# Sidebands

The Newsletter of the EAST GREENBUSH AMATEUR RADIO ASSOCIATION

W2EGB

**March 2017**

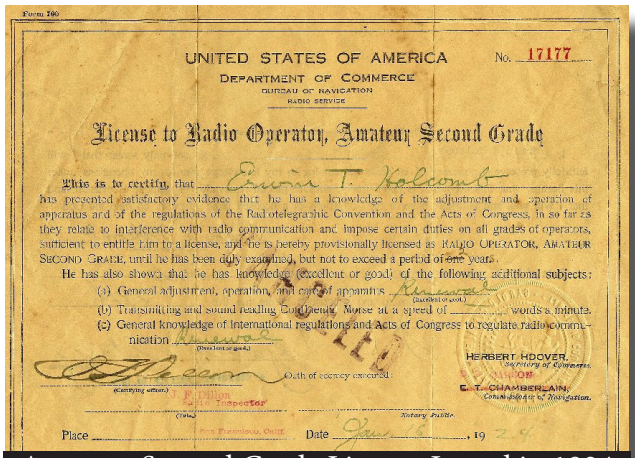
President - Tom Scorsone, KC2FCP
Vice-President - Ridge Macdonald, KB2HWL
Secretary - Russ Greenman, WB2LXC
Treasurer & Newsletter Editor - Bryan Jackson, W2RBJ


# The History of Amateur Licensing

## Current Three Class System Wasn't Always So Easy

Today's FCC licensing of amateur operators is pretty straight forward -- Novice, General and Extra. But it wasn't always quite so clear, and even today there are bits and pieces of the old licensing classes still around.

This coming December will mark 105 years that the federal government has been issuing licenses to hams. For much of this time, operator licenses have been divided into different classes, each of which corresponds to an increasing degree of knowledge and corresponding privileges. However, over the years the details of the classes have changed significantly, leading to the current system of three open classes and two grandfathered classes that are closed to new applicants.


Form 190

UNITED STATES OF AMERICA No. 17177

DEPARTMENT OF COMMERCE

BUREAU OF NAVIGATION

RADIO SERVICE

License to Radio Operator, Amateur Second Grade

This is to certify, that Erwin T. Kolcomb

has presented satisfactory evidence that he has a knowledge of the adjustment and operation of apparatus and of the regulations of the Radiotelegraphic Convention and the Acts of Congress, in so far as they relate to interference with radio communication and impose certain duties on all grades of operators, sufficient to entitle him to a license, and he is hereby provisionally licensed as RADIO OPERATOR, AMATEUR SECOND GRADE, until he has been duly examined, but not to exceed a period of one year.

He has also shown that he has knowledge (excellent or good) of the following additional subjects:

(a) General adjustment, operation, and care of apparatus Excellent (excellent or good)

(b) Transmitting and sound reading Continental Morse at a speed of ..... words a minute.

(c) General knowledge of International regulations and Acts of Congress to regulate radio communication Excellent (Does limit or good.)

Oath of secrecy executed.

(Certifying officer.)

Radio Inspector (Title.)

San Francisco, Calif. (Place.)

Notary Public.

HERBERT HOOVER, Secretary of Commerce.

E. T. CHAMBERLAIN, Commissioner of Navigation.

Place ..... Date Jan 6, 19 28

Amateur Second Grade License Issued in 1924

### Current license classes

Amateur radio licenses in the United States are issued and renewed by the Federal Communications Commission without charge, although the private individuals who administer the examinations -- known as Volunteer Examiners or VEs -- may recoup their expenses by charging a fee (Note: EGARA charges a $15 exam fee but sends all of the money to ARRL's VE administration unit). Licenses currently remain valid for 10 years from the date of issuance or renewal. Today, renewals can be done on-line at the FCC website anytime within 90 days of the license expiration date.

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## In This Issue



## EGARA Overseas: Meet Member Jean-Claude Angebaud!

Did you know that EGARA really is an International amateur club, with members in both France and England? In this issue of *Sidebands* we invite you to meet Jean-Claude Angebaud, F1AKE, who lives in Nantes, France. We asked Jean-Claude to tell us a little about himself and his amateur operations:

"I have been an authorized amateur operator in France since 1970 with the call sign F1AKE. I originally operated on the VHF 144/146 band. Then, in 1988, I was licensed to operate on the 6 meter band.

In 1996, I made contact with EGARA club member Chris Linck, N2NEH during an opening to the USA on 6 meters and he spoke to me in French.

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**Save the Date!**
**Next EGARA Monthly Meeting is March 8th!**

## A History of Amateur Licensing

Today, there are three license classes:

- The entry-level license, known as **Technician Class**, is awarded after an applicant successfully completes a 35-question multiple choice written examination. The license grants full operating privileges on all amateur bands above 30 MHz and limited privileges in portions of the high frequency (HF) bands.
- The next level, known as **General Class**, requires passage of the Technician test, as well as a 35-question multiple-choice General exam. General class licensees are granted privileges on portions of all amateur bands, and have access to over 83% of all amateur HF bandwidth. However some band segments often used for long distance contacts are not included.
- The top US license class is **Amateur Extra Class**. This license requires the same tests as General plus a 50-question multiple-choice theory exam. Amateur Extra licenses have all privileges on all US amateur bands.

From February 17, 2015 onwards, the FCC stopped routinely sending paper copies of licenses to licensees, with the official license now being the FCC's electronic record. However, it continues to send paper copies upon a licensee's request or a licensee can print it out online from the FCC's data base.

### Grandfathered license classes

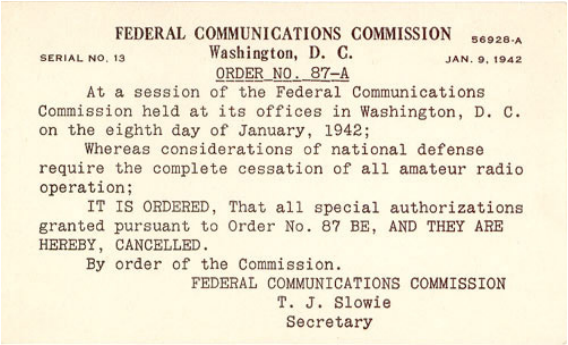
The FCC classifications of licensing have evolved considerably since the program's inception. When the FCC made the most recent changes it allowed certain existing operator classes to remain under a grandfather clause. These licenses would no longer be issued to new applicants, but existing licenses may be modified or renewed indefinitely.

The **Novice Class** operator license was for persons who had passed a 5 word per minute (wpm) Morse code examination and a basic theory exam. After the 1987 restructuring, privileges included four bands in the HF range (3–30 MHz), one band in the VHF range (30–300 MHz), and one band in the UHF range (300–3,000 MHz). This class was deprecated by the restructuring in 2000. Novice operators gained Morse code only privileges in the entire Morse code and data only segments of the General class portions of 80, 40, 15 and data and Morse code in the general section of 10 meters in 2007 just prior to the end of the Morse code requirement.

The **Advanced Class** operator license, whose privileges closely match those of the General class license but included 275 kHz of additional spectrum in the HF bands, was also deprecated by the restructuring in 2000.

### The Start of Licensing

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, 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.



FEDERAL COMMUNICATIONS COMMISSION 56928-A
SERIAL NO. 13 Washington, D. C. JAN. 9, 1942
ORDER NO. 87-A

At a session of the Federal Communications Commission held at its offices in Washington, D. C. on the eighth day of January, 1942;

Whereas considerations of national defense require the complete cessation of all amateur radio operation;

IT IS ORDERED, That all special authorizations granted pursuant to Order No. 87 BE, AND THEY ARE HEREBY, CANCELLED.

By order of the Commission.

FEDERAL COMMUNICATIONS COMMISSION
T. J. Slowie
Secretary

**Cancellation notice of all amateur licenses in World War Two**

### 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 mid-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 license was renamed **Amateur Class** in 1927 and then **Amateur First Class** in 1932.

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 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.

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# AM Rally Set for April 1 - 3

Ever wonder what that "AM" button is for on your transceiver? Well, if you don't know about full-carrier amplitude modulation (AM) or have never used it on the air, you'll get the chance during the AM Rally, April 1-3, on the HF bands between 160 and 10 meters (except 30, 17, and 12 meters) plus 6 meters.

Amateur Radio voice-mode transmissions on the HF bands into the 1960s were AM, the same mode that used to predominate in radio broadcasting. Single-sideband (SSB), a form of AM, gradually took over the bands, although not without some push back! Today, a group of dedicated radio amateurs keep the magic flame alive, getting on AM frequently, and for many of them, AM is their primary operating mode. The AM Rally gives the uninitiated a chance to dip a toe into the pool, so to speak.

*All it takes is a turn, push, or click to participate!*

A cooperative event organized by AM, SSB, and, yes, even CW operators, the AM Rally aims to encourage fellow operators to take this "sister mode" for a spin, make a few contacts, and have a shot at earning some nice certificates.

Clark Burgard, N1BCG, operated AM during the "n1BCG" transatlantic reception commemorative event in December.

"We plan to make the AM Rally fun for everyone, but we also want to help ops who might be new to the mode get their rigs set up and sounding the best they can in time for the event," said Clark Burgard, N1BCG, who is spearheading the event with Steve Cloutier, WA1QIX, and Brian Kress, KB3WFV. "Whether your rig is software defined, solid state, vacuum tube, hybrid, homebrew, or broadcast surplus, you'll be a welcome part of the AM Rally."

The event website has complete AM Rally details, contact information, award categories, logging, and tips on how to get the most out of your station equipment in AM mode.

The AM Rally begins on Saturday, April 1 at 0000 UTC (Friday, March 31, in US time zones) and concludes at 0000 UTC on Monday, April 3.

It's open to all radio amateurs capable of transmitting full-carrier AM, using any type of equipment, from vintage to bleeding edge. The event is sponsored by Radio Engineering Associates (REA), in cooperation with ARRL, which supports all modes of Amateur Radio operation.

If you like to get on the air and have fun and now operate -- or would like to operate -- AM mode, then you're good to go!

Participating stations earn 1 point for each station worked per band, and you may work the same station on more than one band. They also earn 1 point for each state, Canadian province/territory, or DXCC entity worked. Both stations must be using AM for a contact to count.
Certificates will be awarded to stations scoring the highest number of points in each of the five power classes, regardless of rig category, both for most contacts and most states/provinces.

"All it takes is a turn, push, or click to participate!" There's also plenty of time to dig out and dust off that old AM-capable tube gear sitting in your attic or basement.

## Upcoming Programs

### March Membership Meeting:
**March 8th - 7 pm**

**Antenna matching and tuning**
**Give your transmitter a break by learning how to match its output to your antenna. You"ll improve your signal and your QSOs too!**

### April Membership Meeting
**April 12, 2017 - 7 pm**

**Election of Officers**
**Preparations for Hamfest**

**Complimentary pizza & refreshments!**

# EGARA February Meeting Minutes

- The monthly meeting of the club was held on February 8, 2017 at the East Greenbush Masonic Temple;
- President Tome Scoresone, KC2FCP, called the meeting to order at 7:15 pm;
- President Scoresone noted that the club has a large amount of equipment stored at the Masonic Temple, but that it needs to be reorganized and inventoried. He requested that members come on **April 1st at 10 am** to help with the project and several members in attendance agreed to help. As part of the reorganization, it is expected that some of the items now in storage will be discarded, as they are no longer needed. In addition, a comprehensive inventory will be performed so that the club has an accurate record and for insurance purposes;
- There was a discussion about the possibility of moving the club's monthly meeting to another weeknight, as the current schedule of meeting on the second Wednesday of the month conflicts with the dance classes that are also held in the building. A proposal to meet on Friday was discussed, but several members said it would not be convenient for them. The matter was tabled for further consideration and discussion;
- President Scoresone said that a meeting was held with officials of the Masonic Temple to discuss the club's use of the facility and the benefits the club provides in return. The Masons agreed that the club has been very responsible in its use of the building and the club agreed to continue its monthly cleaning of the Lodge in return for its use;
- Vice President Ridge Macdonald, KB2WHL, reminded members about upcoming programs scheduled to be held at club meetings in March and April. The March meeting will include a session on proper antenna tuning, and the April meeting will include preparations for Hamfest and the annual election of club officers;
- Vice President Macdonald also reminded members to offer ideas for programs they would like to see presented at future club meetings;
- Following completion of the board's agenda, a presentation on the history of amateur licensing was presented by Gerry Murray WA2IWW;
- Pizza and refreshments were provided for club members attending the meeting;
- The meeting was adjourned at 8:45pm.


**For just $15 a year you support all of the good things EGARA provides to the community and to its members.**

**From offering informative programs on amateur radio -- to being ready to respond with emergency communications when disaster strikes, EGARA is ready to educate and serve.**

**So take a moment and show your support by sending your dues in today! Thanks!**

**Please mail your check to: Bryan Jackson, Treasurer, 983 Sterling Ridge Drive, Rensselaer, NY 12144**

# Meet EGARA Member Jean-Claude!

We exchanged QSLs and kept in contact over the course of several months. Chris later joined the L'ARALA (The Association of Radio Amateurs of Loire-Atlantic) and I followed by becoming a member of the East Greenbush Amateur Radio Association.

My relationship with Chris continued to grow and eventually I had the good fortune to travel to the States and meet up with him. Chris and his wife, Jo Ann, invited me to stay in their charming house, and I even had the chance to operate from Chris' shack using my F1AKE call as part of the reciprocal amateur operating agreement between France and the US.

**Chris, N2NEH, and Jean-Claude, F1AKE, at the controls of the station F6KSU in France**

Later, I was able to return the favor of their hospitality by having them visited our home in Nantes, which is near the French coast. I have returned to the States several times and even participated in EGARA's Field Day activities.

On a personal note, I was born in 1940 and am married with two children and two small grandchildren. My career was as a radio and television technician, working in the industry for some 40 years. For many of those, I worked for the French subsidiary of ITT. I am also a veteran, serving from 1960 to 1962, including a tour in Algeria during the war there.

Today, I mostly work voice on the 40 meters, 17 meters, 6 meters and 2 meter bands. My activities include DX work and ragchewing. I also enjoy homebrewing equipment and restoring vintage amateur gear. Currently, I am working on a 1965 HALLICRAFTERS SR42 and HA 26.

In addition, my long career in electronics has allowed me to serve as an Elmer to other hams who need guidance and assistance. I look forward to returning to the US sometime in the future and hope to have the opportunity to meet up with other members of EGARA!"

## ARRL Seeks Opinions on Possible New Entry-Level License

An Entry-Level License Committee was established by the ARRL Board of Directors and appointed last fall in an effort to bring younger people into amateur radio. As part of its ongoing work, the committee is gathering member input and will make recommendations to the Board for possible changes to submit to the FCC.

The result could mean changes to the Technician license, but it could also be an additional, but simpler, license with privileges that would give a newcomer a taste of most facets of ham radio, from HF to VHF and UHF.

The committee has created an on-line member survey which is available at: **http://www.arrl.org/license-1**. Members are asked to complete and submit the survey no later than April 7th. Survey results will be published.

The Board received the Entry-Level Licensing Committee's interim report and endorsed its recommendation to work toward improvements in the current license question pools and seek aggregate demographic data from the FCC's Amateur Radio database.

The Committee also recommended continuing the effort to examine public attitudes toward Amateur Radio, with a goal of better understanding how to reach out and attract new licensees.

What are the problems the project is trying to solve?

- The declining population of new hams under age of 30.
- A decline in the number of new licensees who actually get on the air.
- Amateur Radio's lack of appeal for those under the age of 30, compared to other technical hobbies.
- The increasing challenge of engaging and retaining Technician licensees.
- A reluctance in much of the amateur community to embrace newer technologies of interest to the younger segment of the population.

The Committee will work with ARRL Headquarters staff to gather ARRL member input on potential changes to the entry-level license, to develop proposals for change to the entry-level license, and to work toward bringing a final recommendation before the Board at its July meeting.

## Amateur Licensing Through the Years

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.

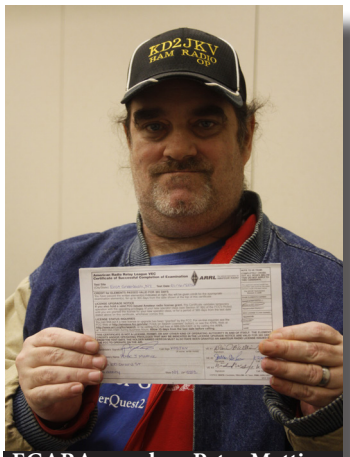
Class C licensees had the same privileges as Class B licensees, but took their examinations from other licensees rather than from Commission field offices. Because examination requirements were somewhat stiffened, Temporary Amateur licensees were not grandfathered into this class but had to be licensed 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, which was valid for only one year). 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 2 meter voice/code was revoked and a code segment on the 10 meter 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.



**EGARA member Peter Mattice, KD2JKV, shows off his new General class license certificate at the January 2016 VE session**

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 call signs (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.

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.

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# On the Beam
## News & Notes

## New FCC Chair Named

Ajit Pai, a 44-year-old telecommunications attorney who has served on the Commission since 2012 and is its senior member, has been named to succeed Chairman Tom Wheeler, who stepped down on Inauguration Day, January 20.

"I am deeply grateful to the President of the United States for designating me the 34th Chairman of the Federal Communications Commission," Pai said in a statement. "I look forward to working with the new administration, my colleagues at the Commission, members of Congress, and the American public to bring the benefits of the digital age to all Americans."

A Republican, Pai was nominated to the FCC by former President Barack Obama and was confirmed unanimously by the US Senate in 2012. Pai has said the Commission needs to eliminate "outdated and unnecessary regulations," as he proposed in a December speech. "The regulatory underbrush at the FCC is thick," he said. "We need to fire up the weed whacker and remove those rules that are holding back investment, innovation, and job creation."

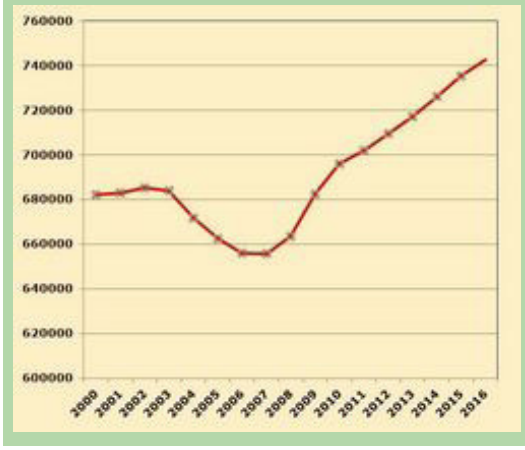
However, the new chairman has already moved aggressively to roll back consumer protection regulations created during the Obama presidency. His biggest target will be net neutrality, a rule created in 2015 that prevents Internet service providers from blocking or discriminating against Internet traffic. The rule, which was created alongside a decision to categorize broadband like a utility, was the tech centerpiece of the Obama administration. He also stopped nine companies from providing discounted high-speed Internet service to low-income individuals, and scrapped a proposal to break open the cable box market to allow other manufacturers to sell equipment directly to consumers.

Pai is a supporter of the Amateur Radio Parity Act, which protects hams from unreasonable restrictions on erecting antenna. That bill, which failed to pass in the last Congress, has already been approved again by the House and is now before the Senate for a vote.

## Amateur Licensing Up Again in 2016

New Amateur Radio licenses were up again last year, the third year in a row that the total number of new licenses has exceeded 30,000. A total of 32,552 were granted in 2016, 32,077 in 2015, and 33,241 in 2014. EGARA contributed to the total by holding three VE licensing sessions during 2016.

EGARA's October 2016 VE session

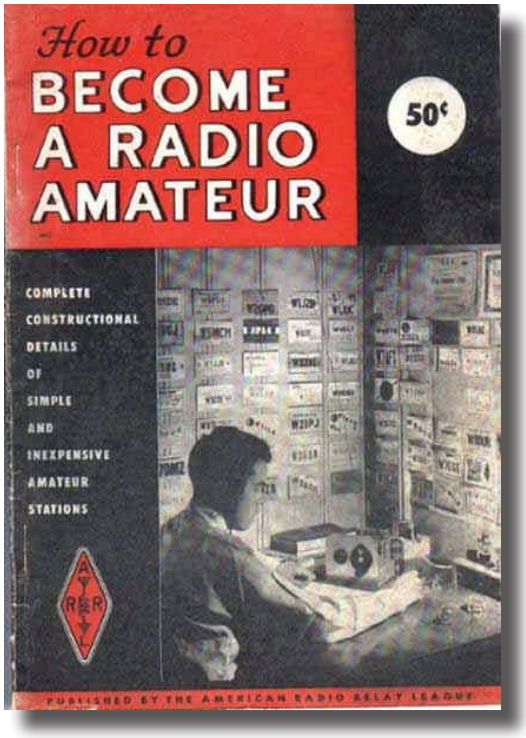



The total number of US Amateur Radio licensees has continued to grow each year since the FCC eliminated the Morse code exam requirement in 2007. Over the past decade, the net number of Amateur Radio licensees has risen by nearly 87,000, according to statistics compiled by ARRL Pacific Section Manager Joe Speroni, AH0A.

As of December 31, 2016, the total number of licensees in the FCC database was 742,787, topping the 2015 total of 735,405, but down just slightly from the all-time high of 743,003 reached last November.

## Amateur Licensing - Then & Now

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.

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## The History of Amateur Licensing

### Another 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" 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.

**Keep EGARA Accredited - Join ARRL**
**EGARA gets many benefits from being ARRL accredited -- but we need at least 51% of our members to join ARRL Consider joining today if you're not.**

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 call sign 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 elimination of the code requirement, the ARRL reported a significant increase in the number of applications for licensing.

##

## Save these Dates!

### April 1st - 10 am - EGARA Inventory

**Reorganization and inventory of EGARA gear at the Masonic Temple. Everyone's help is requested to help get this project completed quickly and easily.**

### May 13th - 7am to 3 pm - Hamfest

***All hands on deck please*** **! It's our biggest event and fund raiser of the year! We need volunteers to help with every aspect of Hamfest -- cooks, parking attendants, admissions, raffle sellers, setup and clean up. Please attend the April membership meeting to sign up for assignments.**

***Your support is greatly appreciated!***

# CALENDAR

**March 8, 2017 - EGARA Monthly Meeting** - 7 pm at the East Greenbush Masonic Temple;

**March 11, 2017 - Ham Swapfest - Saratoga Co. Amateur Assn,** Coop-Ex Bldg (aka Solar Bldg), 50 West High Street (Rt 67w) in Ballston Spa - 8 am free admission. **Info: Jim at kg2h@arrl.net**

**March 19, 2017 - VE Exam Session** - 11:15 am - Capital Area Radio Enthusiasts (Walk-ins allowed) - Location: American Red Cross, 33 Everett Rd, Albany NY - **Info: 518 482-5584**

**April 1, 2017 - EGARA Equipment Inventory** - 10 am, East Greenbush Masonic Temple. Members requested to help.

**May 13, 2017 - EGARA Hamfest 2017** - East Greenbush Fire Department.

## Pro Tip: Cold Weather Can Be Tough on Electronics

As unpleasant as cold temperatures are for humans, they can also wreak havoc on electronics. Here are a few tips to ensure that all of your devices survive the cold.

Let's say the new gadget you ordered has been sitting on your front porch for hours in subzero temperatures. Sure, you'd love to unbox it and get to work right away. Our suggestion? Let everything come up to room temperature first.

Hard drives are especially susceptible to issues when they're cold, as the lubricants that keep the platters spinning freely can thicken when chilled. If those platters can't spin at their design speeds, your device may not boot properly or data written to the drive while cold can be totally unreadable later.

Condensation is another killer for cold electronics. Bring electronics in from the cold and condensation can form bad enough to cause electrical shorts on circuitry. The fix? Don't let the device be exposed to a sudden rise in temperature if it has been chilled for a while. For example, let laptops warm up from subzero temperatures before turning them on. Solid State Drives are not as susceptible to cold weather issues, but it's still better to let them warm up before using them.

Here's another thing to keep in mind if you're ever out in the cold and want to charge your smart phone or other device. The Lithium-ion batteries found in many current consumer mobile electronic devices cannot be charged at temperatures below 0°C (32°F) without causing damage.

Although the cold battery may appear to be charging normally, metallic lithium plating can occur on the battery anode. This is a permanent condition, and batteries that experience plating are more apt to fail if exposed to vibration or other stressful states. The solution? Don't charge your electronic devices at temperatures below freezing and you'll be OK.


## *Wanted to Buy*

- ***Inexpensive Rotor for 6 meter beam*** - Contact Peter Mattice by email at: kd2jkv@gmail.com.

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## *For Sale*

- ***Heathkit Antenna Tuner Model - SA-2060A*** -- $ 300; Contact Tom Scorsone by e-mail at: *kc2fcp@nycap.rr.com*.

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- ***Ameritron Model Al-811H*** – Linear amplifier uses (4) 811's – with manual – great condition - $700 obo;
- ***Kenwood Ts-480 Hf Rig*** – 200 w PEP output, w/manual, cable, and microphone – like new - $800 obo; Contact: Steve WB2HPR at ***326-0902***.

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**Looking to Buy, Sell or Swap?**
**Send your info to W2RBJ@outlook.com**

## Join the Nightly Ragchew

EGARA members are invited to join the club's ragchew every weeknight at 6 pm on 3610 khz or 50.125mhz (depending on band conditions and traffic).
It's a great way to catch up on club news!

## The East Greenbush Amateur Radio Association

Organized in 1998, by Bert Bruins, N2FPJ, (Silent Key) and Chris Linck, N2NEH, the East Greenbush Amateur Radio Association, an ARRL affiliate, is committed to providing emergency services, educational programs, and operating resources to the amateur radio operators and residents of the Capital Region of New York State. The club station is W2EGB. The club also has several VHF and UHF repeaters open to club members and the public.