In learning CW, **the first stage** is that you immediately understand that there must be a pattern, a meaning, a structure behind these harmonious sounds but you cannot understand .

The second stage is the conscious lack of knowledge: you began your study in continuous contact with the teacher, learning step by step all the basics but you practices with uncertainty. You know what you have learned and have to improve with practice. You also know what else is yet to be learned. You know that you are not yet knowledgeable about the subject.
This stage usually lasts just long enough to learn all the basic elements of the object of his study.

In CW, this phase is focused on learning the sounds of letters, numbers and symbols of Morse code.
This means that when you understand a sound, the relationship between the sound of each letter, and the word it is part of will remain yours forever.

The third stage is the longest and it could last for decades. But do not worry because it is also the phase bringing to you the greatest satisfaction: remember that the prize is the journey itself, not the final goal. In learning CW, at this stage you will be perfectly able to understand Morse code but you will need paper and pencil to jot down what you receive. You will be limited in terms of speed of reception and transmission and some words will seem incomprehensible. At this stage it is of fundamental importance to practice on a daily basis. On some days you will go like a lightning, and y et on others it will seem to you like you forgot everything.
Stay cool, stay focused and open-minded.

The fourth stage is about unconscious knowledge: the student has learned about all there is to learn, and obtains more knowledge from <u>the practice of the art itself</u>.

In CW, this is the stage where you will be able to receive and transmit at speeds limited only by your physical capabilities and by the mechanical features of your telegraph key, you will be able to listen and understand signals mixed with QRM and QRN noise and even while you're busy doing other tasks, without writing or making any conscious effort. This will hold true both in transmitting and in receiving.

The learning roadmap

We will approach learning in the four stages, in a form specifically designed for learning CW, in <u>three distinct phases</u>:
1. Learning the elements of the Morse code alphabet and their spacing.
2. Speed consolidation up to a maximum of 15 words or 90 characters per minute, using paper and pencil to copy down what you receive.
3. Increase speed and decode "in your head."

In the first phase, we study each Morse code alphabet element, learning it as a sound. A group of characters per week. Keep practicing every day, not exceeding the time assigned for your training sessions. Practice often, for a short time. <u>At this stage, we focus exclusively on the receiving.</u> To start learning CW we will use software (therefore you must be equipped with a personal computer) and enable it to introduce letters and numbers gradually.

Our training will be focused on receiving letters and numbers, copying down on paper. Sessions will last no more than 10-15 minutes a day. (Try twice a day).
RECORD IT IN YOUR LOG BOOK !
Speed will be starting from a minimum of no less than 15 WPM (which is 90 characters a minute). When you are able to copy on paper all the letters of a group, you move on to the next one.

In the second phase, we introduce punctuation marks and procedural signals. We also consolidate reception speed up to 90 characters (or 15 words) per minute, always using pen and paper. ((At this stage we may introduce the use of a straight key. Do the best you can to transmit with a timing and spacing as close as possible to the one you are hearing from the computer.))

As we can copy on paper 90% of the characters sent by the PC, we increase the speed by 1-2 WPM or 5-10 characters per minute. Our goal is to reach a speed of 15 WPM.

The purpose of the third phase, of variable duration, is to achieve the delicate change of abandoning pen and paper and decoding entirely in your head. Here you will learn new words and will increase and improve your reception speed gradually.

Remember: accuracy is more important than speed – it is better to go slower and be understood.

Exercise the art of CW with style. Obviously, achieving a remarkable accuracy in transmission requires practice and if you do not try, you will never succeed.

Our goal may seem overwhelming, but if we break it down in small parts, the whole path will be developing by itself. In the course of the classes you will be given specific targets, each representing only a small step and but requiring the continuation of your regular practice and study. Always stay focused to your next target and, soonerthan you might think, the end of your journey will be in sight.

Especially **during the first stage**, in preparation for high-speed CW (or QRQ), we must keep practicing each and every day. We need to settle and literally "embed", the sounds corresponding to different letters into ourselves. QRQ will be great fun, we will face it in the **third stage** of learning.
What really matters, here, is to the learn characters as sounds, not as a composition of distinct graphic elements.
It is important to say, again, that the student must focus on learning sounds. This is the reason why a radiotelegraph key is not adopted **until the end of the first phase**.
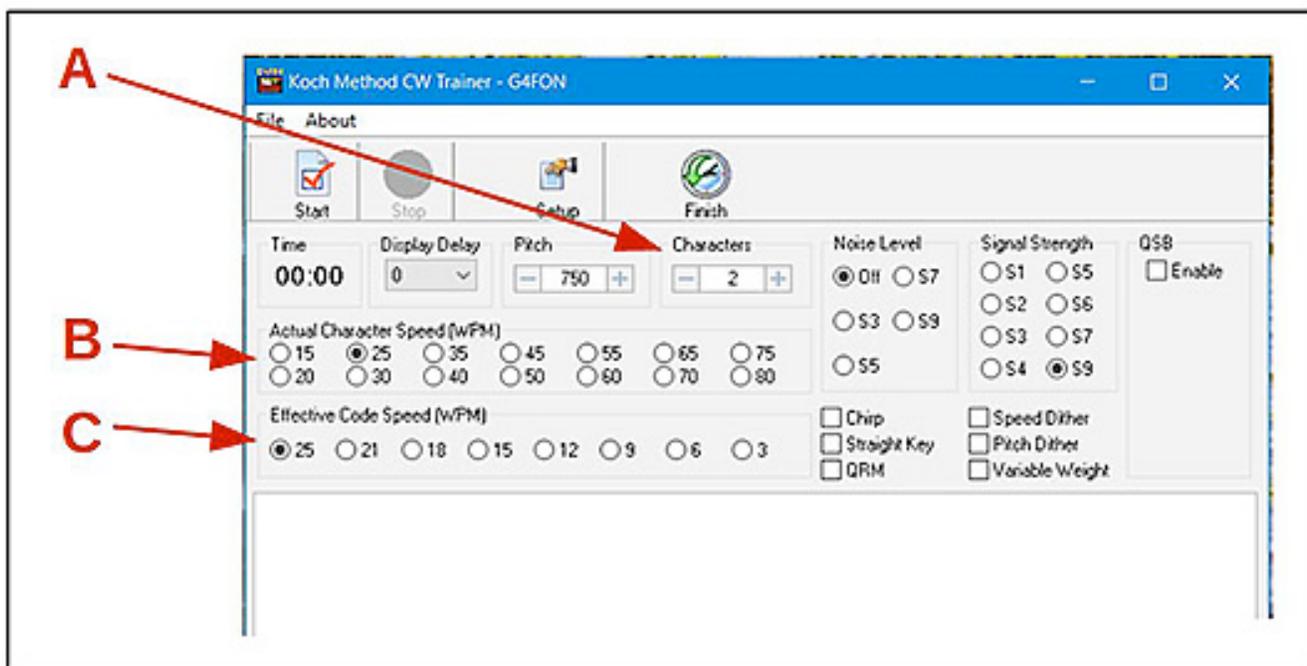
Keep in mind the 4 main pillars for learning CW

    1. Be relaxed.
        2. Repeat every day.
            3. Take every mistake as a chance to correct yourself.
                4. Keep focused on the repetition of the exercise.

Setting Up The Software

Now that we have the software installed, it's time to do the set up needed so we can use it. First step is to start the program. The installation process should have created a short cut icon on your desktop that looks like the one on the left. If you can't find it, type G4F into the "Search programs and files" box, and it should appear. In either case, double click on what you've found and the program will start up. As mentioned above, the first time you run it, you'll get a request for a QSL card to be sent to G4FON, but you can defer that until later. Just click on OK and the program will still run.

When the program starts, you will see a window that looks like the following.
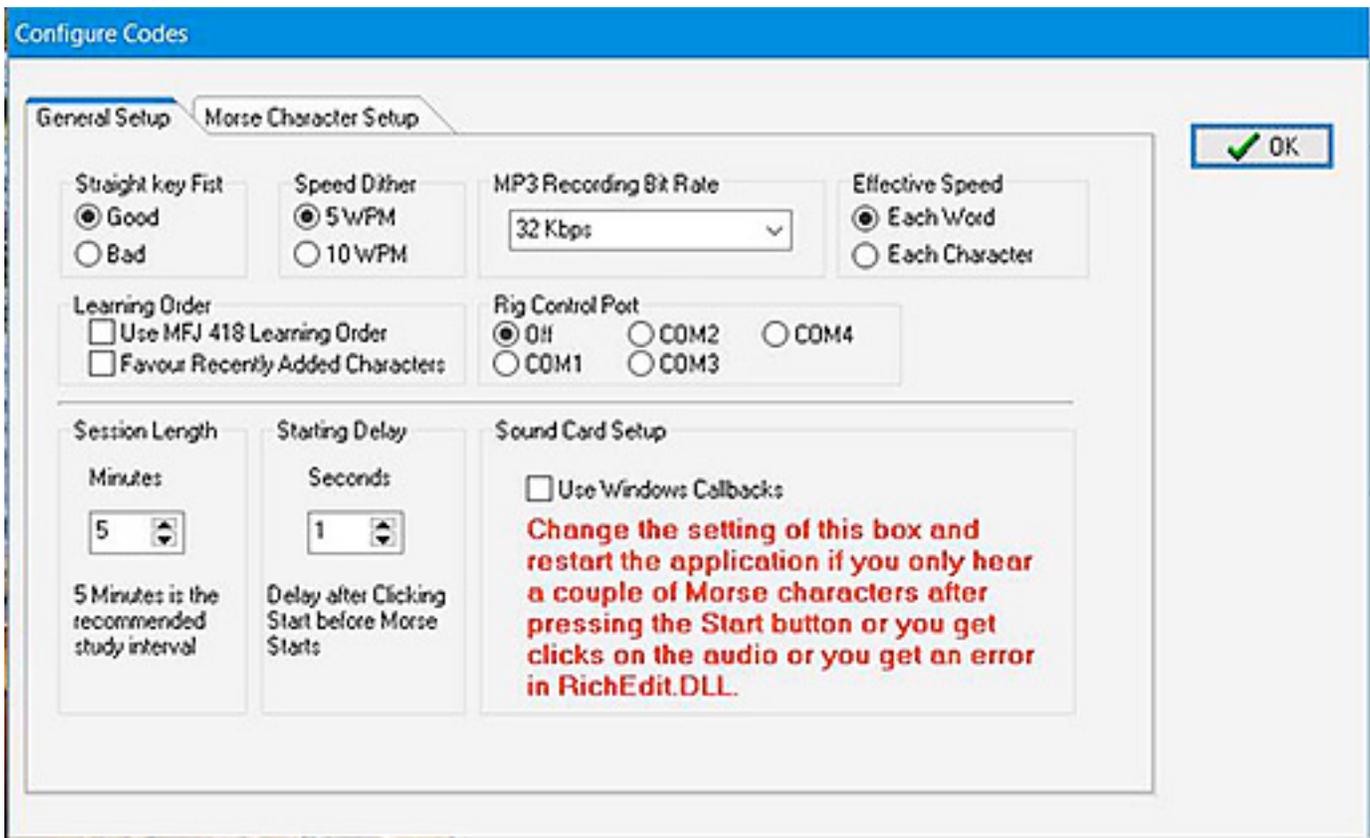

The number of characters you're working on, item A in the diagram above, should be set to 2 to start

The actual character speed, item B, should be set to 15. This means that the dots and dashes that make up each letter will be short enough that you could fit 15 words into each minute. A word is nominally 5 characters long, with a following space, so 15 words a minute means 15 * (5+1) = 90 characters per second. The good news is that the characters will always sound the same, and you only have to learn the sound pattern once.

The effective code speed, item C, should be set to 1 to start. This means that you will actually be hearing 1 words per minute. The same math gives a need for 6 characters per second at this word rate, so there will be some empty time between the characters. For now, that is, because we're going to crank this number up after we are able to recognize all the characters, and some short words, at 1 word per minute.

GENERAL SETUP SCREEN - Chosen from the opening screen

Next step is to click on the Setup tab at the top of the screen. a new window will come up with 2 tabs: General Setup, and Morse Character Setup, as shown above.

Make sure you're in General Setup, and then raise the Session Length in the lower left corner from the default 5 minutes to 10 minutes. Then click OK in the top right corner, and you'll be back at the main screen.

Congratulations! you're now ready to do the assignments for each class, which are described in the meeting history below.

Once you master the basic alphabet, numbers, and punctuation, it will also send random words or QSOs. Also, the program has the ability to include realistic on-the-air conditions in the code, such as QRN, QSB, QRM, different signal strengths, chirp, pitch dithering, and variable weight. There is a KochMorse group on Yahoo that provides a user forum and support.