NCDXC Elmering Project - 2017

Transceiver and Linear Amplifier Selection

By appointment with instructor Please schedule fairly close to Nov 11, 2017

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If you have questions or want to learn about transceivers and amplifiers please join me in one or more one-on-one sessions at my home station. These will be hands-on sessions where you will learn how to decide what you want in a transceiver and an amplifier. Learn how to configure, interconnect and use them.

Two different sessions - one is on Transceivers and the other on Amplifiers. Each will be one or two hours long depending upon your interest and questions. Be sure to bring pencil and paper for notes and sketches.

Transceiver Session:

- What features do you want?
  - DSP
  - EQ
  - 100 or 200 watt
- Sensitivity – how much vs how much is useful
- Stability & Accuracy
  - what frequency is the radio really on
  - can it stay on frequency
- Noise
  - Noise Blanker – hardware or software or both
  - Noise Reduction – DSP, ON/OFF, adjustable
- ALC – why, what does it do, why is it so important
  - Internal to the radio and amplifier provided
- Duty cycle capability
  - 25%, 50%, 100%
- Two receivers vs Dual-Watch with one receiver
  - What is the difference and when will I use it

- Split – what is it, when to use it, how to set it up
    - Does my transceiver have it, should I buy one with the 2nd receiver

- Selectivity Filters – what bandwidths do you want for what mode
    - CW narrow
    - SSB wide
    - Data wide or narrow depending upon mode
    - Roofing filter – what is it

- New or Used
    - How much money are you willing to spend

Amplifier Session:

- Why or when do I need one
    - DX
    - Contests
    - Local rag chew

- Tube or Solid State
    - Warmup time
    - FET resistance to abuse vs. rugged tubes

- How much power (600, 1200, 1500 watts)
    - DX
    - Contesting depending upon entry class selected (QRP, Low Power, High Power)
    - Duty cycle

- AC Power Mains (120 or 240VAC)
    - What is available at your station
    - How easy it is to get 240 to your station if you want it

- Feedline rating
    - Coax models have limits from 300 – 3000 watts depending on model
    - Open wire balanced line has very high limits and low losses
    - SWR impact on power handling capability and losses

- Antenna rating
    - Antennas have power limits dependent upon their design & construction

- Balun rating
    - Many antennas need a balun either at their feed point or back at the station

    - Type, ratio, isolation (amount of ferrite) and power limits

- How to integrate with the transceiver
    - T/R switching (relay, SS, voltage & current limits, timing)
    - ALC – why do I need it, how does it work, how to set it up

- Hot switching – what is it why is it important to avoid
    - Impact on the amplifier
    - Timing and closure verification before RF arrives

- TX Inhibit – what is it, should I use it
    - Some amplifiers provide a circuit for TX inhibit
    - Requires the transceiver to have TX inhibit available or use an accessory