

# Learning Morse Effectively

## ALLOCATE PRACTICE TIME

With practice, anyone can succeed in mastering Morse code. If you can spare only 15 minutes a day, make sure you spend those 15 minutes each day. Decide what time of day is best and stick to that schedule.

## BANISH CHARTS

If a visual Morse code dot • and dash — chart is available, shred it, recycle it, or whatever. That's an invitation to slow down skill building. It introduces a useless visual stage into the learning process. By starting with a dot and dash chart, we are likely to reach a speed plateau which is difficult to overcome.

Morse code is an aural communications system. We want to convert directly from sound into copy, whether on a keyboard, a piece of paper, or better yet, directly into our brains. We need to teach Morse to our ears and fingers, not to our eyes.

## EAR TRAINING

Learning Morse is like learning a new language, except that it's much easier. For lots of youngsters, Morse code is a fun game. It's like a secret language.

There are lots of free online resources for learning Morse by ear. One excellent program for beginners is the **G4FON Koch Trainer**.<sup>1</sup> The Koch method starts at a target speed which the learner chooses. **It's actually easier to learn Morse at higher speeds than slower.** (Read that sentence again!) Since most ham CW operation is about 25 words per minute (WPM) or less, we can try setting our Koch speed to 25 words per minute (WPM), although we could push that to 30 WPM if we wish. Once we've learned to receive all of the characters at that target speed, we're ready to practice sending it with a paddle and keyer. More discussion about them comes later.

For the next stage of improving our listening skills, I'd suggest using another free online program called **RufzXP**,<sup>2</sup> which is available for Windows, Apple and Linux. The basic program sends random call signs at a starting speed which we specify. Each time we copy a call sign correctly on our keyboard, the speed increases by 1 WPM for the next call sign. If we make a mistake, the program decreases the speed by 1 WPM. Call signs make great practice, since they include arbitrary combinations of both letters and numbers. **RufzXP** is an absolute demon, but it's a great way to limber up our Morse listening skill, whether we're just starting out or whether we've been doing Morse for decades. I like to jump into it just before a CW contest. A maximum of about a 15 minutes per session is about right for that advanced program. **RufzXP** is used for international Morse speed competitions. Maybe you'll reach that level someday.

Learning to copy call signs is helpful for, you guessed it: call signs. That's character-by-character stuff. We don't talk in characters. We communicate with words and phrases and even sentences. We learn words by repetition. You may already know some, like **to** and **the** and **is** and special ham-radio "words" like **CQ** and **de** and **QRM** and **73**. We increase our Morse word vocabulary by listening, especially at speeds which are higher than our comfortable copying level. At higher speeds we should be able to pick out more and more words. We'll do better if we don't try to write them down or copy them on a computer word processor. Relax. Don't get uptight about mastering Morse code. With persistence, a whole new world will open up. Do you live in **Poughkeepsie**? Fine. Put that word into a memory keyer and then listen to it again and again at increasing speeds up to the

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<sup>1</sup> <http://www.g4fon.net/CW%20Trainer.htm>

<sup>2</sup> <http://www.rufzxp.net/>

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maximum that your keyer allows. Then gradually decrease the speed and note when you can actually understand it. Do that for a few days and you'll have added another word to your Morse vocabulary.

An online Morse code training program called **morseDX** is available.<sup>3</sup> The basic letters and numbers facility is free of charge. You can buy more advanced facilities for nominal monthly subscription prices.

## FORGET STRAIGHT KEYS

Skip the straight-key stage entirely. Except for the fun Straight Key Night on New Year's Eve and New Year's Day, hams rarely use straight keys anymore. Professional telegraphers who used straight keys yesteryear often had to retire early, suffering from what we now call **carpal-tunnel syndrome**.<sup>4</sup> The standard way of sending Morse manually is with left-right paddles and electronic keyers, although it can be done with keyboards as well. A cootie or sideswiper key is also a viable option.

## ELECTRONIC KEYERS

We can use either a keyer built into a transceiver or a purpose-built keyer. A simple pocket-sized keyer which is quite sophisticated is the **HamGadgets Ultra PicoKeyer Kit**, which makes a fine first hands-on electronic kit project.<sup>5</sup> The speaker is quite small, which yields weak volume in stand-alone mode. It works better with headphones. There are other quality keyers available, like the **Begali CW Machine**<sup>6</sup> (which can also include a trainer) or the **K1EL WKUSB Kit**.<sup>7</sup> If we own the **Elecraft KX2** or **KX3** or **K3** or **K3s** or **K4**, they include an excellent Morse decoder function, which is especially helpful for transmitting. If we're not leaving enough space between words, the decoder will tell us so. We can practice off the air with those transceivers by changing from VOX to PTT in CW mode. The **Begali CW Machine** (actually a USA product which is marketed through the Italian company) also includes a sending Morse decoder.

## PROPER WORD SPACING

CW operators should remember that we use spaces between words. That makes it just as difficult to understand on the air as it is to read in print. For sending practice, we can copy any printed text. However, to learn sending on the fly while still using proper word spacing, we can try something which we already have in mind, like the Pledge of Allegiance, the Gettysburg Address, or the full names and birthdates of family members. The latter will give us practice with numbers. We can think up whole sentences describing our recent activities. By using non-printed text with a transmit decoder, we can pay attention to leaving proper word spacing. When we're ragchewing on the air, we don't usually quote from printed text. We translate our thoughts directly into hand and finger motions.

## QUALITY BASIC PADDLES

A used paddle is easy to find at a hamfest or on eBay or similar sources. If its return force and contact spacing screws include pesky lock washers, I'd give it a miss. If the threads are so coarse that a lock washer is required, the mere act of tightening the lock washer changes the adjustment.

<sup>3</sup> <https://morsedx.com/membership-join/>

<sup>4</sup> [http://en.wikipedia.org/wiki/Carpal\\_tunnel\\_syndrome](http://en.wikipedia.org/wiki/Carpal_tunnel_syndrome)

<sup>5</sup> <http://www.hamgadgets.com/ULTRA-PICOKEYER>

<sup>6</sup> [http://www.i2rtf.com/html/cw\\_machine.html](http://www.i2rtf.com/html/cw_machine.html)

<sup>7</sup> <http://www.k1el.com/>

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For a new paddle, the dual-lever **American Morse Equipment Porta-Paddle II**<sup>8</sup> will work well. Instead of buying the **AME Porta-Paddle Base**,<sup>9</sup> we can order an **AME Quick Mount**,<sup>10</sup> which we can then attach to any operating surface with some matching 3M™ Dual Lock™ installed there. I would avoid the dual-lever **AME DCP**.<sup>11</sup> It has only one mounting screw and since it doesn't have a channeled base, we can't easily fix the problem of its rotating around that single screw. The quality **AME Bushwhacker Paddle**<sup>12</sup> is also compatible with the **AME Quick Mount**.



**AME Bushwhacker**

Larry Naumann NØSA makes two economical but high-quality paddles, the single-lever **TSL** paddle and the dual-lever **SSP**. These tiny low-*mass* paddles are designed for portable operating, sporting silky action and employing opposing magnets to generate return force. The return force and contact spacing are adjusted with hex wrenches, so it's best to adjust them at home before taking them into the field. The **TSL** and **SSP** work very well for backpack-portable operating. They are sold complete with a long stereo cable attached for \$100 including Priority Post shipping to the USA. Both paddles are pre-equipped with 3M™ Dual Lock™ on the base, so they will mount on any surface where more Dual Lock™ can be attached, including an operating desk or a transceiver. NØSA does not have a website. Send an email to [n0sa@att.net](mailto:n0sa@att.net) to request a paddle brochure via email attachment. These are low-production items, so a wait until the next manufacturing run may be needed.



**NØSA TSL and SSP**

<sup>8</sup> <http://www.americanmorse.com/portapaddle.htm>

<sup>9</sup> <http://www.americanmorse.com/portapaddlebase.htm>

<sup>10</sup> <http://www.americanmorse.com/ppquickmount.htm>

<sup>11</sup> <http://www.americanmorse.com/dcp.htm>

<sup>12</sup> <http://www.americanmorse.com/bushwacker.htm> For ultra-portable single-lever operation, try the AME Mini-B <http://www.americanmorse.com/minib.htm> or for dual[paddle operation the AME Ultra Porta Paddle <http://americanmorse.com/ultraportapaddle.htm> with 3M™ Dual Lock™ plastered on their channeled bases, overcoming their single-screw design. Operators who are making the transition from a semi-automatic bug may do very well by starting with a single-lever paddle and sticking to it. The advantages of dual-lever paddling are minimal at best.

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I gave away my Begali **Simplex Mono**<sup>13</sup> paddle, but there's nothing wrong with its quality. It was my first single-lever paddle, by which I learned to enjoy single-lever paddling after years of using the dual-lever kind. Now I switch back and forth regularly between dual-lever and single-lever paddling. All of the Begali paddles in the Simplex family are pretty economical. These include the dual-lever **Simplex**, **Simplex Pro**, **Simplex Basic** [the most economical Begali paddle, and still a quality product]<sup>14</sup>, or the single-lever **Simplex Mono** and the **Simplex Mono Basic**.



**Begali Simplex Basic**

## LUXURIOUS PADDLES

High-end paddles without lock-nuts are available from **Begali**,<sup>15</sup> **Schuenemann**,<sup>16</sup> **K8RA**,<sup>17</sup> **N3ZN**,<sup>18</sup> and **BaMaTech**.<sup>19</sup> Study their features carefully and read whatever reviews you can. The website **eHam.com**<sup>20</sup> has a large collection of paddle reviews.

In my opinion, the finest Morse keys on the planet are made by Pietro Begali<sup>21</sup> in the comune of Cellatica near the Italian Alps. His company prides itself in excellent customer service, and his products are normally shipped promptly via air freight. Five standout Begali paddles are the unsurpassed single-lever **Sculpture Mono**,<sup>22</sup> the heavy dual-lever **Magnum**,<sup>23</sup> the hybrid dual-lever/single-lever **Sculpture Janus**,<sup>24</sup> the single-lever portable **Adventure Mono**<sup>25</sup> and the dual-lever portable **Adventure Dual**.<sup>26</sup> I've taken the latter two on Summits on the Air (SOTA) activations, but they also can be used at home, mounted on the **Adventure Magnetic Base**.

<sup>13</sup> [http://www.i2rtf.com/html/simplex\\_mono.html](http://www.i2rtf.com/html/simplex_mono.html)

<sup>14</sup> <http://www.i2rtf.com/html/simplex-basic.html>

<sup>15</sup> [http://www.i2rtf.com/html/keys\\_paddles.html](http://www.i2rtf.com/html/keys_paddles.html)

<sup>16</sup> <http://www.scheunemann-morsetasten.de/>

<sup>17</sup> <http://www.k8ra.com/>

<sup>18</sup> <http://www.n3znkeys.com/>

<sup>19</sup> <https://www.bamatech.net/morsetasten/bamakey-tp-ii-twin-paddle-key-schwarz.html>

<sup>20</sup> <http://www.eham.net/reviews/products/16>

<sup>21</sup> <http://www.i2rtf.com/>

<sup>22</sup> [http://www.i2rtf.com/html/sculpture\\_mono.html](http://www.i2rtf.com/html/sculpture_mono.html)

<sup>23</sup> <http://www.i2rtf.com/magnum.html>

<sup>24</sup> <http://www.i2rtf.com/sculpture-janus.html>

<sup>25</sup> [http://www.i2rtf.com/html/adventure\\_mono.html](http://www.i2rtf.com/html/adventure_mono.html)

<sup>26</sup> <http://www.i2rtf.com/html/adventure.html> Both the **Adventure Mono** and the **Adventure** can attach either to the **KX2** or to the **KX3** using the **KX3/KX2** mounting bracket. **Adventure** brackets for the **Elecraft KX1** and the **Yaesu FT-817ND** and **FT-857D** are also available.

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## Begali Sculpture Janus

The beautiful hybrid Begali **Sculpture Janus** is an excellent choice if you want to be able to choose a single-lever or a dual-lever paddle without investing in a separate instrument. After a few moments to adjust it, the **Sculpture Janus** can be used with either style. The Begali **HST Mark III**<sup>27</sup> is an economical single-lever paddle which converts to a cootie or sideswiper key with the flick of a built-in switch.<sup>28</sup> The Begali **Sculpture Swing**<sup>29</sup> is recognized as the finest cootie or sideswiper key in the world, with a price-tag to match.

We won't regret investing in a quality paddle.

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<sup>27</sup> <http://www.i2rtf.com/hst-mark-iii.html>

<sup>28</sup> The original Begali **HST Single Lever** is the only Begali paddle which I don't like. It's no longer available from Begali, and has been replaced by the **HST Mark III**. If you see an **HST Single Lever** on the used market, be wary. Avoid it if it doesn't look exactly like the one currently on the Begali website. The old version had too long a lever and is awkward for ordinary mortals. Apparently some world-class speedsters liked it. Even the current **HST Mark III** is not for beginners. If you can already send at 40 WPM and you're trying to get to 50 WPM, you might consider the **HST Mark III**. Otherwise, any other Begali paddle would be better.

<sup>29</sup> <http://www.i2rtf.com/sculpture-swing.html>