

# Interfacing for Digital modes

By  
Don Udel KI<sub>5</sub>AIU

# Have days like this?



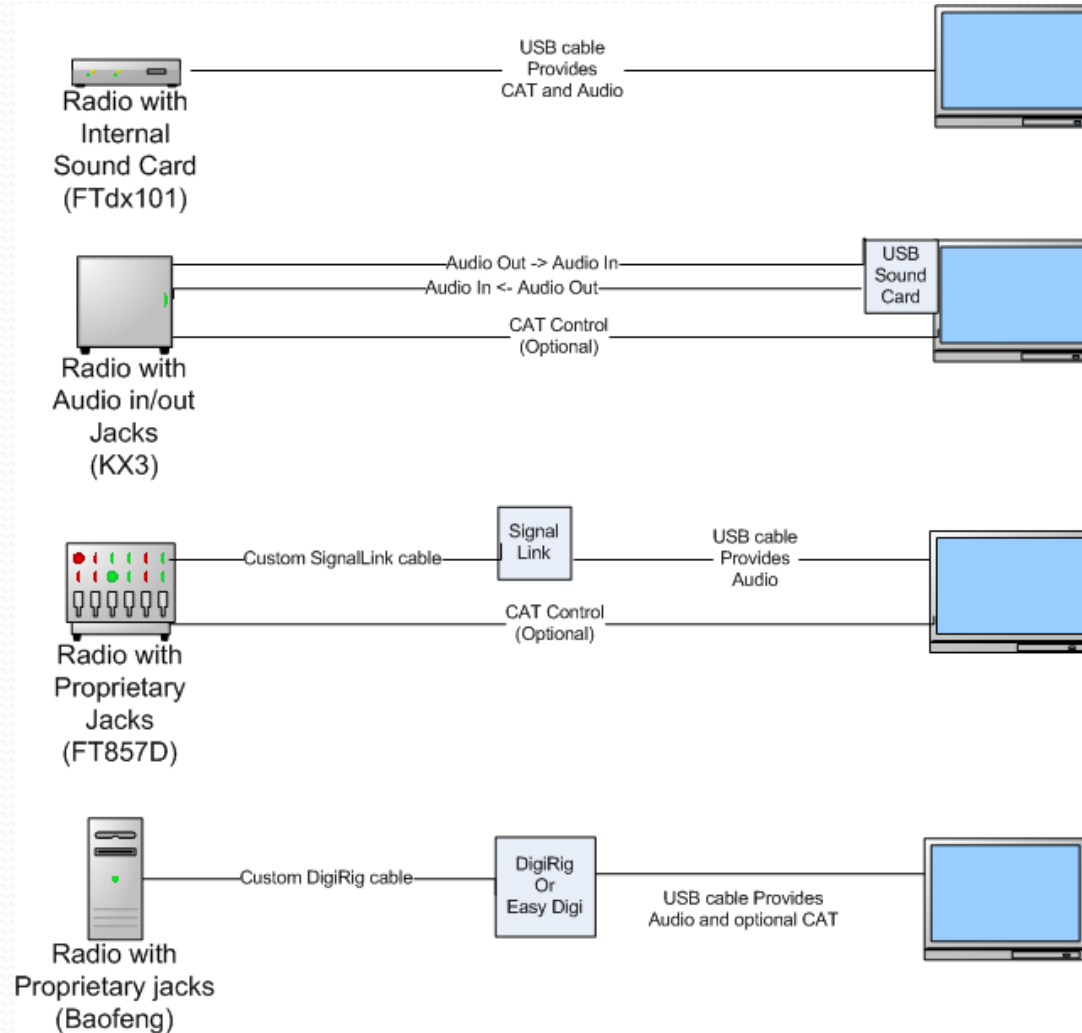
# What's the problem

- Getting digital signals from the computer into the radio and received signals from the radio into the computer.
- CAT (Computer Aided Transceiver) allow computer control of radio functions
  - Basic – PTT (Press To Talk)
  - Full – Band changing, frequency changing, power selection, etc

# Fortunately,

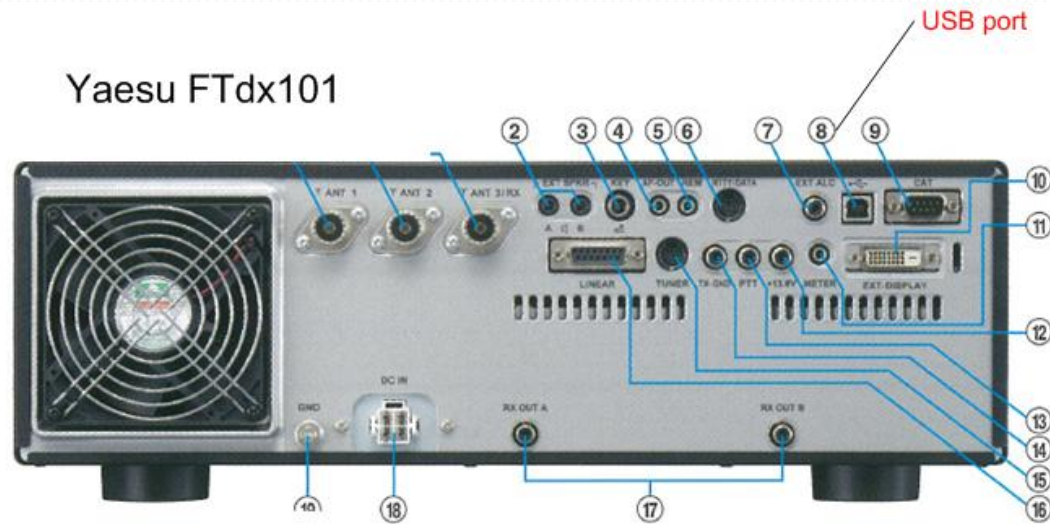
- It's not that complicated. There are four basic varieties.
- We'll cover those
- And spare the radio!

# Types of Radio Connections

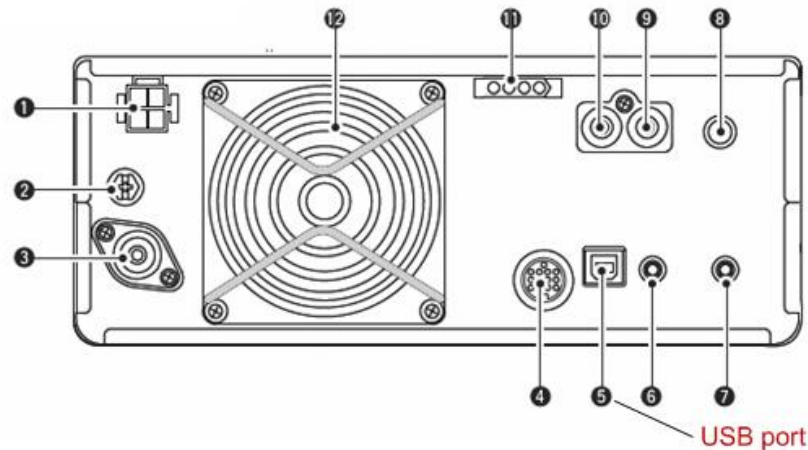


# Radios with builtin Sound Cards

Yaesu FTdx101



ICOM 7300



# Radios with builtin Sound Cards

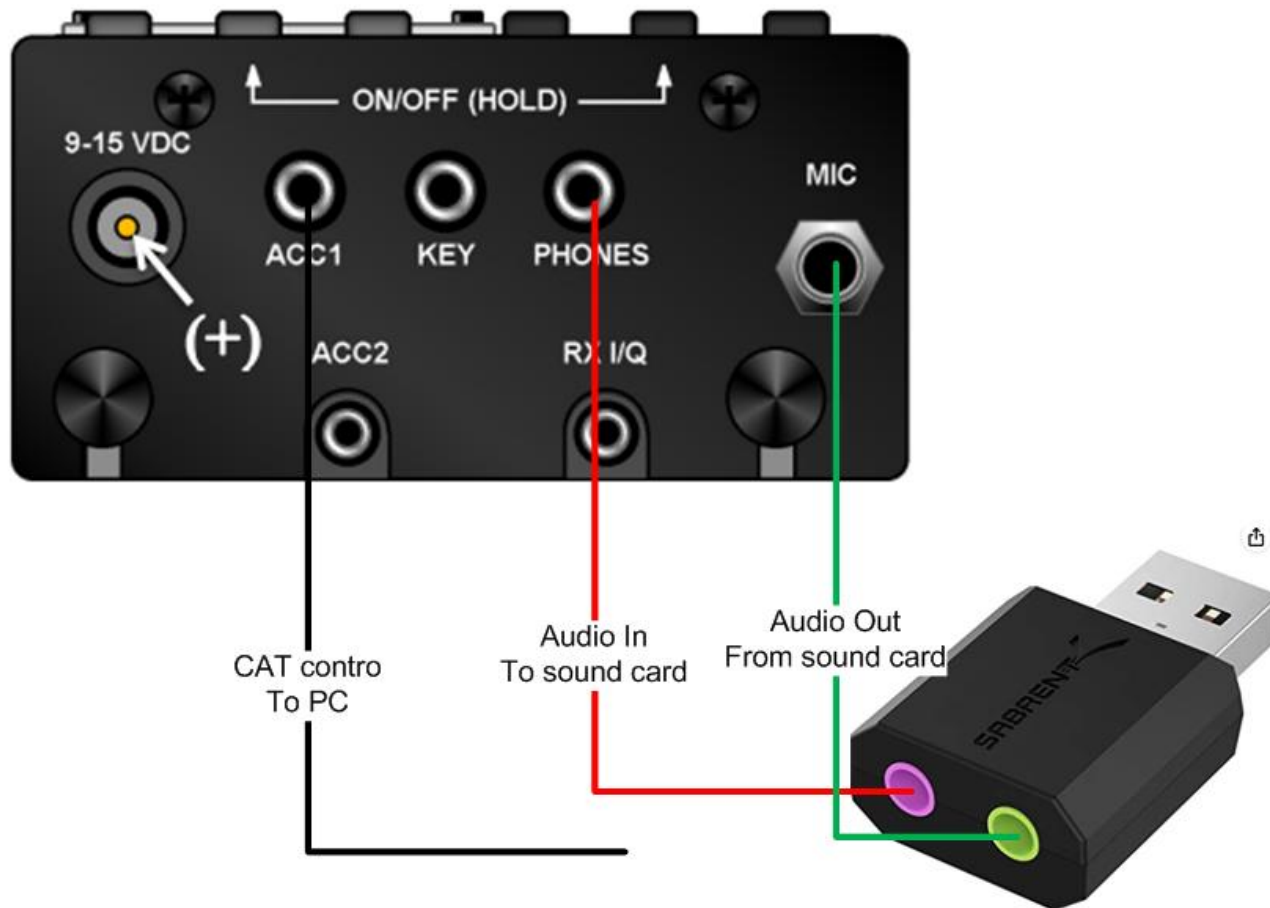
- Pros

- Easy connection via USB cable
- Data and CAT via a single connection
- Presents on the PC as two com ports (one data, one CAT)

- Cons

- Needs a quality USB cable. Recommend Tripp-Lite gold plated connectors with built in ferrites. U023-006
- May need a driver loaded first (check with manufacturer)
- Not available on older radios (Pre 1990)

# Radios with Input and Output





# Radios with Input and Output

- Pros

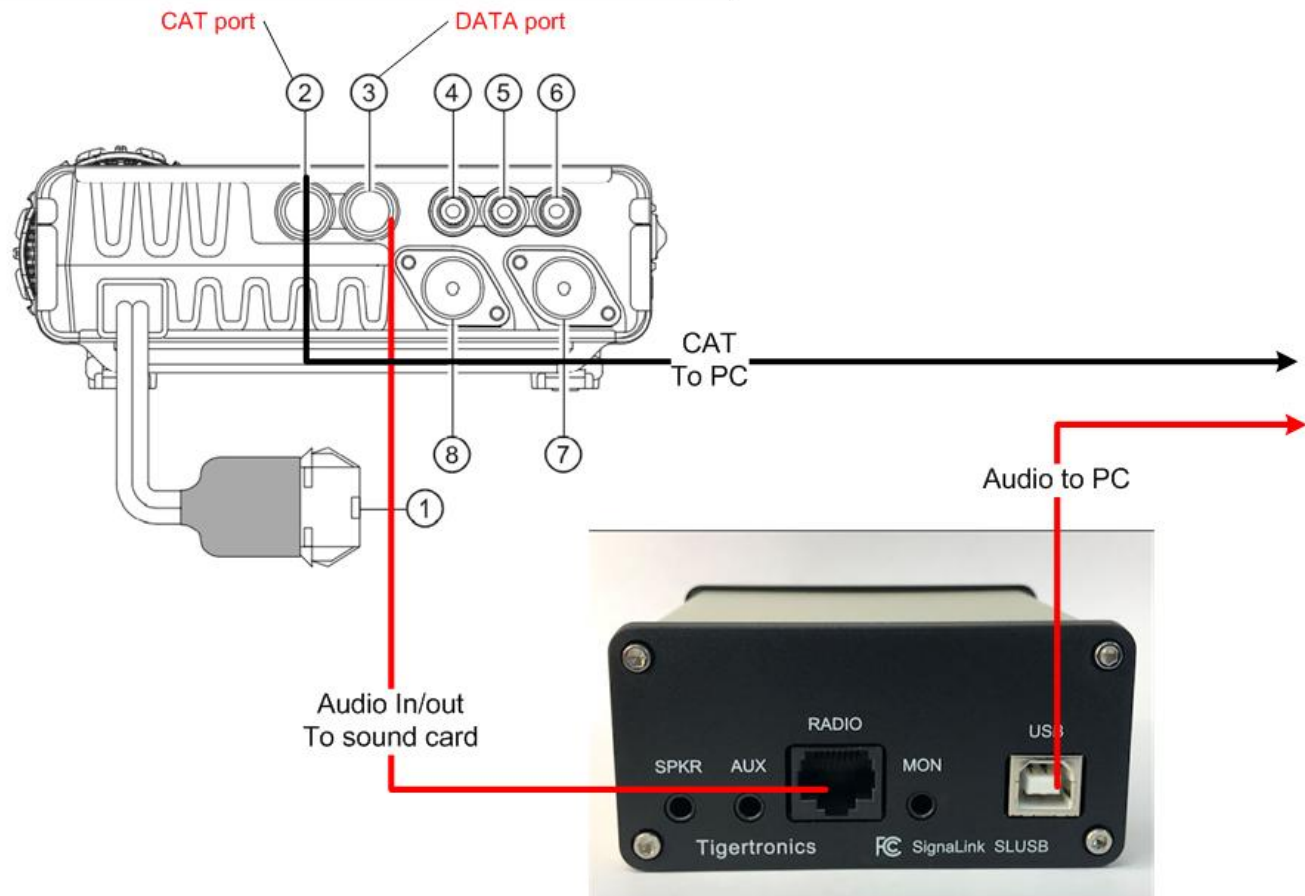
- Easy interface (2 cables) to USB sound card
- Inexpensive sound card < \$10 (Sabrent)
- Very portable solution for remote ops
- Keeps the PC sound card free for other uses

- Cons

- No CAT control unless radio supports it via a separate cable. PTT can be done via VOX

# Radios with Proprietary connection

## ***REAR PANEL CONNECTORS***



# Radios with Proprietary connection

- Pros
  - SignalLink has many proprietary cables available
  - May be the only option on older equipment (unless you build your own cables)
  - No cat control unless available with a separate cable
- Cons
  - SignalLink is pricey (over \$100)
  - Bulky compared to USB sound card

# Radios with Proprietary connection

New option for proprietary connections. Digirig and Easy Digi



# Radios with Proprietary connection

- Pros

- Less expensive than SignalLink. Digirig ~\$50 Easy Digi < \$10
- Both can do PTT operation
- Digirig has custom cables available

- Cons

- You have to build Easy Digi cables
- Easy Digi is a kit (easy kit though)
- Digirig cables can get pricey.

# Next steps

- Still need to configure PC software
- And radio settings
- Topics for another day