



Officer Info

President John Demuth demuthent@gmail.com
 Vice Pres. Mel Vye w8mv@arrl.net
 Secretary, Jim Grover grizgrover@gmail.com
 Treasury, Les Myers fyrwolf@sssnet.com
 Director, Dennis Moriarty k8agb-2@att.net
 Director, Perry Ballinger w8au@sssnet.com

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Amateur Radio Licensing

by Jim Grover, N8PZL

Currently there are three active classes of licenses in the USA: Technician, General, and Amateur Extra. And there are three grandfathered license classes: Novice, Advanced, and Technician Plus. All three classes were deprecated by the [restructuring in 2000](#). You can upgrade and renew both the Novice and Advanced classes. That is why there is a non-zero number for those classes in the table.

Since 1951 Technician licensees had passed the General written exam with only 5 wpm code instead of 13 wpm for General. When the code requirement for Technician was removed in 1991, Technician licensees were promoted to Tech Plus. When the code requirement was removed from General class, Tech-Plus

licensees were promoted to General class licensees. The Tech-Plus class was deprecated and no one holds that license class.

Area	Novice	Tech	General	Advanced	Extra	Total
Ohio	432	12,043	6,999	1,546	5,931	27,951
Region 8	740	25,666	13,408	2,978	11,579	55,371
USA	8,457	383,463	175,618	39,829	146,941	754,308

FCC License Count (31 October 2018)

Formation and early history¹-

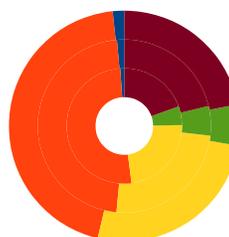
Established in 1912, regulation of radio was a result of the U.S. Navy's concern about interference to its stations and its desire to be able to order radio

stations off the air in the event of war. U.S. radio broadcasting was first governed by the U.S. Department of Commerce (the U.S. Department of Commerce and Labor until March 1913), then by the Federal Radio Commission, and finally (in 1934) by the FCC. The federal government's licensing of amateur radio experimenters and operators has evolved considerably over the century since the inception of licensing.

1912 through 1950

Under authority of the Radio Act of 1912, the Department of Commerce issued Amateur First Grade and Amateur Second Grade operator licenses beginning in December of that year. Amateur First Grade required an essay-type examination and five (later ten) words per minute code examination before a Radio Inspector at one of the Department's field offices. This class of license was renamed

Licensees by Class



Ohio (outer), Region 8, and USA (inner)
 ■ Novice ■ Tech ■ General ■ Advanced ■ Extra

¹ Wikipedia.com, "Amateur radio licensing in the United States, November 1, 2018.

Amateur Class in 1927 and then Amateur First Class in 1932. Amateur Radio licensing in the United States began in mid-December 1912.

At first, the Amateur Second Grade license required the applicant to certify that he or she was unable to appear at a field office but was nevertheless qualified to operate a station. Later, the applicant took brief written and code exams before a nearby existing licensee. This class of license was renamed Temporary Amateur in 1927.

The Department of Commerce created a new top-level license in 1923, the Amateur Extra First Grade, that conveyed extra operating privileges. It required a more difficult written examination and a code test at twenty words per minute. In 1929, a special license endorsement for "unlimited radiotelephone privileges" became available in return for passing an examination on radiotelephone subjects. This allowed amateurs to upgrade and use reserved radiotelephone bands without having to pass a difficult code examination.

From 1912 through 1932, amateur radio operator licenses consisted of large and ornate diploma-form certificates. Amateur station licenses were separately issued on plainer forms.

In 1933, the Federal Radio Commission (FRC) reorganized amateur operator licenses into Classes A, B and C. Class A conveyed all amateur operating privileges, including certain reserved radiotelephone bands. Amateur Extra First Grade licensees and Amateur First Class licensees with "unlimited radiotelephone" endorsements were grandfathered into this class.

Class B licensees did not have the right to operate on the reserved radiotelephone bands. Amateur First Class licensees were grandfathered into this class.

Class C licensees had the same privileges as Class B licensees, but took their examinations from other licensees rather than from Commission field offices. Because examination requirements were somewhat stiffened, Temporary Amateur licensees were not grandfathered into this class but had to be licensed anew.

In addition, that year the FRC began issuing combined operator and station licenses in wallet-sized card form.

1951 licensing structure decision

In 1951, the FCC moved to convert the existing three license classes (A, B, and C) into six named classes. Following the rule change, the classes were Novice, Technician, General, Conditional, Advanced, and Amateur Extra. Each license class required two exams, one on theory and one on Morse code, and each license was valid for five years (except Novice). Until the advent of incentive licensing in the late 1960s, the Technician, Conditional and General classes shared the same written examination and the Conditional, General, Advanced and Amateur Extra classes shared the same operating privileges.

- *The **Novice** class created by the 1951 decision was the entry-level license; it remained the primary entry license until the Morse code requirement was eliminated for Technician licenses in 1990. On HF it permitted code transmissions only, with a maximum power of 75 watts, (input to the transmitter's final amplifier stage) on limited segments of the 80, 40 and 15 meter bands, and on VHF, both code and voice privileges on 145–147 MHz. Initially, they were also limited to crystal control of the transmitting frequency, a restriction that was lifted in 1972. At the same time, the Novice CW bands were shifted on the 40m band and access to the 2m voice/code was revoked and a code segment on the 10m band was added. To qualify for a Novice license, a candidate would have to pass a 5 word-per-minute (WPM) Morse code test (send and receive) and a 25- (later 30-) question multiple-choice test. The Novice Class license was valid for one year, as it was intended only as an entry level; within the year, the Novice was expected to move up to General (or Conditional). Under incentive licensing in the 60s, the term of the Novice class was extended to two years. In 1978 the Novice changed into a renewable license with the same five-year validity as other classes.*
- *The **Technician** license, newly created in the 1951 structure decision, was awarded to applicants who passed the General Class theory test, known as Element 3, but only required a 5 WPM code proficiency. It was initially*

intended for *radio control of model aircraft*, etc. but at that time, usage of the band for such a purpose was rare. Technicians were granted all General Class privileges in the 50 MHz band and all bands above 220 MHz; on 2 meters they were limited to 145–147 MHz. An applicant was permitted to apply for and hold both Technician and Novice licenses simultaneously (for the first year). In the 1950s and until the late 1960s, a US ham could hold both Technician and Novice licenses at the same time, thus having two callsigns (WN 2x3 for the Novice and a WA or WB 2x3 for Technician).

- The **General** class originally conveyed full privileges on all ham bands, having passed the Element 3 theory exam and 13 WPM Morse code test. Class B operators were assigned this license following the 1951 structure decision.
- The **Conditional** license class was created when Class C operators were reassigned to this group. In 1978 all Conditional Class licenses became General Class.
 - *History:* Prior to 1984, the FCC administered license exams for all classes except Novice and Technician, with some exceptions. The old Class C license had been issued to applicants who would otherwise have been Class B operators but who lived more than 125 miles airline from the nearest examining point. They were permitted to have their code test and written exam administered by a Class A or B or otherwise FCC-qualified operator. When the class became the Conditional Class, the restrictions were generally the same, except that the required distance from the nearest Field Office was reduced to 75 miles (there were also exceptions for the military and physically disabled). The Conditional License exam was given by a ham with General (or higher) license, who would administer the code test, proctor the written exam, and send the completed exam to the FCC for grading. Successful examinees were given Conditional licenses, which brought the same privileges as the General class. The FCC retained the right to require Conditional licensees to come into an FCC office for retesting. The current Volunteer Examiner program evolved from the Novice/Technician/Conditional exam procedure.

- *The **Advanced** class was earned after the General Class through passing the Element 4A theory exam. Class A operators were assigned this license following the 1951 structure decision. Although existing Advanced Class licenses continued to be renewed, new licenses were not issued in the period 1951–1967.*
- *The **Amateur Extra** class was a new highest-level class created in the 1951 decision, and was reached by passing both the Element 4B theory exam and a 20 WPM Morse code test. From the 1950s through the early 1980s, FCC Field Offices would issue diploma-form certificates to Amateur Extra Class licenses.*

Incentive licensing

In 1964, the FCC and the [American Radio Relay League \(ARRL\)](#) developed a program known as "Incentive Licensing," which rearranged the HF spectrum privileges. The General/Conditional and Advanced portions of the HF bands were reduced, with the spectrum reassigned to those in the Advanced and Amateur Extra classes. It was hoped that these special portions of the radio spectrum would provide an incentive for hams to increase their knowledge and skills, creating a larger pool of experts to lead the [Space Age](#). It did not take effect until 1968.

Prior to the advent of incentive licensing, only a small percentage of General Class operators progressed to the Amateur Extra Class. After incentive licensing, a large number of amateurs attained Advanced and Amateur Extra Class licenses. Thus, incentive licensing was successful in inducing a large number of amateurs to study and upgrade their knowledge and license privileges. Incentive licensing was not without controversy; a number of General class operators, unhappy at having their privileges reduced, dropped out of the hobby rather than upgrade.

Novice enhancement

Prior to 1987, the only difference between the requirements for Technician and General licenses was the Morse telegraphy test, which was five words per minute (wpm) for Technician and 13 wpm for General. The written test, then called element 3, was the same for both classes.

In 1987, a number of changes, later called the "Novice Enhancement," were introduced. Among them, element 3 was split into two new exams, element 3A, which covered [VHF theory](#) and 3B, which covered [HF theory](#). Element 3A became a requirement for the Technician class and element 3B became a requirement for General. Both classes also required candidates to have passed the Novice element 2 theory exam.

The changes also granted Novice and Technician classes limited voice privileges on the 10-meter HF band. Novices were also granted voice privileges on portions of the then-220-MHz (since changed to 222 MHz) and 1,240 MHz bands using limited power. For the first time, Novices and Technicians were able to operate using single sideband voice and data modes on HF. It was hoped that this would prompt more hams to move up to General, once they had a chance to sample HF without a Morse key.

Technician: the first license without Morse code

In late 1990, the FCC released their Report and Order on Docket 90-55. Beginning on February 14, 1991, demonstration of proficiency in Morse code telegraphy was removed from the Technician license requirements. Because [International Telecommunication Union](#) (ITU) regulations still required proficiency in Morse telegraphy for operation below 30 MHz, new Technicians were allowed all modes and bands above 50 MHz. If a Technician passed any of the contemporary Morse tests, he or she gained access to the so-called Novice HF privileges, essentially "upgrading" to what a Tech had before the new rules went into effect. This new, sixth class had no name until the FCC started calling them "Technician Plus" in

1994. With a code-free class now available, Technician class became a second entry class, eventually surpassing the number of Novice class license holders.

Restructuring in 2000

In 1999, the FCC moved to simplify the Amateur Radio Service operator license structure, streamline the number of examination elements, and reduce the emphasis on telegraphy. The change was titled a restructuring, and the new rules became effective on April 15, 2000.

The major changes were:

- A reduction of the number of operator license classes from six to the current three (Technician, General, Extra). The Advanced Class, Technician Plus Class, and Novice Class licenses were deemed redundant and would no longer be issued; however, existing licensees would retain their operating privileges and be allowed to renew their licenses.*
- A reduction of the number of telegraphy examination element levels from three to one. Both the 20 words-per-minute (WPM) and 13 WPM Morse code tests were removed in favor of a standardized 5 WPM as the sole Morse code requirement for both the General and Extra Class licenses. With the removal of the high-speed Morse code tests, physician certification waivers were no longer accepted.*
- A reduction of the number of written examination elements from five to three.*
- Authorization of Advanced Class amateur radio operators to prepare and administer examinations for the General Class license.*
- Elimination of station licenses for the [Radio Amateur Civil Emergency Service \(RACES\)](#).*

With the rule simplification, all pre-1987 Technician operators were now qualified to become General class operators, having already passed both the theory and code exams now required for the higher class. All that was necessary was to apply for the General license, usually through a "paper upgrade" (often done

through existing amateur radio clubs) to achieve the license acquisition. The restructuring also enabled a pre-1987 Technician operator to become an Extra operator simply by passing the element 4 theory examination. Additionally, an expired or unexpired Novice class license could be used as credit toward the 5 WPM Morse code examination when upgrading.

With the change, Technicians who could pass the 5 WPM Morse code examination were given the same HF-band privileges as the Technician Plus class, although the FCC's callsign database no longer distinguished between those Technician licensees possessing HF privileges and those who did not.

End of Morse code requirement

In 2003, the [International Telecommunication Union](#) (ITU) ratified changes to the Radio Regulations to allow each country to determine whether it would require a person seeking an amateur radio operator license to demonstrate the ability to send and receive Morse code. The effect of this revision was to eliminate the international requirement that a person demonstrate Morse code proficiency in order to qualify for an amateur radio operator license with transmitting privileges on frequencies below 30 MHz.

With this change of international rules, the FCC announced on December 15, 2006 that it intended to adopt rule changes which would eliminate the Morse code requirement for amateur operator licenses. Shortly thereafter, the effective date of the new rules was announced as February 23, 2007. After that date, the FCC immediately granted the former Technician Plus privileges to all Technician Class operators, consolidating the class into a single set of rules.

Following the change in requirements, the [ARRL](#) reported a significant increase in the number of applications for licensing.

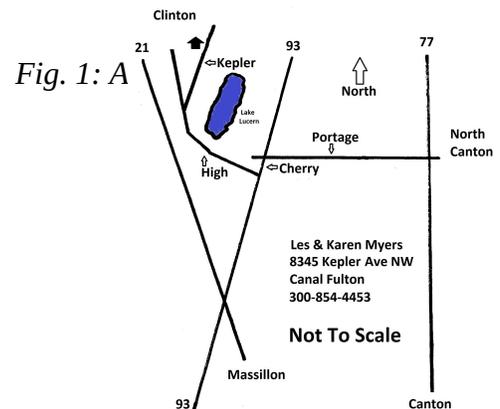
Did You Know?

- Mae (Stankovich) Rauvola, formally of Canton Ohio, was the second women in the US to become a Ham Radio Operator. Her last call was W8EKL. Since November of 2013 she has been a silent key.

- Actor and comedian Tim Allen, KK6OTD, now not only plays an Amateur Radio operator on television, he *is* one! In his weekly FOX comedy TV show “Last Man Standing,” Allen’s character Mike Baxter, is supposed to be KA0XTT, and the show has featured ham radio in some episodes.

Upcoming Event

Yum yum it’s free lunch at Karen and Les Myers. home. Mark you calendar for 9 February at Noon. The address is 8345 Kepler Avenue NW, Canal Fulton, Ohio. See adjacent map. Please RSVP at 330-714-7382. Mel Vye will make a presentation on his trip to the [Kingdom of Bhutan](#).



Ragchew

Don't forget the monthly ragchew at Tim's Tavern at Noon on the last Wednesday of the month. The address is 3323 Parkway Street NW, Canton Ohio 44708. All are invited. For you information that is 31 October, 20 November, and 29 January for the next quarter. Please add these dates to your calendar.

Some Local Hamfests

01/27/2019 | Tusco ARC Hamfest, Electronics & Computer Show

Location: Strasburg, OH



Sponsor: TUSCO Amateur Radio Club

Website: <http://tuscoarc.org>

02/17/2019 | InterCity ARC Hamfest

Location: Mansfield, OH

____ Sponsor: InterCity Amateur Radio Club

Website: <http://www.w8we.org>

03/03/2019 | WINTER HAMFEST

Location: Elyria, OH

Sponsor: Northern Ohio Amateur Radio Society

Website: <http://www.noars.net/hamfests/noarsfest>

03/16/2019 | Gallipolis Ohio Hamfest

Location: Gallipolis, OH

Sponsor: Mid-Ohio Valley Amateur Radio Club

Email: docdiesel@hotmail.com

03/17/2019 | Hamfest and Computer Fair

Location: Perrysburg, OH

Sponsor: Toledo Mobile Radio Association

Website: <http://www.tmrahamradio.org>

04/13/2019 | 65th Annual Cuyahoga Falls Amateur Radio Club Hamfest

Location: Cuyahoga Falls , OH

Sponsor: The Cuyahoga Falls Amateur Radio Club, Inc.

Website: <http://cfarc.org>

04/20/2019 | Portsmouth Radio Club Hamfest

Location: Portsmouth , OH

Sponsor: Portsmouth Radio Club

Website: <https://www.facebook.com/w4pox/>

04/28/2019 | Athens Hamfest

Location: Athens, OH

Sponsor: Athens County Amateur Radio Association

Website: <http://www.ac-ara.org/>

Dues Are Due

The little piggy is back. Remember 2019 local dues of \$5 will be collected. National dues are paid directly to QCWA via qcwa.org. The rates for national dues are listed in the table below.



Membership Type	1 Year	2 Years	3 Years	Life
Regular	\$25.00	\$40.00	\$55.00	\$500.00
Family	\$8.00	\$15.00	\$20.00	\$160.00

Minutes

The meeting was preceded by a ride on Mel Vye’s pontoon boat to 11 August 2018. The minutes for the 3rd Quarterly meeting of QCWA #21 are as follows:

The meeting was called to order on 11 August 2018 at Martha and Mel Vye's home on Portage Lakes. The attendance was 15 people. There were more people than would fit on the boat so some had to go by car to the restaurant. Les Myers, KK8K, report \$562.28 in Huntington account and \$25.00 in cash for at total of \$587.28

There was no old business or new business so the meeting was closed. Mel Vye made a presentation on "Panama and the Canal".



If there are any additions or corrections, please contact the secretary at N8PZL@arrl.net.

Did You Know

Each month edition of the QCWA Journal is available in audio form (mp3) at <http://handiham.org/audio/QCWA/>?. The journal is read by Jim Perry, KJ3P. There is a link to these audio recordings on the banner for the qcwa.org website. Many of the member are getting up there in years and may need some of the resources of Courage Kenny Handiham Program. If so, please see <http://handiham.org/wordpress1/> for details.

