How to connect and use WFView and the Icom 705 to do digital modes wireless (via WIFI).

Version 1.01

In the context of this document, Wireless = Wifi = WLAN.

No Bluetooth is used or mentioned. Virtual audio cable, free and paid version can be just and should be installed already.

Tested on Icom 705 version 1.26

1. How to setup your IC-705 to act like a WIFI Access Point, and connect your PC to it. (point to point)
2. How to setup your IC-705 to connect to your WIFI (or hotspot)
3. Use WFView via virtual comport?
4. Use WFView via rigctld (easier)?
5. How to configure JTDX with use of the  virtual comport?
6. How to configure JTDX with use of rigctld to have IC-705 access?

Links to all software on last page.

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1. **How to setup your IC-705 to act like a WIFI Access Point, and connect your PC to it.**

In this mode, the IC-705 will act like an Access Point and broadcast a SSID for a client to connect to.

This means, point to point. The PC you use will only be able to communicate with the IC-705 not with other devices in the network.
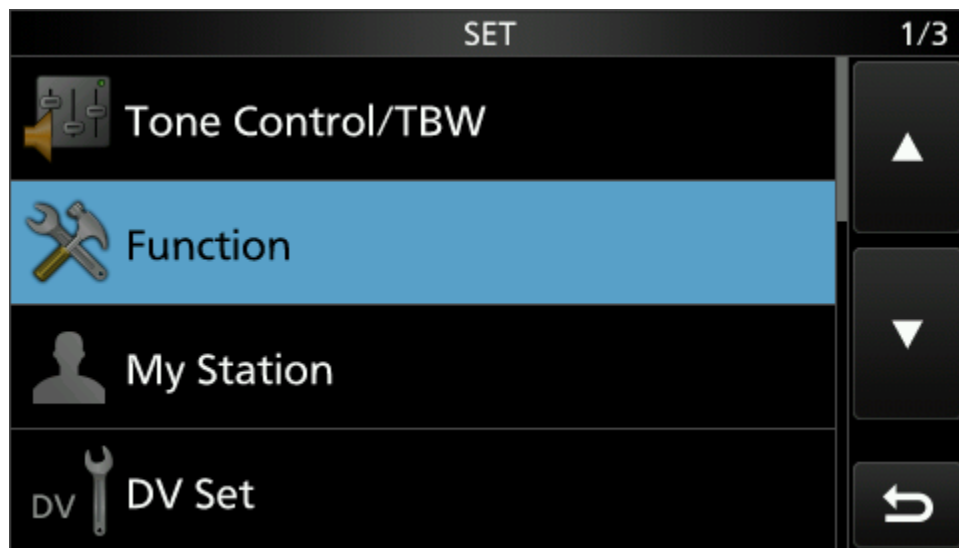
You will need to configure the name of the SSID and the password and encryption type in the IC-705.

After you have configured the SSID ,the  SSID password and encryption type, you also need to add a username and password to get access to the radio controls.
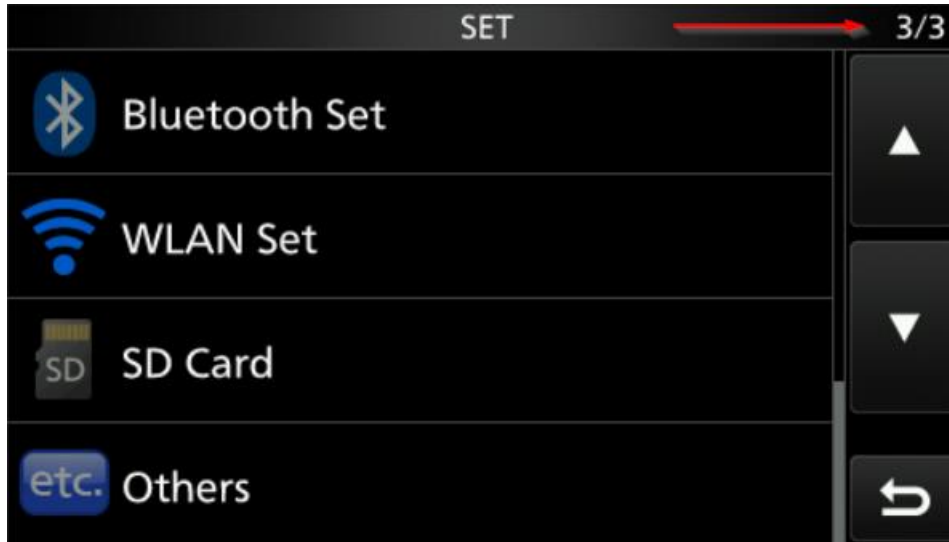
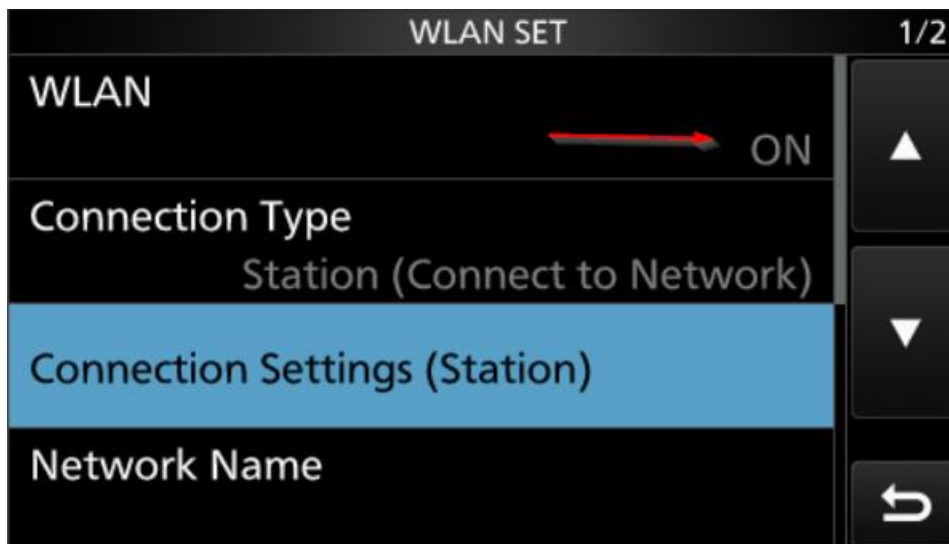Power the IC-705 on and press Menu
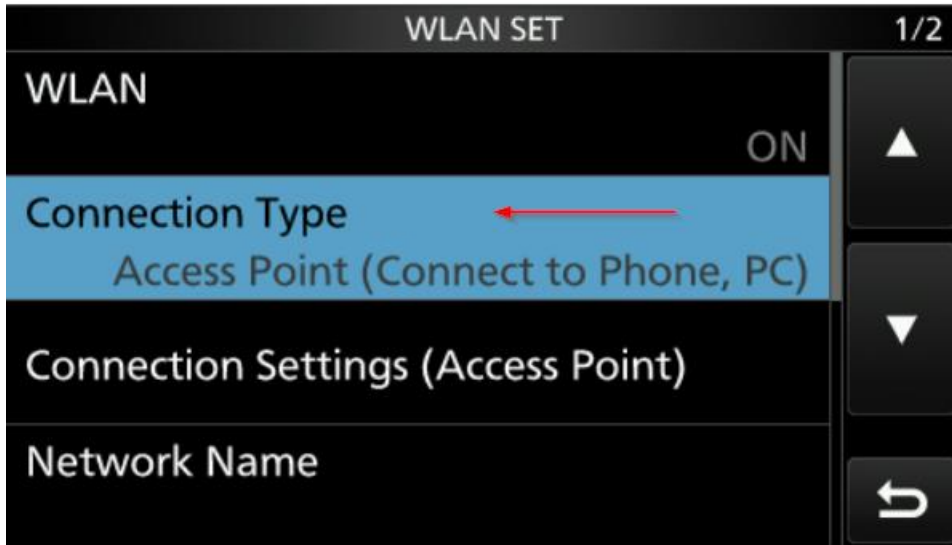


Then choose "SET"

Then with the down arrow go to the third (3/3) menu.



Now select "WLAN Set"



And then select "WLAN" and set it to ON.
After that press the exit button and power off the IC-705.
It needs a restart to enable WLAN.
So switch of the IC-705 and power it back on.
When the IC-705 is powered on again, we continue,
Press again, Menu, Settings, WLAN Set.
Choose "Connection Type

Choose "Access Point (Connect to Phone, PC)" with this mode the IC-705 is acting like an Access Point.

The next step is to configure which SSID (WLAN) and password the IC-705 will used and broadcasted.
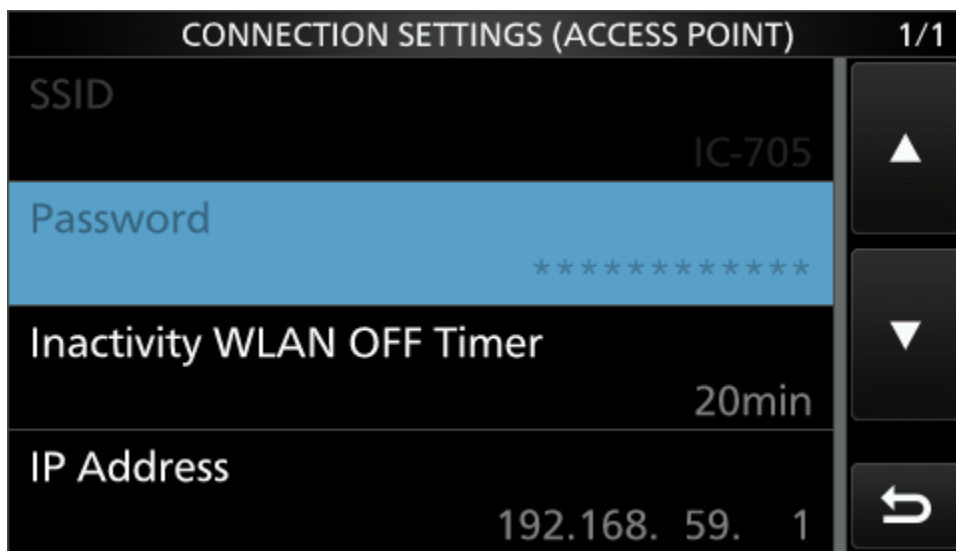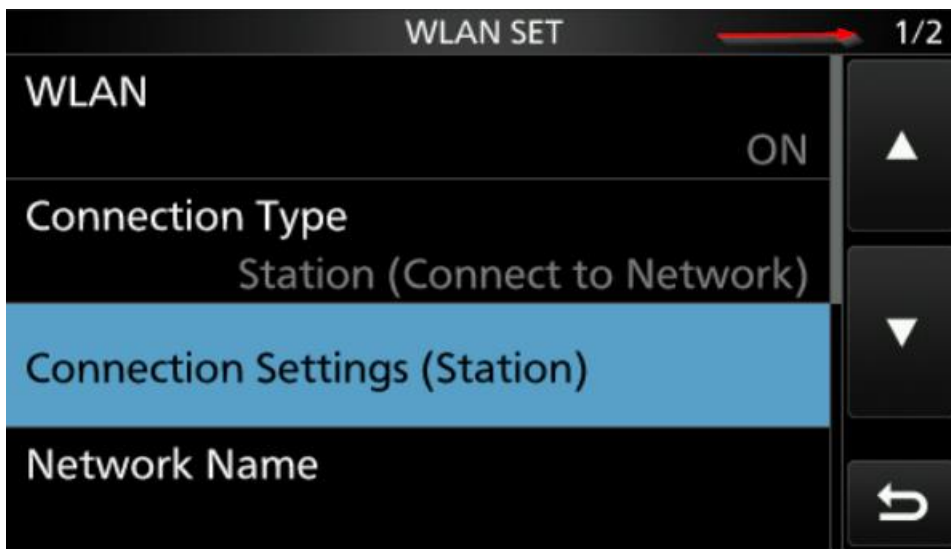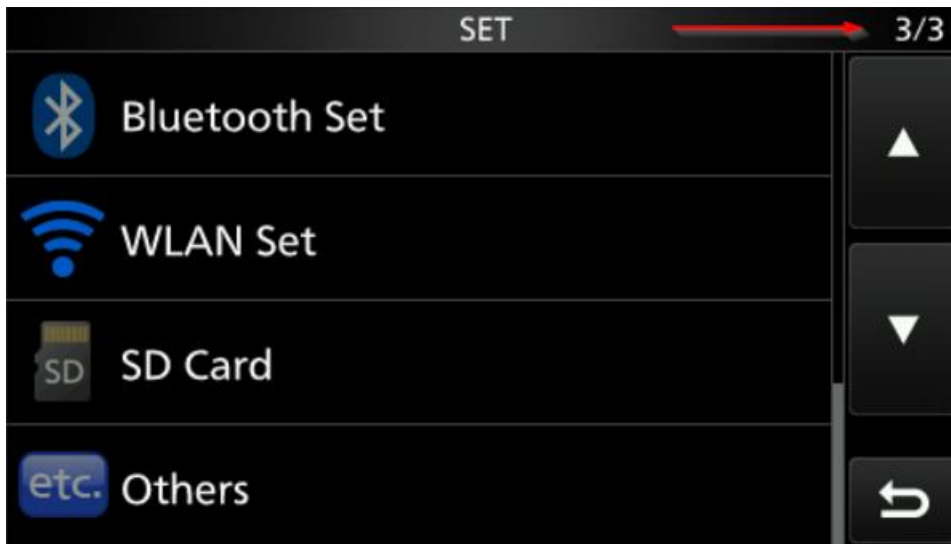


So in the above screenshot configure the "SSID" or leave it at IC-705, and configure your own password.

With this SSID and password, your PC can connect to the IC-705 as access point.
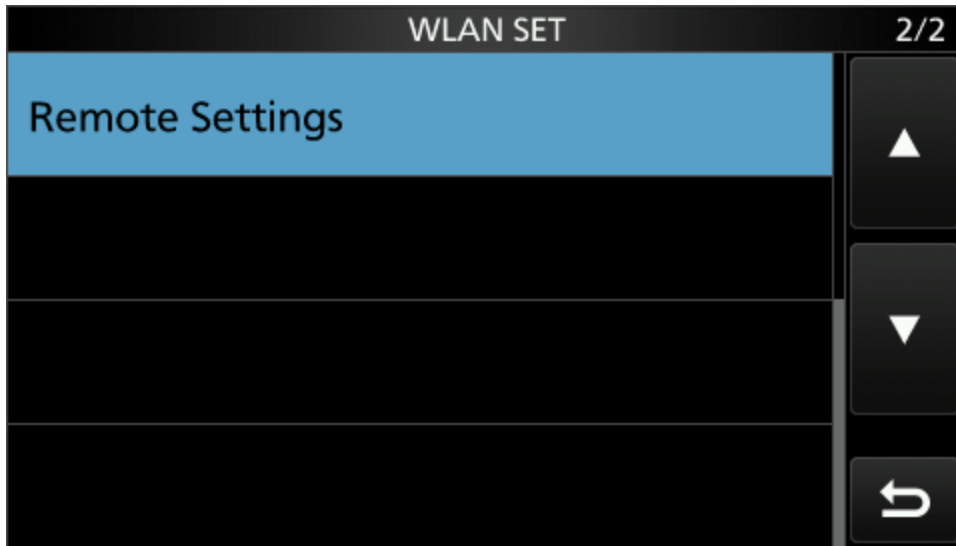
**Next step is to setup an username and password to access the IC-705 from remote.**

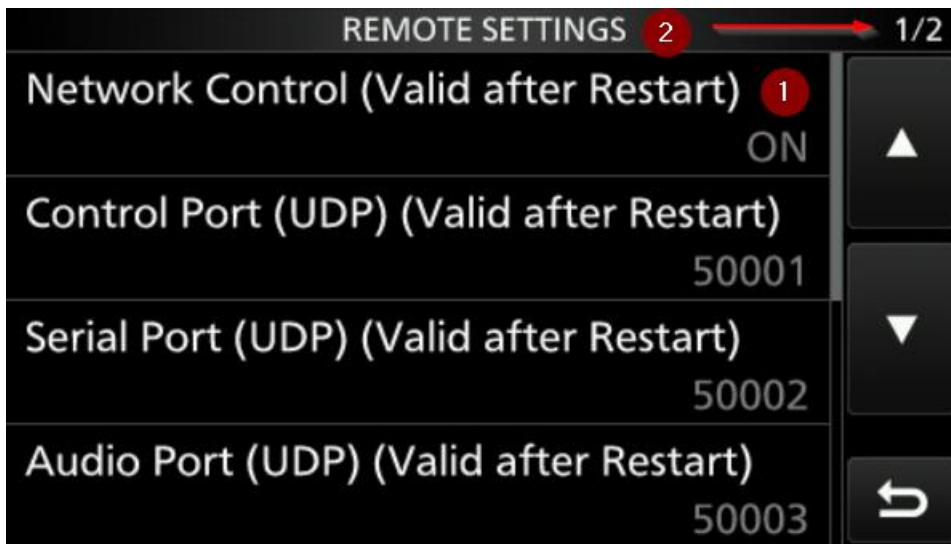This username and password will be used by WFView to get access to the IC-705.

Go back to the menu "WLAN Set"





Then go to page 2/2, It will show "Remote Settings"

Remote Settings

▲

▼

↩

Click on "Remote Settings"

REMOTE SETTINGS 2 ⟶ 1/2

Network Control (Valid after Restart) 1
ON

▲

Control Port (UDP) (Valid after Restart)
50001

Serial Port (UDP) (Valid after Restart)
50002

▼

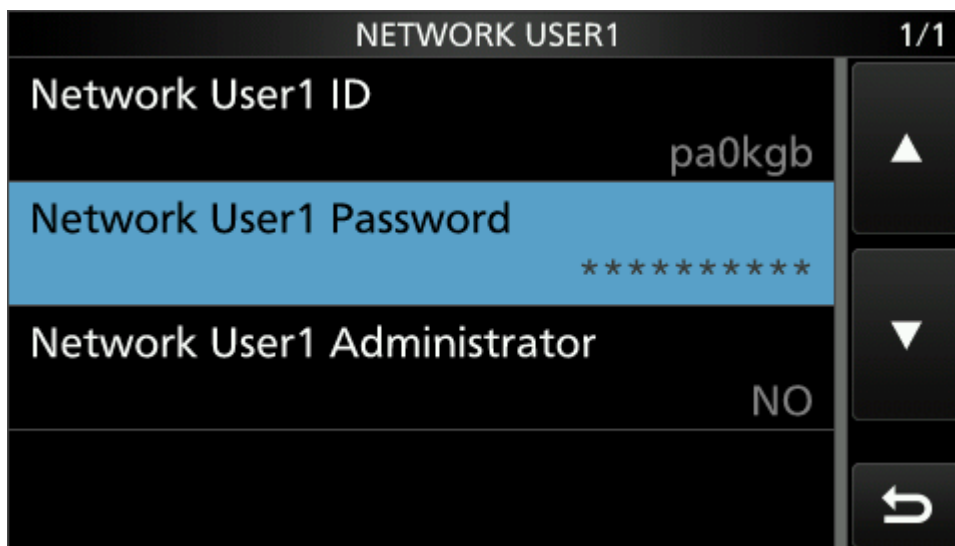Audio Port (UDP) (Valid after Restart)
50003

↩

Then first you need to allow (enable) remote access to the IC-705, change "Network Control" to ON.

The restart you can do when we finished all steps.

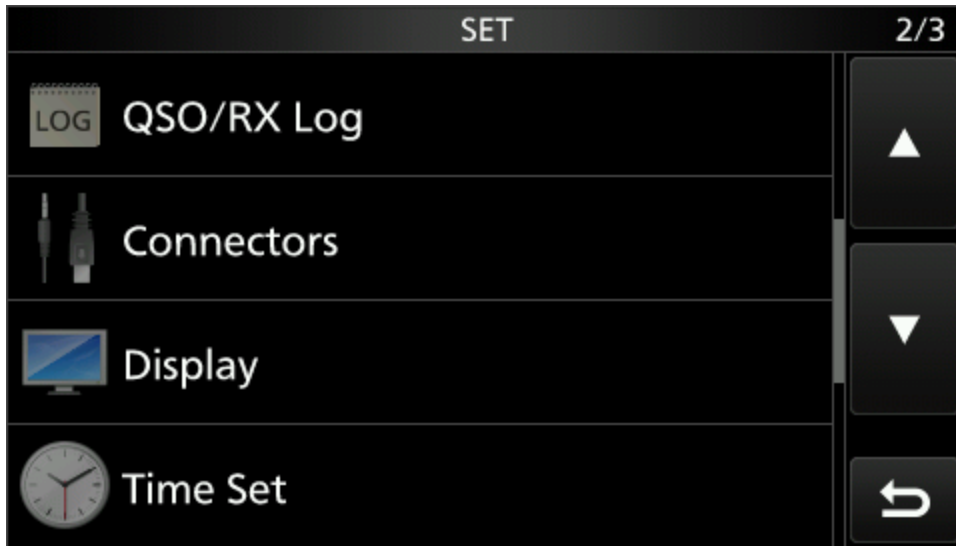Then go to page 2/2, and select "Network User1"
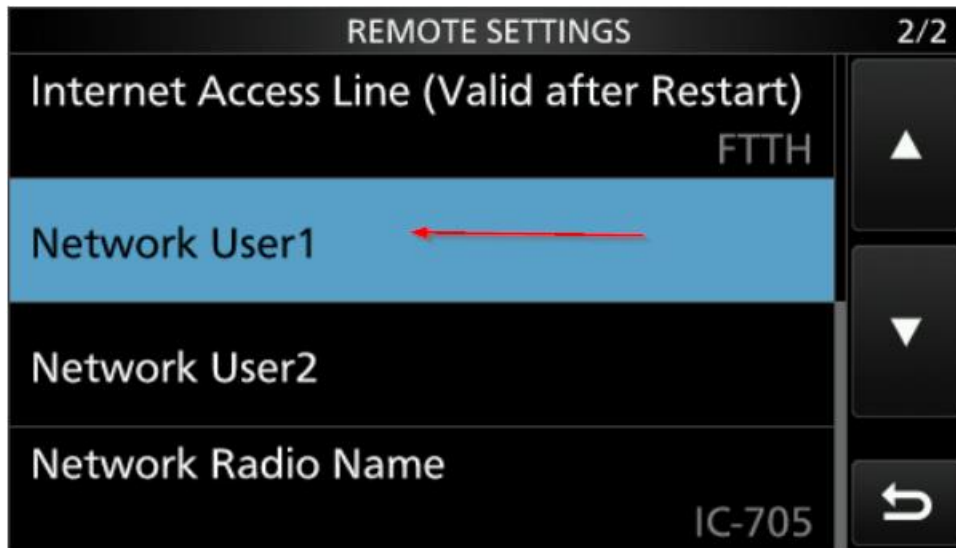


Then configure at " Network User1 ID" the username you want to use to remote control the IC-705 and with "Network User1 Password" fill in a password. Write them down as you need them later with WFView again.
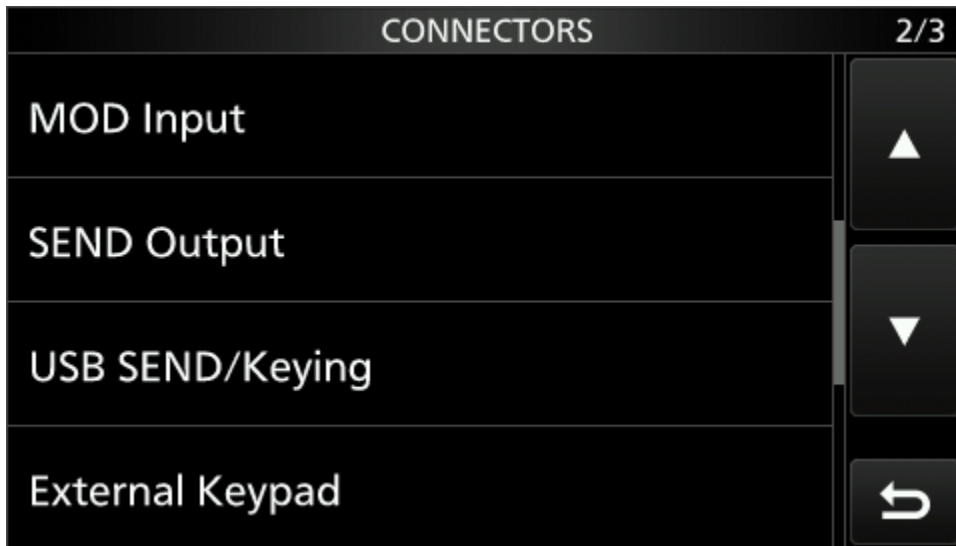


Next step is to redirect,  that  the Audio of the IC-705 goes via WLAN instead of MIC, USB.
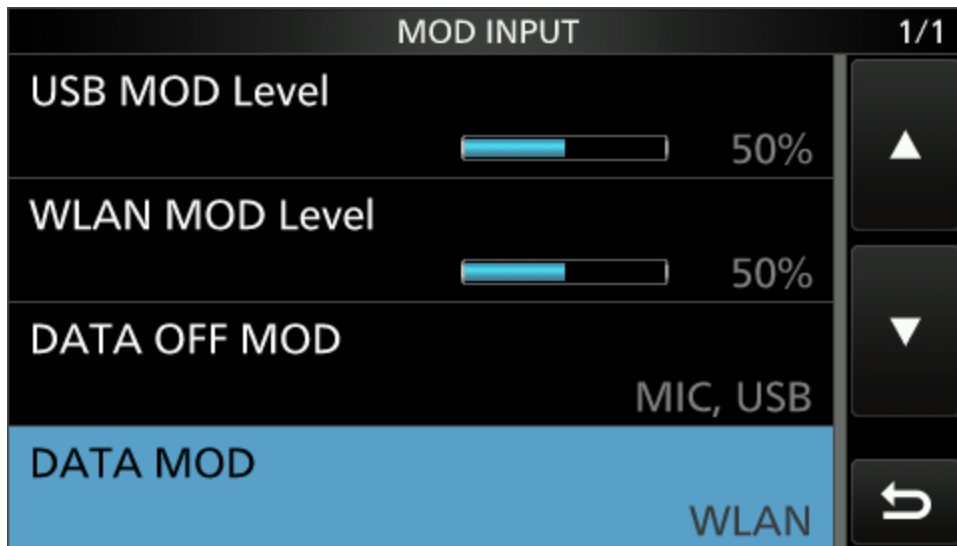
For this go from the main menu, back to SET and select

Select "Connectors"



Then select " Mod Input"

USB MOD Level 50%

WLAN MOD Level 50%

DATA OFF MOD MIC, USB

DATA MOD WLAN

Then select " DATA MOD" and change it to WLAN.

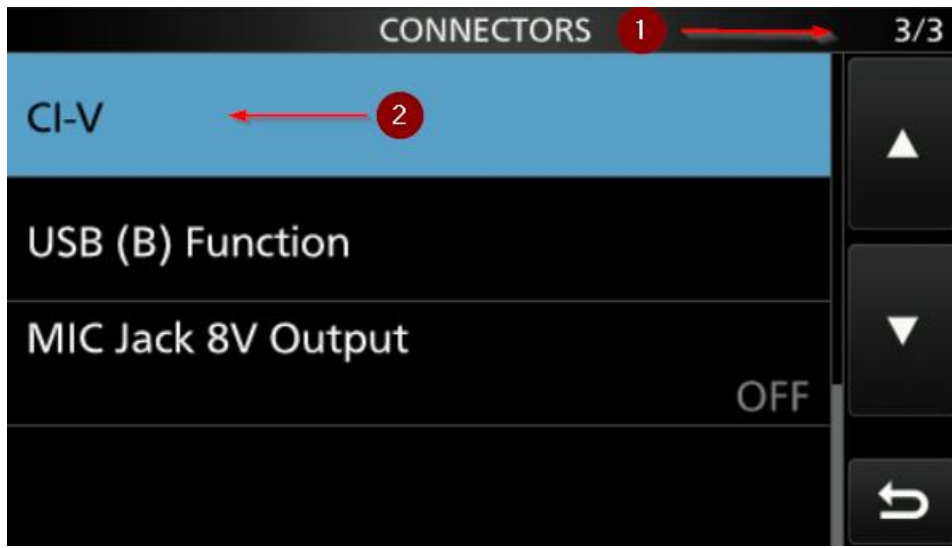Now power off the IC-705 and power it back on.

You have now the IC-705 configured to access it via Wifi.

One more setting needs to be done to enable transmit via CAT / remote control.
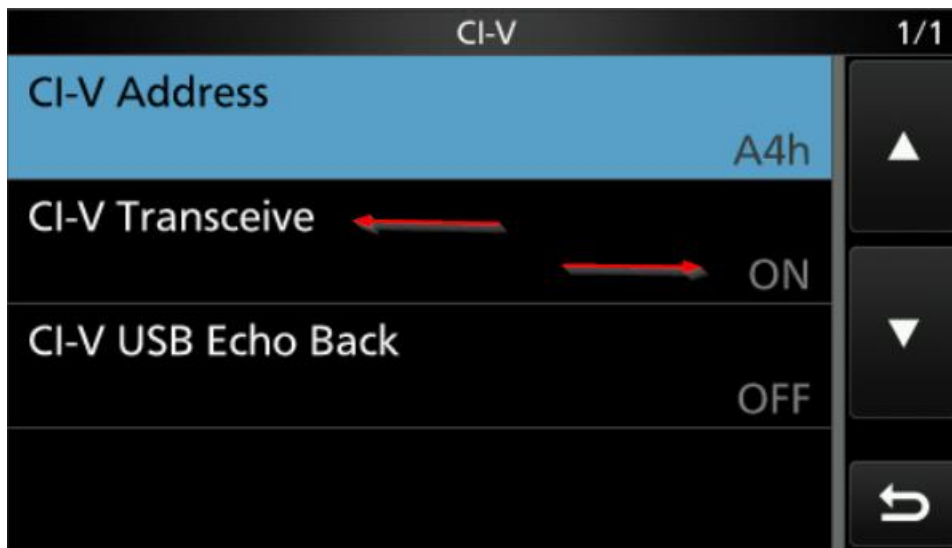
Press Menu, then Set, and go to the second screen, and click on Connectors.

LOG QSO/RX Log

Connectors 2

Display

Time Set
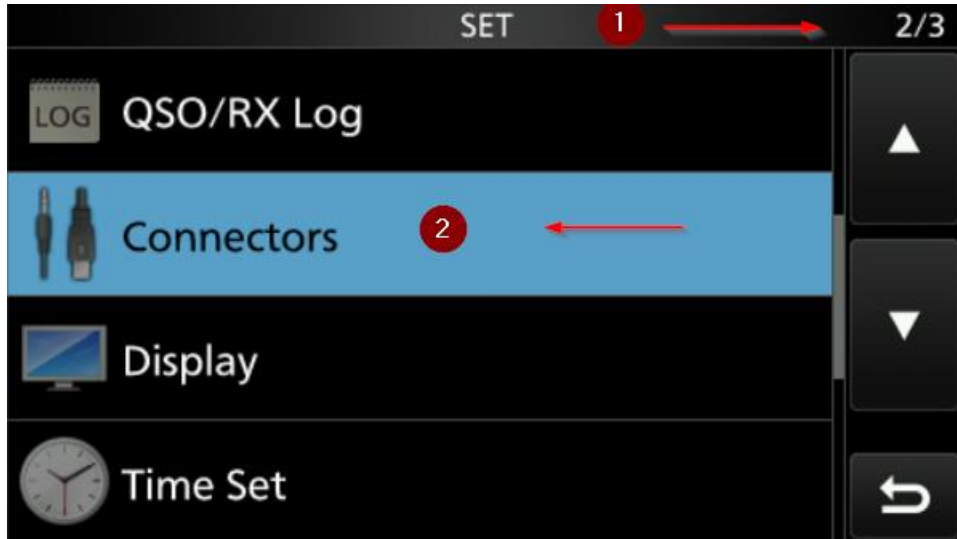
Now go to menu 3/3 and click on CI-V.



Now change the CI-V Transceive to ON.



**You can now continue with the WFView settings.**

2. **How to setup your IC-705 to connect to your WIFI (or hotspot) and connect your PC to it.**

In this mode, the IC-705 connect to an Access Point as a wireless client. So your PC will connect to the IC-705 via your local wifi network.

You will need to configure enable WLAN, select the SSID WLAN you want to connect to and the password of that WLAN. Default it uses DHCP (automatic IP address).
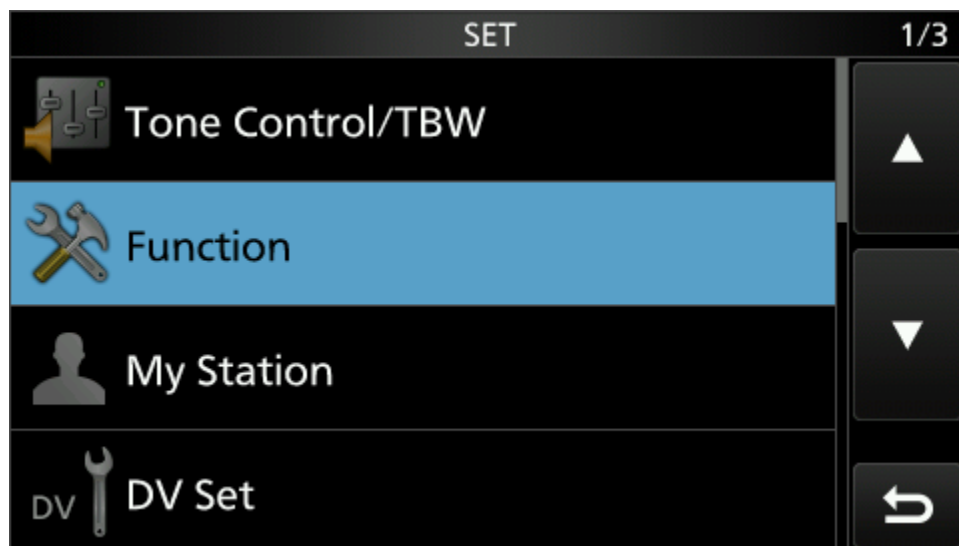The advantage is that you can use your PC still to the internet, and make sure your time sync is working for FT4/FT8.
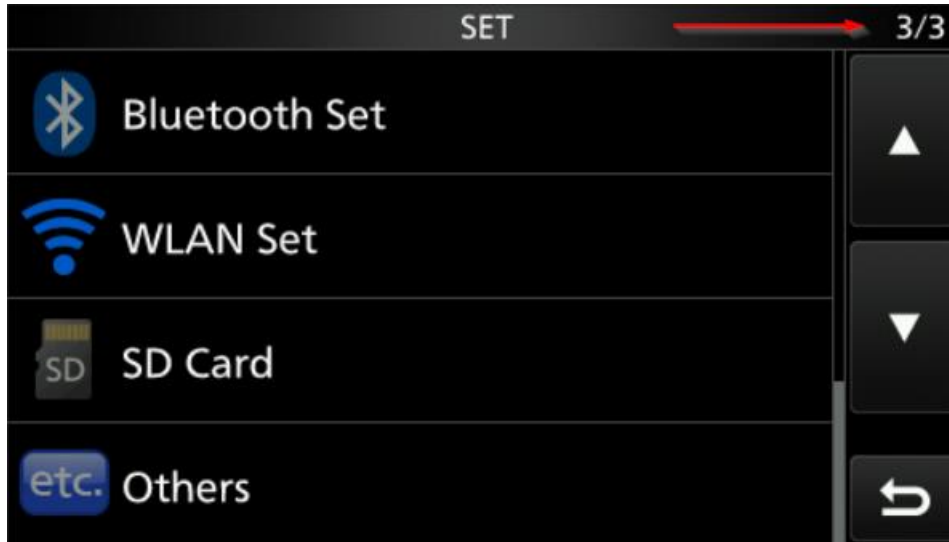In the field I use my mobile as hotspot.
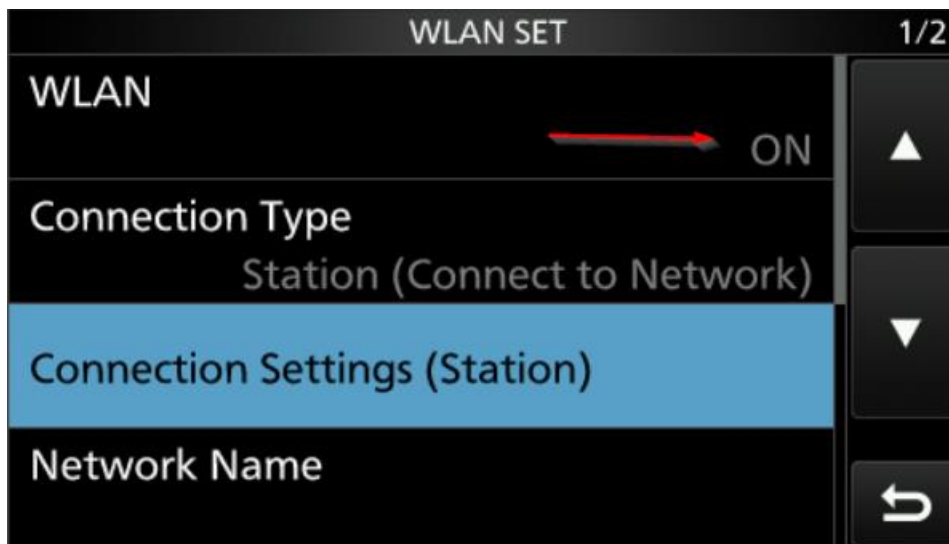
Power the IC-705 on and press Menu



Then choose "SET"

Then with the down arrow go to the third (3/3) menu.



Now select "WLAN Set"



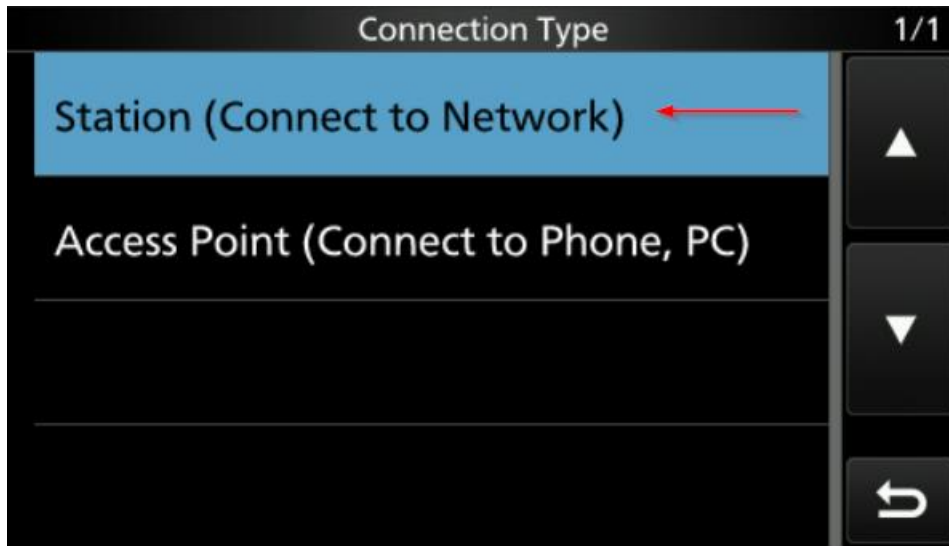And then select "WLAN" and set it to ON.

After that press the exit button and power off the IC-705.
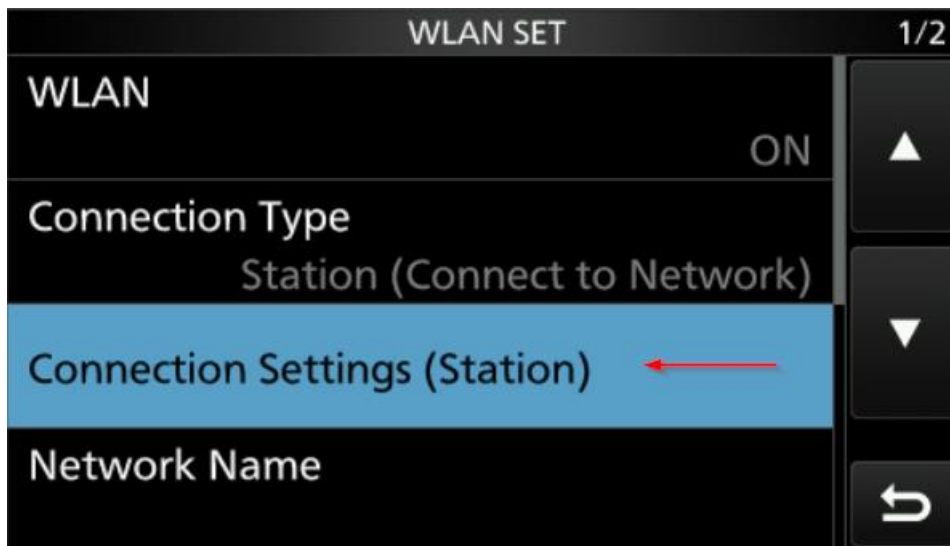
It needs a restart to enable WLAN.

When the IC-705 is power on again, we continue,

Press again, Menu, Settings, WLAN Set.

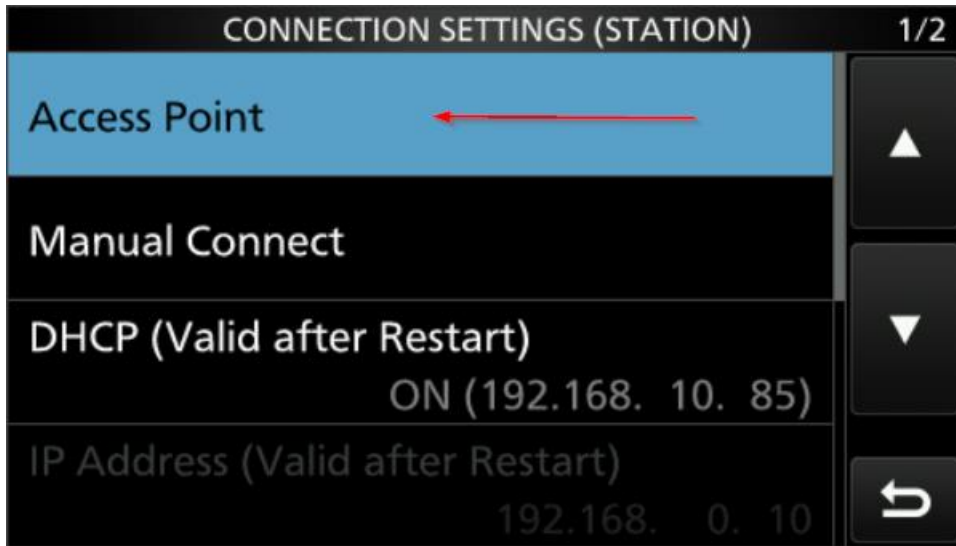Choose "Connection Type"

Station (Connect to Network)

Access Point (Connect to Phone, PC)

As in this section we are going to connect the IC-705 to the Wifi, we select " Station (Connect to Network) and then press the previous ⤺ button.
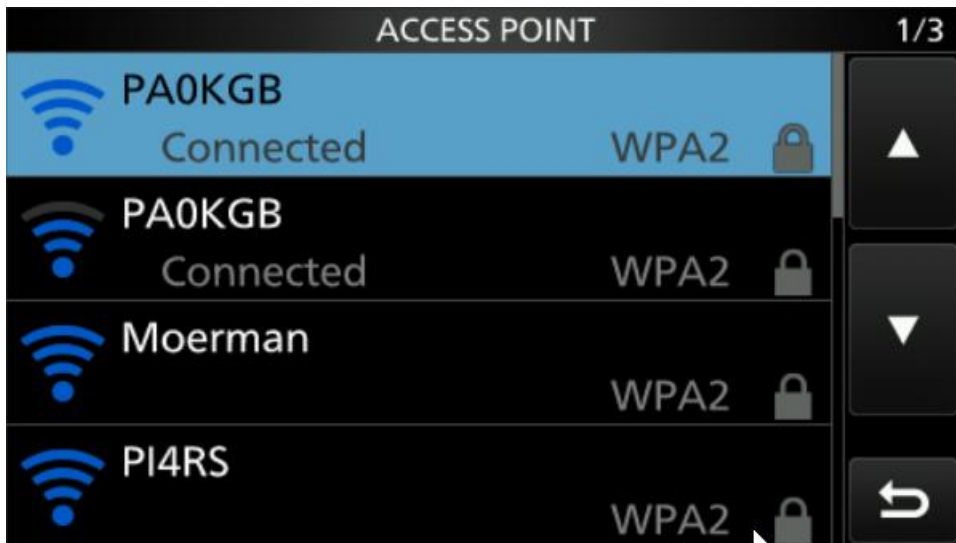
WLAN
ON

Connection Type
Station (Connect to Network)

Connection Settings (Station)

Network Name

Choose then "Connection Settings"

Access Point

Manual Connect

DHCP (Valid after Restart)
                          ON (192.168.  10.  85)

IP Address (Valid after Restart)
                          192.168.    0.  10

And then select "Access Point"

After this you will get a list of your local Wifi access points that the IC-705 can see.

Select your own local wifi  (or mobile hotspot).

ACCESS POINT    1/3

PA0KGB
    Connected                    WPA2

PA0KGB
    Connected                    WPA2

Moerman
                                 WPA2

PI4RS
                                 WPA2

Click on your own Wifi, I have clicked here on mine " PA0KGB"

Password

1

<<Connect>> 2

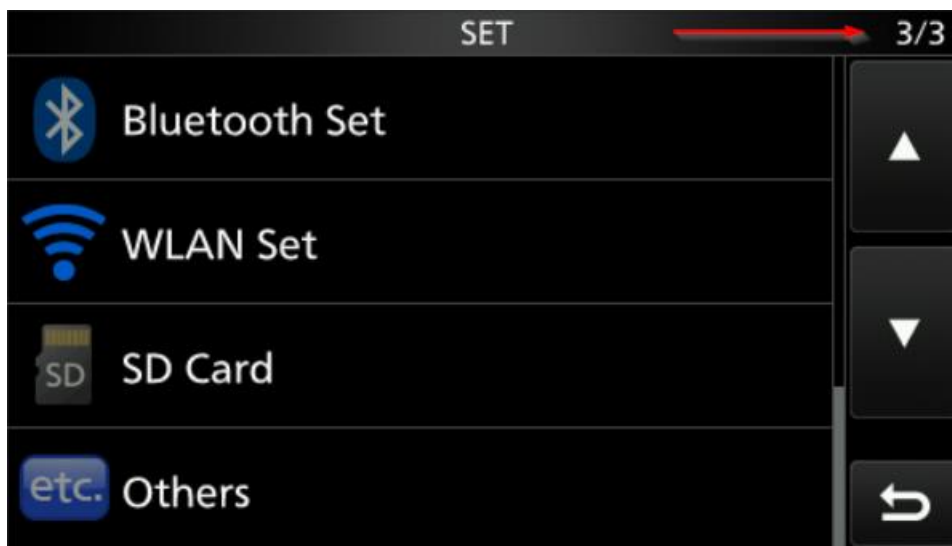First select "Password" and then fill in the password of your wifi.

Then select "<<Connect>>"

**The IC-705 will now be connected to your already existing own wifi.**

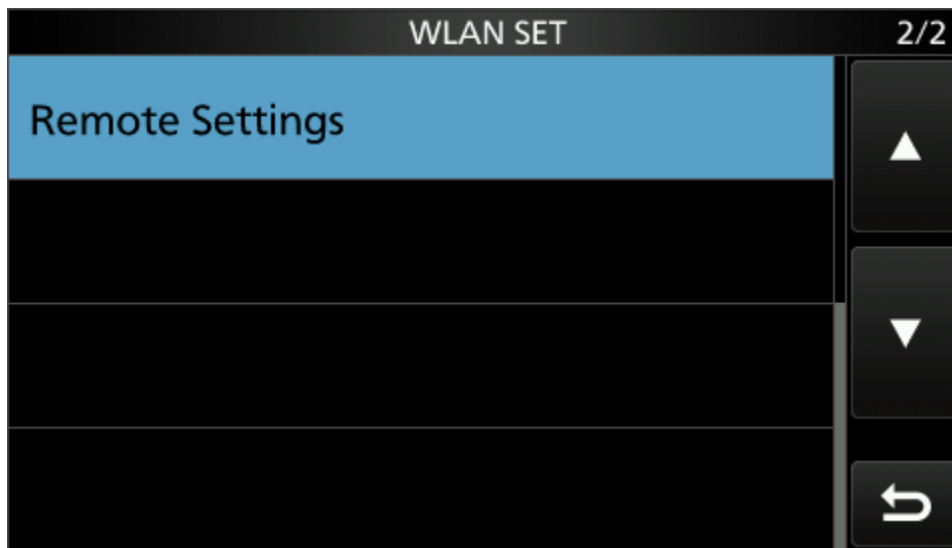**Next step is to setup an username and password to access the IC-705 from remote.**

This username and password will be used by WFView to get access to the IC-705.

Go back to the menu "WLAN Set"

Bluetooth Set

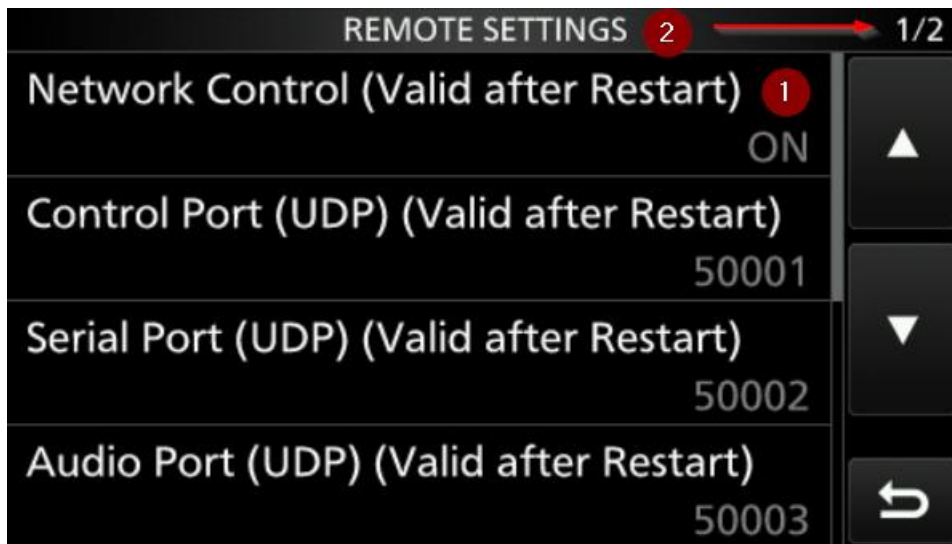WLAN Set

SD Card

etc. Others

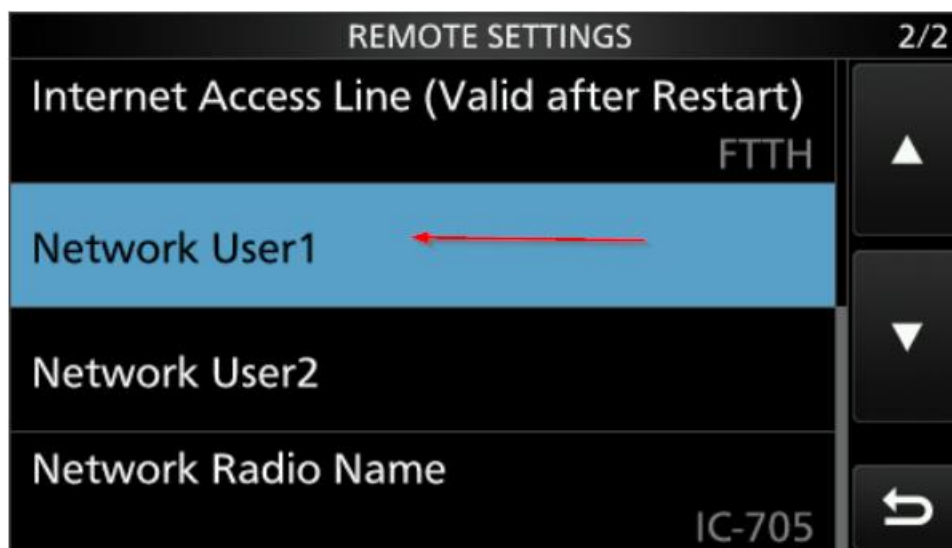Then go to page 2/2, It will show "Remote Settings"
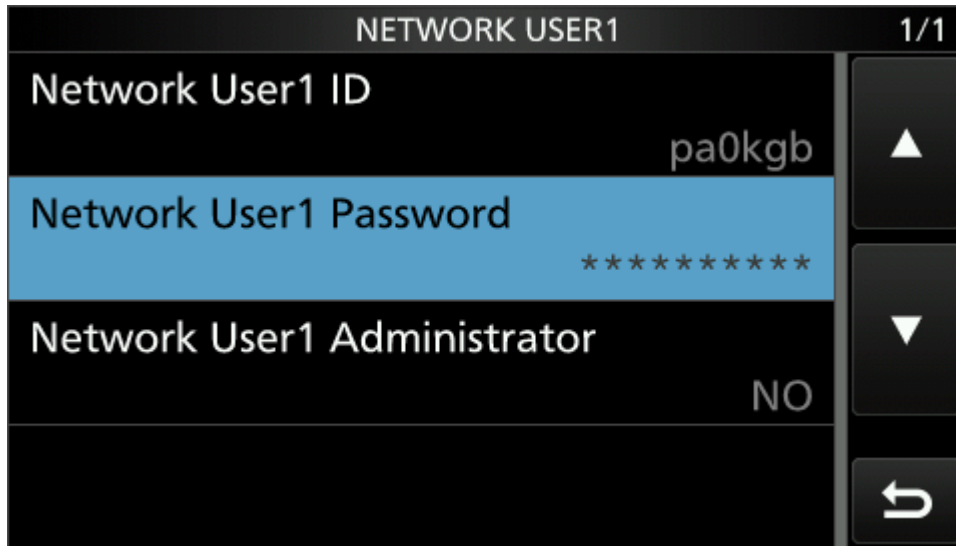


Click on "Remote Settings"

Then first you need to allow (enable) remote access to the IC-705, change "Network Control" to ON.

The restart you can do when we finished all steps.
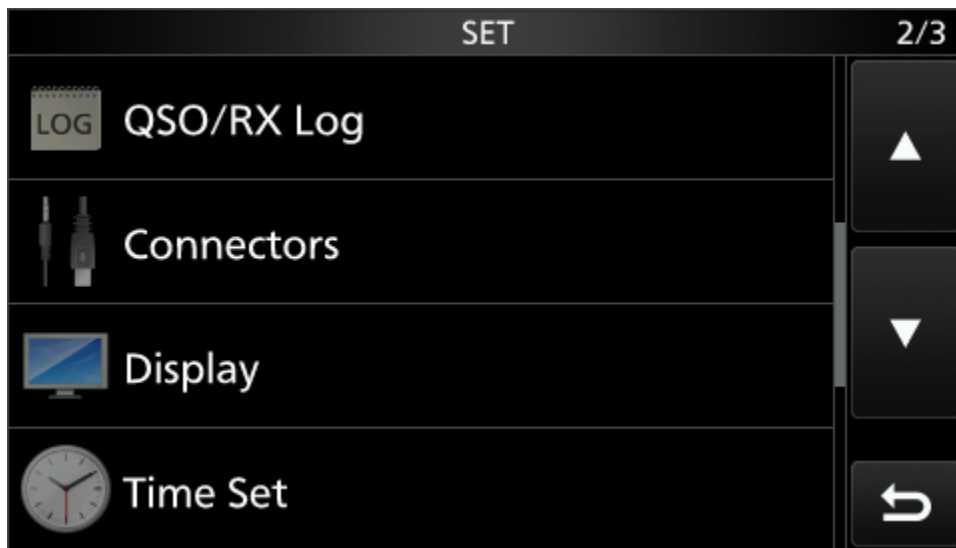
Then go to page 2/2, and select "Network User1"

Then configure at " Network User1 ID" the username you want to use to remote control the IC-705 and with "Network User1 Password" fill in a password. Write them down as you need them later with WFView again.

NETWORK USER1 1/1

Network User1 ID
pa0kgb

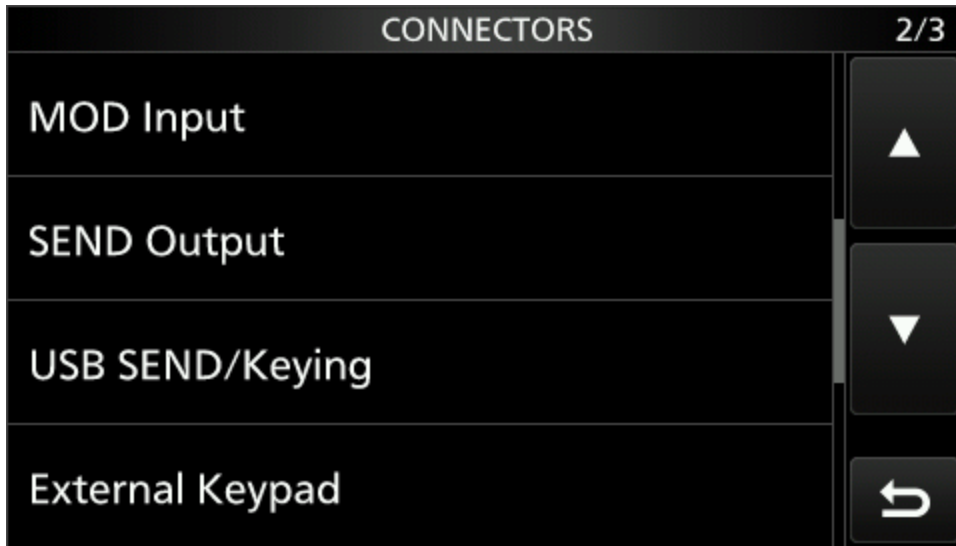Network User1 Password
**********

Network User1 Administrator
NO

Next step is to redirect that the Audio of the IC-705 goes via WLAN instead of MIC, USB.

For this go from the main menu, back to SET and select

SET 2/3

LOG QSO/RX Log

Connectors

Display

Time Set

Select "Connectors"

MOD Input

SEND Output

USB SEND/Keying

External Keypad

Then select " Mod Input"

USB MOD Level

50%

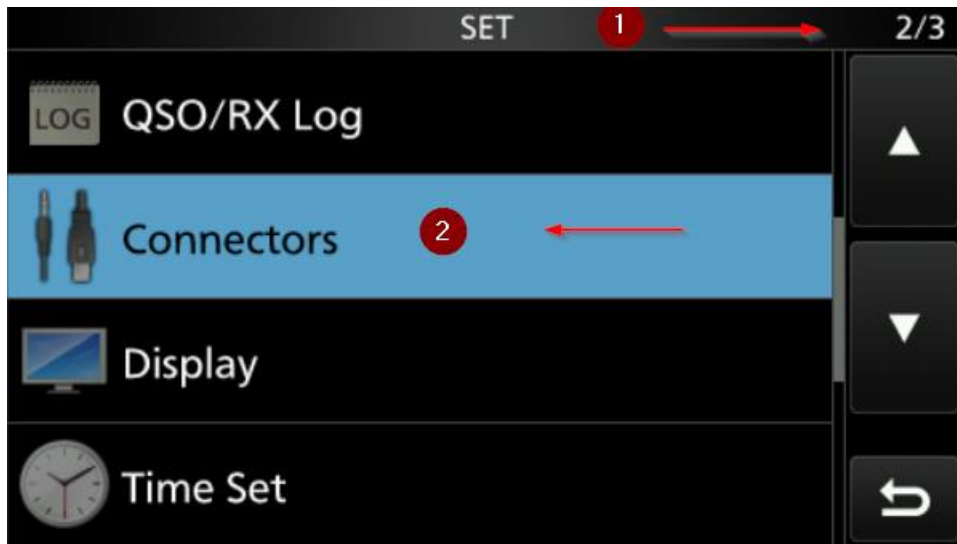WLAN MOD Level

50%

DATA OFF MOD

MIC, USB

DATA MOD

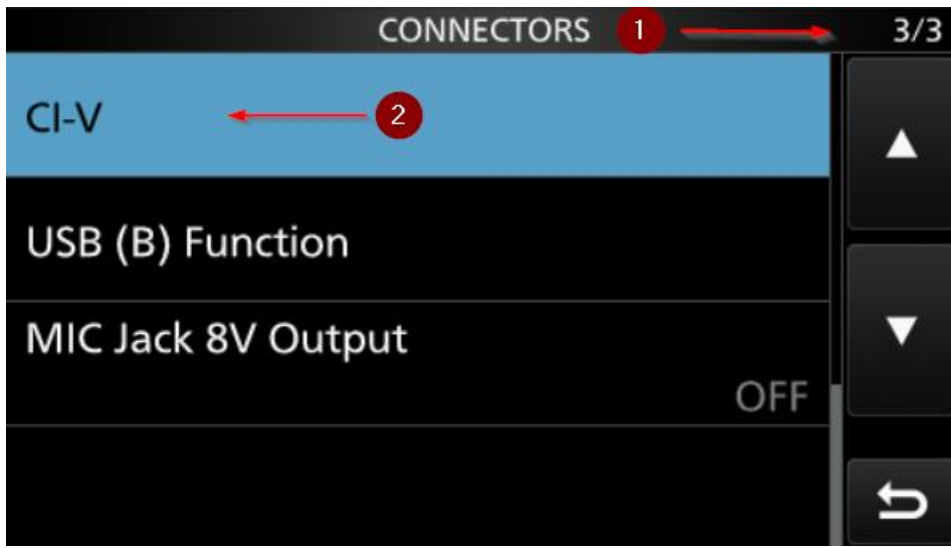WLAN

Then select " DATA MOD" and change it to WLAN.

Now power off the IC-705 and power it back on.

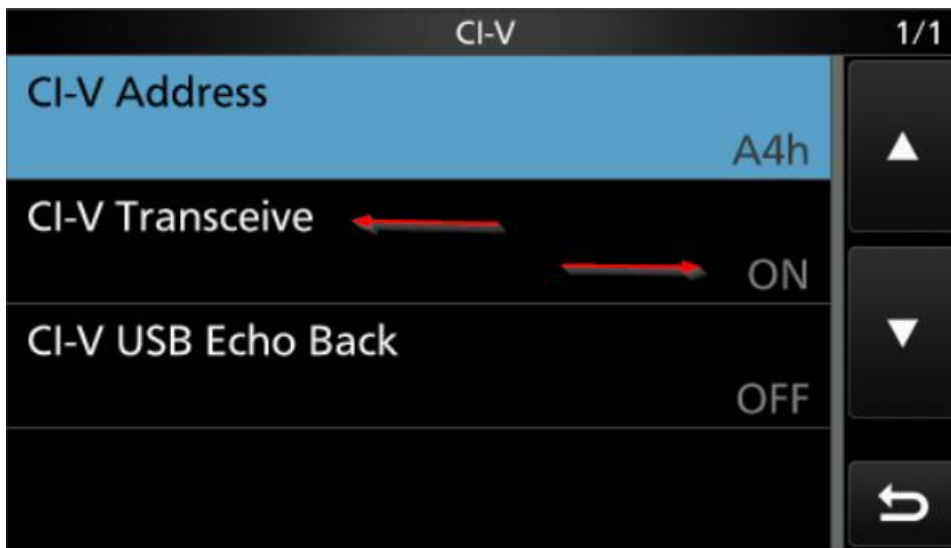You have now the IC-705 configured to access it via Wifi.

One more setting needs to be done to enable transmit via CAT / remote control.

Press Menu, then Set, and go to the second screen, and click on Connectors.

Now go to menu 3/3 and click on CI-V.



Now change the CI-V Transceive to ON.



**You can now continue with the WFView settings.**
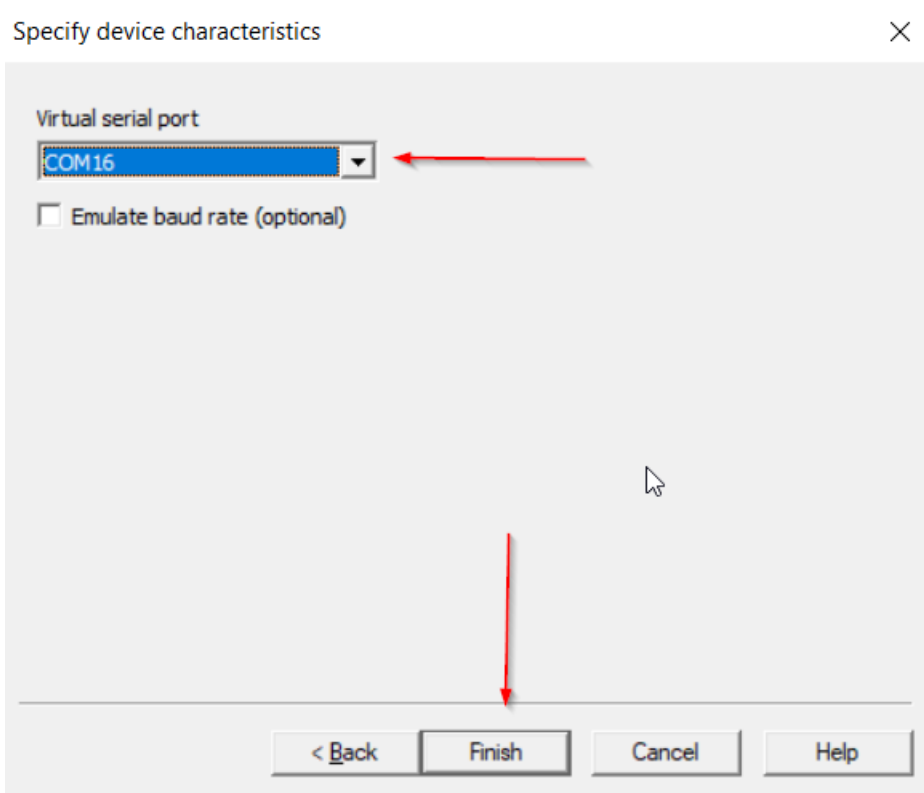
**3. Use WFView via virtual comport?**

1. Connect your IC-705 to your local wifi (or hotspot), and write down it's IP address (this line will be extend later with details on how to setup your IC-705 for WIFI.
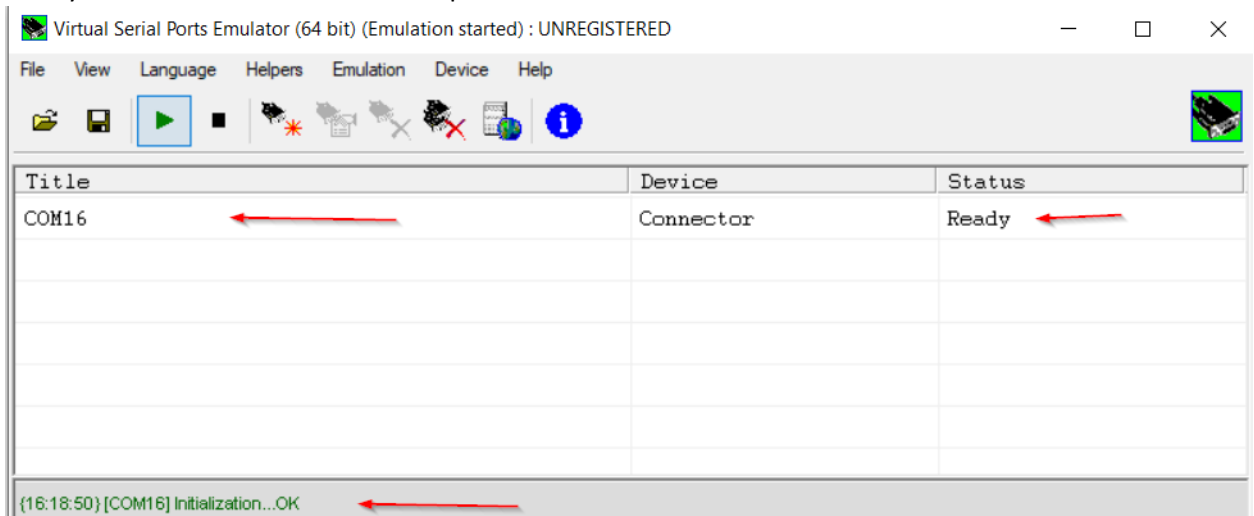2. Start VSPE.
3. Click on this icon:
4. Then make sure it says, connector and press next (it takes a few seconds before you can continue on point.
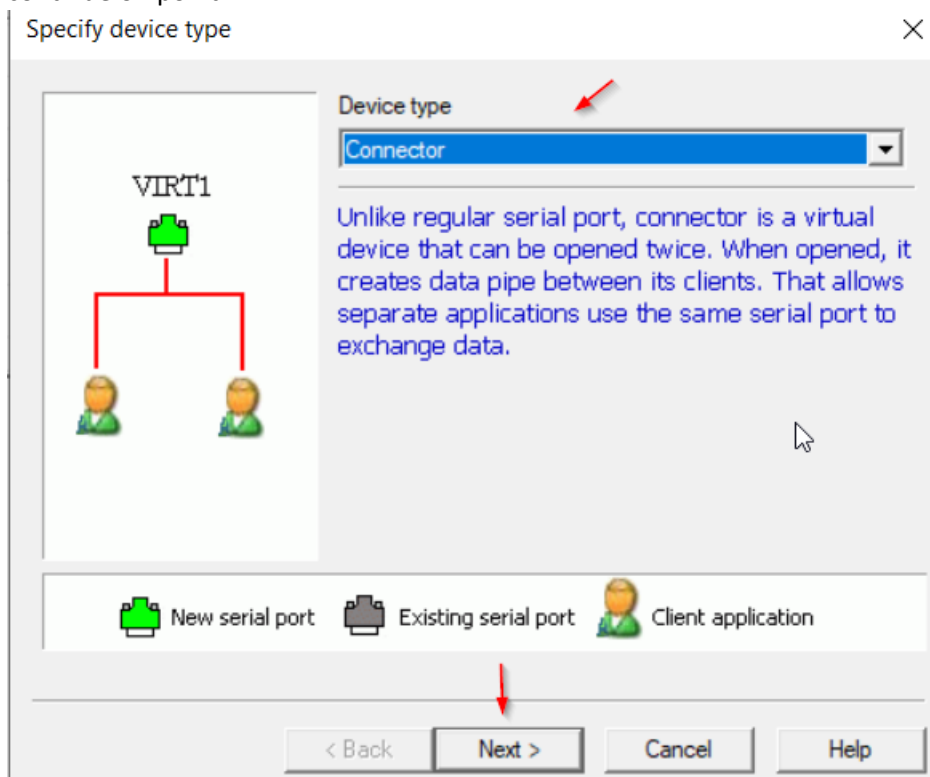


5. Now select the comport you want to virtual create. I have chosen COM16, as this is a high port and normally not used for other programs. Then press next.

Specify device characteristics                                    ✕

Virtual serial port
[COM16          ▼]          ⟵━━━━━

☐ Emulate baud rate (optional)


                           ↓


─────────────────────────────────────────────────────────────
              < Back      Finish        Cancel       Help

6. Now you will see that the virtual comport is active.

Virtual Serial Ports Emulator (64 bit) (Emulation started) : UNREGISTERED        —    ☐    ✕

File    View    Language    Helpers    Emulation    Device    Help

| Title | Device | Status |
|-------|--------|--------|
| COM16 ⟵━━━━━ | Connector | Ready ⟵━━ |
| | | |
| | | |
| | | |
| | | |
| | | |

{16:18:50} [COM16] Initialization...OK   ⟵━━━━━

7. The next step is to configure WFview.
8. Start WFView and go to the Settings menu.
9. Fill in the marked items as below.
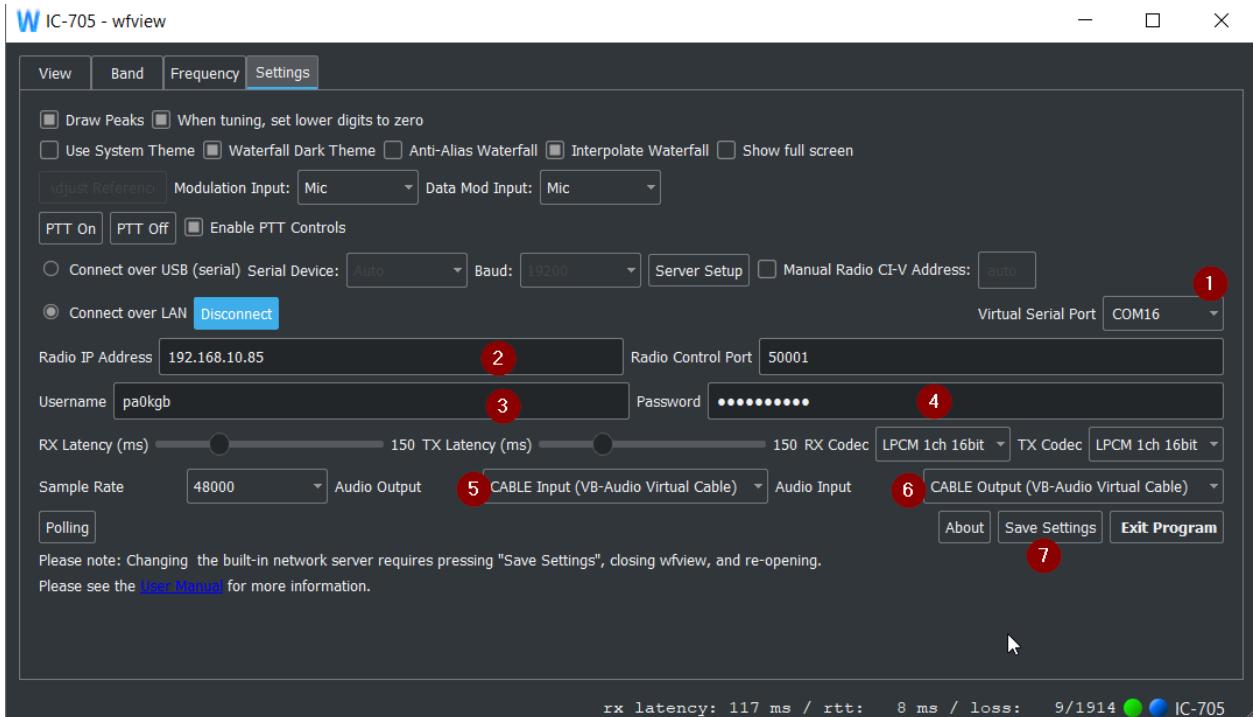
1 = The virtual comport you just created.

2 = The IP Address of the IC-705.

3 & 4 = The username and password you have configured in the IC-705.

5 & 6 = Where the audio input and output should go to, select the CABLE input/output.

7 = To save the settings.

10. Now press on Connect (which is next to the line "Connect over LAN"

11. On the bottom line you should see rx latency information coming and also green and blue ball with IC-705 as seen above.

12. You now have WFView working.

### 4. Use WFView via rigctld (easier)?

Start WFview and go to the settings menu.

1 = Click on "Connect to LAN" don't click on the connect button behind it yet !.

2 = Enable Rigctld and make sure that with point 3 the virtual serial port is set to None.
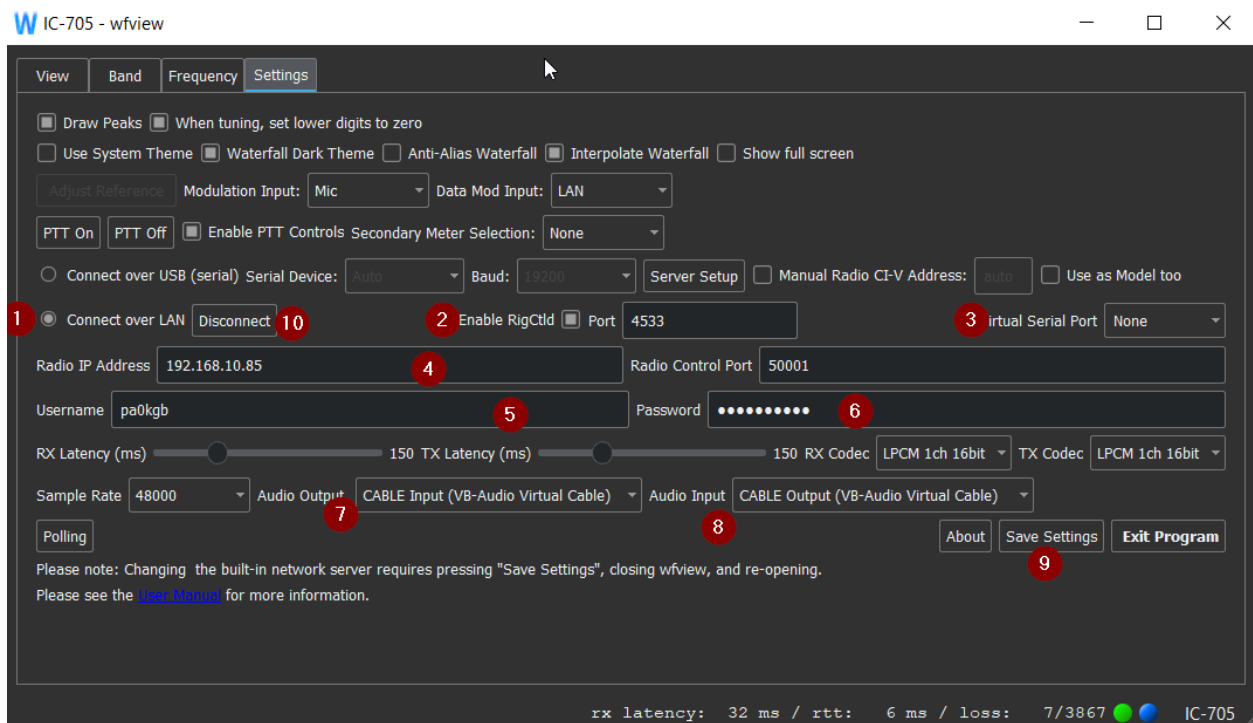
4 = Put in the IP address of the radio. (check the Menu, Settings, WLAN Set, for the IP address)

5 = Fill in the username you have configured in the IC-705 as Network user 1, and with 6, fill in the password.
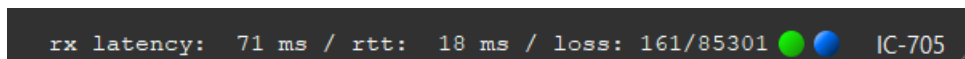
7 and 8 = set to Cable input and Cable output.

9 = Save settings.

10 = Click on the connect button



You can see if you have a correct connection via wifi if this line is visible



The numbers will be different, but it will have a green and blue ball and IC-705.

**Click on the "View" tab and you have your WFView connection working.**

## 5. How to configure JTDX with use of the virtual comport?

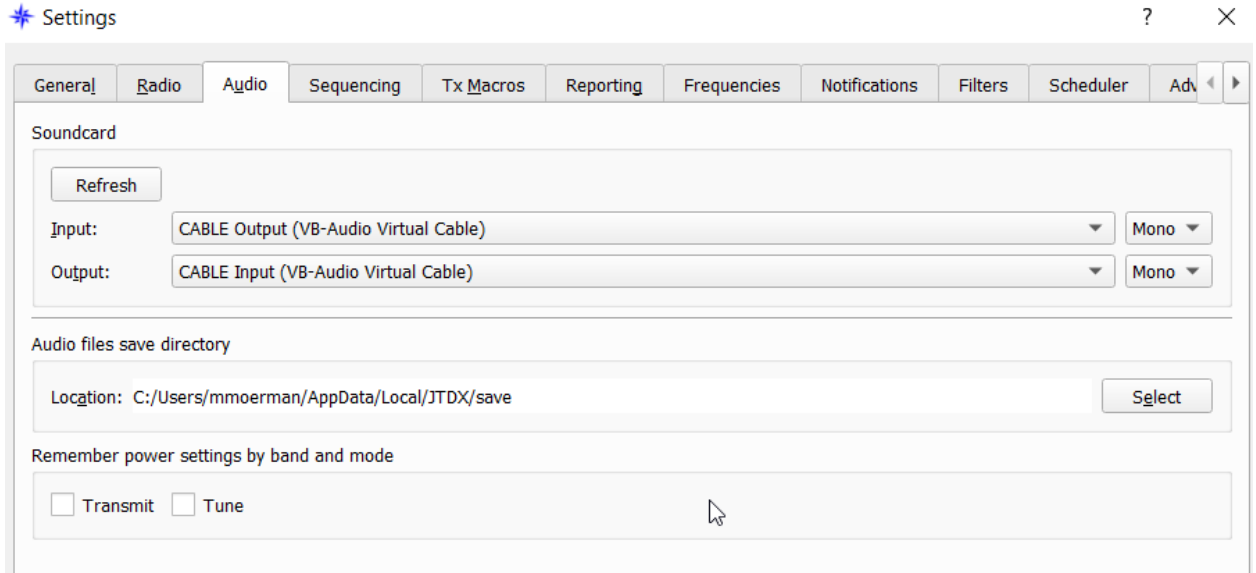To setup for example JTDX, start JTDX.

Go to File then Settings.
My settings are as follows



But configure as above and press "Test CAT"
And then go to the Audio tab, and change audio input and output as shown below.
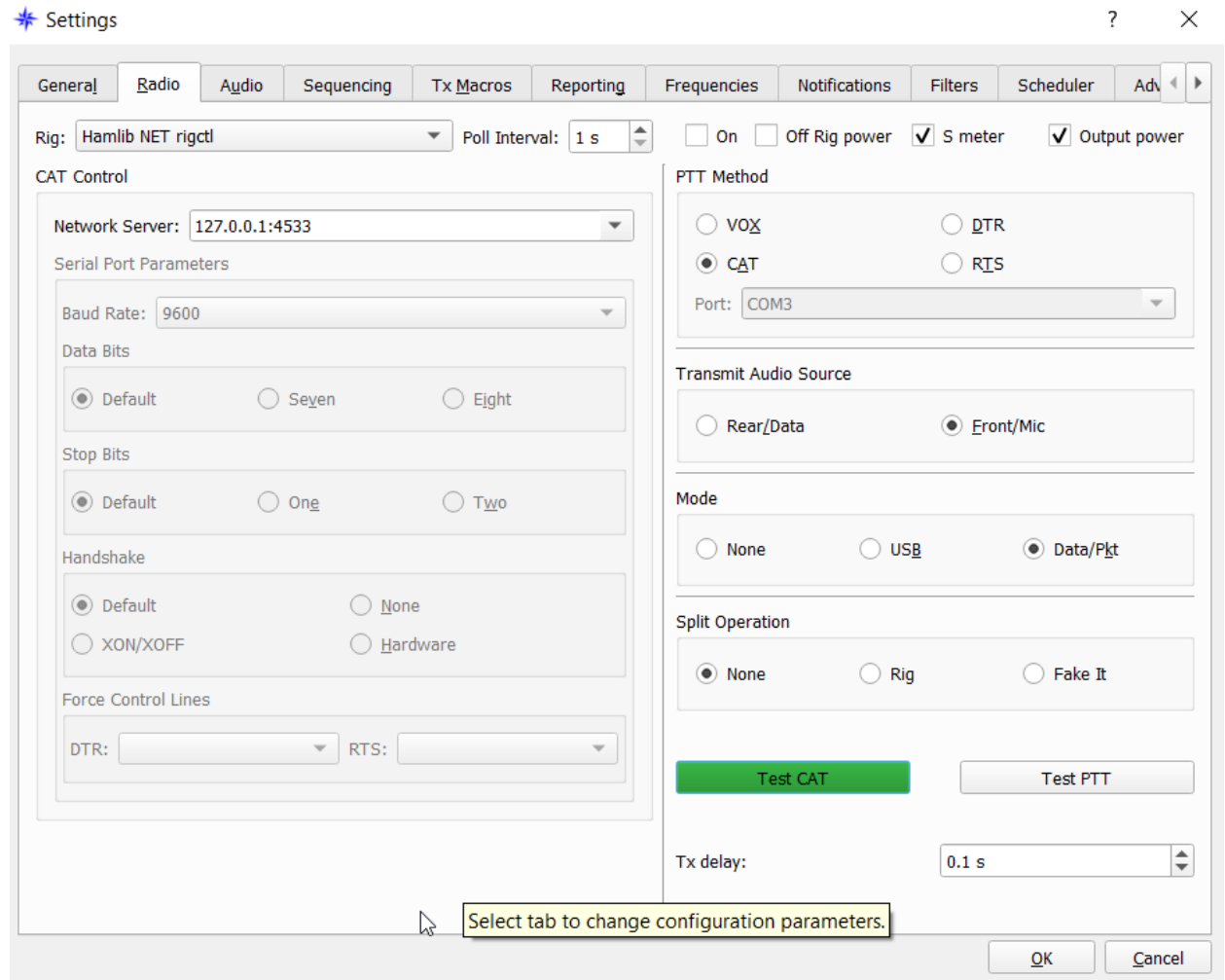
Now JTDX should receive, and you should be able to send.

## 6. How to configure JTDX with use of rigctld to have IC-705 access?

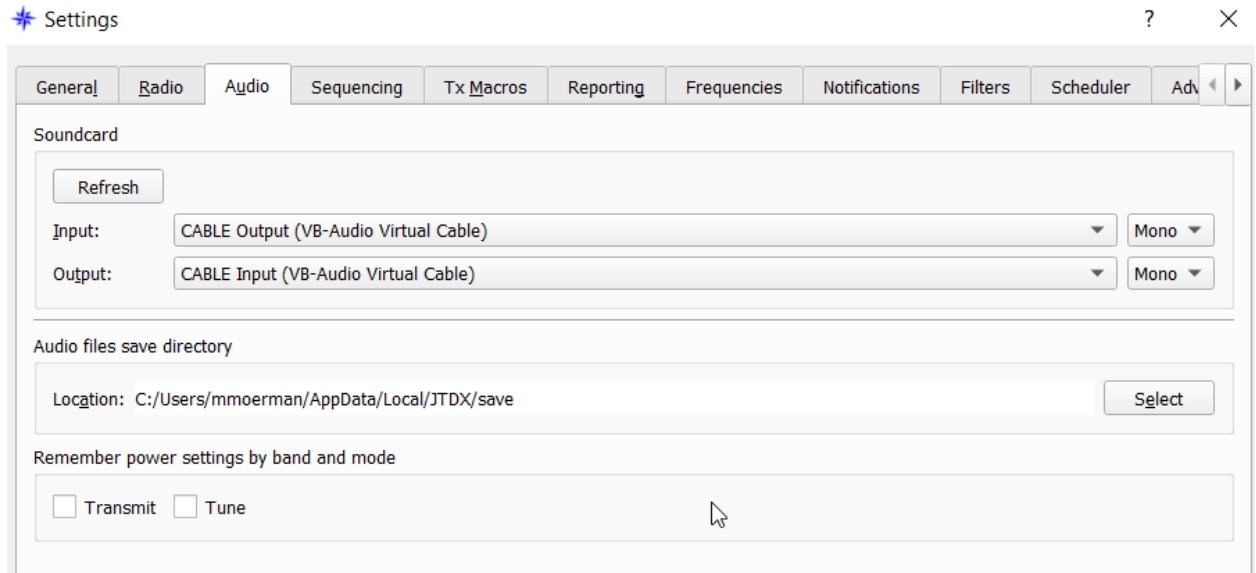To setup for example JTDX, start JTDX.
Go to File then Settings.
My settings are as follows



But configure as above and press "Test CAT"
And then go to the Audio tab, and change audio input and output as shown below.

Now JTDX should receive, and you should be able to send.

Links to software:

WFVIEW:

https://wfview.org/download/

For **rigctld** control use minimum version 1.2 or higher.

VSPE (for virtual comport)

http://www.eterlogic.com/Products.VSPE.html

JTDX

https://www.jtdx.tech/en/

Virtual Audio cable:

https://vb-audio.com/Cable/index.htm