

MOBMN's guide to learning Morse

I Help run the FISTS CW Club (AKA The international Morse Code Preservation Society) and Morse Code is almost a way of life for many of our members. This guide is intended for anyone new to Morse Code and trying to learn it. The comments below are my own and so please do not take them as gospel. They are based on my own struggles with learning the code and the collective wisdom of many different well-seasoned radio amateurs and friends that I have consulted at length with on this topic.

Morse Code What is it?

Without giving you a history lesson Morse code is a way of representing written characters as a series of short and long tones or flashes of light.

It's a simple code that now is most commonly used by radio amateurs to communicate over great distances with relatively low power, I suppose it could be considered 'Green' or more environmentally friendly than other modes of communications.

I often get asked what is the best way to learn the code, and what Decoder is best to start with, what key should I buy. Many beginners want to jump right in and start tapping away, they want a nice screen showing them just what they are sending with their shiny new key. Well just stop there!

It's great you are interested in learning Morse but there is the right way and the wrong way to go about it. Forget decoders! 90% of the time they will not work with hand sent CW, they need more or less perfect Morse to decode and a beginner is not going to be sending perfect Morse for a while. In fact, a beginner should not be touching a key at all just yet (IMO). Learn to receive Morse to a reasonable standard BEFORE you start to think about sending. You will certainly learn bad habits if you try sending before you can receive code.

So what's the best way to learn Morse? Well I am sure that the answer is debatable but most will agree that all good methods have much in common, we will look at these common features and make some suggestions that should help anyone trying to learn the code.

But first let's look at some of the wrong ways to do it that many people try and fail with.

A Common way people try to learn the code with is writing down the alphabet and writing down What each letter is in Morse so for 'A' they write Dot Dash, 'B' Dash Dot Dot Dot . This method would be fine if you were doing a paper test that asked you to decode a written Morse message but that doesn't happen in real life does it!

Another bad method is to count the dots and dashes, so that's one dot and one dash, that's a 'A' . One dash and then three Dots, that's a 'B' and so on. To do that the Morse Code has to be VERY slow so you can count the elements of each letter. This method is very commonly used by beginners and will really cause them frustration often leading to them giving up.

So OK what's a better way of learning?

A few features common to any good method.

Do NOT learn Morse code as a visual code, do not use charts, tables or anything that makes you need to see something to decode the Morse. Instead think of the code as sounds, don't

even think in terms of Dots and Dashes, rather in Dits and Dahs (The sounds of the elements).

This is a very important part and key to learning the code. We need to learn the sound of the letters not what elements make up the letter. We need to make sure we do not count the Dits and Dahs that make up the letters. The best way to do this is to listen to Morse with a fairly fast letter speed, (18-20 wpm) that fast you can't count the individual elements of each letter but you hear the overall sound of the letter. It's like listening to a musical cord rather than the individual notes that make up the cord.

We need to train the brain to recognise the letter sound and to associate this sound with a letter, the process needs to be automatic. This takes time and can be hard to do without a plan.

There are two main schools of thought when it comes to learning the code, Both have their own supporters. The Farnsworth Method and the Koch method.

The Farnsworth method

This method wants you to start with a character speed that you would like to receive at, typically 15-20 wpm, then adjust the gap between each character to give a little thinking room. The gap can be shortened as you improve. This is a very popular way of learning the code but it does have some problems. The way you learn using this method uses a thinking part of the brain rather than a reflex part, this means the decoding process is not automatic. The result of which is well known to most learners, at around 10 wpm (effective speed) the brain doesn't have time to work out which letter your hearing before the next one so learners hit a speed wall which most find very hard to get past. I have done this myself when I was learning at the local night school Morse class. Many learners struggle to break through the wall and may just about get to the old 12 wpm standard which got them their ticket (in the old days) after that they put away their keys and never touched it again as they just couldn't read real on-air Morse at the speed it was being sent.

The Koch Method

An alternative method was developed in the 1930's by a German psychologist, Ludwig Koch came up with a method that many now consider the fastest way to learn Morse and to learn it well. Like the Farnsworth method you start at a reasonable character speed but this time you don't have the large gaps between characters.

Instead, you start with only two letters, K & M. the learner listens to these two letters and writes them down as they hear them, the learner sticks with just the two letters until they can get it right 90% of the time (not 100%), when this level is reached a 3rd letter is added to the mix and the learner now needs to reach 90% copy of the 3 letters before moving on again, this process develops in a different part of the brain and is more of a subconscious or reflex decoding method. It can be harder to start with but the gains later are much greater as decoding of Morse is done in the sub conscious brain, rather like listen to your primary language. This method will allow you to read Morse a much higher speed.

Also, another common mistake can be to first learn the letters, then numbers and finally some punctuation. When you do this, you tend to put more effort into the letters than the other characters. That way when you hear a number or a punctuation character it will cause a glitch in your subconscious decoding and you will miss what is being sent, the brain tries to recall what that character was and you then miss the next word.

The best way of learning is to treat ALL the characters as the same value, be it a letter, a number or a punctuation character. The Koch method mixes all the characters in an order that has been found to be most effective so that is a big plus for this method too.

That brings us to an important tip, if you do miss a character don't think about it, just move onto the next, often it will be clear what letter is missing but trying to work it out as you hear it will cause you to miss the next few letters too.

Another tip that's worthwhile is not to write down what you hear as soon as you hear it but instead try and write one letter behind to start with and as you get better at it try and move up to one word behind, in the end I find it better to only write down the parts of the QSO you may need to refer to such as Name , QTH etc, to be honest most QSO follow a similar format and you will be able to head copy most of it without writing things down, after all you don't write down the full conversation if using SSB do you.

Ok so you have chosen a method to try and you have started to learn but what about sending? What sort of key should you use?

Good questions and like most questions you will get different answers from different groups of people.

Traditionally it's said not to start sending until you can receive well, and then to start with a straight key.

There is some sense in this as it's very easy to form bad habits that will be hard to break at a later date. The biggest mistake I hear is people concentrating on the makeup of each letter that much they don't think about the gaps between characters or words. This makes it virtual impossible to read their code even though they think they are sending well. The gaps between characters is VERY important and with that being right your sending gibberish! most training packages (more on that later) break the code they send into 5 figure groups (words) so you will hear when the 'word' is finished.

The choice of key is really a personnel thing but I will say a paddle key is easier on the wrist and makes faster code easier to send. I started with a pump key and still find it hard to move over to a paddle, I think I would have been better to use a paddle key from day one. The disadvantage of paddle keys is that they tend to be expensive, you can pick up straight keys for just a few pounds (or even make your own) but paddle keys are often in 3 figures, hard to justify if you're not 100% sure you will stick with it.

Training tools.

There are two main ways to practice your receiving skills. The first is completely free! There is an excellent software package that runs on a PC computer written by G4FON (now Silent key I am sorry to say) this is based around the Koch training method but will allow you to add Farnsworth gaps between characters if that helps you. It will do just about everything you need. You may still need a practice oscillator if you want to try your hand at sending but for your receiving practice it is excellent and the best software training package I have found. Just google G4FON Morse Trainer and you will find it (I also have a link to it on the free stuff page of my web site).

The other popular method is a standalone electronic tutor, there are a number of these available, I am of course biased as I produce a range of them myself that I sell via Kanga Products or Phoenix kits. Back in the time I learned the code a popular trainer was the Datong D70. It offered random letters/numbers or mixed. It was the main go to trainer of the time, some are still around now on eBay but they do lack features and for some reason

are very expensive now even second hand. My advice would be if you are a complete beginner then get a tutor that offers Koch as a training method, once you have learned the code you may want to try other methods too. The trainer that I produce, The FMT (Fists Morse Tutor, which was developed for FISTS CW Club members a few years ago) can be switched to a Koch trainer mode with all the 39 lessons designed by Koch and the LCD readout shows just what the tutor is sending, of course the FMT offers lots of other options too and even has a built in practice oscillator for either a straight or paddle key that you can use when you're ready. Look up the full spec of the FMT on my web site if you're interested as I don't want to turn this into one big advert.

Decoding your own sending?

My FMT does NOT have a decoder built in, it will NOT show what you are sending. A number of people have asked about a decoder but to be honest it can be disheartening to a learner to find that their sending cannot be decoded by these machines, it takes a lot of processor power to decode anything but 100% accurate Morse. There are PC packages that are better but none will decode bad sending. I have said before don't worry too much about your sending until you can receive reasonably well. When you're not having to think about how the letters are formed you will find your sending will become almost automatic. Put all your efforts into learning to read the code first. If you want to try a PC decoder then if you have the FMT there is an output that is intended to be connected to a PC sound cards line input (3.5mm socket), this is ideal for this purpose as well as its intended purpose of feeding into an Internet stream (Zoom, MS Teams etc). Contact me and I can point you to some free software that will do this for you.

There are also other tutors out there, I offer a number myself that will all help you learn the code. Trainers cannot replace listening to human generated Morse, the tutors or software produce near perfect code, most humans don't! you will notice the difference when you compare real Morse to machine Morse. Remember I said that it was easy to pick up bad habits? you will hear many people that have!

When you have learned the code it's time to get on air. To start with try and arrange a contact with a friend that understands it's your first contact using Morse, take your time and very importantly only send at the speed you can read Morse yourself. Do NOT send any faster. Your QSO partner should reply at the speed you send even if they can send much faster. Likewise, if you hear another station slower than you call back only at their speed. It is bad practice to send faster than your partner. They will not understand what you're sending so the QSO will fail causing frustration to both parties.

It could be worthwhile considering joining a CW Club such as FISTS, in the club you will find people that will be willing to help you with on air practice and give you advice that can help you learn.

Other options are taking online training courses that use Zoom or Microsoft Teams to give you personal training. Clubs such as CWops and LICW Club run free courses that are very effective in getting people trained to good levels. Give them a look. The CWops course is very effective and uses internet streaming services like Zoom etc so you can take part wherever you are.

Most important fact.

Above all have fun. This is a hobby but one that is very rewarding and will allow you to form lifelong friendships all over the world.

Good luck with the code. Hope to work you on air soon.

73 Paul M0BMN