

## **Teaching Morse Code and Improving CW Proficiency**

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#### **Background - How the system came about**

Most every accomplished CW Operator has their own opinion, method and standards for teaching Morse Code. The same can be said for those who Elmer or help others that want to improve their QSO or contest skills. This said, what is the best teaching method is a difficult question to answer. It depends on the individual desire to teach and learn and most importantly the desire and dedication to accomplish a goal.

If anyone learned Morse Code the wrong way it was me; I am self taught. When I started learning CW at age eleven, I didn't have a clue what I was doing and certainly did not recognize or understand I did everything the wrong way. I memorized the 26 letters of the alphabet and 10 numbers by printing letters and numbers on 3x5 index cards along with their associated Dits and Dahs. I didn't have a code practice oscillator, code learning records, a radio and most certainly no computer or software program to learn from. I laid on the living room floor while my dear mother would say "Dit Dah" and I would reply A, B, C, etc. etc.

Once I memorized all the letters and numbers I tuned the family floor model radio in the living room to the shortwave bands and listened to whatever code thumps I could hear coming from the speaker as there was no BFO. Instead of trying to understand what was being sent, I simply wrote each letter on a pad of paper, one letter or number after the other as soon as I heard it.

It wasn't until I saved enough money to buy a surplus BC-342N receiver, put up an antenna and started listening to real CW that my bubble was burst as I discovered I had great difficulty making heads or tails out of what I was copying. I was however able to pass the required five words per minute Novice test then put together a Heathkit AT-1 and tried making a few QSOs and it didn't take long to find out I had much more to learn.

Thankfully, I stumbled across a CW Traffic Net and every evening I would copy everything I could and in time I was able to actually understand complete words as they were sent. I am most fortunate, once I discovered understanding words in CW was not difficult and before long my ability to receive and send using a J-38 hand key reached a point where I could carry on a QSO, understand and remember what was said without writing everything down.

Without knowing what I had accomplished, CW had become a second language which to this day, in my humble opinion, is the secret to becoming a proficient CW Operator - **Make CW a second language.**

Fast forward to U. S. Navy days when I was assigned instructor duty at Communication Technician School and quickly recognized The Navy Way of pounding CW into the brains of prospective operators by teaching CW and typing at the same time caused problems. A high percentage of students forced to spend eight hours a day trying to learn to copy unintelligible five letter and mixed letter number groups sent by paper tape at 10 words per minute simply didn't work and the school had a high failure rate. I quickly realized the failure rate was directly related to students who were unable to learn and remember letters or numbers and certainly five letter/number code groups were not something anyone could understand. CW was a foreign language to them.

Rather than simply force students to learn CW by trying to copy random five letter/number groups at slow speed then a weekly increase in speed, I developed an interactive teaching method. Why force anyone learn at 10 words per minute when they could just as easily learn at 28 which is also a very comfortable QSO and Contesting speed. Why not teach receiving, sending and if necessary touch keyboarding at the same time which allows students to converse in CW and make it a second language.

By learning just three letters, T, E and A students can easily learn to receive, recognize, understand, send and type simple three letter words, Tea, Eat, Tat and then progress to Cat, Dog, See, etc. Understanding complete words is the basis for learning any language.

I then move on to two words in a row, three words, then short two word sentences and finally on to mixed groups and plain language text. Students are not allowed to type a character or word until they hear and understand a complete word, words, call sign, code group or thought expressed in a sentence in their head thus they learn to copy behind which overcomes anticipation.

My method worked in Navy Training School, the failure rate became far less as this method was incorporated in the school curriculum. This method works to this day - Make CW an immediate understandable second language. Over my 59 years of working CW I have taught and helped many, many students to learn and use CW as a second language. I have yet to have a failure with this method no one has simply given up. The system works for beginners as well as anyone who has the desire to improve their CW QSO or Contest skills.

### How To Employ My System

- Define the objective and stick to it - Make CW become a second language for the student
- Teach or Elmer starting at 28 WPM and allow extra space between letters at first then close the gap to normal ratio with student progress
- Students are required send each letter, letters, word, group or sentence back to the instructor
- Students are **NOT** allowed to type a letter, letters, word, group or sentence thought until it has been sent as they must copy in their heads. Keep sentences short at first then move on to QSO type sentences or contest exchanges
- Start with individual letters, numbers and simple punctuation in the sequence shown in tables below
- Once individual letters can be copied accurately move on to two letters, then three, four and five
- As each group of three letters are received and sent back accurately move on to three letter words
- Then move on to two then three word phrases
- Lastly move on to five letter then five letter groups and finally on to numbers and basic punctuation
- Each student must learn to send the following sentence with 100% accuracy. If a mistake is made, they must start all over again from the beginning: **The quick brown fox jumps over the lazy dogs back 703542189** - Make this a daily exercise until the student can send the entire sentence three times without making an error
- Spend no more than 30 minutes daily on teaching or Elmering, do daily sessions and continue until the agreed upon goal is achieved
- Encourage students to use Morse Runner and / or RUFZ on their own for 30 minutes daily at 28 WPM following the same basic teaching rules - no call or text is to be typed until the entire call or an entire word is heard and understood

Letters	teaching	order
T	E	A
O	U	N
D	R	S
C	W	P
H	L	B
K	I	V
Q	Y	M
Z	X	F
J	G	

### Teaching Sequence

THREE		LETTER	WORDS	
EAT	TEE	ATE	TAT	TEA
OUT	NUT	TOO	TEN	NAT
DUE	SUN	NET	RAT	SAT
OWE	CUP	WET	NAP	PEN
HOT	LOT	BAT	HOW	WEB
KIN	IRE	VAN	WIN	ASK
QUE	YES	MOP	SAY	MAN
ZOO	FAX	DAB	BEE	SAD
JET	GUN	FIX	VIA	RUG

Once a student learns the letters T, E and A and can hear and send simple three letters words they have begun learning their second CW language

<b>TWO WORD PHRASE</b>				
EAT TEN	NOT OUT	SEE DOG	NAP NOW	HOT BAT
ASK MAN	BIG BEE	FIX NET	PUT PEN	SEE HER
BAD CAT	HOW BIG	CUP WET	YES SIR	OLD RUG
HER MOP	HIS LOT	BIG ZOO	EEL FIN	MISS HER
SAW LOG	JET SKI	FAT RAT	HOW NOW	HUG HIM
CAN FIX	ANY WAY	DOG VET	TOO OLD	RED BUG
SEE CAT	SAW SUN	ANY WAY	SIT NOW	HER MAN
WAY OUT	HOT BED	BIG GUN	FUN RUN	HIS BOY
QUE NOW	OLD VAN	RED INK	SAD DAY	BIG CUP
<b>SHORT SENTENCES</b>				
Dog sees cat	Chase it now	Pull the rug	Saw the log	Drove the car
Boy loves her	She is nice	Big bad dog	Run the race	Old red barn
Fly up high	Mow the yard	Go to Zoo	Yes you may	No not now
The sad lady	Pretty big hat	Ten ton load	Sea sick now	Who is that
<b>FIVE LETTER GROUPS</b>				
YBPIL	AIGFO	MOPPY	CPABU	DGNZP
ELKJO	PGFIK	HBOPP	PLOIK	MNJBH
QTWIE	ZCXDW	THGYR	SLFKJ	TYEQ
LSFKH	VFRED	QSAXW	POLKU	NJHUY
OPWQI	TRUWO	LKJSD	VTXRE	QMOPA
Ø	<b><u>Numbers</u></b>	<b><u>And</u></b>	<b><u>Punctuation</u></b>	
2	1	9	3	8
"Period"	7	4	6	5
	"Slash"	"Comma"	"Hyphen"	"Ampersand"
	<b><u>MIXED</u></b>	<b><u>LETTERS</u></b>	<b><u>&amp; NUMBERS</u></b>	
AØMPA	UK6AB	9LOJQ	74QWY	LK1BB
ZD2RU	5GFNB	P Ø53W	Q3CYU	8YTFE

### PLAIN TEXT OF CHOICE

Radio-telegraphy is the sending by radio waves. It was developed mainly for ship-to-shore and ship-to-ship communication. This was a way of communicating between two points, however, it was not public radio broadcasting as we know it today.

Wireless signals proved effective in communication for rescue work when a sea disaster occurred. A number of ocean liners installed wireless equipment. In 1899 the United States Army established wireless communications with a lightship off Fire Island, New York. Two years later the Navy adopted a wireless system. Up to then, the Navy had been using visual signaling and homing pigeons for communication.

In 1901, radiotelegraph service was instituted between five Hawaiian Islands. By 1903, a Marconi station located in Wellfleet, Massachusetts, carried an exchange of greetings between President Theodore Roosevelt and King Edward VII. In 1905 the naval battle of Port Arthur in the Russo-Japanese war was reported by wireless, and in 1906 the U.S. Weather Bureau experimented with radiotelegraphy to speed notice of weather conditions.

In 1909, Robert E. Peary, arctic explorer sent by radiotelegraph: I found the Pole. In 1910 Marconi opened regular American-European radiotelegraph service, which several months later, enabled an escaped British murderer to be apprehended on the high seas. In 1912, the first transpacific radiotelegraph service linked San Francisco with Hawaii.

Enjoy your new CW second language