

Note: We will be recording all Bootcamp Sessions. Anyone not wishing to be recorded should mute their video or disconnect.



# HOW TO LEARN CW BREAKOUT

Ham Bootcamp

Fall 2022

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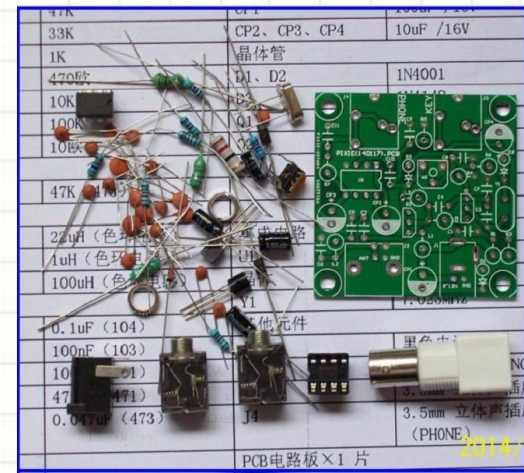
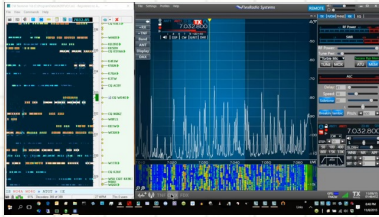
# Topics



- Why Learn CW?
- How can you Go About Learning CW?
- Gear for Learning CW
- Do's and Don'ts when learning CW
- CWOps – A great online class



# Why Learn CW?



- Work more DX
  - Many DX stations operate mostly or exclusively using CW
- Make your signals go farther
  - Stations with 100w and a wire antenna will reach out further
  - Great for low-power QRP operation
- Lower power requirements and simplicity favor those who want to build their own transceivers
- Battery powered CW Transceivers are very effective tools for operating portable
- Participate in Field Day and CW Contests



# How to Go About Learning CW?

- Learning CW is like learning a new language
  - You need to invest time to learn
- Learning CW is a bit like learning to play an instrument – you'll do best if you learn to play as you learn to listen
  - You'll need a set of paddles, a Keyer, and practice oscillator
- Learning CW is about learning the sounds of letters and words – throw away your table of Dots and Dashes!
  - "Sound-alike" shortcuts will also severely limit your speed
- A computer with Internet access opens the door to some excellent learning and practice tools
- Get on the air and make slow speed CW contacts as soon as you can – near the top of the CW sub-bands





# Gear for Learning CW

A Practice Keyer/Decoder like the K1EL K44 can help you practice timing



## CW Paddles

- Choose a “repeatable” set
- Plan to spend about \$150 - \$200 for your first paddles



## CW Keyer (or use your transceiver)

- Built-in small speaker for practice
- External oscillator is required to drive headphone/powered speaker



## Headphones & Powered Speaker

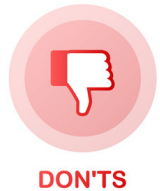
- Practice oscillator will be needed for use with a Keyer
- Inexpensive units are fine
- Also needed for online CW courses





# Learning CW

## Some Do's and Don'ts



- **Do** spend 60 mins a day on practice
  - Plan to practice 6 – 8 weeks to get to about 10-12 WPM
  - Break your practice time into 15 – 30 min. sessions (2 – 3 per day)
  - Protect your practice times and stick with it!
- **Don't** learn using “dots” and “dashes” or use “sound-alike” systems
  - These approaches will severely limit your ability to build speed beyond 10 wpm or so
  - Avoid counting dots and dashes
  - Focus on developing **Instant Character Recognition**
- **Do** use the Farnsworth Method (15 – 20 wpm Character Speed/5 wpm Farnsworth Speed)
- **Do** practice at speeds 3 – 5 wpm faster than your 100% recognition speed
- **Do** learn simple words and phrases as soon as you can
  - Start word practice as soon as you learn a handful of letters
  - CQ, de, ur, 5NN, 599, tu, 73, SK, your callsign, your name, common words like “is”, “the”, “and”, “ant”, “rig”, “pwr”, “qth”, “hw”, ...
  - Begin learning numbers and common punctuation (ex. “/”, “?”, “.”) early
- **Do** send using a set of paddles and a Keyer from the beginning

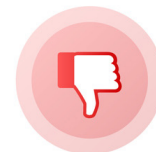


# Learning CW

## Some Do's and Don'ts continued



DO'S



DON'TS

- **Do** use your computer and the Internet as practice tools
- **Do** practice and learn proper character, word and sentence spacing
  - What you don't send is just as important as what you do send...
- **Do** record your sending practice - listen and note areas where you have trouble sending to help you focus on what to practice
  - Make a list of your "problem letters" and focus your practice there
- **Do** practice hearing callsigns once you know the alphabet & numbers
- **Do** learn the structure of a QSO & practice QSOs as soon as you can
- **Do** get on the air & make slow-speed contacts as soon as you can
  - Learn the basics of making contacts and have some fun!
- **Don't** get stuck in a single practice format – change it up
- **Do** sign up for an online CW class – **CW Academy** is a great choice
- **Don't** rely on computer decoders to get started on the air
  - Use your ears and brain instead and develop your skills via practice



# Consider an Online CW Class

- We recommend **CW Academy**
  - [cwops.org/cw-academy/](http://cwops.org/cw-academy/)
- Regular practice coupled with expert coaches and online group practice
- Built upon effective online learning techniques
  - Many good practice tools and training scripts
  - Helps you avoid developing habits which will limit you
- Makes use online tools such as:
  - [CWOps Morse Code Trainer](#)
  - [Word List Trainer](#)
  - [QSO Trainer](#)
- [Morse Runner](#) is a good tool for practicing callsigns and simple QSOs





# Questions?

## To Learn More:

Check out the **CWOps** website:


<https://cwops.org/>

Sign up for **CW Academy**:

<https://cwops.org/cw-academy/>







**Please Now Leave this Breakout Room which  
should return you to the Main Room for the Ham  
Bootcamp Wrap-up!**

***Please Be Sure to Leave the Breakout Room and  
NOT the Meeting***