SO YOU WANT TO LEARN MORSE CODE

How to Avoid Frustration, Minimize the Pain And Gain Full HF Privileges

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Most of what you've been told about learning Morse Code is wrong -- dead wrong. Amateur radio operators traditionally have used the slowest, most frustrating, most painful and least effective techniques possible for gaining code proficiency. It's no wonder that the 13- and 20-word-per-minute requirements for full HF access are considered a nearly insurmountable barrier by many hams.

You can overcome that barrier. You can do it in a reasonable amount of time and with a minimum of frustration and pain. In order to do so, you must approach code training from a different perspective and use different techniques from those common among amateurs for the past half century.

It will require work. You will have to commit yourself to at least one 15-30 minute training session every day until you reach your goal. You may succeed in a month or in several months; individuals differ greatly. Without this commitment, however, you may as well not bother.

So what's new here? By using a code training method devised by a psychologist some 60 years ago, you will progress as quickly as you possibly can, with ample reinforcement and little frustration. By understanding this method and how it builds your code proficiency, you will know why you have to spend time practicing and you'll be able to make a reasonable prediction of how long the total effort will require.

We're going to start on your road to success by throwing some time-honored ham-radio traditions onto the trash heap where they belong. These are:

* Slow (5 wpm) code -- It ought to be illegal to teach anyone code at 5 wpm. Every minute spent toying with 5 wpm code is irrevocably wasted. In addition, as we'll see later, starting with slow code is a virtually-guaranteed path to frustration and quitting. Morse at 5 wpm and Morse at 15 or 20 wpm are completely different critters, and you don't want to waste time on the wrong one.

* Charts, mnemonics, musical cues and other "memory aids" -- These things make you think about what you're doing while trying to copy code. That is deadly to proficient copying.

* Code tapes -- In very short order, and unconsciously, you'll memorize the tape. This will lull you into false confidence in your ability. That false confidence will be quickly shattered when you hear transmitted text that you haven't memorized.

* Copying QSOs off the air -- You don't know the speed of code you find on the bands, and much code on the air is pretty badly sent. All this makes it useless for training purposes.

Now that you know what you're NOT going to do, let's start examining just how you can best gain code proficiency.

The Mechanics: Just what is code training, anyhow?

Go to the shack of a veteran CW operator, or visit the CW station at a club Field Day operation. Watch people copy and send code at 30 to 35 wpm. You'll notice they're pretty relaxed about it; they're not sweating each character as it comes out of the speaker and they're not racking their brains to "figure out" what's being sent. Code has become second nature to them.

That's the key to code proficiency. Copying code must be a thought-free process. When you hear a character, you should know, without thinking, what it is. It should be a REFLEX. In fact, copying above about 10 wpm can only be done by reflex. Above that speed, thought processes are too slow to succeed.

That's why slow code is a deadly trap, and why traditional amateur methods of code training are so painful and frustrating. Most hams are told to memorize all the characters, then start building their speed. When you do it this way, you build a "lookup table" in your brain, comparing each character you hear with those in the lookup table until you find a match. This process shuts down from overload at about 10 wpm. That's why people experience a "plateau" at 10 wpm, and don't see any progress for weeks or months.

Those who finally get over that "hump" and progress beyond 10 wpm do so because, through constant practice, they have begun to copy code by reflex instead of by thought. They are the lucky ones; this 10 wpm barrier is where many folks give up out of frustration.

Code training, then, should completely bypass the lookup-table phase and begin by building copying proficiency as a reflex. This was recognized in the 1930s by a German psychologist named Koch, who devised the most efficient method known for Morse training. It's his method, and how you can use it, that we're going to examine in detail.

Morse Training by the Koch Method

Koch's method is a simple, direct way of building reflexes. However, it requires either a computer and Morse software or a personal trainer. That's why it was overlooked for so many years. Now that computers are commonplace, it should become the standard Morse training method. Here's how it works:

You start out by setting up your computer (or a microprocessor-based code tutor machine) to send you Morse characters at 20 wpm and at an overall sending speed of at least 15 wpm. You then get out your paper and pencil and have the machine start sending -- but only two characters. That's right, for your first sessions, you'll only have two choices. Copy on paper for five minutes, then stop the machine and compare what you copied with what the machine sent. Count characters and calculate your percentage of correct copy.

If your score is 90 percent or better -- congratulations! You just learned your first two characters, and, importantly, you learned them at full speed. You'll never have to learn them over again. If you didn't make 90 percent, practice some more. As soon as you can copy the first two characters with 90 percent accuracy, add a third character to your practice. Your accuracy will drop as you work on assimilating the new character, but it will rise again to 90 percent or better. Then you add the fourth character, and so on.

This method does not allow you to build that lookup table in your brain. To copy at full speed, you MUST build the reflexes in order to achieve 90 percent accuracy. And that's what you're spending your time doing -- building reflexes. Think of it as a parallel to perfecting a tennis swing or mastering a gymnastic routine; you're practicing until you get it right. The Koch method of building code proficiency character-by-character is similar to standard methods of teaching touch typing, another skill that must be reflexive.

This is a very individual method of training -- you progress at your own best speed, and spend only the time required to gain each new character. This means that you will waste no time in reaching your goal.

How much time is required? That will depend on the individual. Koch himself, with hand-picked

students, got a group to master 12 wpm code in a mere 13.5 hours. You probably won't match that, but that's much faster than any other method in the psychological literature. You can get an idea of how long it's going to take after you've mastered a few characters. Keep track of your training sessions (some software will do this for you) and calculate your hours-per-character rate (or characters-per-hour if you're really fast!). That, multiplied by the 43 characters in the amateur Morse test, will give a rough idea of how long it's going to take.

While the Koch method is the fastest method of Morse training, speed alone is not its principal advantage. Its principal advantage, and a major difference from other methods, is that it provides you with constant positive reinforcement. This begins with your realization, after mastering the first two characters, that you CAN copy code at 15 or 20 wpm, because you just did it. After that, each new character mastered is further proof of your progress. Contrast that to slowly trying to build speed up from 4 or 5 wpm, then hitting the plateau at 10 wpm and seeing no progress for a long time. With the Koch method, frustration is at a minimum.

Constant testing is necessary to ensure that you maximize the effectiveness of the Koch method. You must copy on paper, so you can grade yourself. Remember, if you score 90 percent accuracy or better, add another character. If you score any less than that, try again. By constantly testing yourself on continuous copying of at least five minutes, you know exactly how you're doing and exactly when you should add another character. This results in the fastest progress possible.

Naturally, with the Koch method, you'll be copying random groups of characters, rather than words, until you've mastered the entire character set. If your software allows, make these groups of random length, rather than a constant stream of five-character groups. This will ease the transition from random groups to actual words. Yes, there is a difference in the rhythm and "feel" of words and random groups. Once you've become accustomed to copying words, you should start copying sample QSOs, which are the format of the amateur tests. Pay special attention to callsigns, locations, and numerals; these are the types of things that can form questions on the test.

As you proceed toward your goal, remember that some days are just going to be better than others and some characters will take longer to assimilate than others. You know, however, that you can reach your goal because you've already mastered some characters and proven that copying at full speed is something you can do. Keep in mind that what you're doing is building reflexes, and that takes time. The amount of time you require has nothing to do with your intelligence; it's just how long it takes for characters to "sink in" and become part of your reflexes.

So there it is -- your path to passing the 13- or 20-wpm code test. After you've used this method, and start enjoying the wonderful world of HF radio, try a few CW QSOs. With Morse code developed as a reflex, you may just find that you really enjoy using it on the air. After all, you've gained proficiency without the frustrating ordeal that most hams have endured for decades. See you on the HF bands!

Questions? They're probably answered in Morse Code: Breaking the Barrier, <http://www.sdc.org/%7Efinley> the author's complete book on code training and CW operating, published by MFJ Enterprises, Inc. <http://www.mfjenterprises.com> It's available now for $14.95 plus shipping. Call (800) 647-1800 and ask for stock number MFJ-3400.

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Instructions <http://www.ees.nmt.edu/sara/sara/finley.sm404.html> for implementing the Koch method with Super Morse V4.04 software.