New remote control for ICOM transceivers



Figure 1: Remote control of the IC-705 with the software "wfview"

"Wfview" is a new, simple to install software for remote control of Icom transceivers **(1)**. The special thing about the program is the open source solution (anyone can participate) and that the software is made available free of charge. In the following I describe the installation of the software in conjunction with an Icom IC-705.

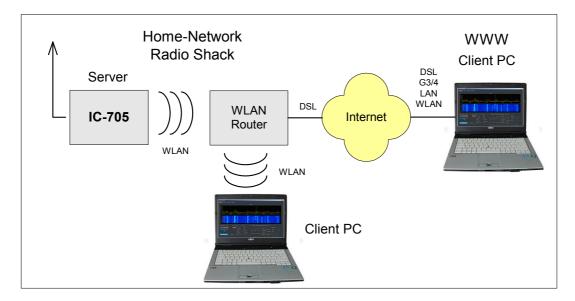


Figure 2: IC-705 connected to clients via WLAN router

Presettings on the IC705

The IC-705 (IC-9700, IC-7850, IC-7610) already has an integrated server and a WLAN interface, which makes remote control considerably easier. First, the IC-705 must be connected to the home WLAN

router (Fig. 2). To do this activate WLAN on the IC-705 under Menu -> Set and switch WLAN to ON. Furthermore under Connection Settings -> Access Pont

enter the password of the home router. After restarting, the router automatically connects to the IC-705 and the DHCP address assigned by the router appears in the "Connection Settings" menu, in the example 192.168.178.58 (Fig. 3). Make a note of this IP address.

CONNECTION SETTINGS	1/2				
Access Point					
Manual Connect					
DHCP (Valid after Restart)					
ON (192.168.178.58)					
IP Address (Valid after Restart) 192.168. 0. 10	U				

Figure 3: IC-705 in connection with the WLAN router

Make the following settings in the menu of the IC-705: WLAN Set -> Connect Settings -> DHCP: ON WLAN Set -> Network Name -> Network Name (e.g. werner) WLAN Set -> Remote Settings -> Network Control: ON WLAN Set -> Remote Settings -> Internet Access Line: FTTH WLAN Set -> Remote Settings -> Network USER1 -> Network User1 ID -> (e.g. user1), Network User1 Password (e.g. dc4ku1234)

WLAN Set -> Remote Settings -> Network User 1 -> Network User 1 -> Administrator: YES

Install the "wfview" software

Download the current wfview.exe for Windows (x86), Linux or MacOS from

https://wfview.org/download/ and start it. Under Settings, you only have to enter the data in the field outlined in red (Fig. 4): Radio IP Address: e.g. 192.168.178.58, Radio Control Port: 50001 and under Username and Password enter the same data as before in the Connection Settings of the IC-705. In addition, activate the item Connected over LAN. Finally, save the selected settings via Save Settings and Exit Program. That was it!

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View Band Frequency Settings							
Draw Peaks 🔳 When tuning, set lower digits to zero							
🗌 Use System Theme 🔳 Waterfall Dark Theme 🔳 Anti-Alias Waterfall 🔳 Interpolate Waterfall 🗌 Show full screen							
Adjust Reference Modulation Input: LAN 👻 Data Mod Input: LAN 👻							
PTT On PTT Off Enable PTT Controls							
O Connect over USB (serial) Serial Device: 🗤 👻 Baud: 👘 Server Setup 🗋 Manual Radio CL-V Address: 🗤							
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Please note: Changing the built-in network server requires pressing "Save Settings", dosing whilew, and re-opening. Please see the two Monto for more information.							
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rx latency: 112 ms / rtt: 24 ms / loss: 12557/107333 🤇	IC-705						

Figure 4: Wfview setup with the required entries, radio IP 192.168.178.58 and port 50001

After starting the software via Power on, the program opens (Fig. 5) and the IC-705 can be remotely controlled from all PCs / notebooks in the home network (Radio Shack) on which the software is installed.

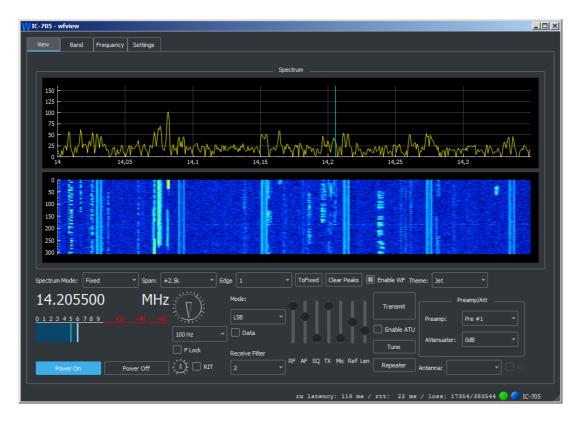


Figure 5: "IC-705-wfview" opened and in operation

There are basically three options for remote control of the IC-705: a) Via the IP address of the IC-705 in the home network (here -> 192.168.178.58) b) via the public IPv4 address of the router on the Internet (e.g. 91.36.146.218) or c) via a DynDNS address on the Internet (e.g. xxxx.dyndns.org).

If the IC-705 is to be controlled remotely from the Internet (b or c) a "port-forwarding" must be set up in the home router **(Fig. 6)**. To do this, open the router and release the IP address of the IC-705 under Internet -> Releases. In the example, the IP address 192.168.178.58 is released with the newly created ports 50061 to 50063 under UDP and TCP and thus forwarded to the Internet. Save the settings with Apply in the router (in the example Fritz!Box).

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Freigaben		-	HTTPS-Server	UDP	91.36.135.113	50001 - 50003	
MyFRITZ!-Konto		0	HTTPS-Server	TCP	91.36.135.113	50001 - 50003	
DSL-Informationen							
 Telefonie 	-					ОК	Abbrechen

Figure 6: Port forwarding in the router

The data must then be corrected accordingly in the settings of wfview (Fig. 7). The currently valid public IPv4 address of the router is now entered under Radio IP Address (91.36.146.218) and the forwarded port (50001) under Radio Control Port. Save the new settings with Save Settings and Exit.

Wwfview							
View Band Frequency Settings							
Draw Peaks 🔳 When tuning, set lower digits to zero							
🗌 Use System Theme 🔳 Waterfall Dark Theme 🔳 Anti-Alias Waterfall 🔳 Interpolate Waterfall 🗌 Show full screen							
Adjust Reference Modulation Input:							
PTT On PTT Off Enable PTT Controls							
O Connect over USB (serial) Serial Device: Auto * Baud: 1900 * Server Setup Manual Radio CI-V Address: Sector							
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Please note: Changing the built-in network server requires pressing "Save Settings", dosing wfview, and re-opening.							
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Figure 7: Enter the IP address of the router and the forwarded port under Settings

That was it! The IC-705 is then in the home network (local) as well as from the Internet remotely controllable worldwide.

Note: When using the public IPv4 address of the router (b), it must be taken into account that the router usually changes this daily for security reasons. Access via the Internet with a DynDNS address is easier. The domain is dynamically updated in the Domain Name System (DNS). This means that if the router changes its IP address, the domain entry of the server changes automatically with it. A change of the router IP no longer plays a role, the DynDNS address always remains valid. If you have a DynDNS address, you enter it under Radio IP Address instead of the router address.

The setting options of the IC-705 under "View" (Fig. 5) are self-explanatory. After clicking on "Transmit", the transmitter switches on, using either the microphone in the notebook / PC or a headset.

The popular Icom IC-7300 can of course also be remotely controlled via Wfview. Under Settings, however, further settings have to be made, because unfortunately no server is built into the IC-7300 and it does not have a WLAN/LAN interface, only USB. Willi Passmann, DJ6JZ described the installation with an IC-7300 in detail under (2), so there are no problems here.

Conclusion

Wfview works under Windows 7 to 10 and, in contrast to the ICOM software RS-BA1/2, provides a pleasantly large screen in which all settings can be made very easily. The open source software is constantly being expanded and reworked by a group of specialists. What else is planned in the future can be found at https://wfview.org/about, we can look forward to it!

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Literature:

(1) Wfview Homepage

https://wfview.org/

(2) Wfview - Open Source Interface for Icom Transceiver

Willi Passmann, DJ6JZ FA 11/2021