HF DIGITAL MADE EASY

Fun, Easy and power efficient

- Digital Modes on HF (or VHF/UHF)
- Uses the power of your computer to encode and decode
- One interface works on almost all modes
- Low Power required
- Moderate computer either desktop or laptop

- Many modes to choose from – Find your favorite
- Most software is FREE FREE FREE
- Easy to build interface from Radio to Computer

OK, What do I need?

- HF Radio, Frequency stable VFO (most solid state radios)
- Power supply with stable clean DC
- Antenna, dipole, rain gutters, vertical, flag pole
- Interface, build, buy, or built-in
- Program

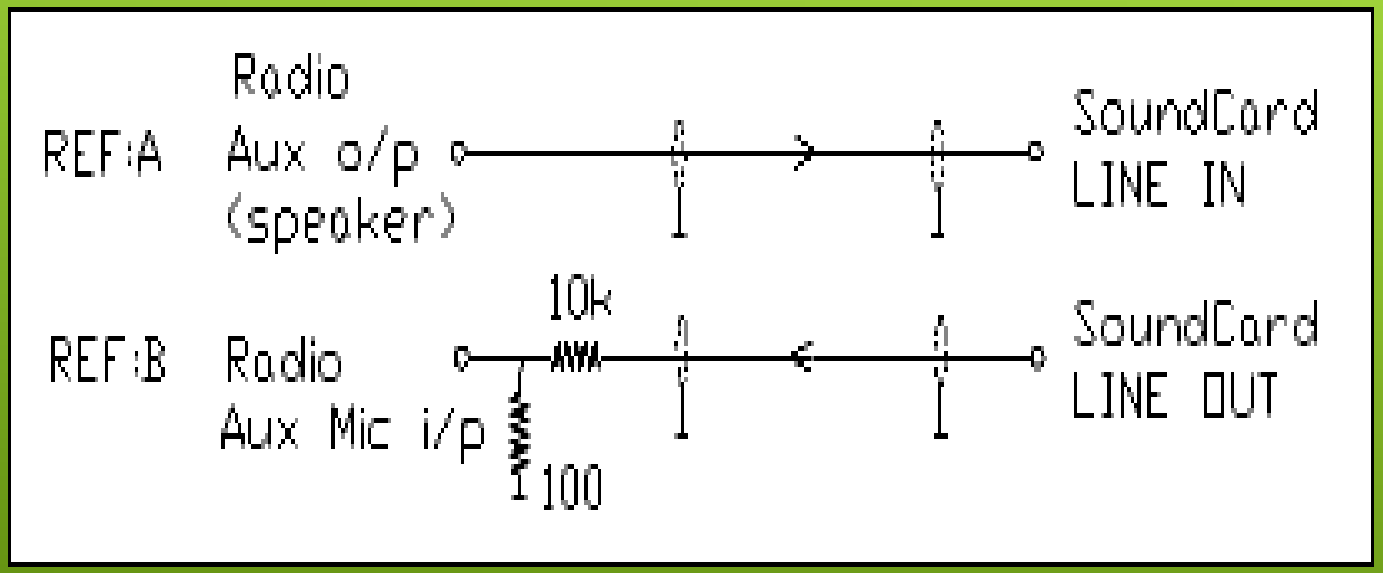
HF Radio

- Does not have to be fancy or expensive.
- Example – Yaesu FT-840, Icom IC-718, IC-706, Kenwood TS-130
- If it is stable on CW, then it is stable enough.
- 50 watts is more than you will need.
- Contacts on 5 – 10 watts are not uncommon
- ALC meter is your best friend

Computer to Radio Interface

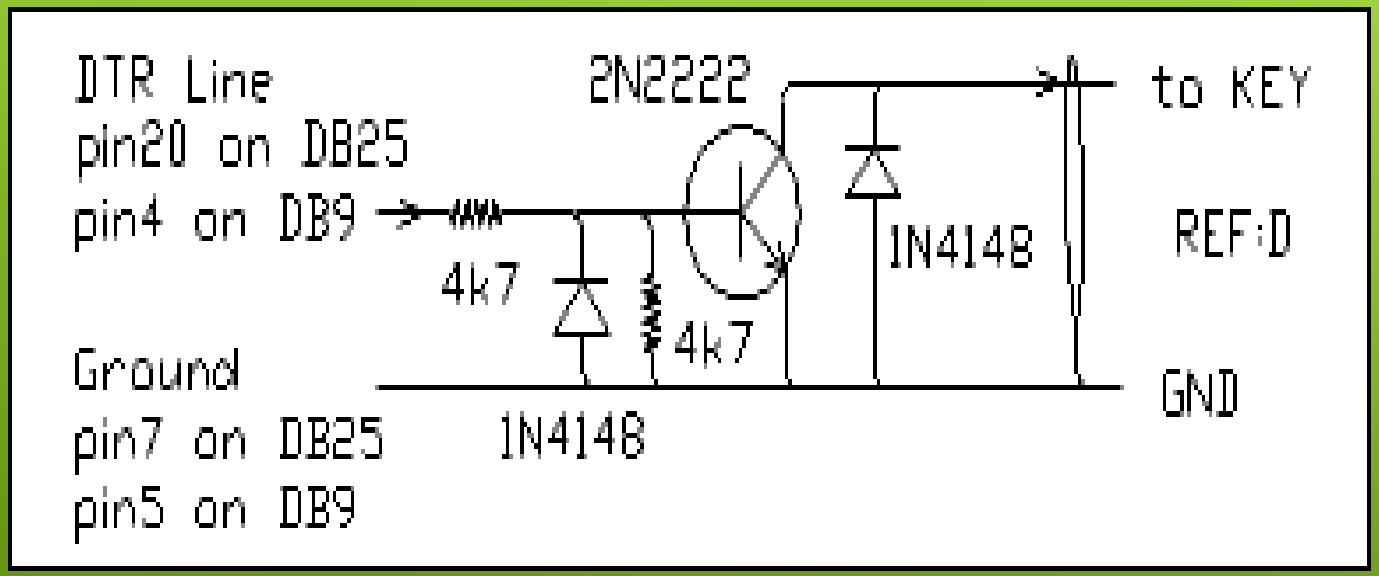
- What does it do?
- Pass audio from the radio to the computer and from the computer to the radio
- Key the radio
- PC Control of the radio, not required but can make remote operation *easier!*

Computer to Radio Interface (cont.)



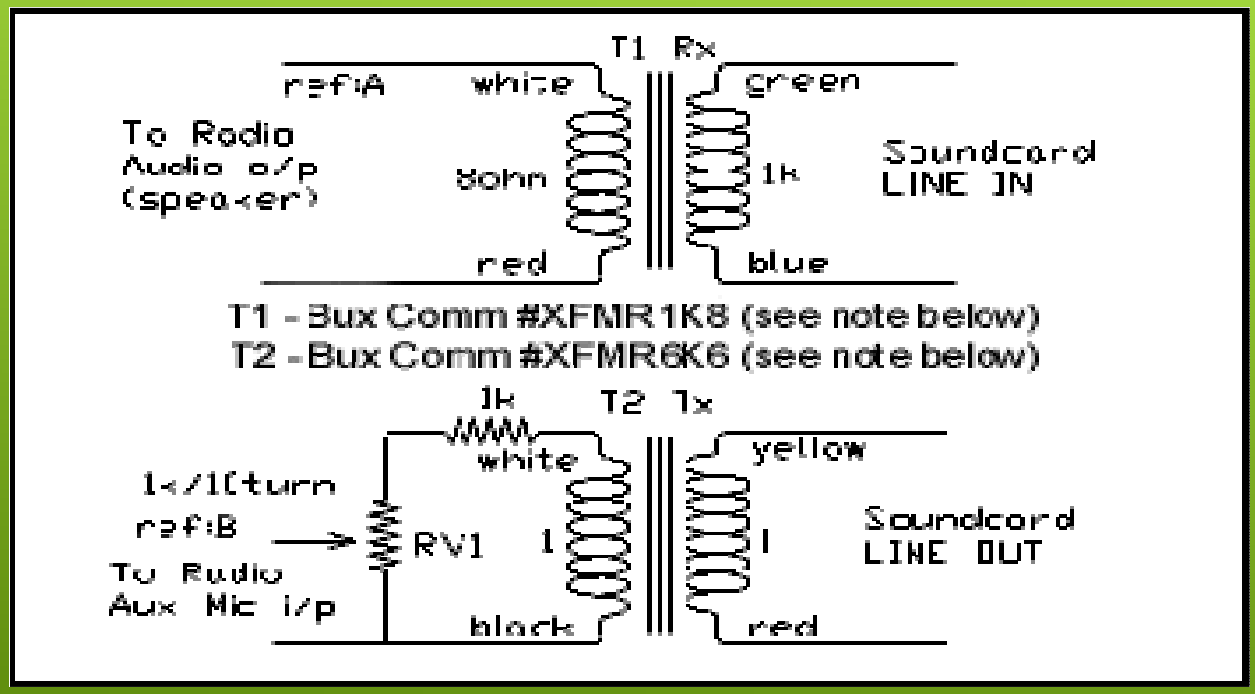
Simple Audio Interface

Computer to Radio Interface (cont.)



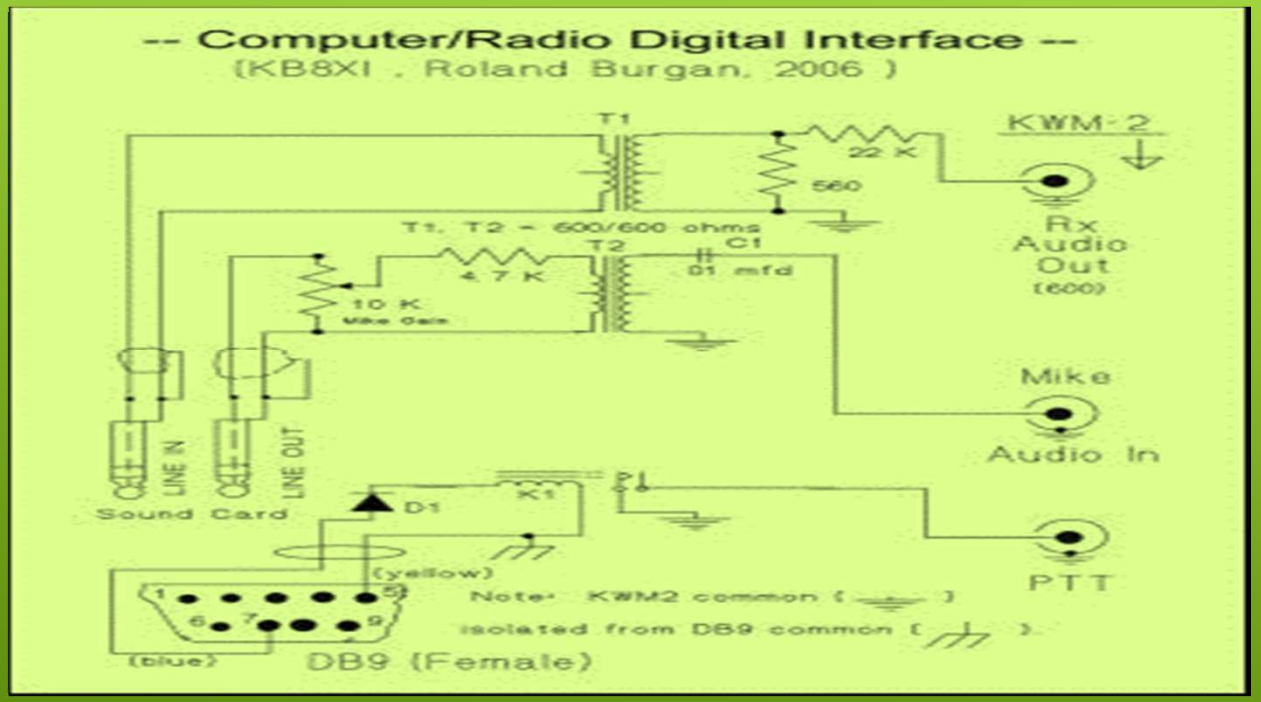
Transistor Keying Interface

Computer to Radio Interface (cont.)



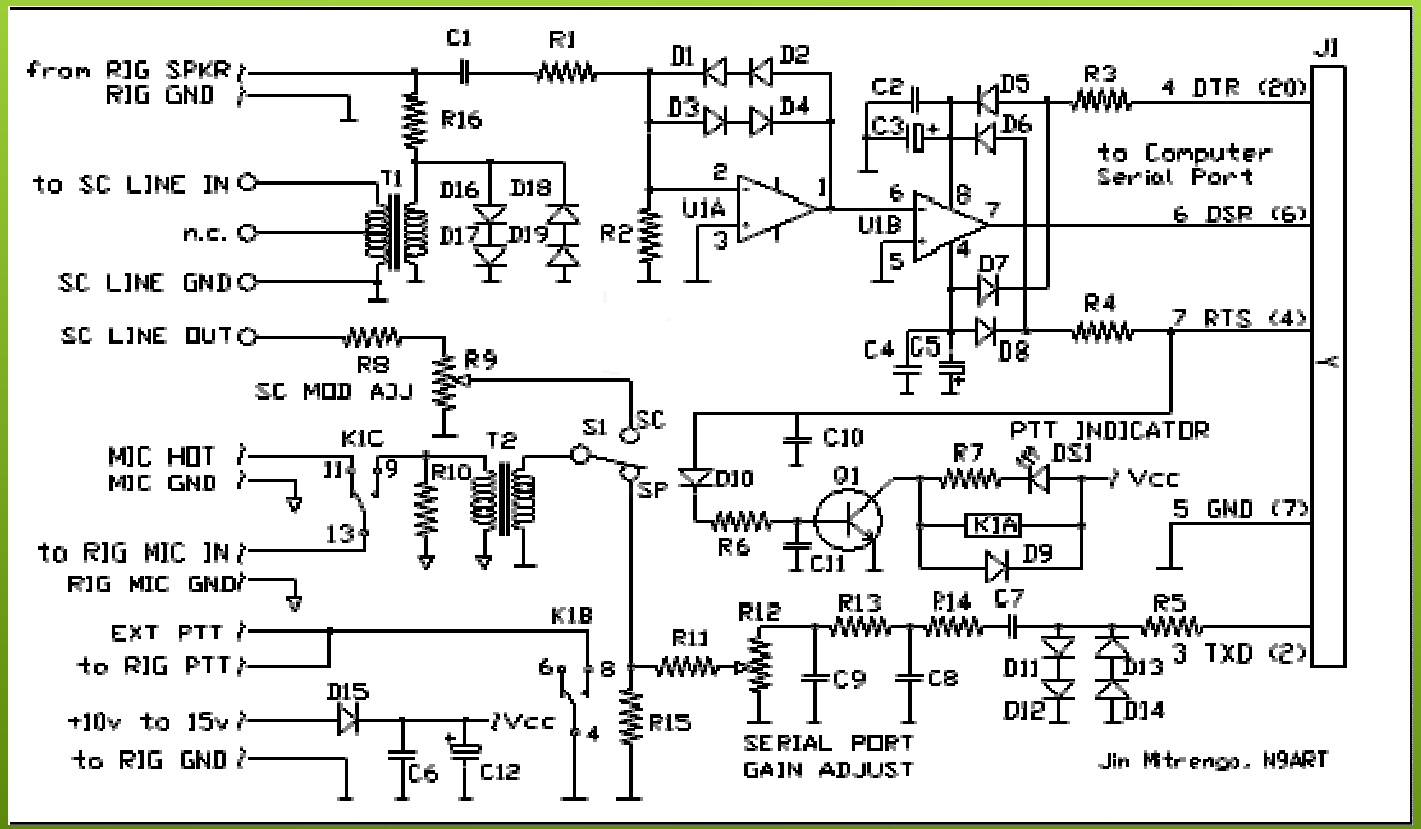
Isolated Audio Interface

Computer to Radio Interface (cont.)



Complete Simple Interface

Computer to Radio Interface (cont.)



Complete N9ART Interface – QST November 2000, FAR Circuits circuit board

Computer to Radio Interface (cont.)

Available Interfaces to buy (just a few)

- BUXCOM Rascal
- Donner Digital
- Tigertronics – Signalink
- West Mountain Radio Rigblaster
- DigiMaster (Europe)
- MFJ-1275 , MFJ-1279
- RigExpert

HF Radio Antenna

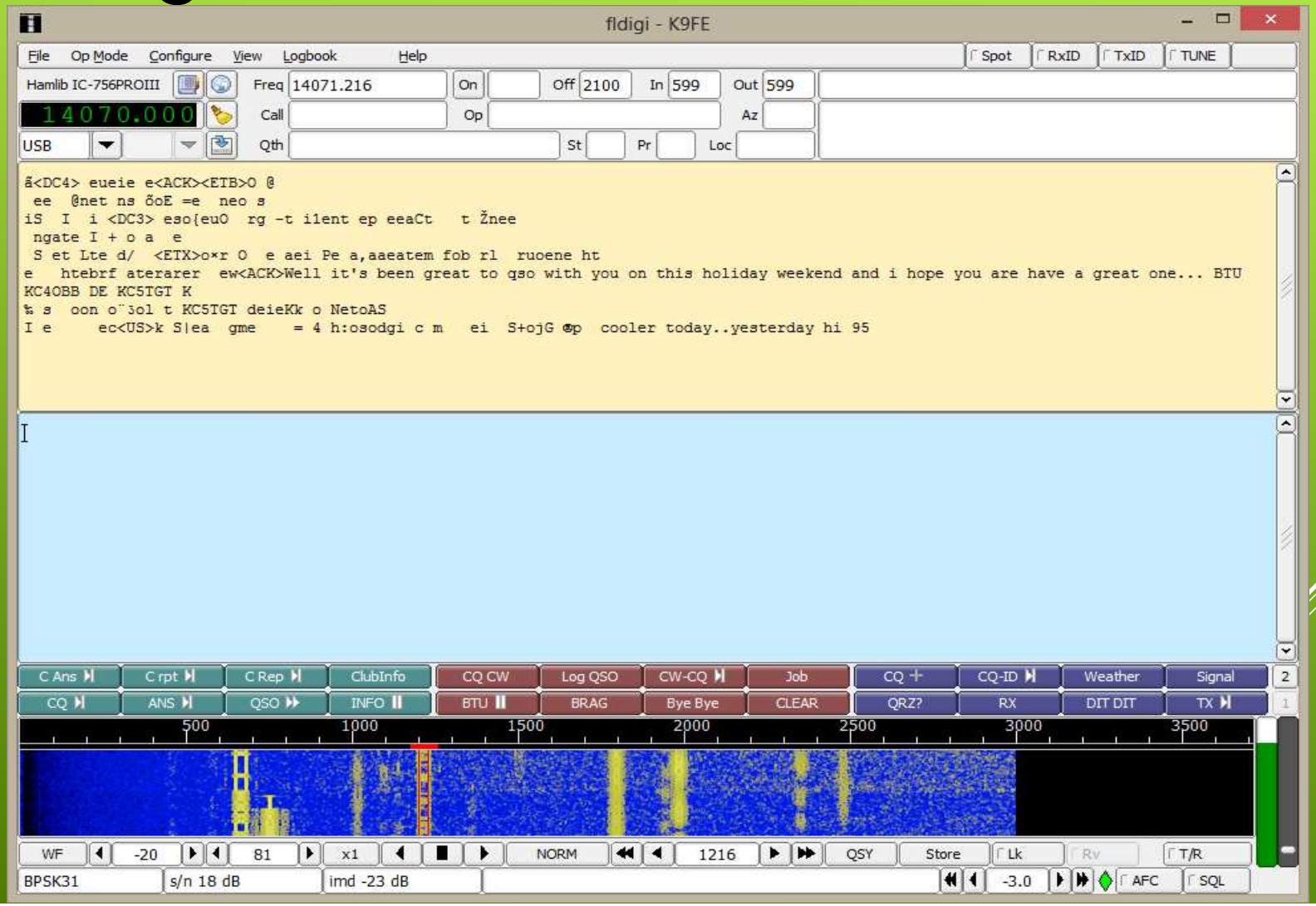
- If you can have 1 antenna, use 20m (14.070 Mhz)
- Attic, home gutters, simple dipole, end fed wire, Slinky, vertical, beam, …..

- *THEY ALL WORK!*

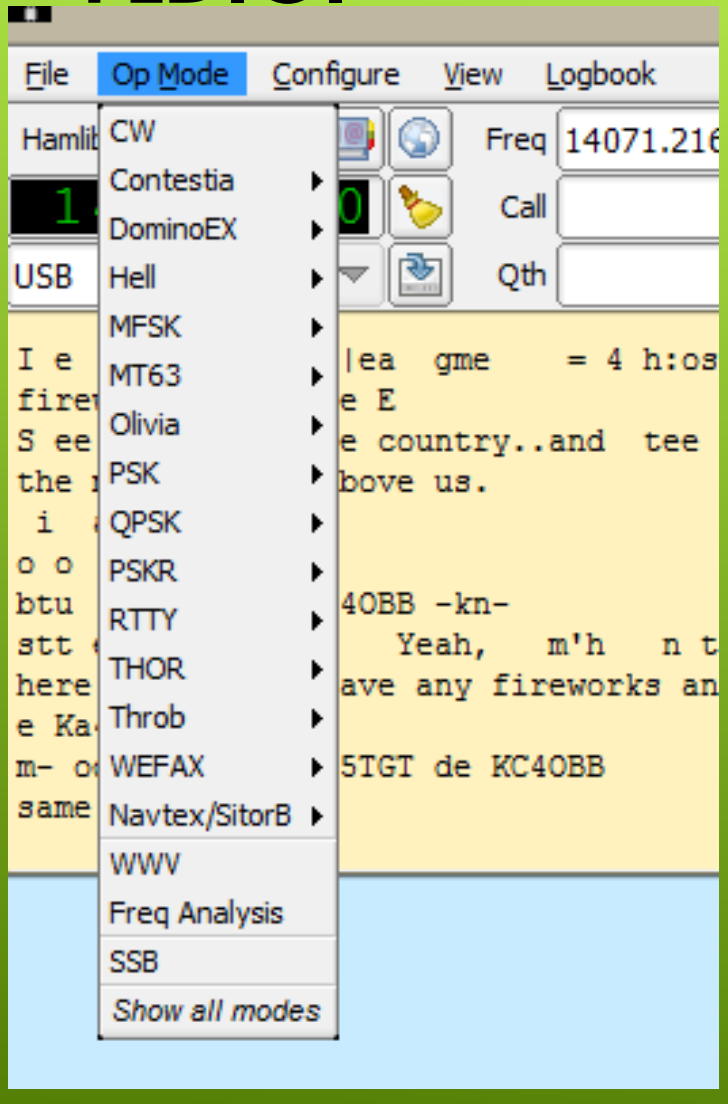
Digital Programs

- DIGIPAN - simple to use, one of the originals (FREE)
- MixW – Feature packed but older and not free ($50)
- HRD DM780 – Version 5.24 is free, all later versions are $100 but you get HRD!
- FLDIGI – My personal favorite! Lots of features (FREE)
- MultiPSK – OK, a little different but many modes (FREE)
- WSJT-X – JT-65 & JT-9 only (FREE)
- JT-65 HF – JT-65 Another Favorite (FREE)
- Many others, but all use the same interface.

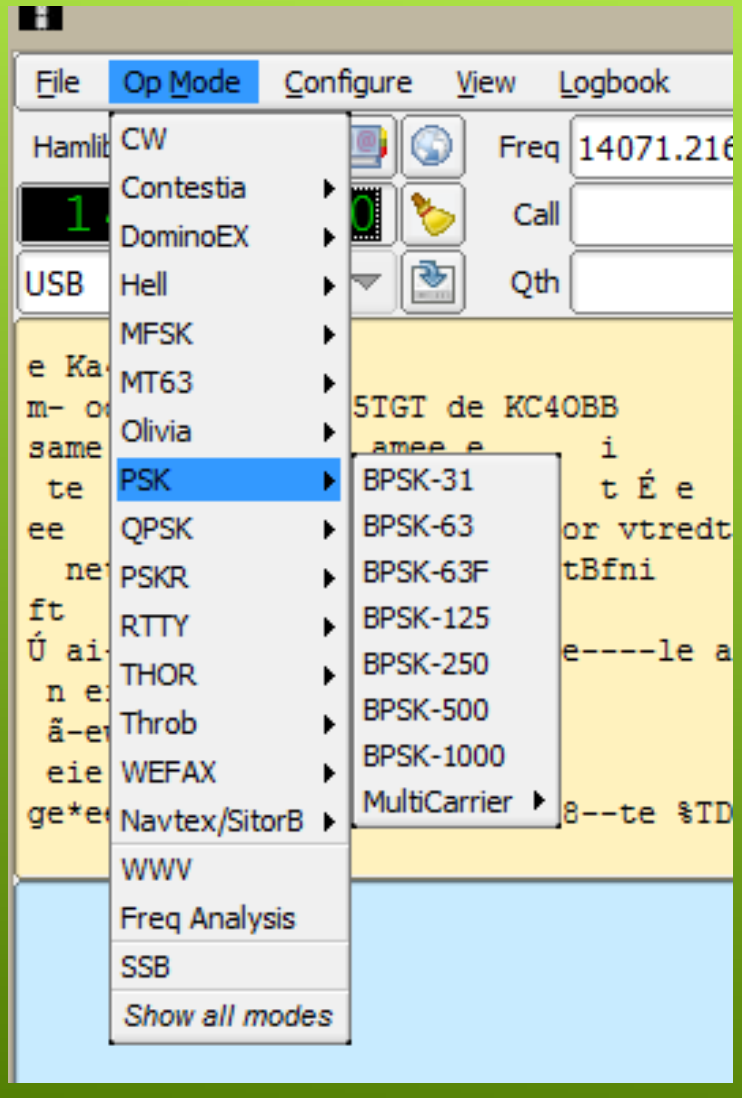
Digital Programs - FLDIGI



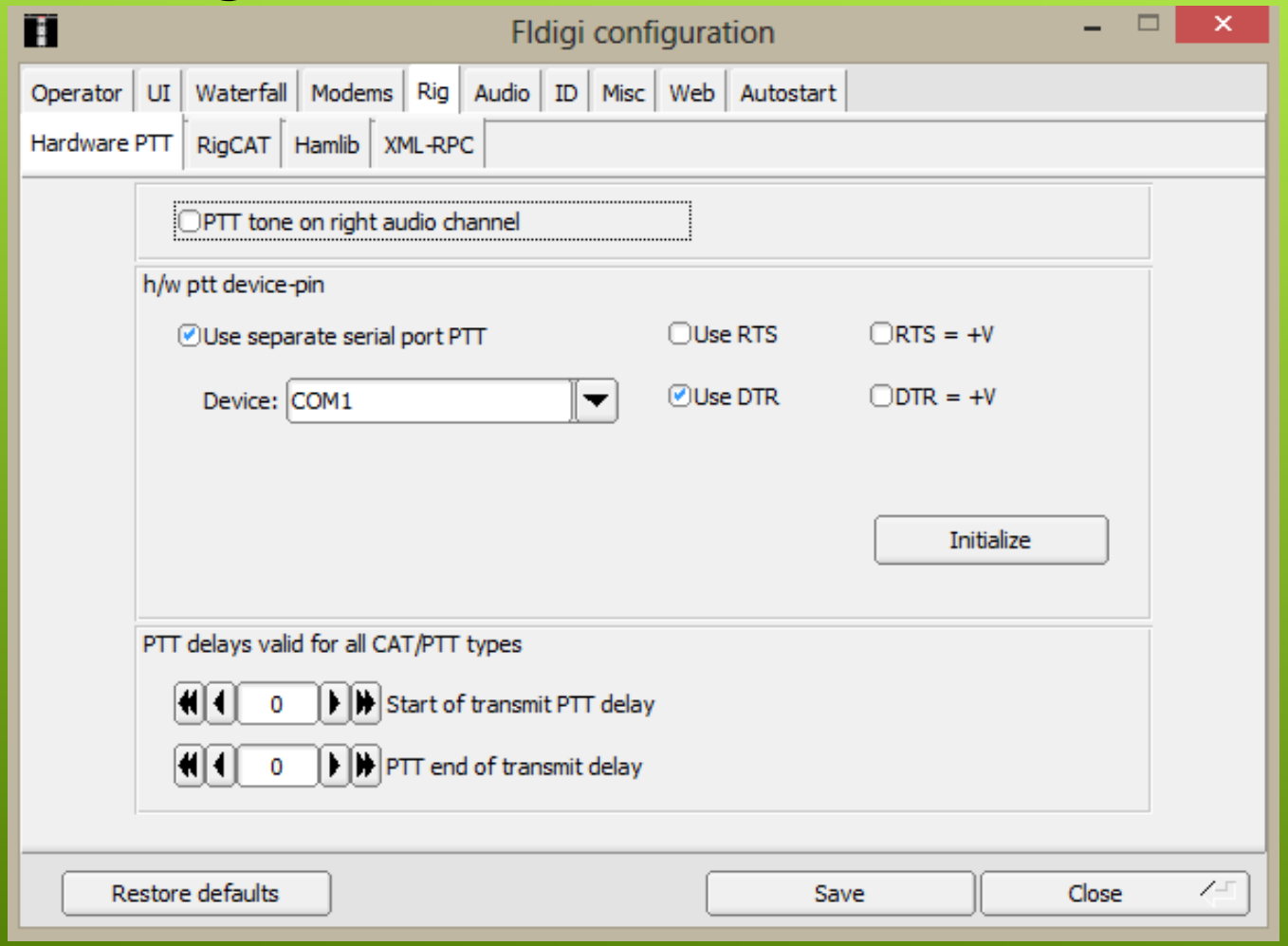
Digital Programs - FLDIGI



Digital Programs - FLDIGI



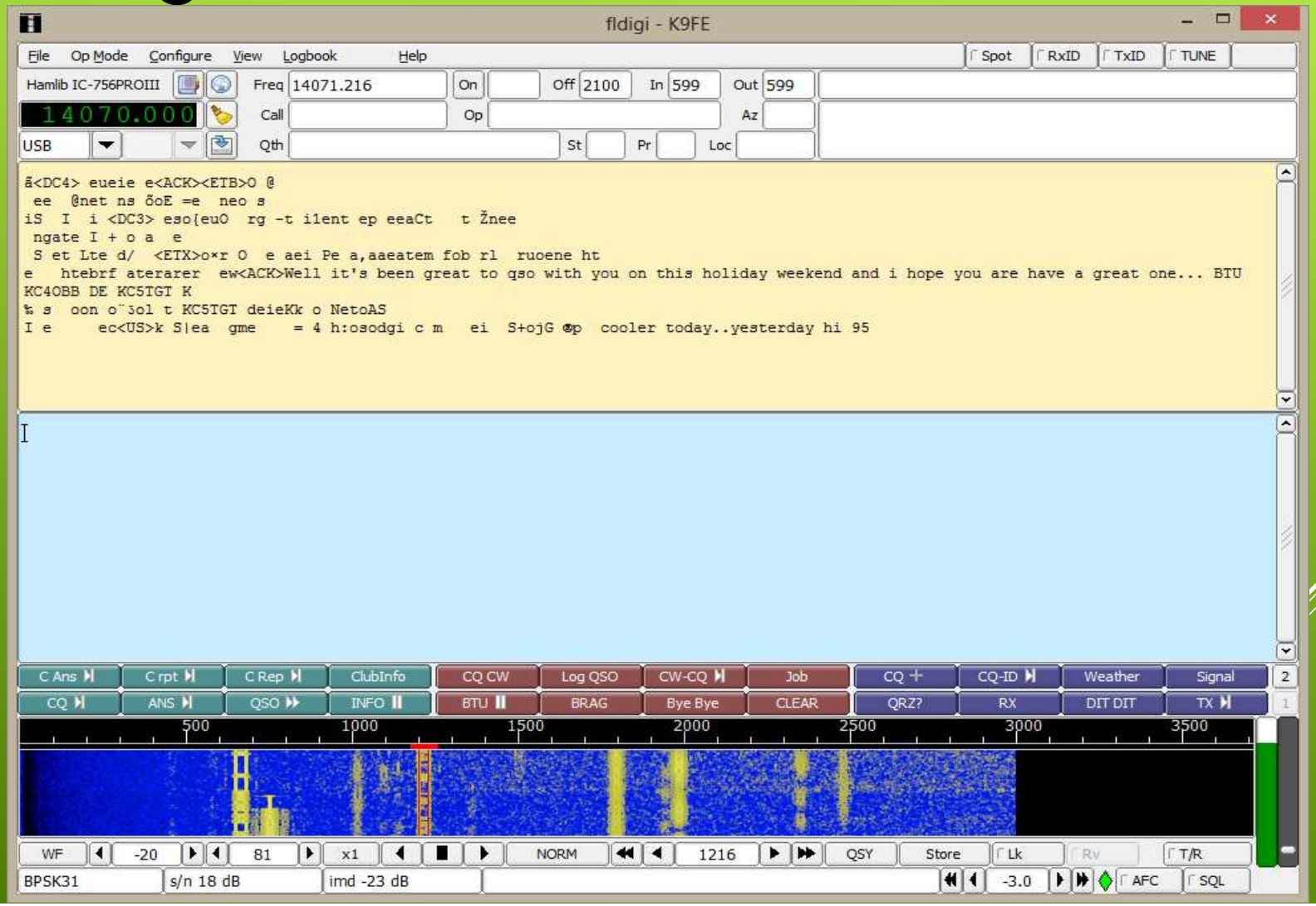
Digital Programs - FLDIGI



Digital Programs - FLDIGI

Select VIEW, Signal Browser

Digital Programs - FLDIGI



Digital Programs – Time Dependent Modes

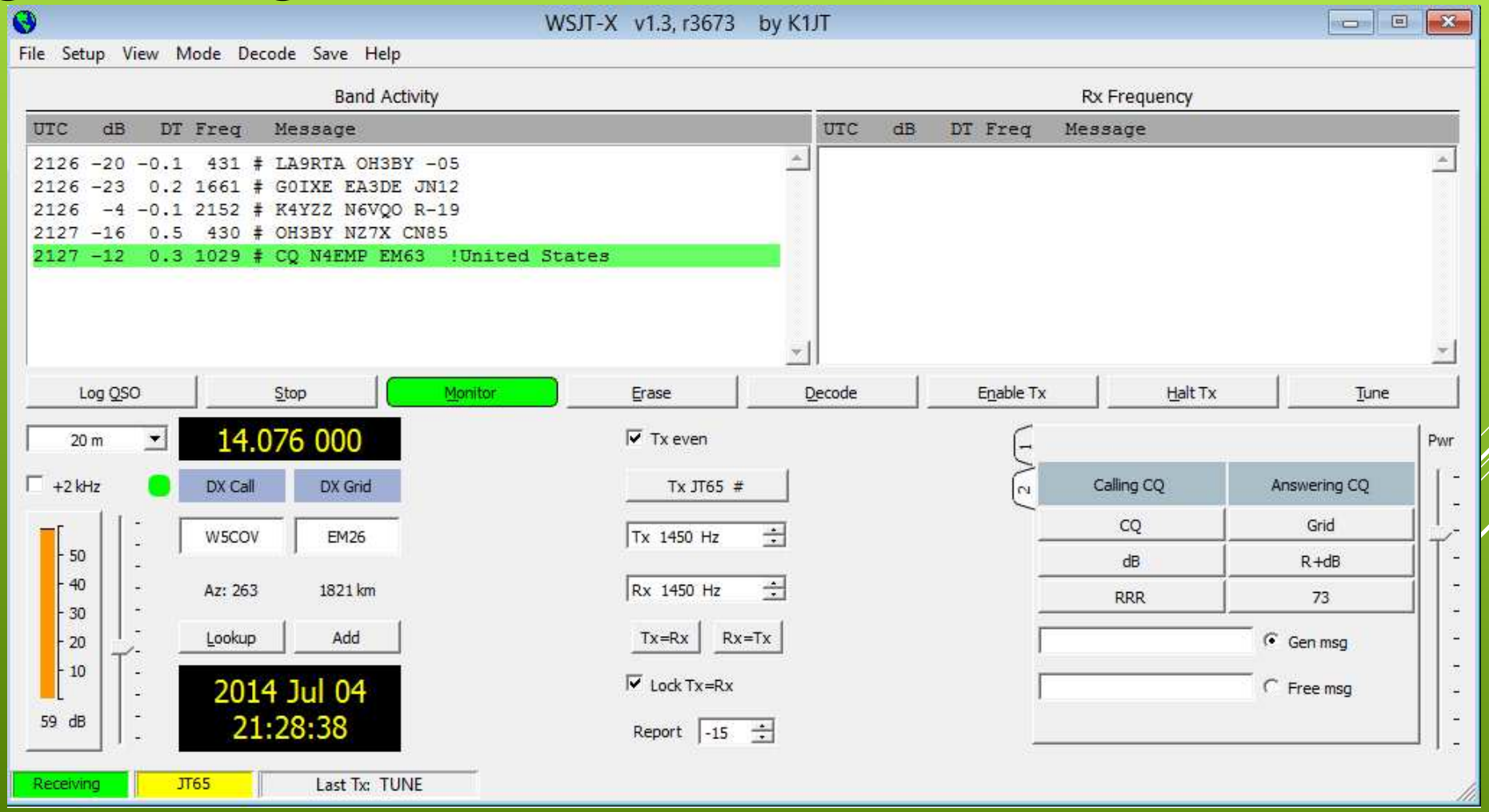
- Some noise resistant modes require an accurate clock on your computer (weak signal modes)

- Simple FREE program to do this – DIMENSION 4 (Thinking Man Software www.thinkman.com)

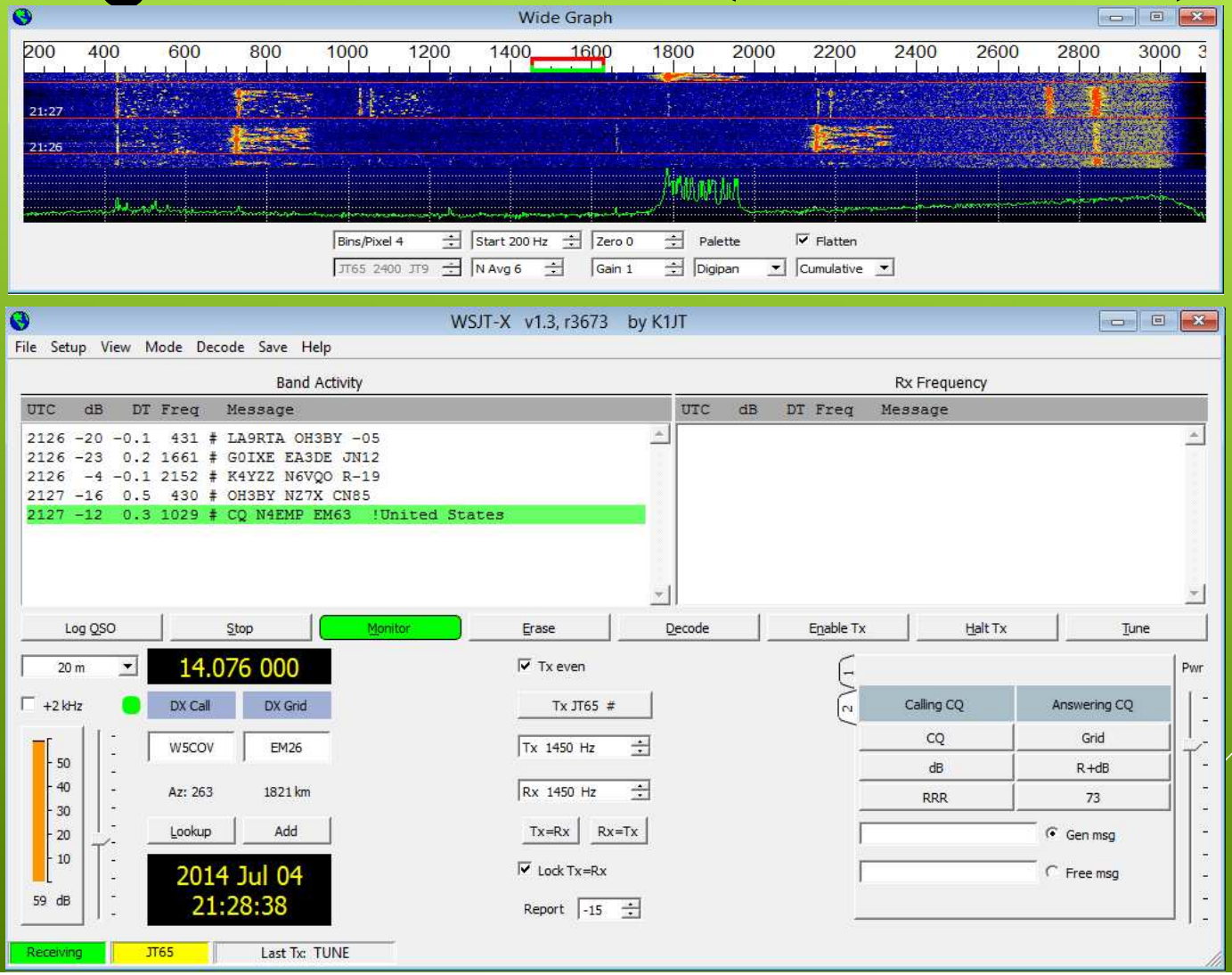
- Runs in background and uses SNTP to get the time from servers across the world.

- Can be set to any interval to obtain time, (if your computer is poor at keeping time you can use a shorter interval)

Digital Programs – WSJT-X (JT-65 & JT-9)



Digital Programs – WSJT-X (JT-65 & JT-9)



- *On to the demonstration!*