

## Get Your Commercial Radiotelegraph Ticket!

We're sorry, but we have to ask: what have you been waiting for? You're a True Believer, you love Morse code and you've been thinking about getting that commercial ticket for some time now. Well, now's the time to turn thoughts into action. And our advice is: **do it now!**

Why? Because the whole topic of the commercial radiotelegraph ticket is the subject of a FCC Notice of Proposed Rulemaking. We have no inside information about what those birds over that the FCC are going to do. But it could be anything from combining all the classes of radiotelegraph licenses into one general ticket like they did with the radiotelephone license. Or they could even eliminate the ticket entirely!

One way or another the current structure of the radiotelegraph license is likely to change.

Okay, we know it's a big pain to figure out what you have to do, find out where to take the exam and so on. And why bother in the first place? Well, there's the bragging rights. Then there's ability to visit KSM, sit the circuit and have your ticket endorsed as an operator of the last commercial coast station.

Now come Mr. Tony Castellano and Mr. Stan Levandowski who have very graciously given us permission to reprint their article on the "ultimate CW credential". No more excuses!



**In Pursuit of the Ultimate CW Credential**  
How Two OMs Achieved Their Lifelong Goals

By Tony Castellano W1ZMB (FISTS #15740) and Stan Levandowski WB2LQF (FISTS #14992)

Tony and I lived within a few miles of each other for over twenty years but never knew it until a chance meeting at a local ham event. We struck up a conversation and discovered that we were both dedicated to CW QRP and operated Elecraft K2/10 transceivers with only simple wire antennas. In fact, neither of us owned a microphone!

We are both Navy veterans and have always felt very strong connections to maritime wireless. Each of us had long desired to earn the commercial radiotelegraph certificate as a symbolic link to the history of wireless and as outward evidence of proficiency. In early 2012, as the publicity surrounding the 100th anniversary of the Titanic disaster ramped up, we began to wax philosophic and made a pact to "just do it."

On April 28th, 2012 Tony and I passed our exams and were awarded our commercial Second Class Radiotelegraph Certificates.

### About Commercial Radiotelegraph Certificates

CW was retired as the international maritime standard in July 1999. But to paraphrase Mark Twain was this death of Mr. Morse's Code "greatly exaggerated?" Not only is Morse a major operating mode in amateur radio, but throughout the world Morse is still used on the high seas by a number of nations. Three or four letter Morse identifiers still beep their greetings to pilots intercepting Instrument Landing Systems and crossing VHF navigation beacons around the world. Even public television stations frequently use it to satisfy their FCC ID obligations just as amateur repeaters do.

It may come as a surprise to many hams that commercial radiotelegraph certificates are still obtainable today. At the present time (May 2012), all three original commercial radiotelegraph certificates are still offered. Commercial radio operator testing is now directed by private groups known as Commercial Operator Licensing Examination Managers (COLEMs). Eight COLEMs, the commercial counterpart of the Amateur Service's VEC, have been certified and have entered into a Memorandum of Agreement with the government in much the same manner as VECs (Volunteer Examiner Coordinators). The Commercial Radio Operator examination program is patterned after the very successful VEC System in the Amateur Service. Commercial Operator License Examination Managers (COLEMs), Examination Schedules, Fees and Testing Locations can be found [HERE](#).

There are three commercial certificate levels. The Third Class certificate requires a 16 wpm cipher group exam (Code Element 1) and a 20 wpm plain text exam (Code Element 2). The applicant must copy one error-free continuous minute. Provisions exist to grant credit for Code Elements 1 and 2 to Amateur Extra Class licensees whose grant date was prior to April 1, 2000 at which time the 20 wpm code requirement was eliminated. Amateurs seeking such credit must produce their original CSCE document. The written exam consists of Written Element 1 (basic radio law and general operating practices) and Written Element 5 (radiotelegraph operating practices).

The Second Class certificate adds Written Element 6 (advanced radiotelegraph technical theory).

The First Class certificate requires one year of documented experience in sending and receiving public correspondence by Morse at either a public coast station, ship station, or both, and a code test of 20 wpm cipher groups (Code Element 3) and 25 wpm plain text (Code Element 4). There is no additional written exam.

At this time it is very difficult - and often impossible - for an applicant to satisfy the one year public correspondence requirement. This explains why only two First Class certificates have been granted since 2007.

[Difficult, yes. Impossible, no! Get your T-2, then become a volunteer operator at KSM. Build up your one year of experience and go for the Big Ticket! Mike Payne of the MRHS operations staff has done just that and is getting ready to take his T-1 exam! - Ed.]

Written Element 8 is optional and if taken will add the Ship Radar Endorsement to either the First or Second Class certificate. This endorsement cannot be added to the Third Class certificate. The FCC does not mandate a sending exam because the ability to copy infers the ability to send. However, the examining entity has the leeway to administer a sending test if it so desires.

What's the Attraction for Hams?

Given that a commercial radiotelegraph license requires considerable effort to obtain, carries a hefty fee, may require traveling to a testing location, provides marginal economic value, and grants absolutely no additional operating privileges to an amateur radio operator, why bother?

According to the FCC ULS database, a total of 78 applicants earned (any level of) a commercial radiotelegraph certificate in the five year period ending on March 31, 2012.

Seven Third Class Certificates, 69 Second Class Certificates, and two First Class certificates were awarded. Ninety percent - 71 grantees - held current amateur radio call signs. It appears that at least for some hams, a commercial ticket provides a personal benefit powerful enough to overcome the logical arguments against pursuing it. Averaged across the five years between March 2007 and March 2012, fourteen applicants per year have earned their commercial radiotelegraph credentials, qualifying for membership in a rather exclusive club!

Change in the Wind?

On August 31, 2010 FCC published an NPRM, Docket Number 10-177, which included proposals relevant to the radiotelegraph certificates. Specifically, FCC sought public comment on the following: 1) Cease accepting any applications for the First Class Radiotelegraph Certificate because of the near impossibility of meeting the experience requirement and 2) Cease accepting any applications for the Third Class Radiotelegraph Certificate because its scope is currently covered by the newer Marine Radio Operator Permit (MROP) and 3) Rename the current Second Class Radiotelegraph Certificate to "Radiotelegraph Operator Certificate" with no further modification to it. This would streamline the licensing process and create the

radiotelegraph equivalent of the General Radiotelephone License (GROL). An inquiry to the FCC in March 2012 determined that no action has yet been taken nor is any action planned at this time. Thus, for now and into the foreseeable future, the original commercial radiotelegraph exams remain intact.

### Stan Comments on the Code Elements

"I was a Navy Radioman Second Class attached to Marine Amphibious Squadron Four aboard the USS BOXER during the Vietnam War. Aboard ship, I had Kaufman's Q and A Manual tucked away in my locker. My career plan, hatched with a fair amount of youthful exuberance, was to earn my radiotelegraph license, become a radio officer on a merchant vessel, and grow rich, famous and well-traveled.

That never happened. However, my shipboard experiences always made me feel somehow a proud but very small part of that continuum of wireless ops who kept the watch at sea. The history and romance of wireless and the maritime industry has always fascinated me. I wanted to "own" a piece of that history before it vanished. To earn my T2 as close as possible to the 100th anniversary of the Titanic disaster became my goal.

Tony had upgraded to Amateur Extra Class in 1995 when the 20 wpm requirement was still in force. Fortunately, Tony had safely filed his original CSCE document. As a result, Tony was granted credit for both Code Elements 1 and 2. Because I had upgraded to Amateur Extra Class after 2000, I had to take Code Elements 1 and 2.

With over fifty years of CW experience I thought this would be a no-brainer. Then I learned that I had to copy one continuous error-free minute by hand. I've been copying in my head, including entire words, for a long time now and just jotting down notes. Whenever I need to copy with greater precision I clamp on my "cans," put my station PC into "Notepad" mode and then every character becomes a single keystroke. In the military, we learned to copy CW on a "mill" which was a manual typewriter with all capital letters and I've never lost that skill. Copying by hand almost did me in! It slowed me down terribly and caused me to miss characters and then become even further confused. "Copying behind" became much more difficult because there was the added burden of having to write out characters legibly, each of which required a different number of pencil strokes. 1, I, and / and 5 and S were especially troublesome when written at a furious pace because I couldn't read my writing afterward! I began to regret the laid-back style I had so proudly developed over the years and I realized that I had some serious un-learning and re-training ahead of me.

My Begali CW Machine with the Trainer option proved invaluable. It permitted me to tailor my practice sessions to focus on problem areas with greater efficiency and effectiveness. Both the CW Machine and the code exams are based on the PARIS standard so it worked out great. The ability to generate completely random cipher groups from a pool of letters, numbers, punctuation marks, and pro-signs of my own choosing really allowed me to focus my preparations for Code Element 1. Being able to load plain text into the CW Machine's message memories from any source proved equally effective in preparing for Code Element 2. At first, I loaded in all the WIAW practice files available at [www.arrl.org](http://www.arrl.org). It later became evident that there was a very

strong "ham flavor" to my practice sessions and I was guessing ahead all too well. Whenever I saw "imp" I just knew it was going to turn into "impedance!" That's when I began loading snippets from online novels, chunks of travel brochures, papers on environmental issues - anything and everything I could find to challenge myself. That's one cool little CW accessory!

On the day of the test I was a bundle of nerves. The cadence at certain speeds can invite mental excursions that lead to disaster! For me, 16 wpm is one of those troublesome speeds! Indeed, I managed to choke on some early cipher groups but did successfully recover and earned my passing grade. The 20 wpm plain text exam which followed, Element 2, was much easier. Unlike amateur exams, the commercial examiners were not permitted to disclose my score but, being plain text I could pretty much figure out that I had either "aced it" or come very close. I seem to remember copying "here" but writing out "hr." Earning the T2 has been the high point of my ham radio career. I've always felt just a bit guilty that I'd never been properly "CW stress-tested" because I had upgraded into a no-code Extra Class license."

### Tony Comments on the Written Elements

"Like Stan, I also served in the Navy. I was a Sonarman First Class aboard a sub chaser during the Korean War. Many folks are unaware that sonar operators had to know Morse code just like the radiomen. It's how we communicated with submarines, albeit at only 6 or 7 wpm!

Fifty-seven years ago, we were tied up to the pier in Boston on the morning I was scheduled to take my Second Class Radiotelegraph exam at the uptown FCC office. Unexpectedly, I awoke to the shrill call of the bosun's pipe and the 1MC announcing we were to set the sea and anchor detail and make preparations to get underway immediately! I'm now 79 years old and I figured it was time to complete some unfinished business.

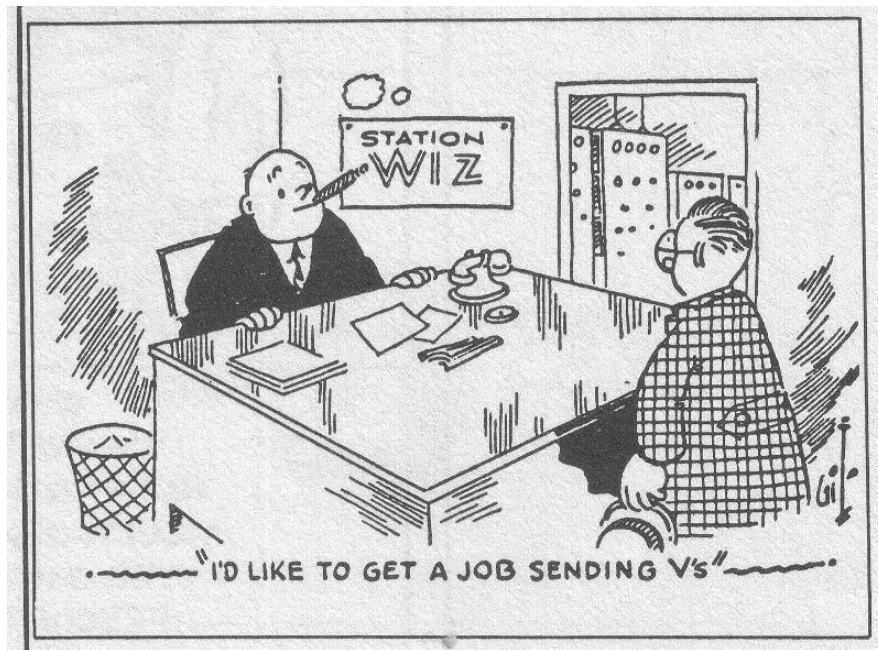
The written exams for us consisted of Elements 5 and 6. Because Stan and I had our GROLS with Ship Radar Endorsements we were granted credit for Written Elements 1 and 8. Element 5 gave us the most trouble. This element deals with commercial radiotelegraph procedures, including just about the entire Q code as well as a litany of CW abbreviations. In amateur radio, we use only a small subset of the Q code. The entire Q code is quite extensive. One useful technique I found was to keep in mind that "RSTU" are the only valid middle letters in any Q signal. That allowed some narrowing of the answers by process of elimination. The CW abbreviations required pure memorization. A few, such as TU (Thank You) or SIG (Signature), are shared with amateur radio and intuitive; others, such as DJ (Bearing doubtful because of interference) don't reveal much of a clue at all!

Element 6 could be described as a more detailed and challenging version of a vintage Amateur Extra Class written. The current question pools are dated 1994. Questions about factors that determine the bias voltage, space charge, and the debugging steps to use for an ailing regenerative receiver really brought us back to our roots! Unlike the current GROL, there were no questions about positive logic devices, digital logic states, or the characteristics of an inverting operational amplifier circuit! I didn't need a scientific calculator for the exam; I needed a history book! Also unlike the current GROL, there are no published study guides or software instructional programs available. There is only the FCC question pool which can be downloaded

directly from THIS LOCATION as individual MSWord files. Alternatively, a question pool booklet can be purchased through W5YI/NRE HERE. In either case, all you get are the questions and answers. It is up to the applicant to hit the books and research why an answer choice is correct, incorrect, and how it was arrived at. I took issue with a few of the "correct" answers but decided that it would probably be in my best interests to avoid confronting anyone. I earned my degree in electrical engineering in 1960 and have extensive experience in RF engineering and receiver design as well as test equipment and repair. Even so, I often found myself referring to a well-thumbed and yellowed copy of Kaufman's Q and A Manual from a half century ago!

When I was told I had passed I was elated! After 57 years I had finally done it. I had also proven that, even as I approach my 80th year, I can still set and achieve meaningful goals. I've been a ham since 1953 and earning my T2 is my proudest accomplishment."

### Reflections



Today's employment prospects for either coastal or shipboard radiotelegraph operators are admittedly dim, especially for two old guys. We put a lot of time and effort, and a portion of our Social Security checks, into earning a credential with absolutely no economic value to either of us. What we did gain, however, was priceless - the personal satisfaction of ultimately having accomplished that one goal that "got away" from us so very long ago.





Stan WB2LQF (L) and Tony W1ZMB (R) holding their Certificates of Successful Completion along with the W5YI/NRE commercial examiners team in Milford, CT.

Well, what more can we say? We've shown you it can be done, Stan and Tony have shown you how to do it and we've offered you a spot at a KSM operating position to exercise the privileges of your new certificate. As we said at the beginning... what have you been waiting for?

NEXT: Want to license and equip your boat to communicate with KSM on commercial frequencies? Several folks have done this and they're among our best customers\*. If there's any interest we'll pass along the details. It's pretty simple. But you *\*will\** need that commercial radiotelegraph ticket to be legal. Send your thoughts on an email to [info@radiomarine.org](mailto:info@radiomarine.org).