

# Operating your Radio Remotely

# The Issue: My Ham Shack is in the Garage -----



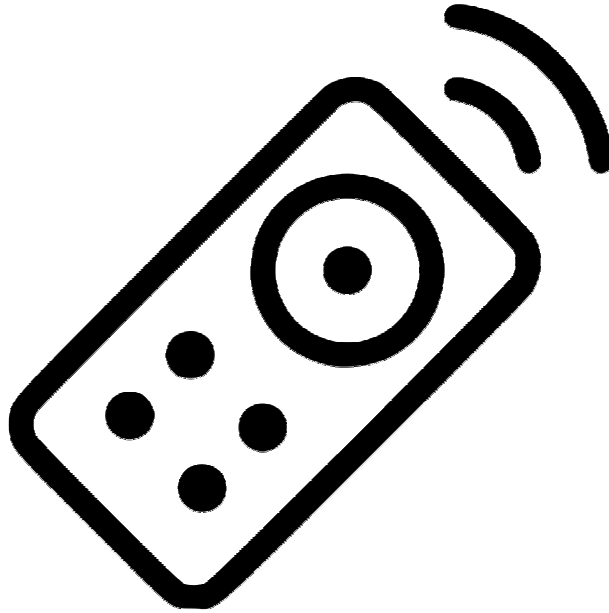
## Provides Easy access to the antennas in the attic ....

- two large Cushcraft beams, one 70 cm beam,
- 20 meter dipole, and lots of VHF/UHF/CB antennas





The ham shack is nice,  
but it can be **too hot** or **too cold** ...  
I'm a lazy guy who dislikes leaving the office chair...

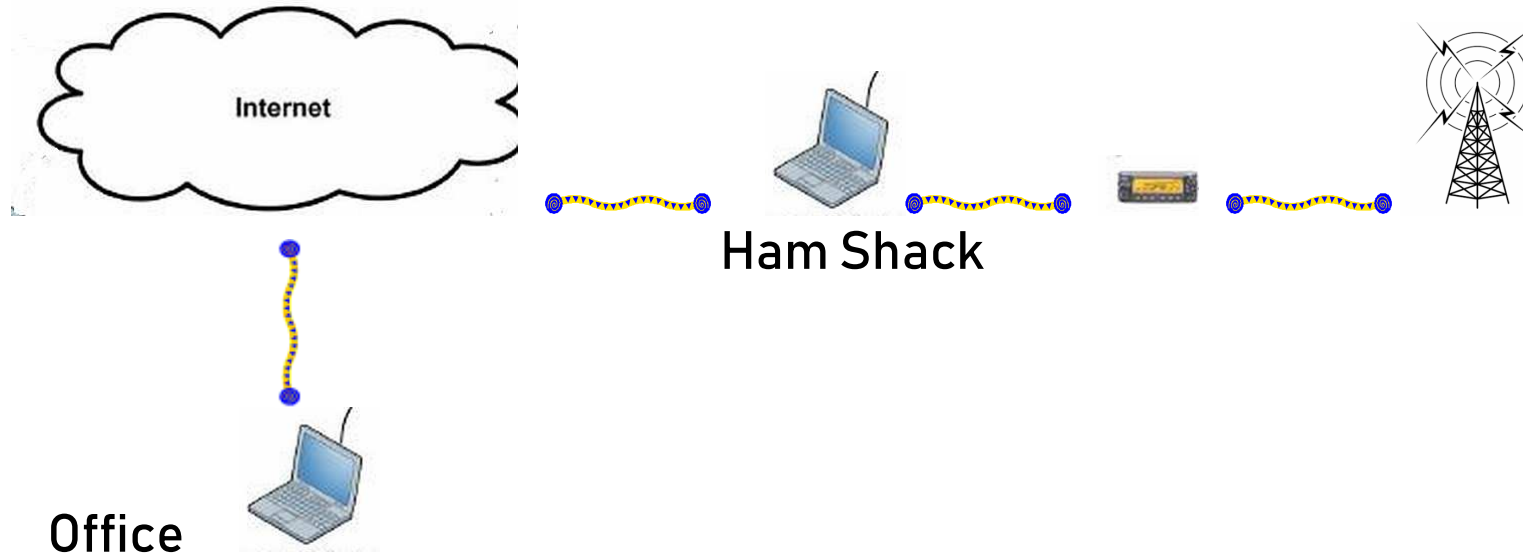


I needed Remote Control !

# Remote Radio Control:

Examples of three methods

- Ham Radio Deluxe
- Chrome remote
- RC Forb
- formerly used by SCC & KP ARC
- easy method for digital modes like FT8
- method formerly used by TARC



To accomplish remote:

- Office – connect to the internet
- remote PC must be on, connected to internet & radio
- radio must be able to turn on/off (or leave on)
- antenna must be able to turn on/off (or leave on)

Method 1 – Ham Radio Deluxe

Overview – start HRD at Office and “dial-up” the remote PC

Local

Remote

Ham Radio Deluxe



HRD Remote server  
(Port 7805)

COM1



Radio



## Setup- start the remote server

The image shows the HRD Rig Control software interface with the 'Tools' menu open and 'IP Server' selected. The main window displays a frequency of 14.235.00 MHz. The 'Remote Server Configuration' dialog box is open, showing the status of the HRD Remote Server on this computer.

**Remote Server Configuration**

The status of the HRD Remote Server on this computer.

HRD Remote Server (Radio Support)      HRD Serial Port Server (Keyer & Rotator Support)

Service name: HRD RemoteSvr  
 Display name: HRD Remote Server  
 Configuration: C:\ProgramData\HRD\HRDRemoteSvr.cfg  
 Logfile:  
 Last started:  
 Status: Stopped

Start   Stop

Configure   View Log   Help   Install   Remove

**1.0 Introduction**

The HRD Remote Server enables a connection between Ham Radio Deluxe and a radio connected to a remote computer which can be contacted via TCP/IP.

**1.1 Requirements**



Method 1 – Ham Radio Deluxe (cont)

Configure the remote radio ports and define allowed users

Remote Server Configure

COM Serial Ports to share:  Share all local COM Serial Ports

- COM3 - USB Serial Port
- COM6 - Generic (COM6)
- COM7 - Generic (COM7)

TCP Port for sharing:  Default: 7805

Welcome Message: (blank for no message)

Welcome to HRD!

Import Legacy Config File

Note: All passwords are stored without encryption and are also used by the Remote Server without encryption.

Allowed Users:

User	Password	TX	Macros

Remove User

Add/Update U...

Add/Edit User

Name:

Password:

Allow Remote TX

Allow Remote Macro

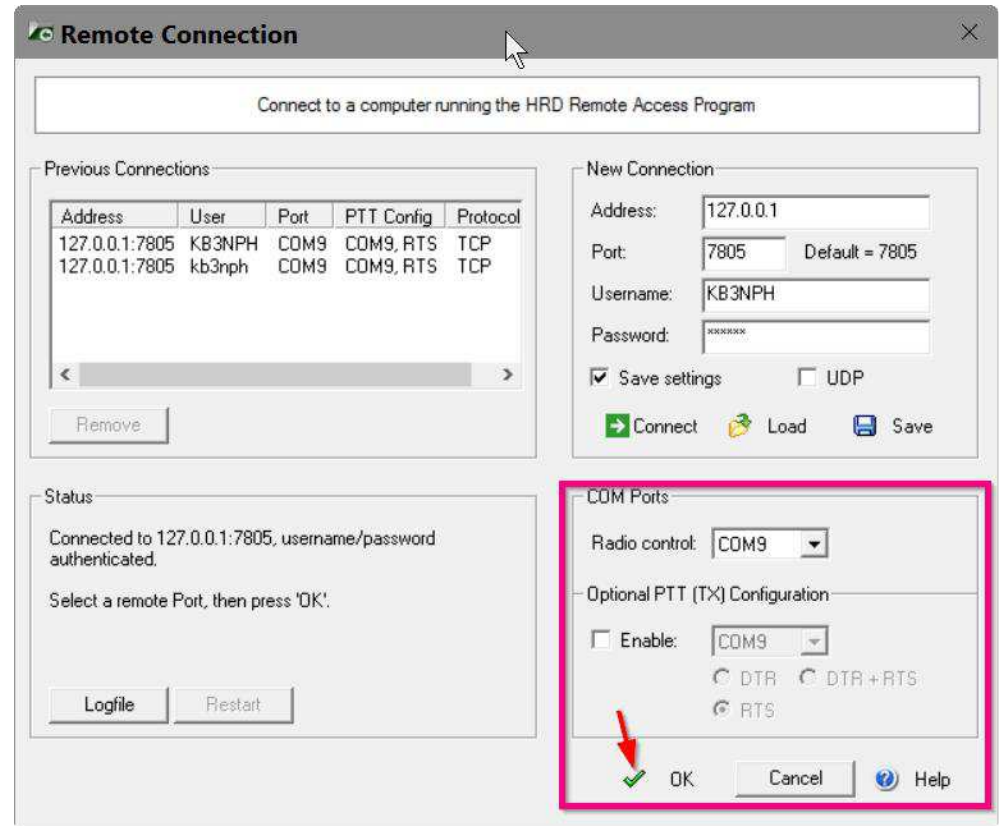
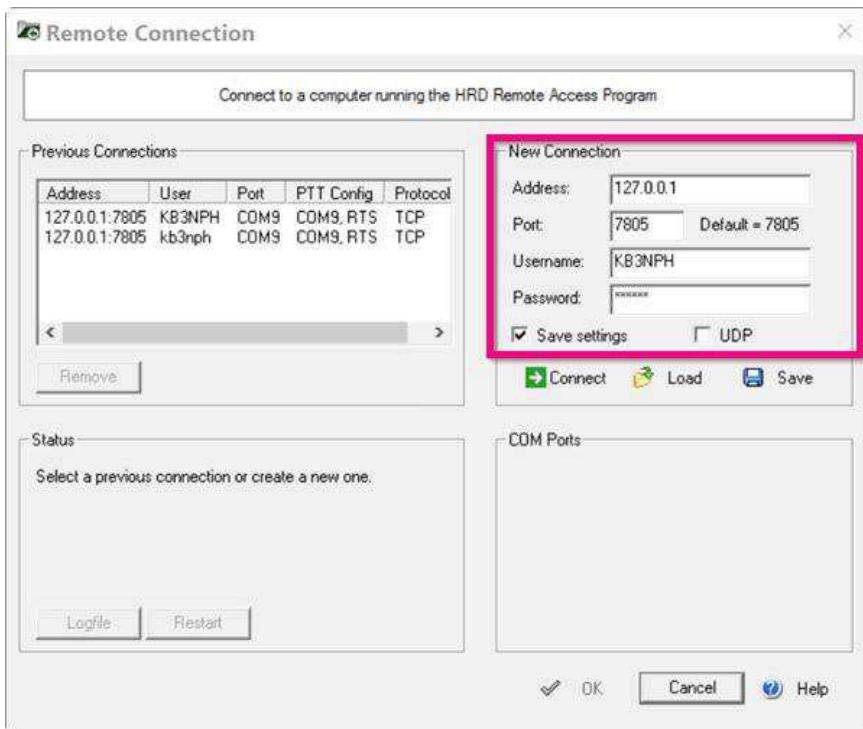
OK Cancel

18:19 10/20/2011

## Method 1 – Ham Radio Deluxe (cont)

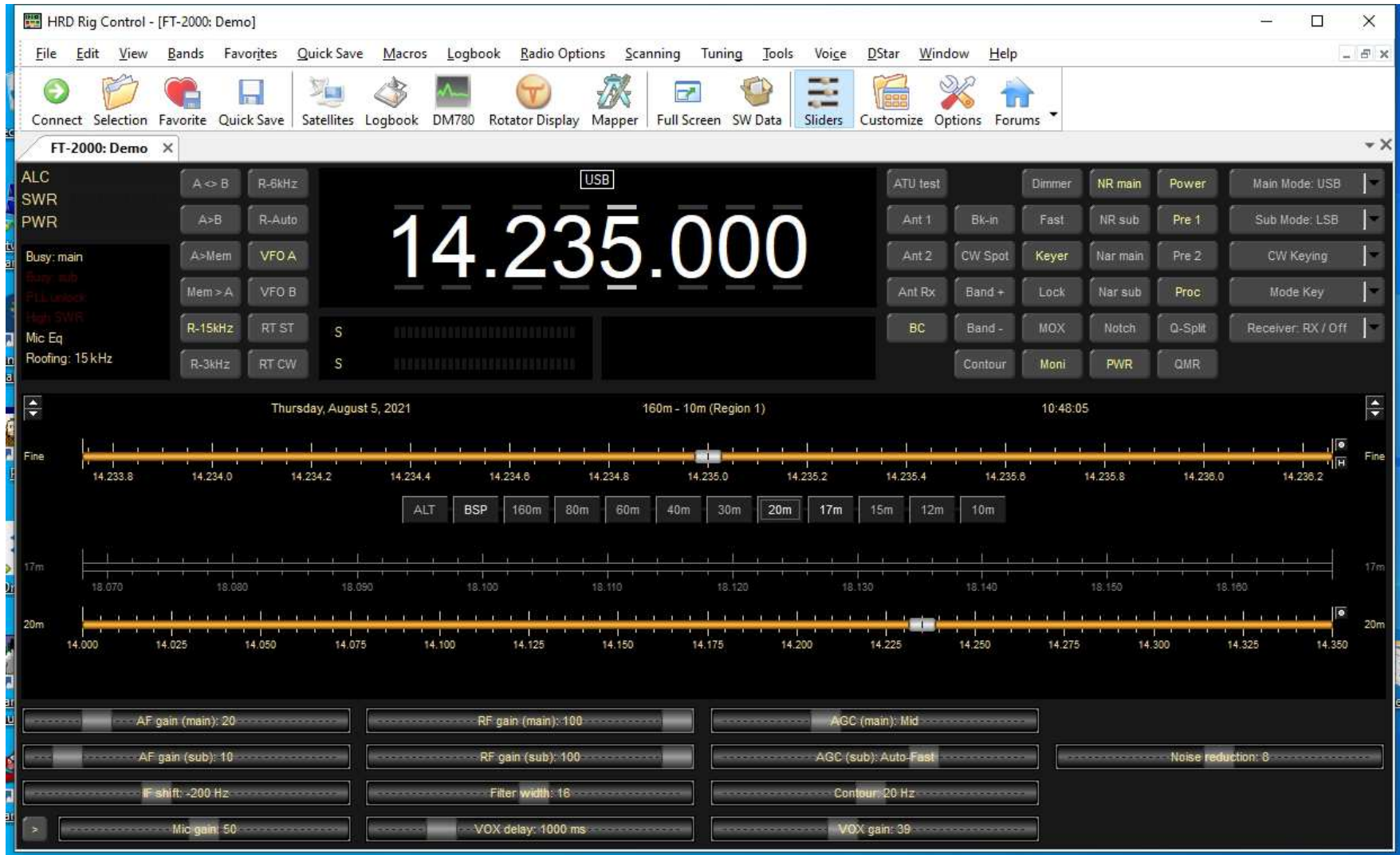
On the Office PC—

Define the IP, Logon, PW and PTT COM ports



## Method 1 – Ham Radio Deluxe (cont)

Connect from Office to remote using static IP address  
== radio now controlled ==

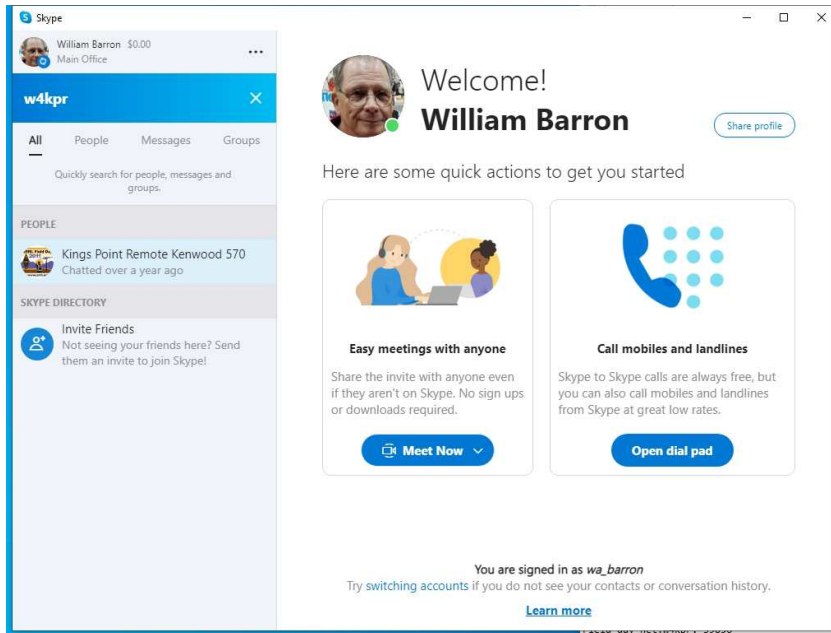


# Method 1 – Ham Radio Deluxe (cont)

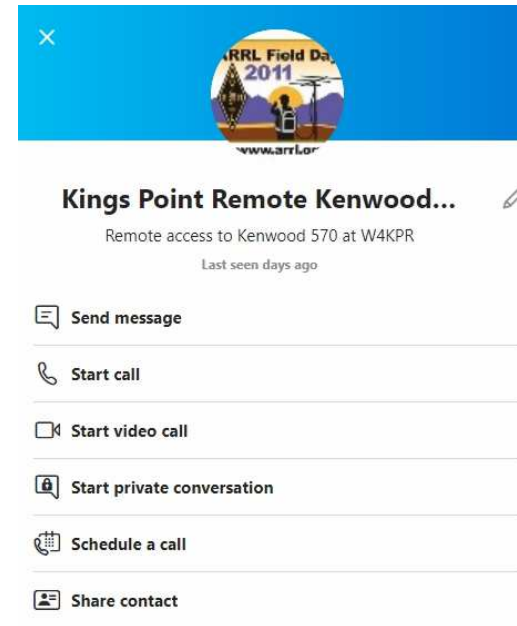
Need Sounds!

Start the audio – Skype! – in office → connect to the remote → and you're off!

Office →



KPARC Remote



## Method 1 – Ham Radio Deluxe (cont)

## Issues:

- Audio must be driven from microphone or it's very poor
- Must open various remote server ports in router
- Remote PC must be "on"
- Remote Skype program must be running
- HRD must be running Remote Server (no local use)
- Using two Skype names/ connections drains PC power
- IP address must be static

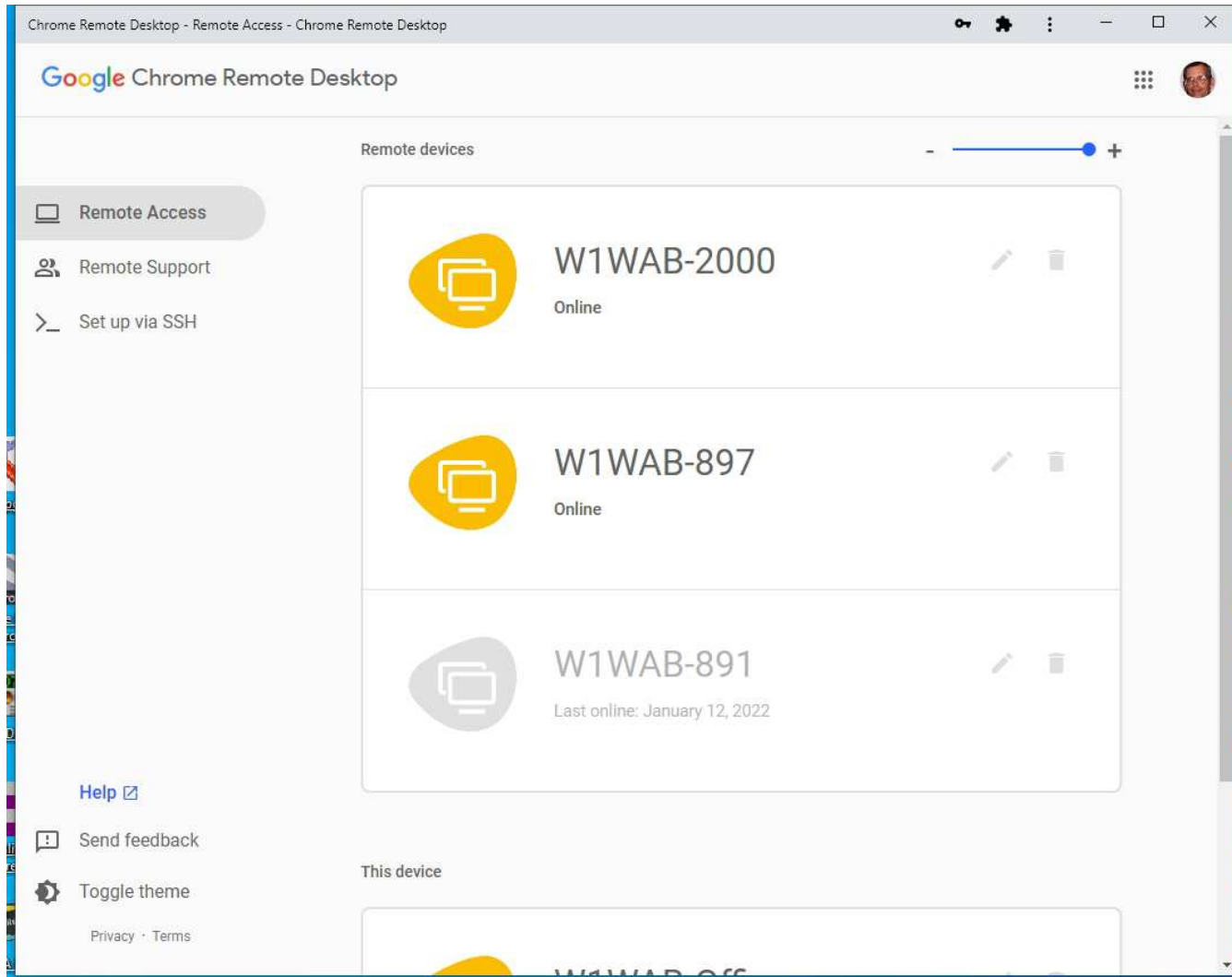
## Summary:

Difficult, clumsy



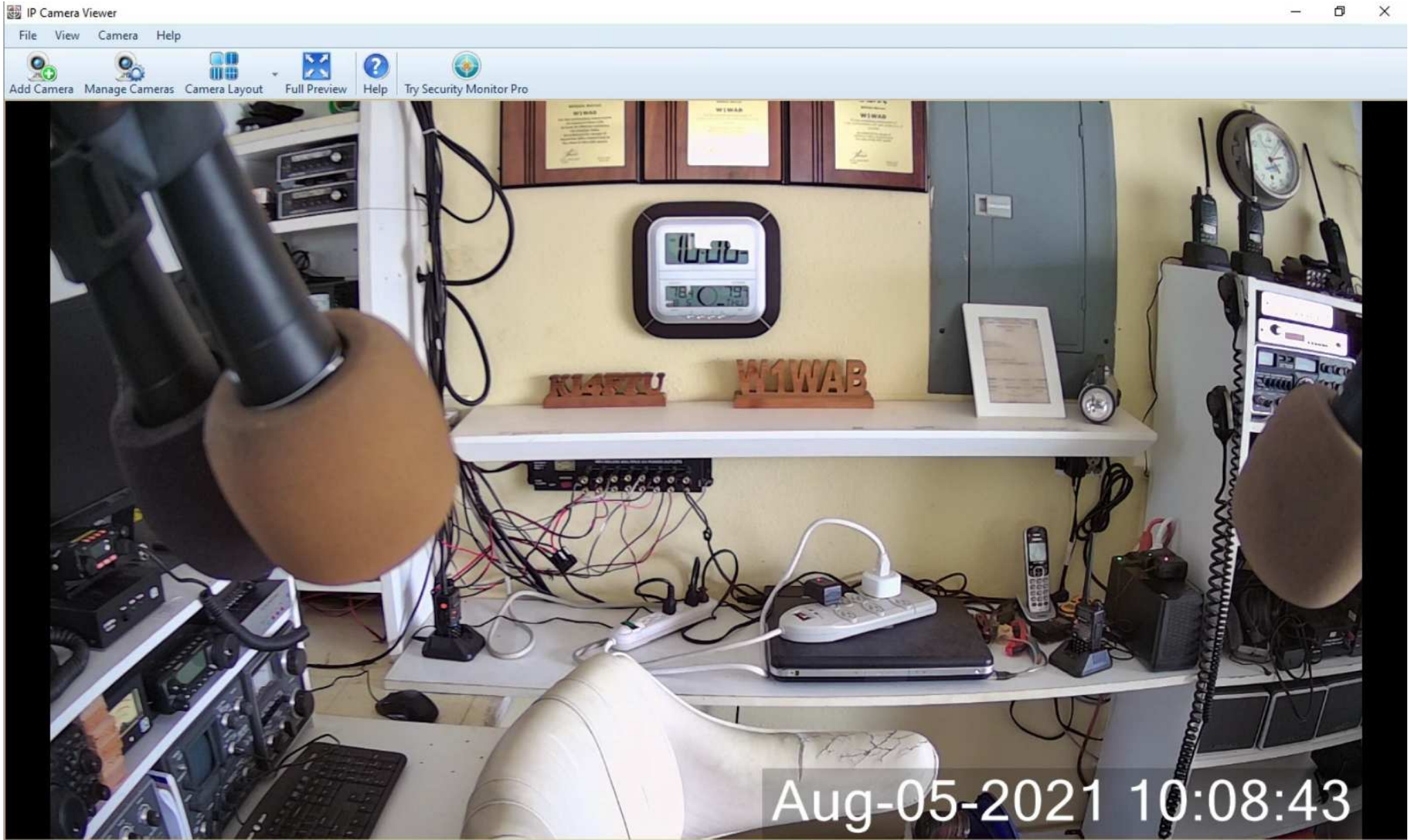
## Method 2 – Chrome Remote desktop

Set up Chrome remote on both Office and remote (radio) PC's



Method 2 – Chrome Remote desktop (cont)

Voila! I control the remote PC!

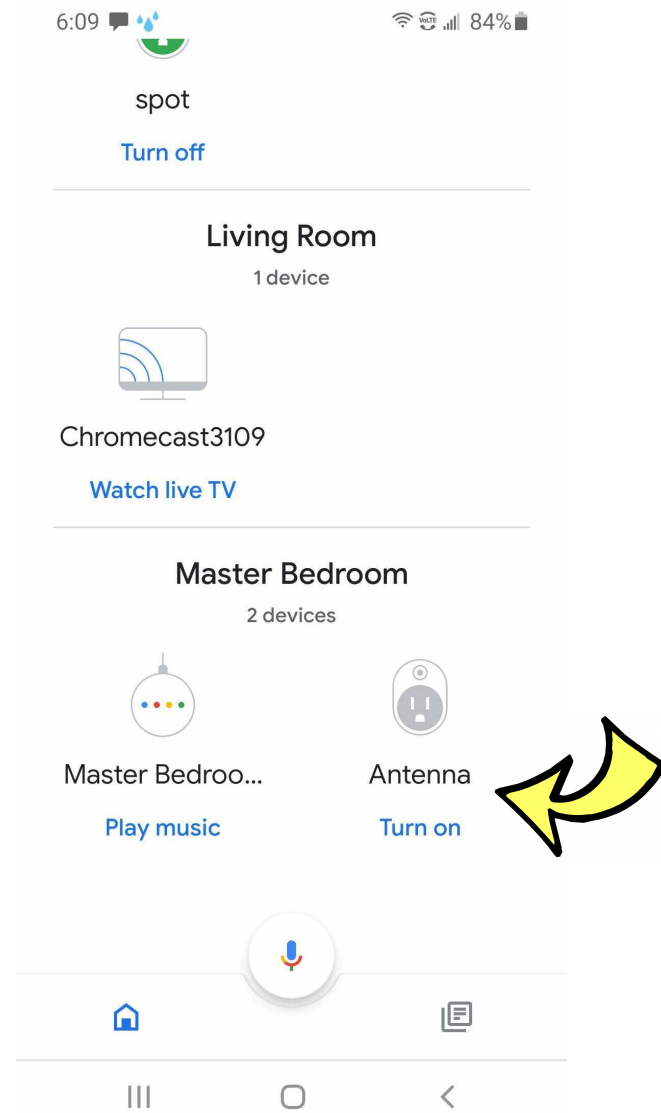


Method 2 – Chrome Remote desktop (cont)

Turning Antenna and radio power on.

I use Google Home—  
with speakers and internet AC power plugs.

“Hey Google! Turn Antenna on!”



Method 2 – Chrome Remote desktop (cont)

Electric Power on – I can tell as my electric Antenna switch is glowing....



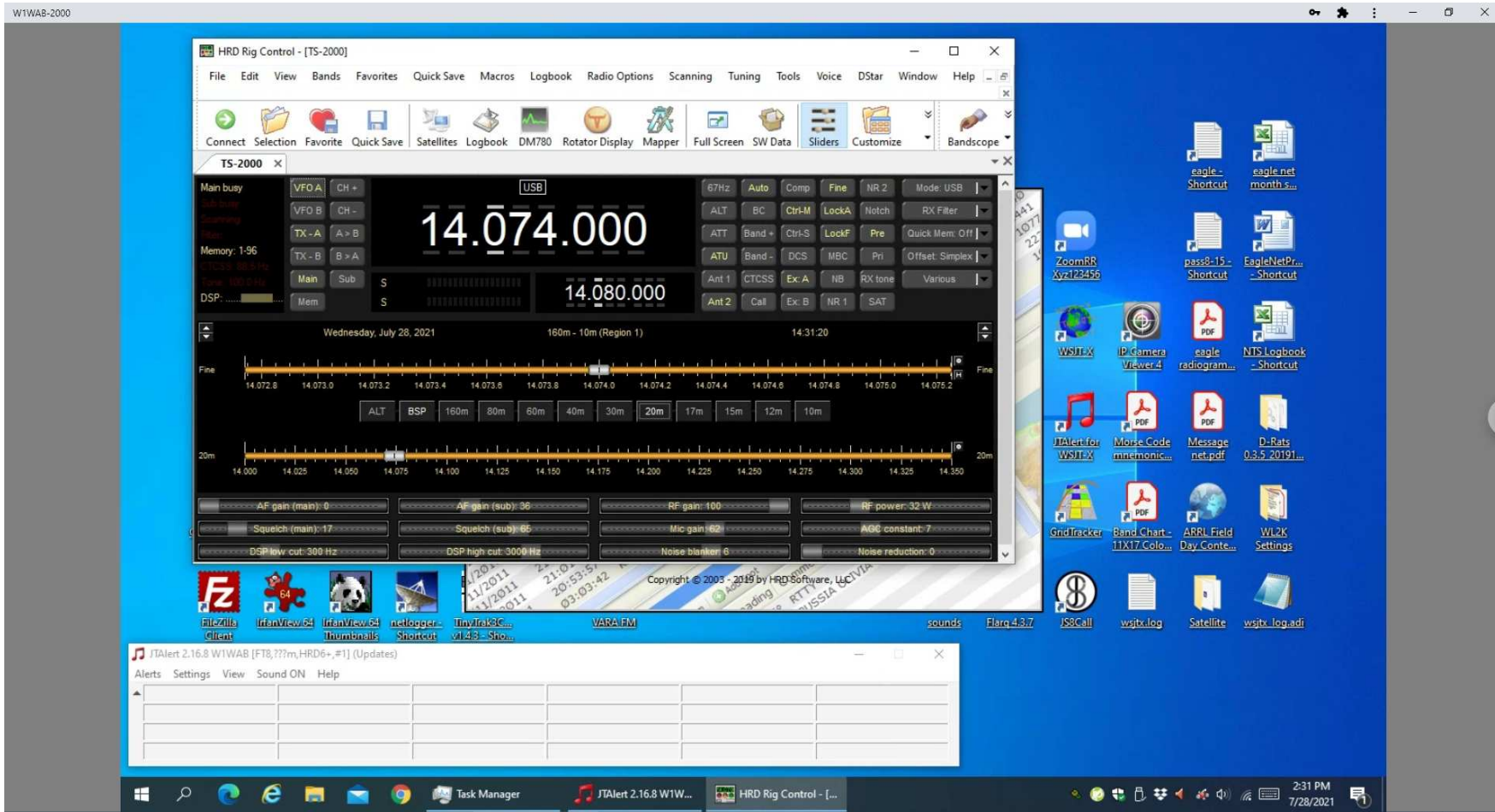


## Method 2 – Chrome Remote desktop (cont)

Remote PC on. OK!

Power & Antenna on. OK!

Now turn on the radio .. HRD will turn on my TS 2000s or FT 891...





Method 2 – Chrome Remote desktop (cont)

Start the FT 8 software and JT Alert Logging program and we're off!

K5BYN in QSO... and logged

The screenshot displays the WSJT-X v2.5.2 software interface. The main window is split into several sections:

- Band Activity:** A table showing received signals. The entry for K5BYN is highlighted in red:
 

UTC	dB	DI	Freq	Message
135530	-17	-0.0	1342	~ CQ W5LE EM15 U.S.A.
135530	-16	0.1	1200	~ <...> VE1RY FN74
135530	-19	0.1	504	~ CQ DX N9GBP EN52 U.S.A.
135600	-8	0.2	1503	~ W1WAB K5BYN -17
135600	-7	0.1	1443	~ CQ K5UHF EM10 U.S.A.
135600	-13	0.3	1024	~ F4CTJ KF3CW FM18
135600	-15	0.1	1879	~ CQ NKOV EN14 U.S.A.
135600	-11	0.2	1201	~ <...> VE1RY FN74
135600	-12	0.6	1342	~ CQ W5LE EM15 U.S.A.
135630	-11	0.2	1503	~ W1WAB K5BYN RR73
135630	-4	0.1	1444	~ CQ K5UHF EM10 U.S.A.
135630	-10	-0.4	1978	~ LA9KHA KD2JHH FN21
135630	-10	0.3	1024	~ F4CTJ KF3CW FM18
135630	-12	0.1	1342	~ CQ W5LE EM15 U.S.A.
135630	-12	0.1	1201	~ <...> VE1RY FN74
135630	-13	0.1	2499	~ CQ DX N9GBP EN52 U.S.A.
135630	-16	0.1	1880	~ CQ NKOV EN14 U.S.A.
- Rx Frequency:** A table showing transmitted signals. The entry for K5BYN is highlighted in yellow:
 

UTC	dB	DI	Freq	Message
135530	-8	0.2	1502	~ CQ K5BYN EM25 U.S.A.
135548	Tx		1502	~ K5BYN W1WAB EL87
135600	-8	0.2	1503	~ W1WAB K5BYN -17
135615	Tx		1502	~ K5BYN W1WAB R-08
135630	-11	0.2	1503	~ W1WAB K5BYN RR73
135645	Tx		1502	~ K5BYN W1WAB 73
- Wide Graph:** A spectral display showing signal activity across a frequency range from 500 to 2000 kHz. A signal is visible at approximately 1500 kHz.
- QSO Confirmation Dialog:** A dialog box titled "Click OK to confirm the following QSO:" with the following details:
 

Call	Start	End
K5BYN	1/19/2022 13:55:45	1/19/2022 13:56:45

 Below the table, the QSO details are listed:
 

Mode	Band	Rpt Sent	Rpt Rcvd	Grid	Name
FT8	20m	-08	-17	EM25	

 Other fields include Tx power (23), Operator, and Exch sent.
- JTAlert 2.16.8:** A window showing a log of alerts. The entry for K5BYN is highlighted in red:
 

Call	Grid	Band
K5BYN	K5UHF - B4	KD2JHH
N9GBP	NKOV - B4	KF3CW - MD
		W5LE - B4
		VE1RY - NS

The system tray at the bottom shows the date and time as 8:56 AM on 1/19/2022. The taskbar includes icons for Task Manager, HRD Rig, JTAlert 2..., HRD Log..., and multiple instances of WSJT-X.

## Method 2 – Chrome Remote desktop (cont)

### Issues:

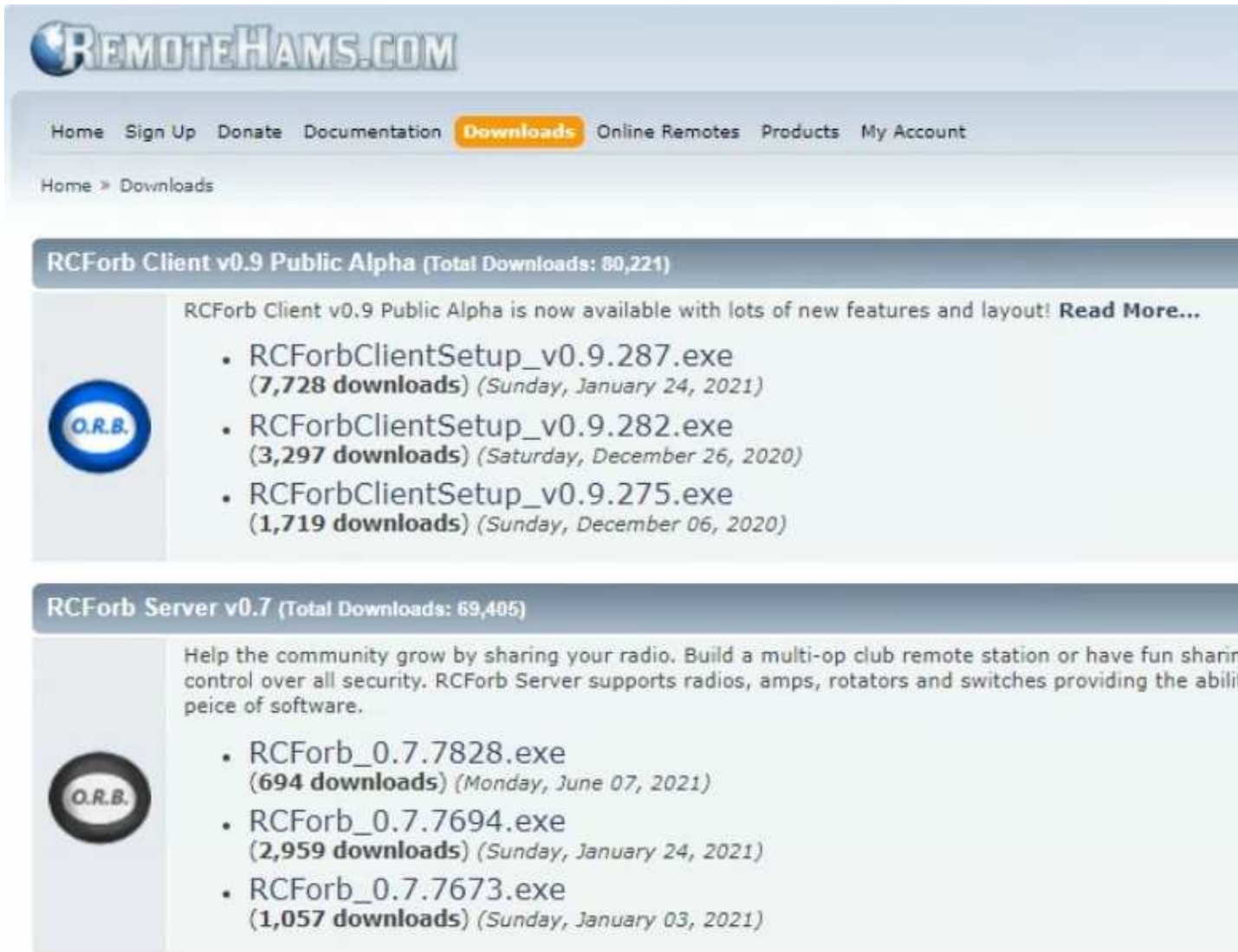
- Remote PC must be “on”
- Remote PC soundcard Audio clear; but **no radio audio**

### Summary:

Very easy and fun for digital modes.  
No ‘overuse’ limits like Teamviewer

Method 3 – RC Forb – **solving the Radio Audio issue**

Separate software for your Office PC/tablet/cell ... and remote radio  
- must have Windows 10 & Net Framework 4.0



The screenshot shows the RemoteHams.com website with a navigation menu including Home, Sign Up, Donate, Documentation, Downloads (highlighted), Online Remotes, Products, and My Account. The breadcrumb trail is Home > Downloads. The main content area features two sections:

### RCForb Client v0.9 Public Alpha (Total Downloads: 80,221)

RCForb Client v0.9 Public Alpha is now available with lots of new features and layout! [Read More...](#)

- RCForbClientSetup\_v0.9.287.exe (7,728 downloads) (Sunday, January 24, 2021)
- RCForbClientSetup\_v0.9.282.exe (3,297 downloads) (Saturday, December 26, 2020)
- RCForbClientSetup\_v0.9.275.exe (1,719 downloads) (Sunday, December 06, 2020)

### RCForb Server v0.7 (Total Downloads: 69,405)

Help the community grow by sharing your radio. Build a multi-op club remote station or have fun sharing control over all security. RCForb Server supports radios, amps, rotators and switches providing the ability peice of software.

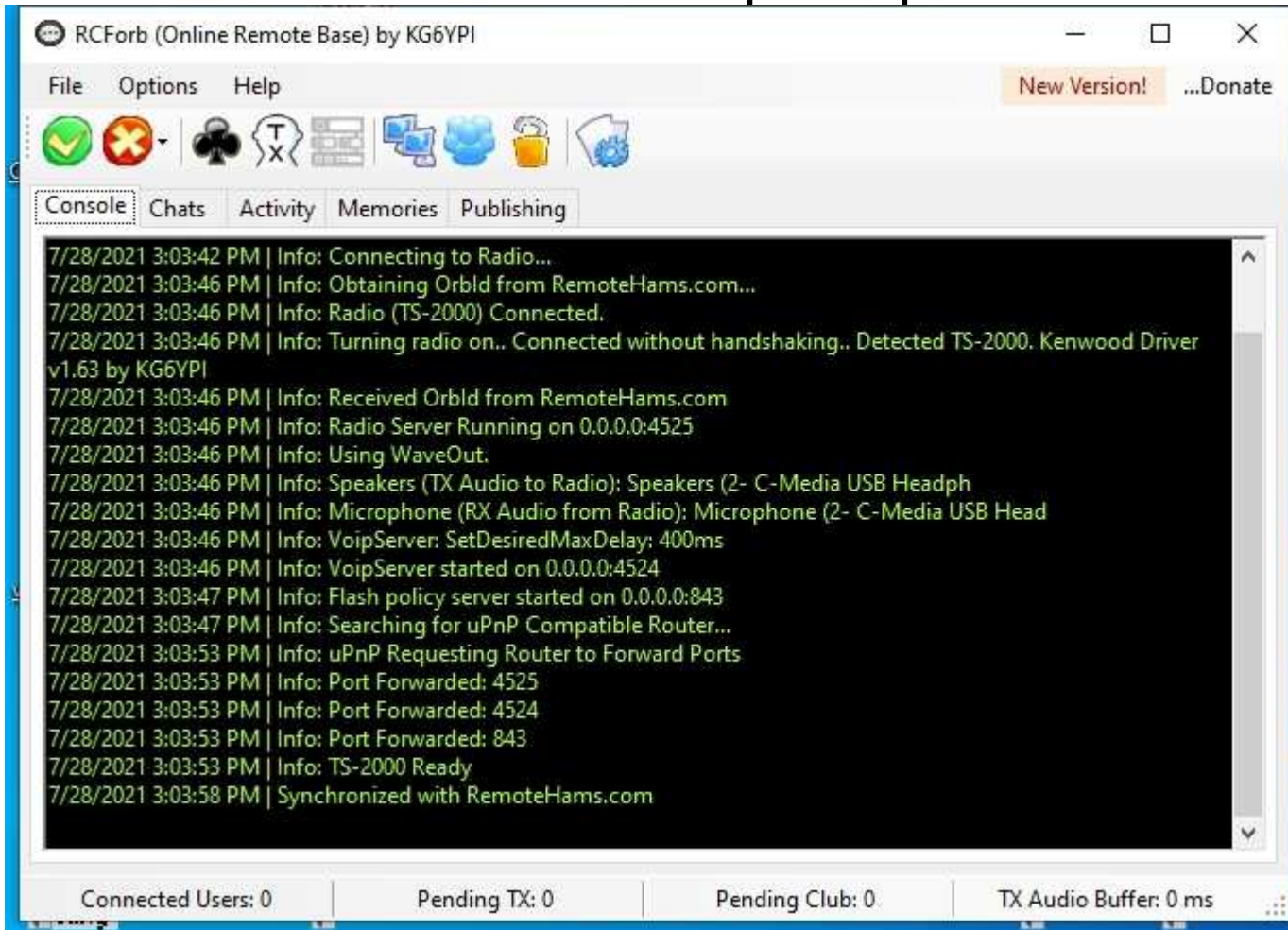
- RCForb\_0.7.7828.exe (694 downloads) (Monday, June 07, 2021)
- RCForb\_0.7.7694.exe (2,959 downloads) (Sunday, January 24, 2021)
- RCForb\_0.7.7673.exe (1,057 downloads) (Sunday, January 03, 2021)

← OFFICE

← REMOTE PC

## Method 3 – RC Forb (cont)

## Remote Radio Server PC needs 3 ports opened



➔ Software will auto-start my Kenwood TS 2000 😊



## Method 3 – RC Forb (cont)

Office software shows Worldwide available stations (some are restricted clubs)

The screenshot shows the RCForb Client interface with the following components:

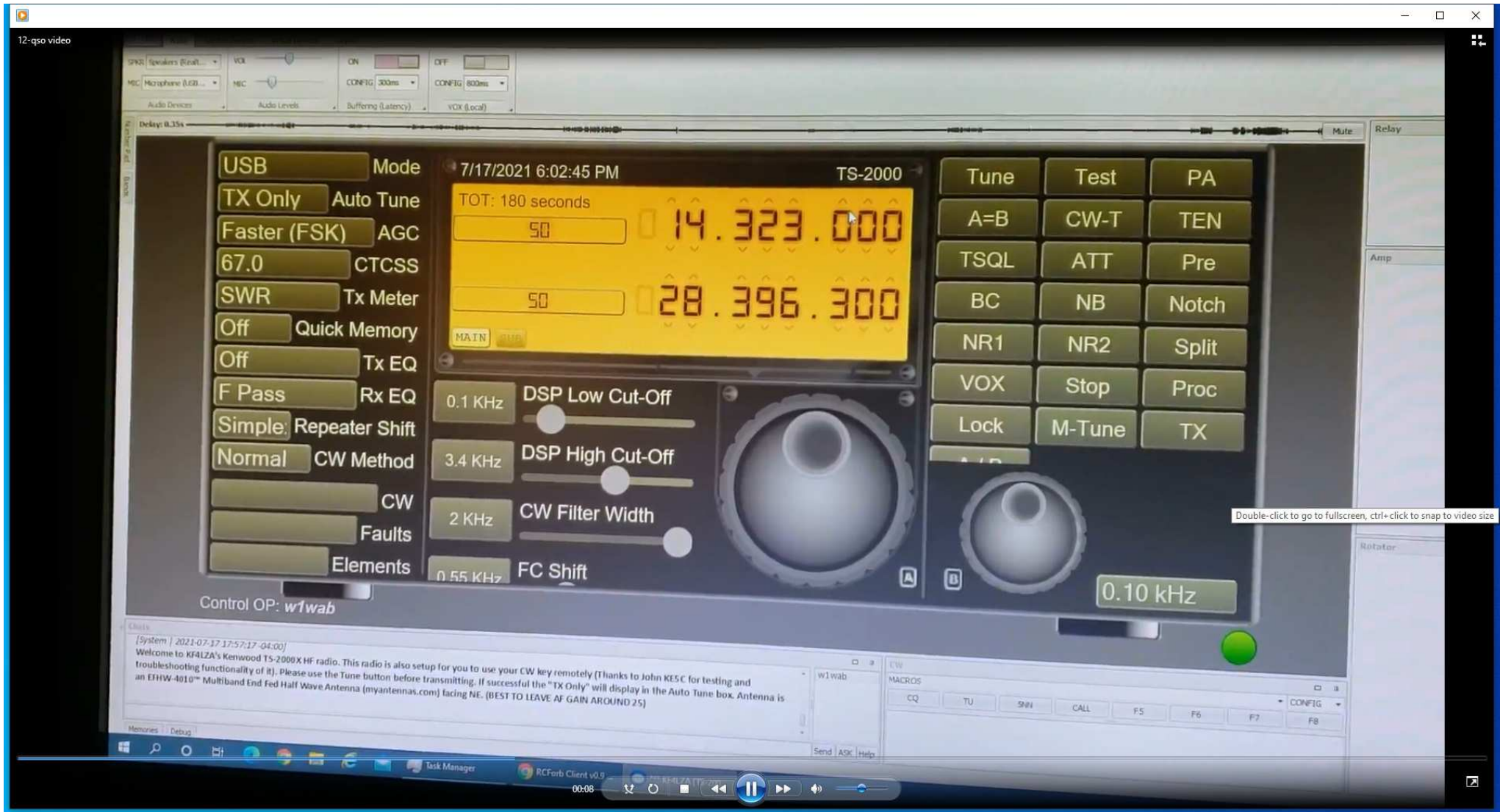
- Top Bar:** Welcome, w1wab VOL, MIC, Update Available, RCForb Client by RemoteHams.com
- Control Panel:** SPKR (Speakers), MIC (Microphone), VOL (Volume), MIC (Microphone), ON/OFF buttons, CONFIG (300ms/800ms), Buffering (Latency), VOX (Local).
- Station List Table:**

Orb...	Remote Station	Radio	City	State	Country
194...	KZ4RR Radio Club	Ic-7700	St. Augustine	FL	United States
140...	W1WAB TS-2000	TS-2000	Sun City Center	FL	United States
160...	*** KF4LZA [TS-590] *** 20 - 6 Meters {Open to All}	TS-590	Tamarac	FL	United States
8314	W4DUG - Tampa ARC server - EL88. Available only to local TARC...	TS-590	Tampa	FL	United States
209...	Experimental FTdx3000	FTDX-3000	The Villages	FL	United States
5193	N4GYN IC-7610	Ic-7610	Buford	GA	United States
185...	K4MWW PRIVATE CLUB	Ic-7300	Stone Mountain	GA	United States
208...	KH6AH	Ic-7300	Makawao, Maui	Hawaii	United States
154...	KG9H	Ic-7300	West Chicago	IL	United States
5672	WB9DQT CLUB STATION near MDW	FTDX-3000	Chicago	Illinois	United States
6379	W9VW Group = IC-7100 (Private)	Ic-7100	Greenfield	IN	United States
8531	W9VW Group = IC-7610 (Private)	Ic-7610	Greenfield	IN	United States
208...	K9URT- HF-10-15-20-40	Ic-7300	Madison	IN	United States
- Bottom Panel:** Chats, CW (MACROS: CQ, TU, SNN, CALL, F5, F6, F7, F8), Send, ASK, Help, Memories, Debug.



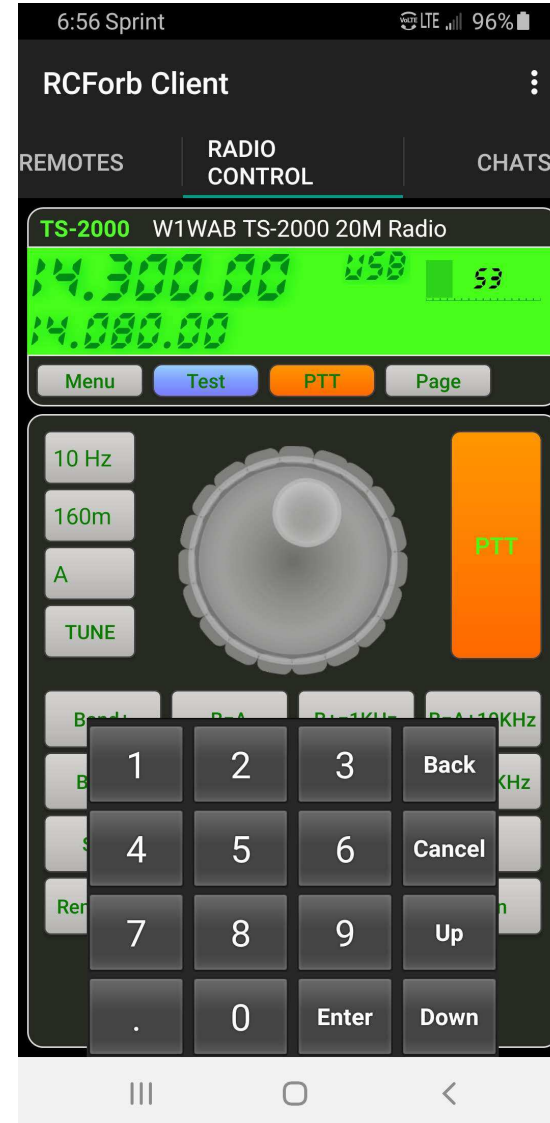
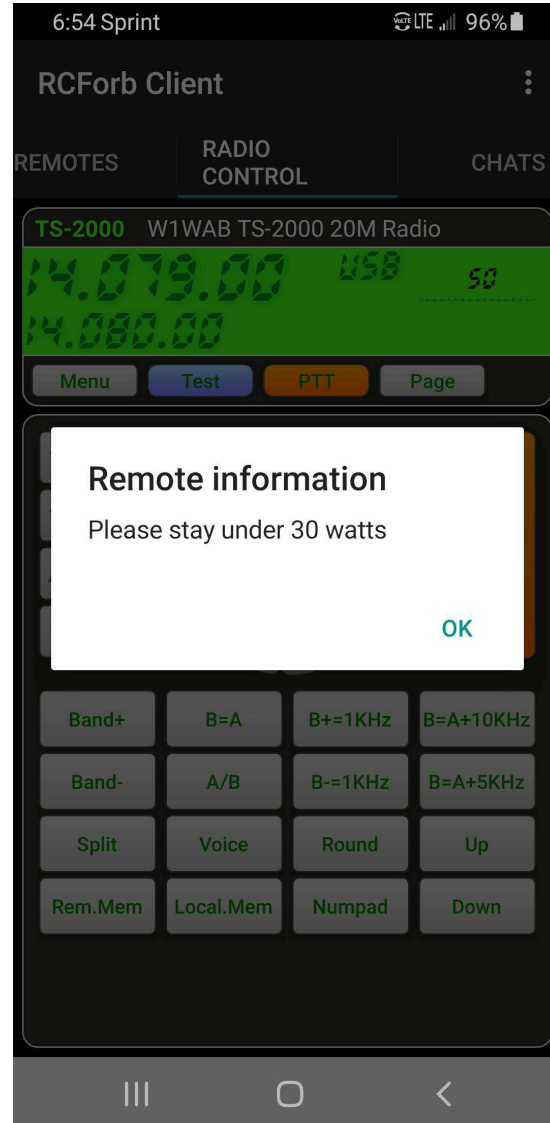
Method 3 – RC Forb (cont)

In a QSO!



Method 3 – RC Forb (cont)

You can even run this software off your cell phone !



## Method 3 – RC Forb (cont)

### Issues:

- Audio must be driven from radio microphone or it's very poor
- Must open various remote server ports in router
- Remote PC must be "on" to connect

### Summary:

Kinda like Echolink for HF—except you can easily set up your own radio as a 'remote'  
Solves the Radio Audio issue without Skyping

Easy – Maybe we should set up our Club Station again

**Conclusions: Give Remote Radio a try!**

**Questions?**

