

THE ART OF ELECTRONIC KEYING CLASS:

Mondays @ 3PM ET in Zoom B

Tom Weaver W0FN

The dual lever paddle is the only CW sending device that enables Iambic Keying.

Iambic Keying (AKA Squeeze Sending) enables relaxed and accurate sending for long periods of time with less fatigue. This technique is fun and a great way to send faster with less effort. Once learned, sending at conversational speeds between 20-35 WPM becomes a reality. Iambic Keying is a great match for Morse code comprehension skills.

Letters, punctuation, and prosigns that a dual lever paddle and Iambic Keying can help automate: **C K N R F L Q Y . / ! <AS> <SK> <KN> <AR> <BK>**

Iambic Keying works by learning how to synchronize rhythmic hand movements to the keyer's character speed rhythm.

Start Practicing Here: (Set your keyer's character speed to 15 WPM for beginners, 20 WPM for experienced CW ops)

The letter 'C' is easy – it's a simple finger-first squeeze and release. Practice 5, 10, or 15 times in a row without worrying about getting it right. Just relax until you start getting "dah di dah dit" reliably. Get the feel of the 'C' squeeze - don't listen for the last dit to let go, just squeeze for different lengths of time until you feel in 'sync' with the keyer rhythm at 15 or 20 WPM. Practice words: 'Cat', 'Caw', and 'Catch'.

The letters K and N. They are shorter finger-first squeezes than the 'C'. Practice **K** first, then the **N**. By the way, Iambic Mode B allows squeezing an **N** but not an **A**. That is discussed later in this document. Practice words: 'Knock', 'No', 'Not', and 'Nut'.

The letter 'Q' is a finger-hold with a thumb tap during the second dah. Iambic Mode B's lenient timing allows a thumb tap any time during the second dah. Start by sending groups of three dahs with the finger paddle. Once you get the feel of that, try tapping your thumb during the second dah. Practice word: 'Quick'.

Sending CQ: send 'C' several times, then 'Q' several times. Then send them together. Practice until you begin to feel a single hand movement rhythm across both letters. Work on getting the feel of this combination of movements by sending groups of three CQ's.

The letter 'Y' is similar to 'Q' but feels different. 'Y' is also a finger-hold letter, but with a quick thumb tap any time during the first dah instead of the second. The finger holds the paddle the same length of time as the 'Q'. Practice words: 'Yes', 'Yet', 'Yack', and 'Yuck'.

The letter 'R' is a thumb-first squeeze and release that most CW ops find easy to learn. As always, work on getting the feel of synchronizing your squeeze with the character speed of the keyer. Practice words: 'Run', 'Ran', 'Rat', 'Ray', and 'Rig'.

The letter 'F'. Start by sending groups of three dits with the thumb paddle. Then practice tapping the finger at the right moment to generate 'di di dah dit'. TIP: This letter feels similar to an R but with a lazy thumb push. Practice word: 'First'.

The letter 'L'. This letter is similar to the 'F' but with an immediate thumb-first squeeze and release of the finger. Practice sending individual L's first, then practice sending groups of two L's. Many students find sending two L's together much more difficult than sending one. Practice words: 'Well', 'Will', 'Bell', and 'Fell'.

Some good Iambic keying practice words are KNOCK, CLOCK, FLOCK, CLAY, CLERK, BAFFLE, LIKELY, HILLY, QUACK, and QUICKLY. Practice sending with great rhythm and consistent letter spacing. BENS BEST BENT WIRE/5 is a fun rhythm send.

Sending practice recommendations: (*find a code buddy, schedule regular on-air QSOs*)

1. Record your practice sessions with [Audacity](#) software, a digital recorder, or your cellphone. Listen to your recorded practice session a few days or a week later. Try to head copy while critiquing your rhythm, tempo, and word spaces.
2. Have fun, practice, improve. Your ICR skills will improve and your QSO partner doesn't really care if you miss stuff. However, poor sending is a bigger issue - CW ops don't enjoy having QSOs with someone they can't copy.

Sending Practice Session Example:

- Turn recorder ON
- Close your eyes, keep them closed while sending
- Send at your most accurate character speed at first, increase speed quickly as you improve
- Send the entire alphabet, work on having extremely consistent spacing between letters (tempo)
- Send number scales: 0123456789098765432101234567890
- Select a [pangram](#), memorize and head-send it a few times during every practice sending session. Switch to a new pangram every week or two.
- Pangram Examples:
 - THE FIVE BOXING WIZARDS JUMP QUICKLY
 - FIVE OR SIX BIG JET PLANES ZOOMED QUICKLY BY THE TOWER
 - THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG
 - HOW QUICKLY DAFT JUMPING ZEBRAS VEX
 - FARMER JACK REALIZED THAT BIG YELLOW QUILTS WERE EXPENSIVE
 - WHEN ZOMBIES ARRIVE, QUICKLY FAX JUDGE PAT
 - BROWN JARS PREVENTED THE MIXTURE FROM FREEZING TOO QUICKLY
- Head send anything you can think of for a minute or so (remember – eyes closed)
- Turn recorder OFF, save the recording (**File, Export** in Audacity)

Listen for the unique acoustic sound of each character as you send – this will improve your character recognition skills (ICR) over time. Vary sending speeds as your Iambic Keying improves. Try sending much faster than your most accurate speed occasionally (ignore errors during these speed sending sessions).

Deliberately 'send' word spaces, don't assume they're there. Key up is just as important as key down. Beware of short word spaces after single letter words, this adds to head copy difficulty as listeners think the next word begins with 'A' or 'I'.

Iambic Keying descriptions:

C K N R '!' and <AR> are simple finger-first and thumb-first 'squeeze' characters
<AS> is a quick thumb-first squeeze followed by a thumb-hold

<AR> is a slightly shorter squeeze than a period '.'

<SK> is a thumb-hold followed by a squeeze

<KN> can be thought of as a 'Y' with a dit at the end

<BK> is a 'B' followed by a squeeze

F and L are thumb-holds with a finger tap, Q and Y: finger-holds with a thumb tap

N is a quick squeeze and release, finger touches first

Practice Iambic Keying these Q-Codes: QRL QRL? QRN QSY QSO QRM

Iambic Keying also helps automate these Punctuation Characters: / . !

Think of a slash '/' as an 'F' with a dah in front of it.

An exclamation point '!' <KW> is a finger-hold with two thumb taps.

A period is a simple thumb-first squeeze, hold, and release.

QSO Oriented Practice:

CQ CQ CQ de (your callsign)

TNX FER FB QSO DE (your callsign) <SK> dit dit

VRY 73 CUL DE (your callsign) <SK> dit dit

BEST 73 CU AGN DE (your callsign) <SK> dit dit

RST 599/579/559 BK NAME IS (your name) BK QTH IS

About Iambic Mode B:

Iambic Mode B detects and remembers if the dit paddle is touched any time during the sounding of a dah. Mode B will then send a dit after the dah with perfect timing. Therefore, Mode B is very lenient on the timing of paddle touches and squeezes. Simply put, Mode B helps make Iambic Keying easier by not requiring perfectly timed paddle touches. If the keyer is in Mode A, touching the dit paddle during a dah will not generate a dit after the dah, but that does make squeezing an 'A' possible. Iambic Mode A doesn't detect and remember a paddle touch during either character element (dit or dah). This makes Iambic Keying in Mode A 'trickier' than Mode B. However, some people prefer Mode A. The majority of Ham radios with an internal keyer default to Mode B.

“Why you’ll usually get an ‘R’ if you try to squeeze an ‘A’ (Mode B):

Squeezing an ‘N’ works fine with a quick finger-first squeeze. The ‘N’ starts with a dah so a quick squeeze and release is easy. However, the ‘A’ starts with a dit. This makes it almost impossible to squeeze the dah paddle during the dit and then get off the dit paddle quickly enough before generating dit after the dah (di dah dit). It is possible to squeeze an ‘A’ but isn’t worth the exquisite timing required in Mode B. The detect and remember function of Mode B works against you in this particular letter.

Is Iambic Keying truly ‘Squeeze Sending’?

Iambic keying is often referred to as squeeze sending but that’s not entirely accurate. The F, L, Q, and Y are thumb-holds with a finger tap (F and L) or finger-holds with a thumb tap (Q and Y). The slash / is a finger tap followed by a thumb-hold with a finger tap (‘T’ followed by an ‘F’ with no space between them). F, L, Q, Y and / aren’t squeeze characters, five others are: C, K, N, R, and the period. Five Iambic keying characters are a simple squeeze, and five aren’t. Referring to Iambic keying as squeeze-sending is correct – half the time <grin>. Since I strive for accuracy I enjoy mentioning that Iambic keying doesn’t always involve squeezing.

Iambic Keying practice words:

ALL	CAKE	FLY	LARK	RELY
ANY	CLAY	FORK	LOCK	REALLY
ABLY	CLACK	FULL	LIKELY	SHYLY
ACRE	CLERK	FAIRLY	LITERARY	SLYLY
AFTER	CLICK	FORCE	LUCKY	TRICKY
ANKLE	CLOCK	FLOCK	NY CITY, NY	TRULY
BEFORE	CLEARLY	FIRST	NICKEL	WELL
BAFFLE	CAREFULLY	HILLY	ONLY	WILL
CALL	FOR	KNOCK	QUACK	
CELL	FER	LIKE	QUICKLY	

lambic Keying Practice Sentences:

MY SHACK IS FULL OF REALLY FUN STUFF.

LOCK YOUR TRUCK CAREFULLY AND REGULARLY.

FORK FULLS OF CAKE WILL ROCK A JELLY BELLY.

ITS A FAIRLY DEEP WELL NEAR THE HILL.

THE RAKE NEARLY FELL OFF THE DOCK INTO THE LAKE.

ITS LIKELY TO BE FAIRLY CLOSE TO NY CITY, NY.

IF I ONLY HAD A DOLLAR FOR EVERY NICKEL...

THIS CLOCK REALLY BAFFLES ME, ITS TRICKY.

PICK UP A STICK AND SHYLY WHACK A SICK BRICK.

Good luck with this one: MISSISSIPPI SISSIES ARE SISSIER THAN TENNESSEE SISSIES