SO2R Box (Plus)

A Potential YCCC Project

SO2R

Radio 1

Radio 2

SO2R Box

Operator
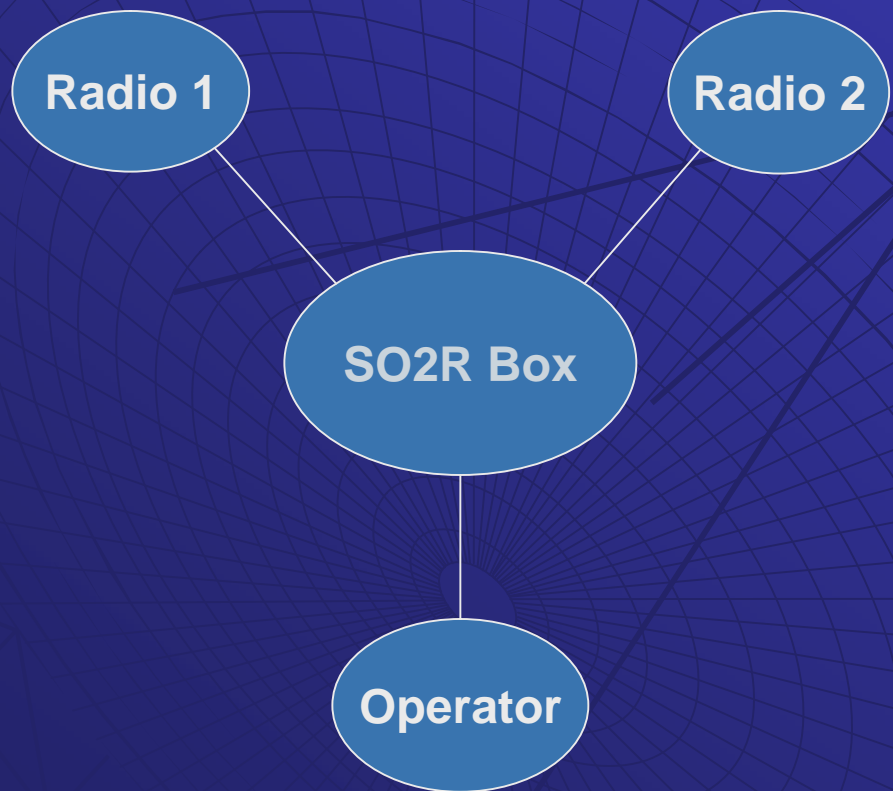
- Two radios
- Two antennas
- Filters
- SO2R Box

SO2R Box Features

- CW keyer
- Headphone switching
- Microphone switching
- And more

CW Keyer

- Paddle modes
  - Iambic A or B
  - Dit or Dah preference
  - Ultimatic
- Contest (short) or normal spacing
- Loose or tight paddle timing
- 2-99 WPM
  - 5-50 WPM from front panel pot

Headphone Switching

- Three Modes
  - Stereo

    One radio in stereo, both split left/right
  - Spatial

    One radio in left ear, Other radio in right ear
  - Symmetric

    Never goes stereo, usable by people with hearing problems in one ear

Headphone Switching

- Left/Right blend
  - Adjustable from the computer
- Reduced clicks when switching between radios

Microphone Switching

u Switches microphone between radios

u Will work with your current voice keyer solution

Plus

⊔ It will switch four radios!
- Useful for VHF contesters
- Good for stations with two "real" radios plus an IC-706 or similar

More Features

- Isolated inputs and outputs
  - Keyer uses optoisolators
  - Headphone switching uses transformers
  - Microphone switching uses relays and switches ground
- USB Controlled
  - No drivers needed

More Features

- Two "parallel ports"
  - 16 output pins for switching antennas or whatever
- PTT Lines for all radios
  - Uses optoisolators
- Footswitch connection

More Features

- Front panel allows control of two radios
- Firmware can be updated through USB connection
  - New features can be added
- Firmware source code will be available
  - Written in C, free compiler available

Connectors

Power 2.1mm

USB

DB-25

   Parallel port

   Front panel wires

PTT switch RCA

Keyer ¼"

Headphones ¼"

Microphone 3.5mm

8 Pin Din (4)

   Headphone audio

   Microphone audio

   Keyer

   PTT

Construction

ᵤ All on one PC board

ᵤ No Wires

ᵤ Three surface mount parts

- Several volunteers to install them for YCCC members

ᵤ Pre-drilled box

Project Status

∪ PC Board designed
- Bruce, WW1M did artwork
- Ken, WO1N did ESD design

∪ Boards fabricated, testing started

∪ Box being designed
- Jose, N1BAA working on layout

∪ Parts and prices
- Dennis, W1UE volunteered to coordinate

Project Status

- Firmware development
  - Firmware runs on hand-wired prototype
  - Feature complete
  - May change to better integrate with logging software
- Test program allows use with N1MM Logger
  - Emulates Winkey and MK2R

PC Board
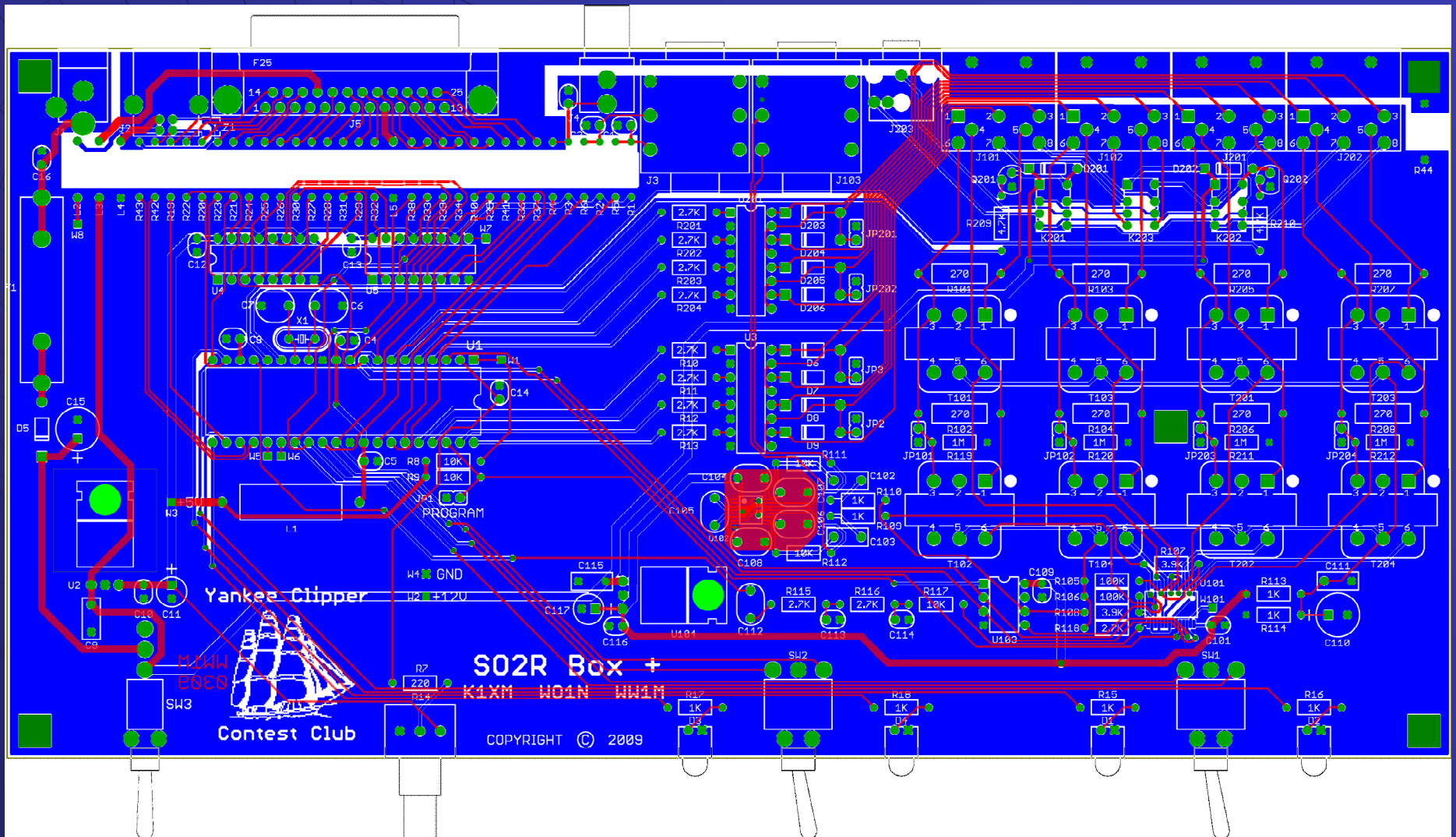
The End

- I'm Outta Here
- See you on the bands
  - Work Me
  - Spot Me
- And thanks for your support