A Visual History of Flex Radios & Remote Capabilities

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Steven M. Simons

- What is SDR ?

Software Defined Radio

- ◦ It works the same as a Super-Het Radio

- ◦ It replaces all the traditional parts of Oscillators, Mixers, RF filters

- ◦ It is a quieter radio

- ◦ It can support many modulation schemes (Wave Forms)

- ◦ A consumer example is your cell phone

SDR Technology

- SDR 1000 introduced in 2003 and considered the 1st open source SDR

  - Required an external sound card

  - Software was open source with many contributors

  - Controlled using a PC
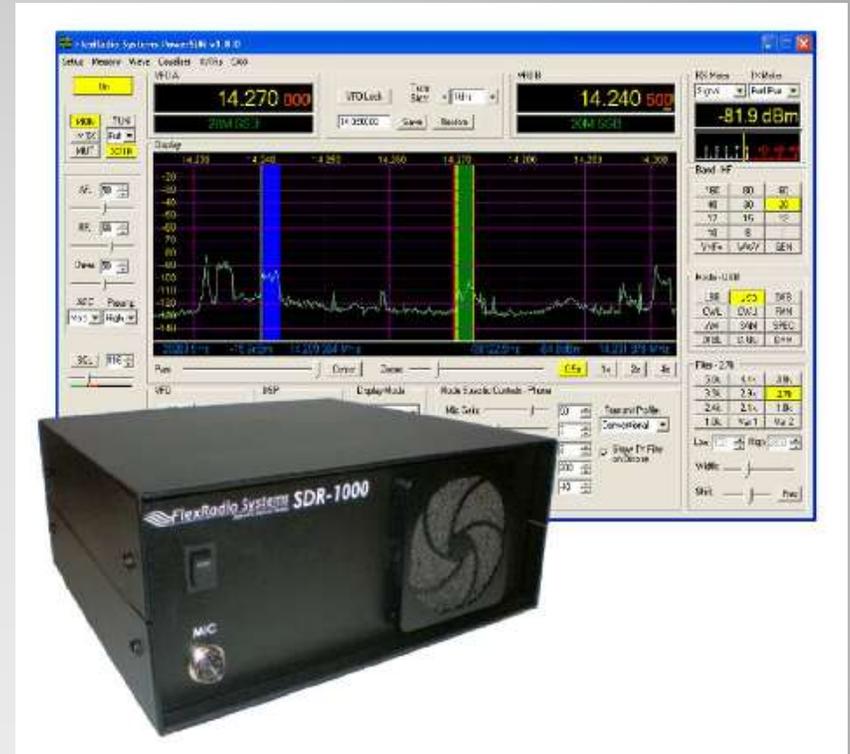
Flex Radio model history

- Flex-5000
  - Hardware control over a single FireWire® IEEE-1394 connection to a user provided computer (no external sound card)
  - The FireWire card is installed in the PC
  - Dual receive capability
  - Excellent receiver specifications
  - External 10MHz reference for better stability
 - Remote via PC
  - PowerSDR software control

Flex Radio model history

- Flex-1500 & 3000
  - Introduced in 2009
  - Small footprint
  - Firewire control
  - For portable operation
  - PowerSDR software control
  - Remote via PC
  - Knobless PC control

Flex Radio model history

- Flex 6000 Series
  - Completely new platform
  - Introduced in 2018
  - Ethernet connected
  - Faceless & Faced models
  - Operation using proprietary SmartSDR on a PC, Maestro or Cell phone
  - Designed for remote operation
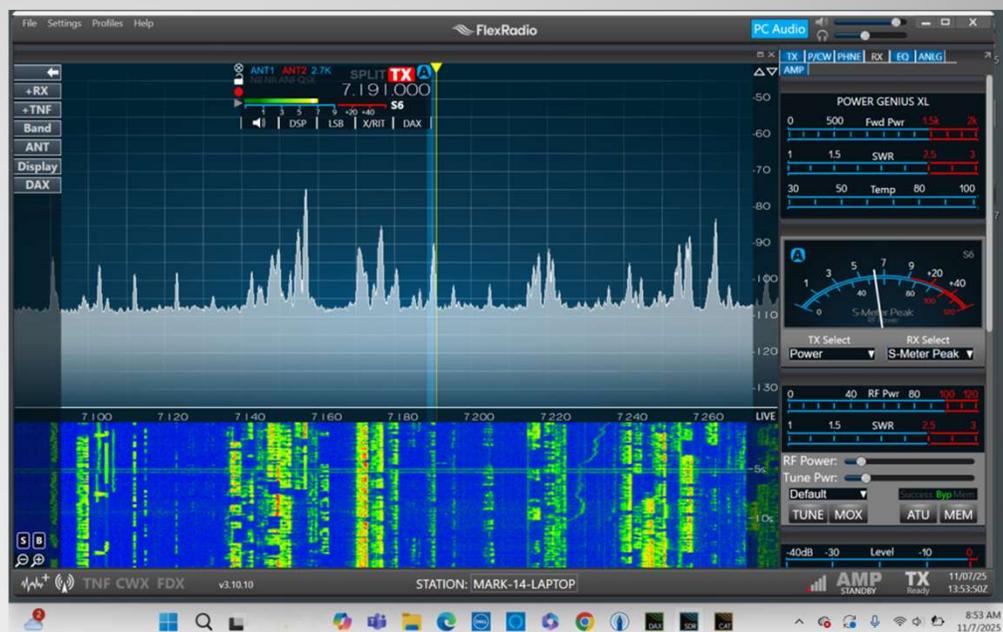 - Multiple users can simultaneous connect
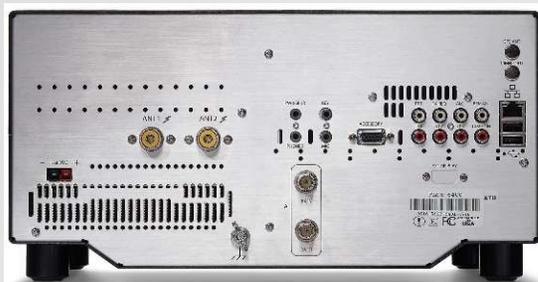
Flex Radio model history

- SmartSDR software
  - PC – Maestro – Cellphone remote capable
  - Full functionality
  - Connectivity to multiple radios
  - Connectivity to compatible devices; Amplifier, Tuner
  - Easy connect in the PC
    To WSJT digital suite
  - Will also control
    Tuner & Amplifier

Flex Radio model software

- Flex Maestro
  - Ethernet connected
  - Full remote control from anywhere
  - Knobs & Buttons
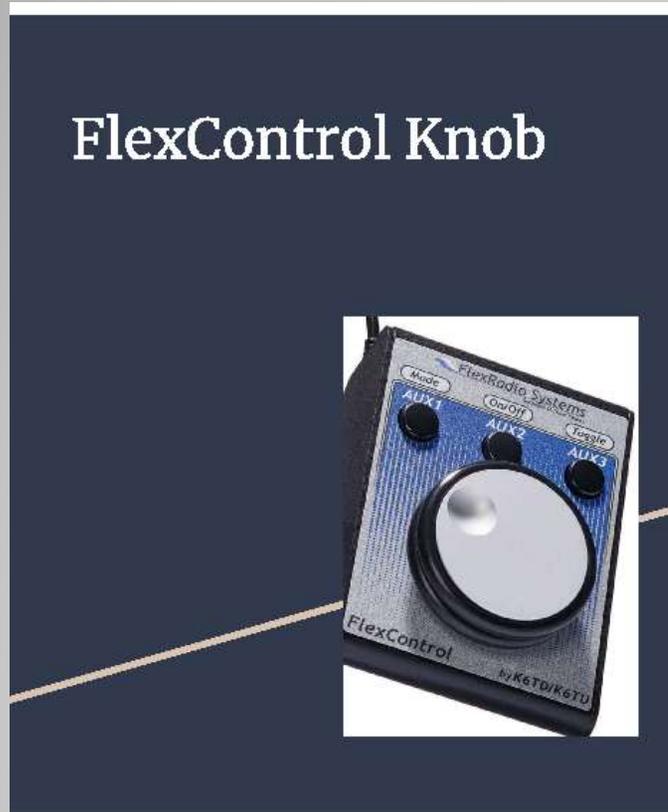
Flex Radio accessories

- Flex Maestro
  - Connectivity

Flex Radio accessories

- The Knob
  - Connects to your PC

FlexControl Knob

The FlexControl knob gives you VFO control of your Active Slice on your desk.

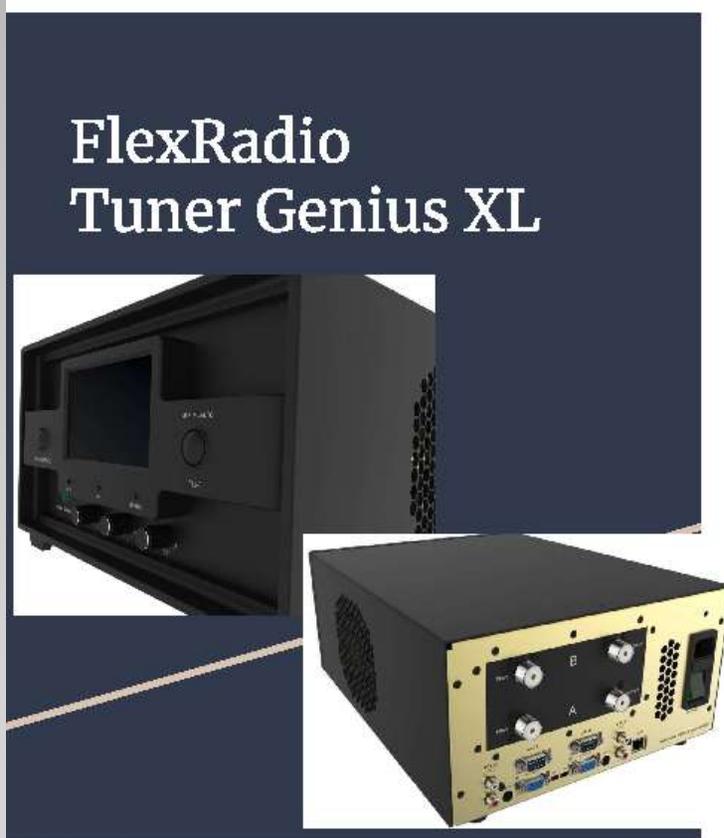It has the feel of a well designed VFO knob

Customizable feature buttons

It works with SmartSDR and is plugged into your PC

https://www.flexradio.com/products/flexcontrol-usb-controlled-tuning-knob/

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Flex Radio Accessories

- Tuner Genius

Flex Radio Accessories

- Power Genius
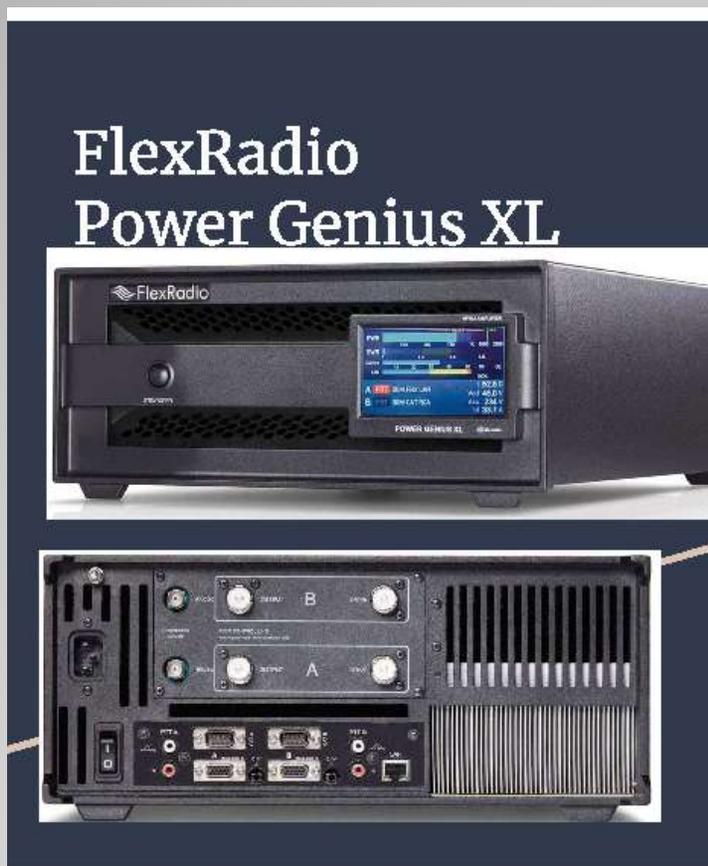
Flex Radio Accessories

- What's required for remote operation
  - Simple station
    - Flex 6400
    - 12VDC PS
    - Internet capable relays to:
      - Power cycle radio
      - Turn 12VDC supply on/off
    - Ethernet connection
    - Multi-band antenna

Remoting

- What's required for remote operation
  - Complex station
    - Flex 6400
    - 12VDC PS
    - Internet capable relays to:
      - Power cycle radio
      - Turn 12VDC supply on/off
    - Ethernet connection
    - Single-band antennas
    - Antenna switch
    - Bandpass filters
    - Amplifier
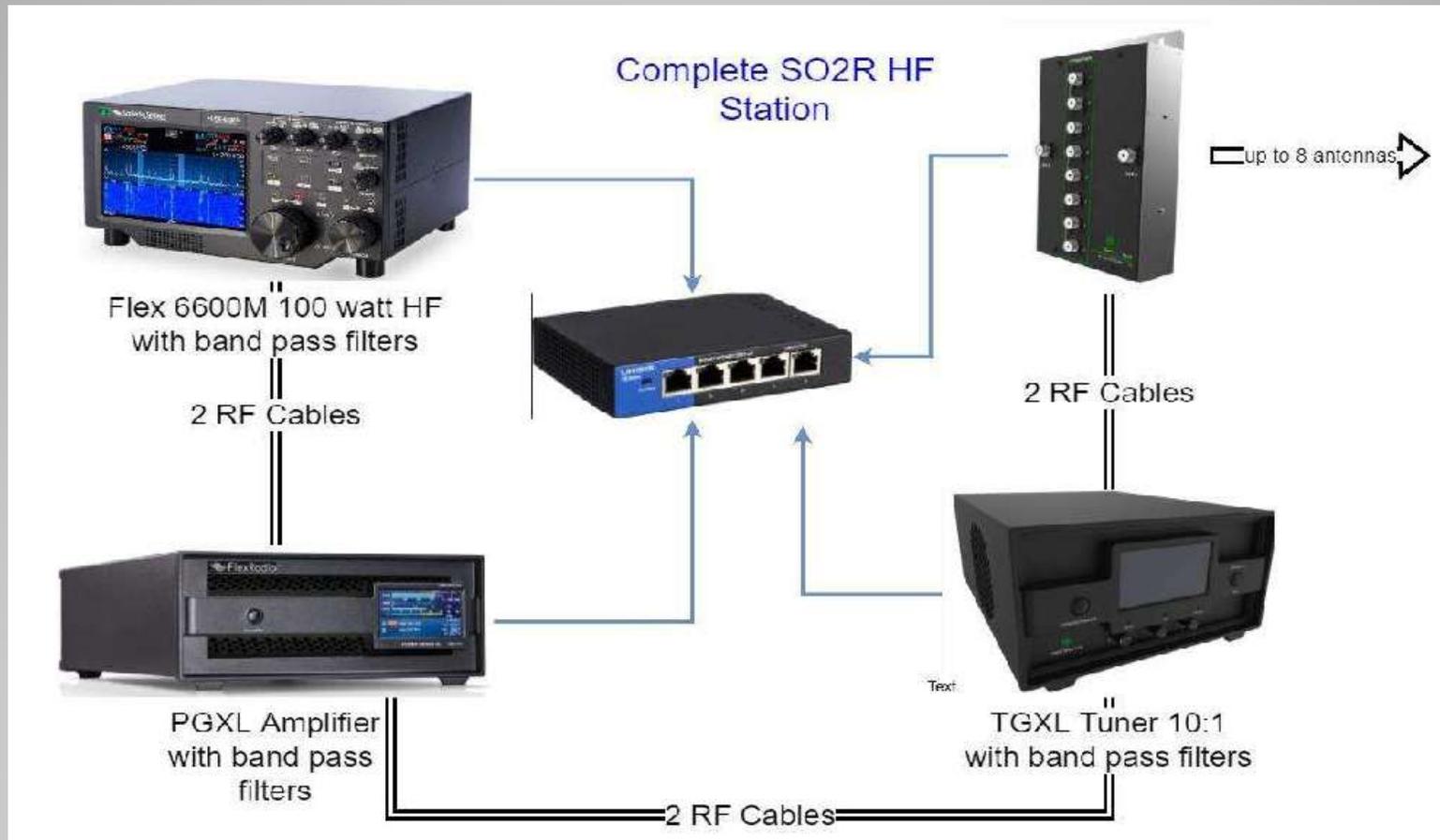   - Some specialized control/monitoring software
      Node Red

Remoting

- SO2R configuration

System Configurations

- SO2R station configuration

System Configurations