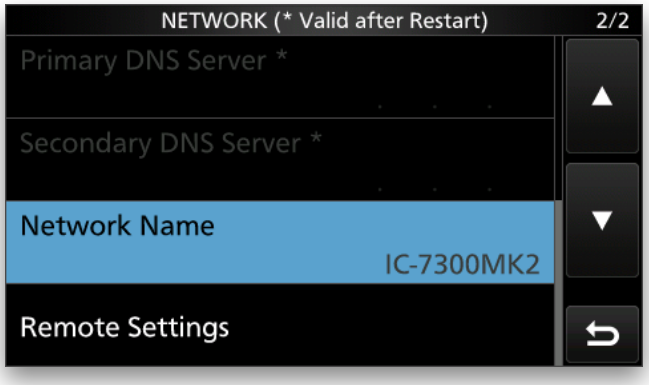
RUMlog includes simple functions to control the IC-7760 and extensive control panels are available for the other models. Audio signals can also be transmitted from and to the transceiver.

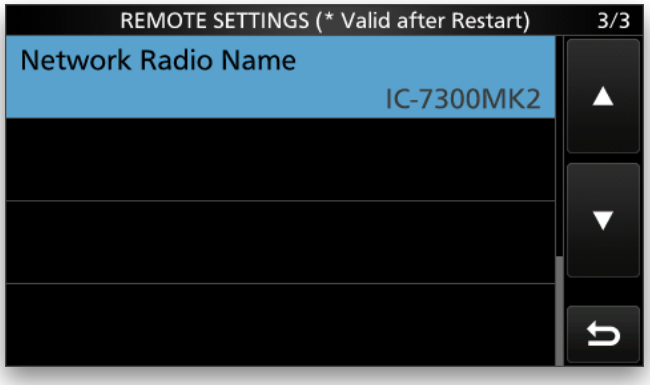
Settings on the transceiver

First of all, the transceiver is via LAN resp. WLAN to connect to the home network, see manual. If there is a connection to the Internet, the internal clock is automatically set. This option is enabled by default.

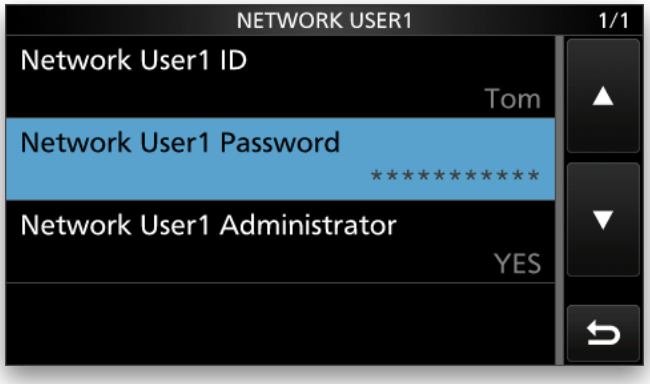
Everyone will adjust the network settings according to their needs. Almost all changes here require a restart of the transceiver in order to be taken over. The following examples are derived from the IC-7300MK2 and apply accordingly to all other devices.

It is recommended to assign a name under *Network* > *Network Name*. Under this name you can recognise the device in the home network. In the remote software, the device is named from the setting in: *Network* > *Remote Settings* > *Network Radio Name.*

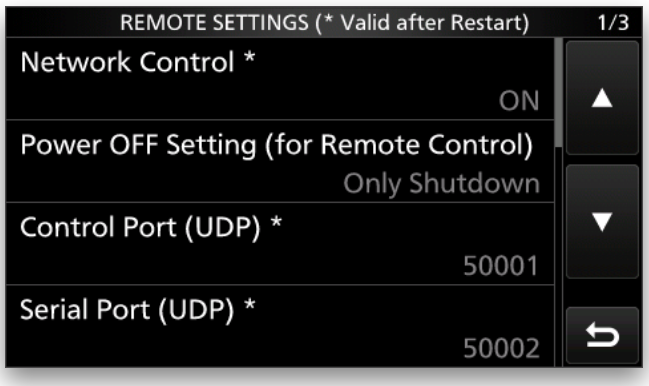


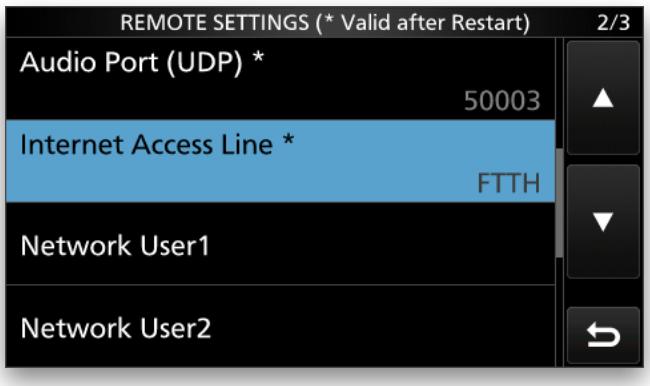


Under *Network* > *Remote Settings* > *Network User 1/2*, a user with name (id) and password must be created.

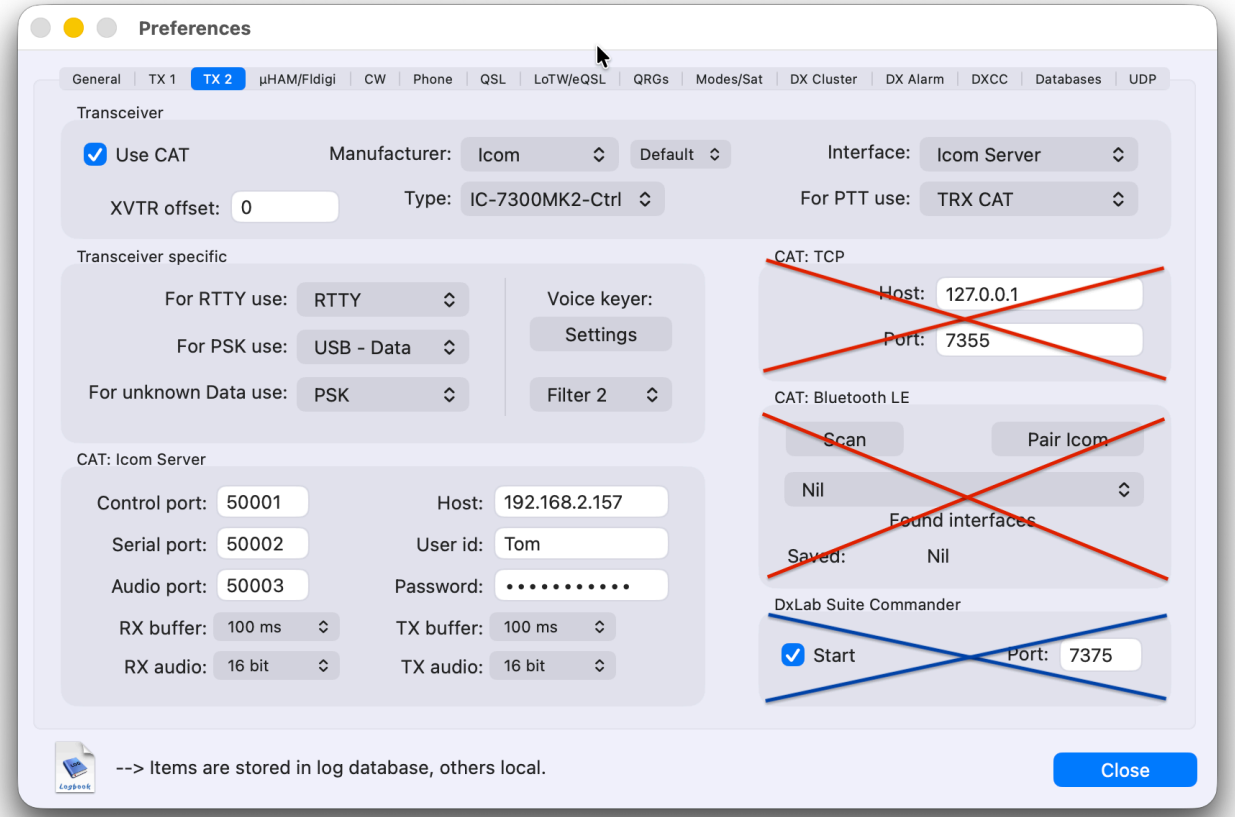


The selected UDP ports should not be used again on the network. If you want to control two devices in the network, different UDP port numbers must be assigned on each device. *Network* > *Remote Settings* > *Network Control* musst be set to *On* to activate the server.





Settings in RUMlog



Transceiver

On transceiver models with the suffix *Ctrl*, an extensive control panel is available. **Important:** *Icom Server* must be selected as interface

CAT Icom Server

Here, the information must match those in the transceiver. The tcp/ip address or the network name (e.g. IC-7300MK2.fritz.box) can be specified as the host.

The times for Audio *RX* and *TX Buffer* should be chosen as short as possible. If audio dropouts occur, the buffer should be increased. For *TX audio*, 16 bits should be selected. At 8 bits, the distortions are quite large.

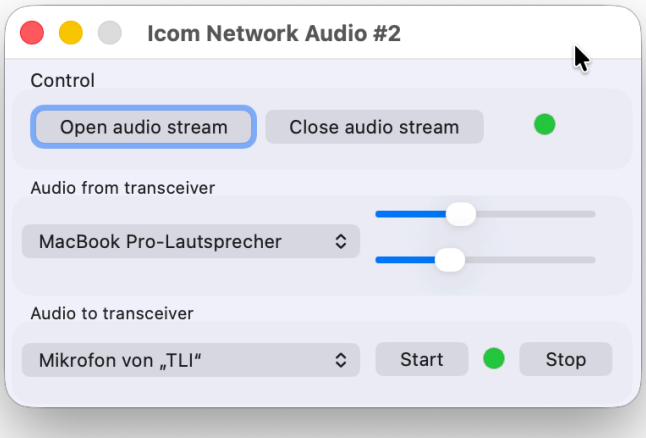
The information under *DxLab Suite Commander* is optional, settings in the boxes *CAT: TCP* and *CAT: Bluetooth LE* are irrelevant for the connection to the server.

Tip: Up to ten complete setups can be saved in the *Menu* > *Transceiver* > *Save TRX 1/2 setup* and downloaded from the menu again.
Tip: If RUMlog is **not** connected to the TRX but the LAN indicator on the TRX lights up, no connection can be established. Then CAT in RUMlog is to be deactivated and the TRX must be restarted. Then CAT can be activated again in RUMlog.
Tip: In the Network Status window, an option to output debug information can be activated at the bottom right.

Audio Transmissions

Audio transmissions over the network from and to the transceiver are possible. The output from the TRX to RUMlog takes place on the IC-705 and IC-7300MK2 in mono. In the IC-7610, IC-7760 and IC-9700, the main band is output on the left and the sub band on the right audio channel.

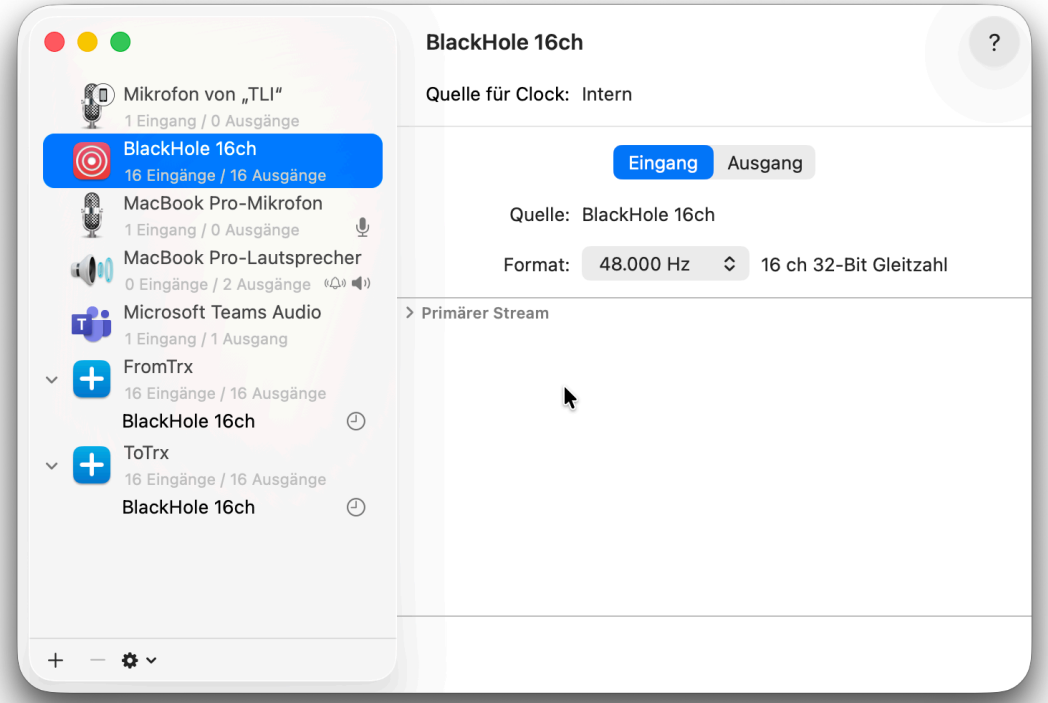
To use the audio function in RUMlog, select *Menu* > *Transceiver* > *Audio #1/2* when (W)LAN is active. Input and output streams can be activated or deactivated separately. The audio input and output devices can be selected here.



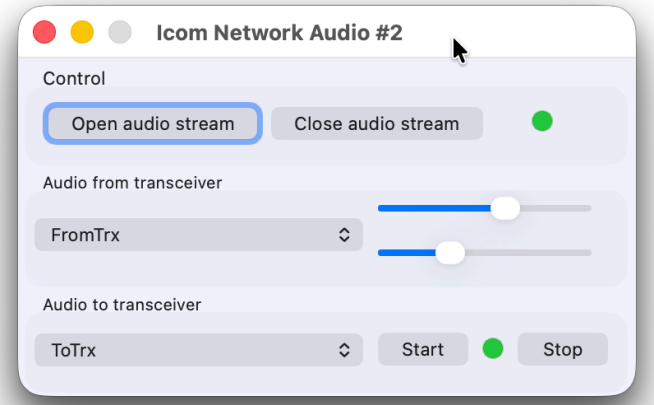
Important: RUMlog does not make any changes to the configuration in the transceiver. *Data Mod* and/or *Data Off Mod* must be set to *LAN* in *Connectors* > *Mod Input*

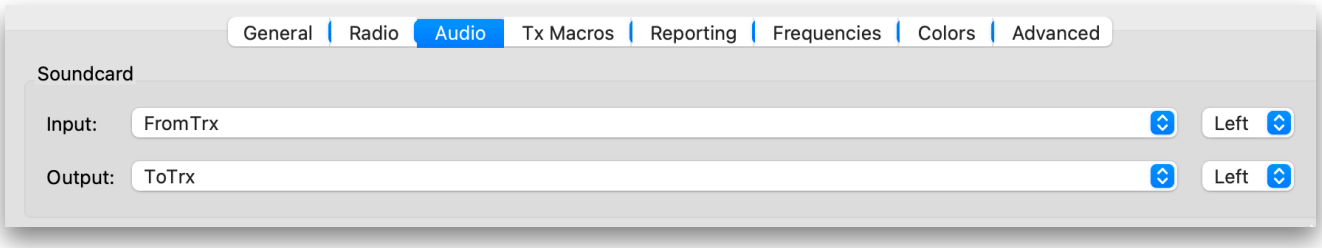
Tip: For setting and setting back, you can program a macro in each case.

The audio transmission to other applications, e.g. to WSJT-X, is somewhat more complicated.
To redirect the audio output from an output device (here TRX) to an input device (here WSJT-X), a virtual audio cable is required. The same applies to the other direction. There is special software for this, e.g. BlackHole. In the Audio-Midi Setup application, virtual devices and connecter cables can then be created:



In RUMlog, the audio signals must now be redirected to WSJT-X via virtual cables.





WSJT-X Setting

Important: The transceiver expects and transmits all audio data at a sampling rate of 48 kHz. In the Audio-Midi Setup Tool, all devices used should be set to 48 kHz.