

From No Code to *Know Code*

or

How I Stopped Procrastinating and Finally Learned CW

A Brief History Lesson

Morse Code Requirement for Amateur Radio Licensing



- The **ITU**, established in 1865, is a specialized agency of the United Nations responsible for issues related to information and communication technologies. The ITU Radio Regulations govern the use of radio frequencies and the technical standards for radio communications.
- **Morse Code Requirement**
 - ✓ Early Regulations: In the early 20th century, Morse code was the predominant form of communication for radio operators. As a result, the ITU included requirements for amateur radio operators to demonstrate proficiency in Morse code to obtain a license.
 - ✓ Proficiency Tests: To qualify for an amateur radio license, operators often had to pass a Morse code test, which typically required them to send and receive messages at a specified speed (usually between 5 to 20 words per minute).
 - ✓ Safety and Communication: The rationale behind the Morse code requirement was largely based on safety and operational efficiency. Morse code was considered a reliable means of communication, especially in emergency situations.

Changes in Morse Code Requirement for Licensure

- **2003** World Radiocommunication Conference (WRC-03): This conference led to the decision to remove the mandatory Morse code testing for amateur radio licensing. Many countries adopted this change, allowing operators to obtain licenses without having to demonstrate Morse code proficiency.
- The United States eliminated the Morse code requirement for amateur radio licenses in **2007**. This change was implemented by the Federal Communications Commission (FCC) as part of a broader update to the amateur radio licensing process.
- And the ***imminent death*** of Amateur Radio was upon us...



Long Term Effect on Amateur Radio

Some Highlights

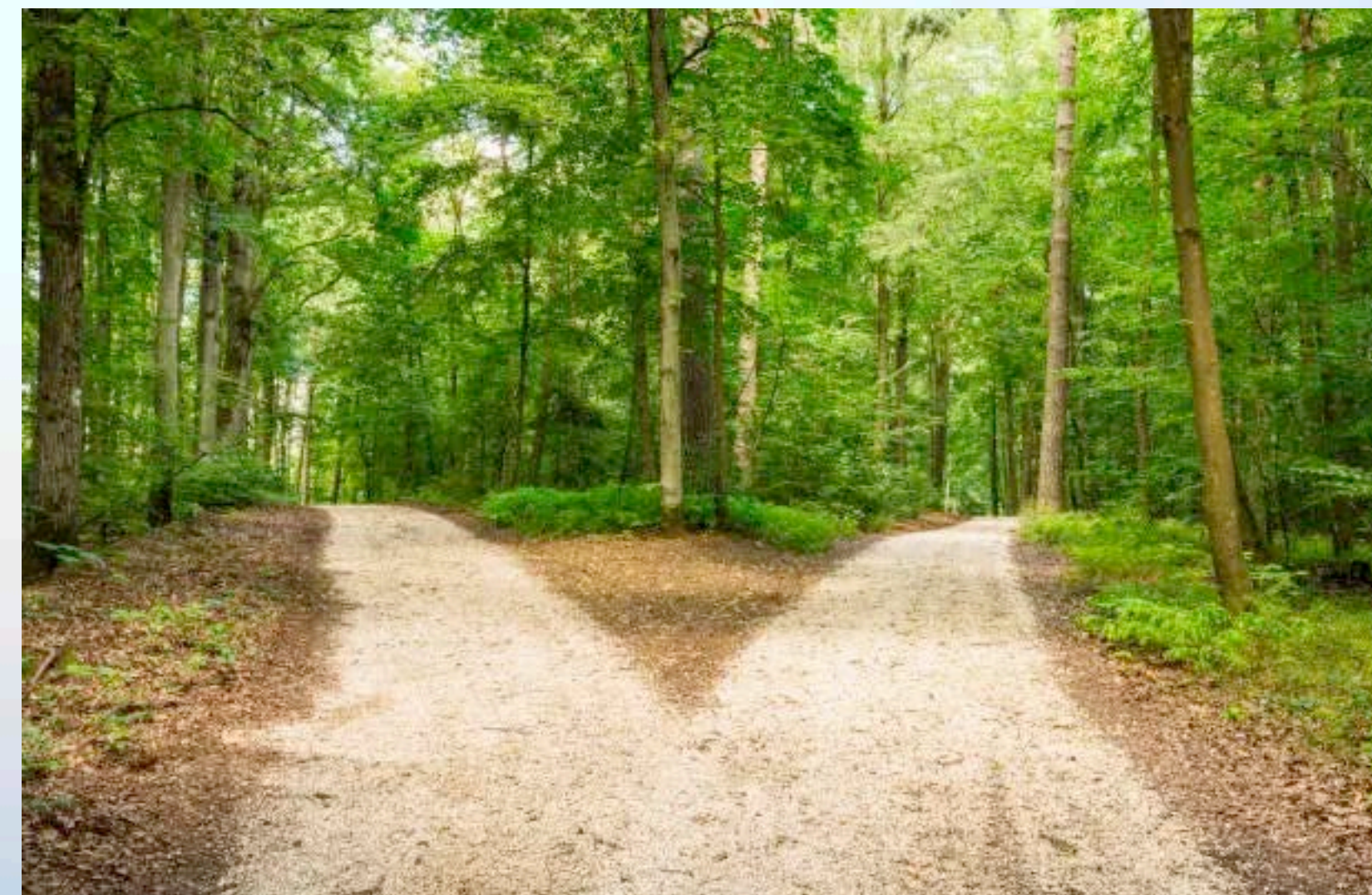


- Increased Amateur Licensure Worldwide
- ECOMM focus shifts from primarily using Morse Code to including additional methods
- There is Anecdotal Evidence of a Resurgence of Interest in both Learning Morse Code and Increasing Proficiency
 - ✓ Various clubs and organizations began offering Morse code training as an optional skill rather than a requirement. Resources, including online courses, apps, and practice tools, became more widely available, catering to those interested in learning at their own pace.
- Morse Code is alive and thriving

Preface

"The journey of a thousand miles begins with one step." — Lao Tzu

- There is no "right way" to learn CW, but there *are* sub-optimal ways.
 - ✓ Perhaps some of my lessons learned will prove useful to you.
- It is OK if MY path and YOUR path to the same destination are different
- It is OK to have differing destinations



Once Upon a Time...

There was a Ham who:

- Was licensed in 2007 when there was no Element 1 requirement
- Bought a J38 replica and a HeathKit HD-16 for just \$5 — But never even played with them :(



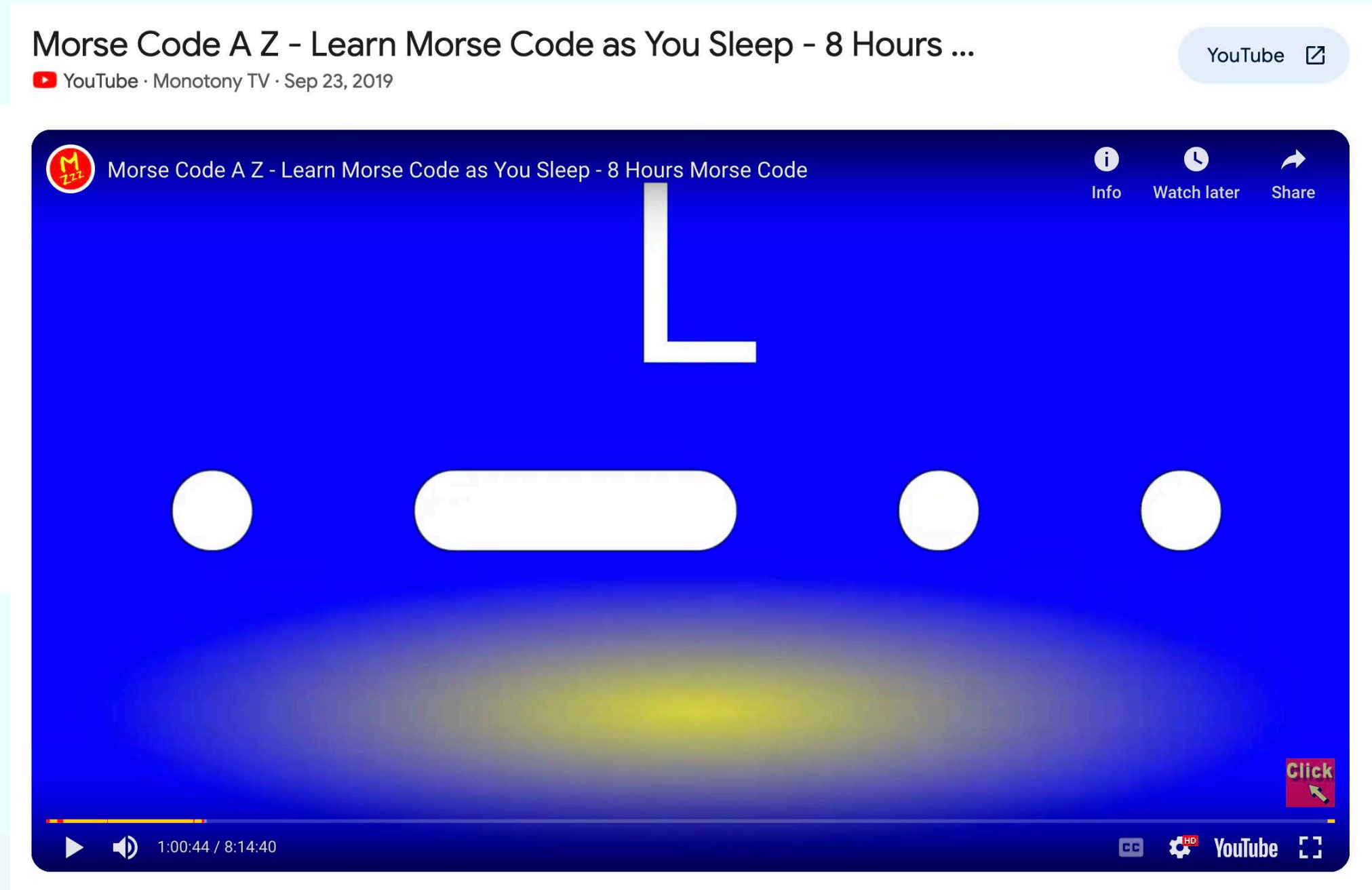
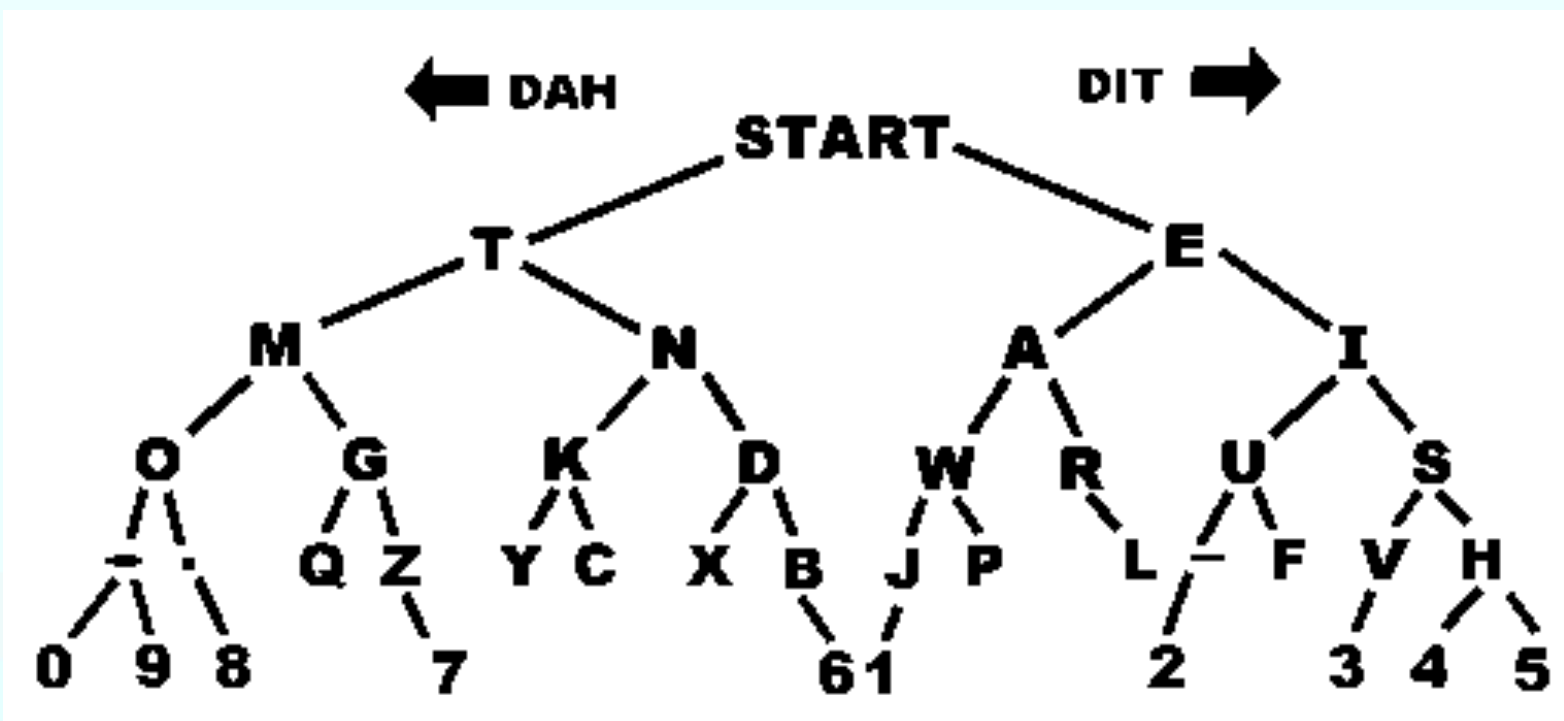
- Won a *really nice* Begali Key at a Ham Banquet in 2012



- But it was neglected, and just sat and collected dust in the ham shack for many years :(

The HAM was given some Learning Aids

By other Hams who were encouraging them to learn CW



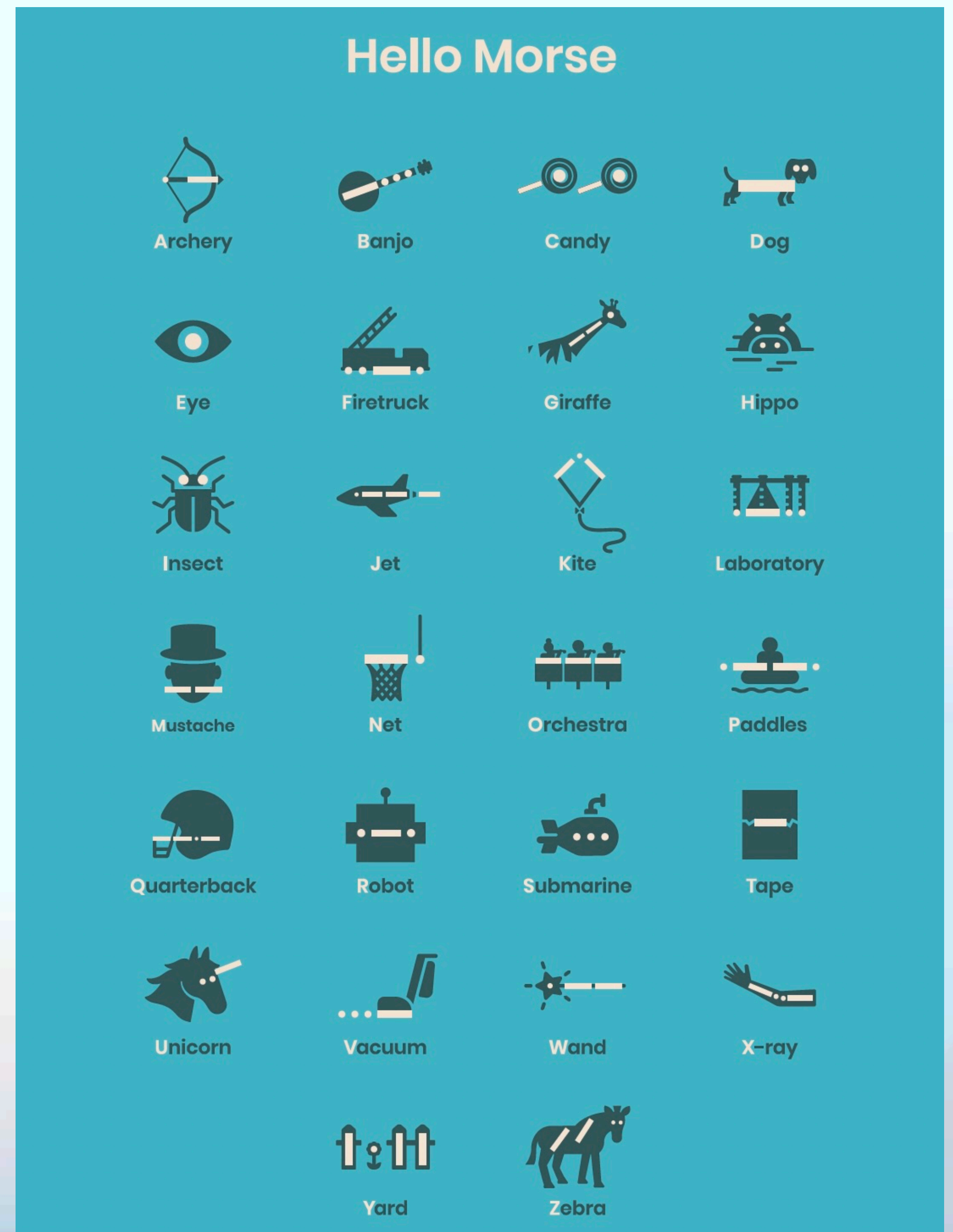
A	• —	U	• • —
B	— • • •	V	• • • —
C	— • • —	W	— • —
D	— • • •	X	— • • —
E	•	Y	— • — •
F	• • — •	Z	— • — • •
G	— • — •		
H	• • • •		
I	• •		
J	• — — —		
K	— • — —		
L	• — • •		
M	— —		
N	— •		
O	— — —		
P	• — • •		
Q	— • • —		
R	• — • •		
S	• • •		
T	—		
		1	• — — — —
		2	• • — — —
		3	• • • — —
		4	• • • • —
		5	• • • • •
		6	• — • • •
		7	• — • • •
		8	• — • • •
		9	• — • • •
		0	— — — — —

- But they did not really make any progress — for years and years

Then one day...

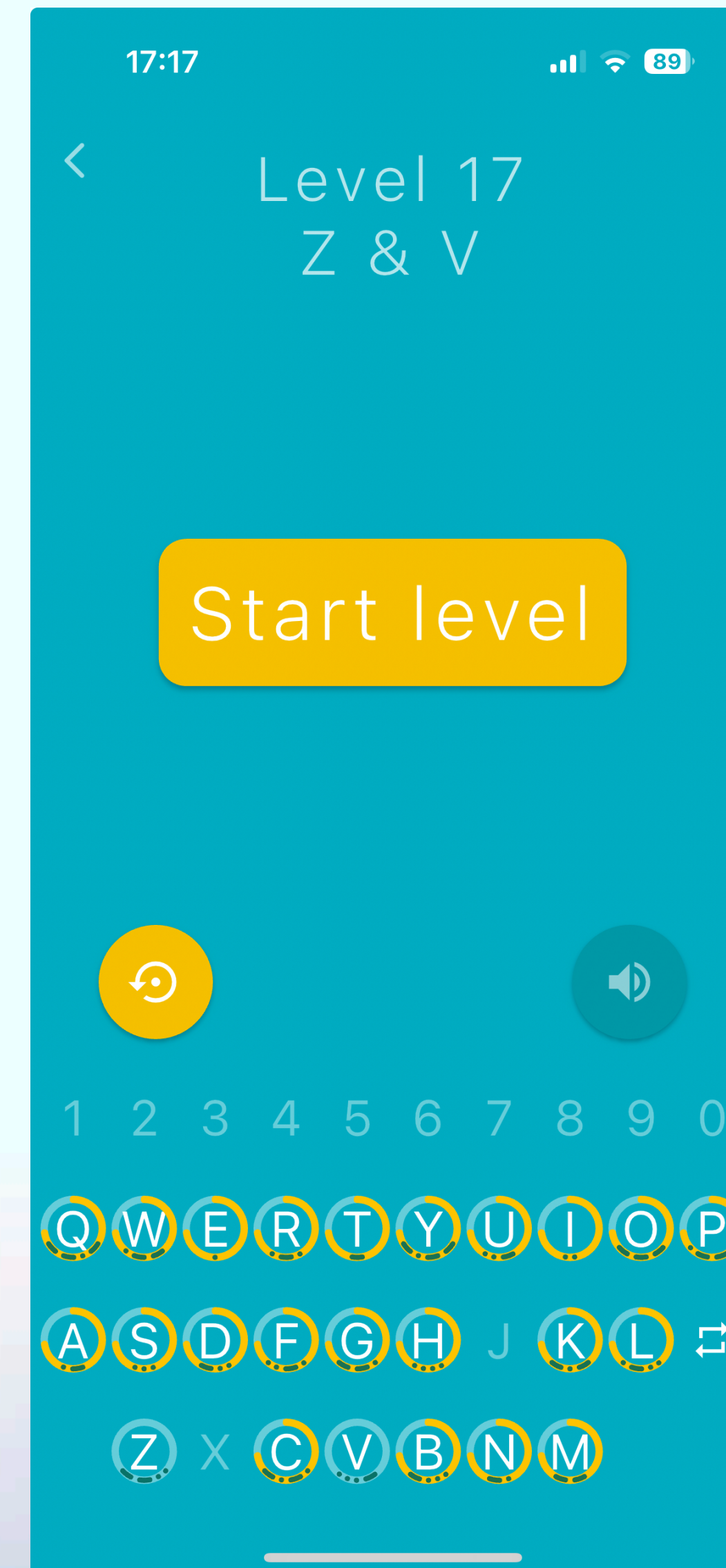
In an effort to get serious about it

- The Ham began messing around with a few newer web resources
- Hello Morse (www). <https://morse.withgoogle.com/learn/>



- And with a couple of mobile apps, just to try to *finally* learn the characters

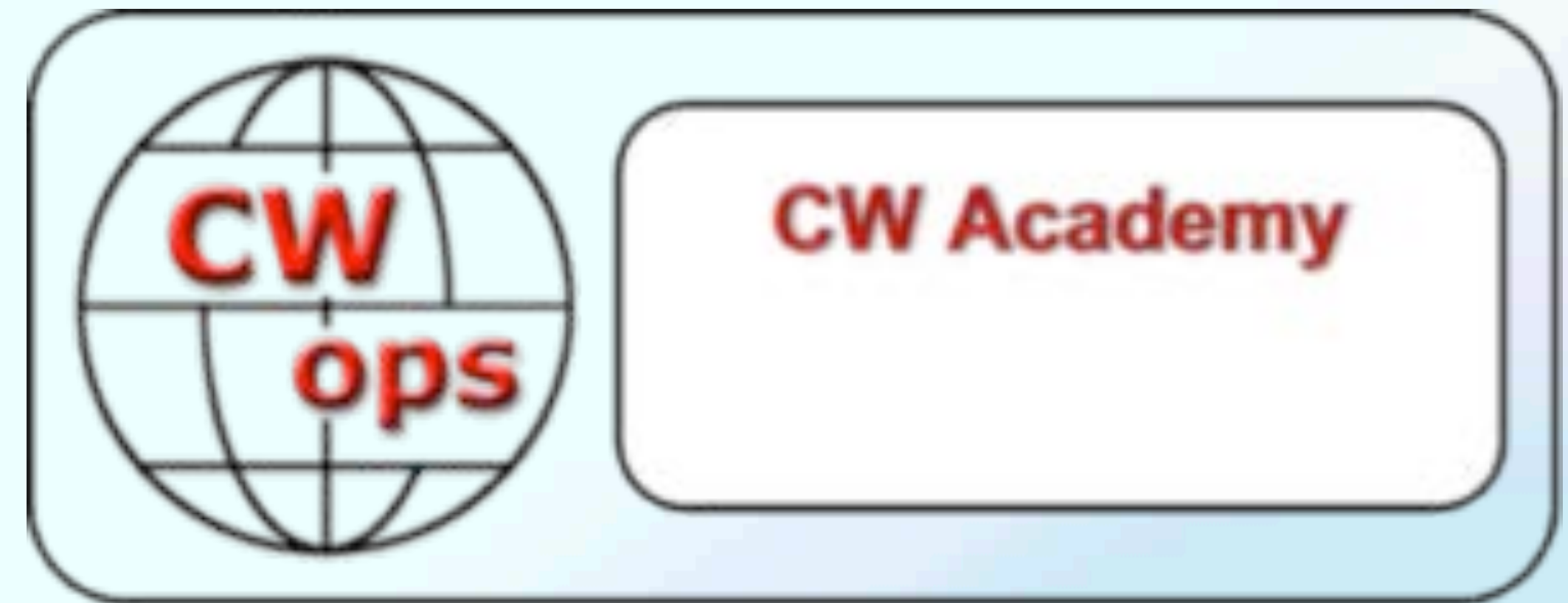
- Morse Mania (iOS). <https://apps.apple.com/us/app/morse-mania-learn-morse-code/id1511042196>



And They Signed Up to Take a Class!

Which was both Online and Free

- Through CW Academy which is sponsored by CWOPS
- <https://cwops.org/cw-academy/>



But Alas. At the First Class...

And much to their surprise

- The HAM discovered that some of what they had done up to this point, although it seemed beneficial, had cultivated some bad habits that would be immediately detrimental:

- Developing "In-Brain" look-up/translation/decode tables

"dah-dah-di-dit" →  → "Z"

- Picturing things in their mind (objects, dashes and dots)
- Counting...



Undaunted...

The HAM Embraced the Coursework

- And unlearned the bad habits
- And relearned the characters in a newfangled way
- And successfully completed the first course and the follow-on course within 12 months
- And actually went on the air and made QSOs in CW, at a very moderate speed naturally
- And felt good about what they had done
- And wanted to share with others, and encourage them to take a class if they were struggling as a beginner

CW Academy Certificate of Completion

John Dean – K0JDD

has successfully completed
Beginner
an 8-week/16-session training program
in Morse Code sending and receiving



J B Friend
Jack B Friend – AK7O
CW Academy Advisor

Jan/Feb 2024

Roland K Smith
R Carter
Roland K Smith – K7OJL
Bob Carter – WR7Q
CW Academy Managers

Certificate of Completion

Presented to

John D. Dean, K0JDD

Who successfully completed an eight-week

Fundamental

class focusing on learning and improving
Morse code and CW skills.
September-October, 2024

Steven Robbs, WJ0C
Advisor



Bob Carter, WR7Q
Joe Fisher
ARRL
CW Academy managers

What is this New Fangled Method?

You may ask...

- It is an alternative approach to the Koch and Farnsworth Methods

Koch Method

- Progressive Learning: Starts with a small set of characters (typically just a few) and gradually increases the number of characters as the learner becomes more proficient.
- Speed and Timing: Focuses on building speed quickly by using the characters in random order, which helps to reinforce learning under varied contexts.
- Emphasis on Recognition: Encourages learners to recognize Morse code at a sound level rather than relying on writing it down, promoting auditory learning.

Farnsworth Method

- Structured Learning: Introduces all the characters but spaces them out with longer pauses initially, making it easier to learn each character.
- Gradual Speed Increase: Starts at a slower speed, gradually increasing the speed as the learner progresses, allowing time to process each character.
- Focus on Visual Learning: Often includes written practice, helping learners associate the dots and dashes with their corresponding characters visually.

Instant Character Recognition

A Different Approach to Learning the Code (or Increasing Speed)

- In psychology there is a "Law of Contiguity," which says that if two events occur no more than one-half second apart, the mind associates the two events.
- ICR is premised upon learning to **associate the sound with the character instantly** - NO look-up tables - NO translations - NO decoding. In the same way that you look at the letter Q and instantly know it is a Q, you will hear Dah-Dah-Di-Dah and instantly know that it is a Q.
- To create these associations you engage in practice sessions where you HEAR the symbol and then SAY it out loud as quickly as you can. This process is aided by a web-based training tool.
- If you are already proficient and want to be able to head copy faster, you can use the same techniques to improve your speed.

Sounds Pretty Newfangled to Me...

- The approach is to **learn the characters as sounds**, at a minimum of 25 wpm, using Farnsworth spacing to initially slow the groups of characters, words, and sentences down - to maybe 5-10 wpm perhaps - but you reduce/eliminate the Farnsworth spacing as you improve. The **sound** never changes.
- The best techniques of Koch (emphasis on sounds) and Farnsworth (spacing) are incorporated. Learning the characters by sound-only at a high wpm helps avoid “copy speed plateauing” in the future.
- ICR training is done in short (15 min) sessions to avoid fatigue. An hour a day total, but spread out, is recommended. If you are not making mistakes/missing symbols when practicing, you are not pushing yourself hard enough.
- You will learn to Head Copy from day one - Throw that pencil away, it will only slow you down
- Used by CWA, LICW, LCWO, CW Innovations, and others

Language Learning Steps

Morse Code *is* a Second Language

- Hear It
- Understand it
- Speak it

Language Learning Steps

Morse Code *is* a Second Language

- Hear It — Dah-Dah-Di-Dit
- Understand it — That's a 'Z'
- Speak it — Send the SOUND

Quick WPM Comparisons

How did Anyone ever learn at 5 wpm?

- 5 WPM O.G.
- 13 WPM O.G.
- 25 WPM / 13 Farnsworth Start Learning Here
- 25 WPM To Get to Here



Introducing Morsecode.World

It's *Awesome*, and all the *Cools Kids* are using it.



- Your one stop shop for ICR training. If you can't find a tool here to help you, then you ain't looking very hard.
- ICR main page <https://morsecode.world/international/trainer/character.html>
- Word List Trainer main page. <https://morsecode.world/international/trainer/words.html>

MorseCode.World

DEMO

Getting over Key Fright

“Newbie-Friendly” Ways to Practice Without the Stress

- **K1USN** SST - Slow Speed Test - Weekly on Fridays and Sundays - Max 20wpm. Any speed welcome and they will slow down for you. <https://k1usn.com/sst.html>
- **CWOP** Giving Back - On-Air practice aimed at learners. <https://cwops.org/giving-back/>
- **LICW** Practice Rooms - Extensive schedule online <https://longislandcwclub.org/events/>
- **SEMARC** - 7pm Wednesday CW Roundtable https://www.semarc.org/P6_SI.htm
- **Vband** - Virtual CW channels over the internet (no RF) <https://hamradio.solutions/>
- **ARRL** Code Practice - On-the-Air transmissions <http://www.arrl.org/code-transmissions> and pre-recorded audio files <http://www.arrl.org/code-practice-files>

Links to Additional Online Courses/Resources

And this is just the cream of the crop

- For beginners

- LICW <https://longislandcwclub.org/morse-code-training/>



- LCWO <https://lcwo.net/>



- For those wishing to improve their speed

- CW Innovations <https://cwinnovations.net/>



- Morse Code Ninja <https://morsecode.ninja/>



More Resources

- Good Article by Nancy Kott, WZ8C (SK) <https://cwops.org/wp-content/uploads/2019/08/Instant-Recognition-Nancy-Kott.pdf>
- CW Morse - Oscillators, keys, and paddles at an affordable price <https://cwmorse.us>
- MCT 73 Trainer https://sparkgaplabs.com/index.php?id_product=22&rewrite=mct-73-morse-code-trainer-kit&controller=product
- Morserino <https://www.morserino.info/>
- CW Hotline <https://hamradio.solutions/cwhotline/>

And then there were Questions

And great rejoicing

Q&A

Morsecode.World ICR Usage Tutorial

To watch on your own

Play / Show Sequence Controls
(If "Repeat" is selected)

1: Show & Say Before
Flashcard time Ⓞ #Dits Ⓞ or Length Ⓞ 500
Delay before proceeding

2: Morse
Morse gap Ⓞ #Dits Ⓞ or Length Ⓞ 1000
Morse Code Sound
If Count=1, Morse Gap is unused.
If Count>1, Morse Gap is the time between each Morse sound.

3: Thinking
Thinking time Ⓞ #Dits Ⓞ or Length Ⓞ 2000
Pause for you to recognize the Morse Code

4: Show & Say After
Flashcard time Ⓞ #Dits Ⓞ or Length Ⓞ 500
Delay before proceeding

5: Morse
Morse gap Ⓞ #Dits Ⓞ or Length Ⓞ 1000
If selected, the Morse is repeated.
Morse Gap = wait time before proceeding.

6: Bell
Morse gap Ⓞ #Dits Ⓞ or Length Ⓞ 1000
The Bell is used to indicate the end of the sequence (if Repeating)
Morse Gap is used for delay AFTER the Bell (if Repeating)

REPEAT