

WAVES

2009 Sees Surge of New Amateur Radio Licensees

NEW FCC LICENSES ISSUED 2005 THROUGH 2009					
Year	2005	2006	2007	2008	2009
Jan	876	1,274	1,647	1,755	1,960
Feb	1,357	1,605	2,435	2,998	2,263
Mar	1,705	2,531	3,478	2,816	3,463
Apr	1,486	1,728	2,673	3,090	3,430
May	1,651	2,283	2,607	2,562	2,717
Jun	1,493	1,967	2,281	2,402	3,011
Jul	906	1,401	1,786	2,077	2,220
Aug	1,500	1,623	2,183	2,084	2,102
Sep	1,139	1,357	1,462	1,763	2,116
Oct	1,385	1,781	2,109	2,303	2,404
Nov	1,540	1,993	2,132	2,197	2,344
Dec	1,330	1,569	1,935	2,019	2,114
Totals	16,368	21,112	26,728	28,066	30,144

In 2009, the FCC issued more than 30,000 new Amateur Radio licenses -- an almost 3 percent increase in the number of new licenses issued in 2008. At the end of 2009, there were 17,084 Novices, 334,245 Technicians, 150,970 Generals, 60,795 Advanced and 119,403 Amateur Extra class licensees.

This past year was a banner year for new Amateur Radio licensees. According to [ARRL VEC](#) Manager Maria Somma, AB1FM, the FCC issued more than 30,000 new ham radio licenses. "In 2009, the demand for Amateur Radio exam sessions remained elevated and is still running at a higher rate than before the FCC's restructuring of the license requirements in 2007," Somma said. "This high level of exam session activity has produced an elevated

influx of new applications, far outpacing recent years."

A total of 30,144 new licenses were granted in 2009, an increase of almost 7.5 percent from 2008. In 2005, 16,368 new hams joined Amateur Radio's ranks; just five years later, that number had increased by almost 14,000 -- a whopping 84 percent! The ARRL VEC is one of 14 VECs who administer Amateur Radio license exams.

"When looking at the statistics over the last 10 years, these are some of the highest numbers we've seen," Somma explained. "Additionally, our total number of licensees across all three classes has grown each year." Currently there are 682,500 licensed Amateur Radio operators in the US, an almost 3 percent rise over 2008. In 2008, there were 663,500 licensed amateurs; there were 655,800 in 2007. Broken down by license class, at the end of 2009 there were 17,084 Novices, 334,245 Technicians, 150,970 Generals, 60,795 Advanced and 119,403 Amateur Extra licensees.

"The ARRL VEC has been busy meeting the needs of the Amateur Radio community by helping people to become radio amateurs or upgrade their existing licenses," Somma said. "In 2009, ARRL VEs administered 44,595 exam elements at 6369 [ARRL VEC-sponsored exam sessions](#). The number of amateurs who want to be Volunteer Examiners and who want to teach Amateur Radio classes is also going up -- we've seen a spike in the number of applications from General and Extra class radio amateurs who want to give back to their community by [serving as ARRL examiners](#) and instructors."

Somma applauded all the volunteers whose "hard work and contribution of countless hours of time helps to ensure the future of Amateur Radio. The ARRL VEC thanks our 32,411 VEs from around the world whose dedication and service helped to contribute to the success of

Amateur Radio. I am delighted by these important achievements. 2009 was a very good year for Amateur Radio and I am excited by the promise of 2010."

Doney, Samuel Lee W4DDP SK

Samuel Lee Doney, 80, of Chattanooga, died on Wednesday, January 6, 2010 at his home.

He was born November 13, 1929 in San Pedro, Ca. but had lived most of his life in the Chattanooga area.

He was a member of Silverdale Baptist Church.

His wife, Mary Brooks Doney preceded him in death.

Survivors include his daughter and son-in-law, Mary and Bill Benno; grandson, Sam Benno, all of Chattanooga.

There will be no visitation and funeral services will be private.

Memorial contributions may be made to Hospice of Chattanooga, P.O. Box 19269, Chattanooga, Tn. 37416.



Samuel Doney

Arrangements are by Chattanooga Funeral Home, Crematory and Florist, 5401 Highway 153, Hixson, Tn.



Tuesday Night 8 PM 146.610

CARC Sunday night net 9 PM 146.790



Thursday night 8 PM 146.790

MARS Gets New Name as It Fine Tunes Mission

On Wednesday, December 23, the Department of Defense (DOD) issued an [*Instruction*](#) concerning MARS, effective immediately. This *Instruction* gives the three MARS services -- Army, Air Force and Navy/Marine Corps -- a new focus on homeland security and a new name: Military *Auxiliary* Radio System. The *Instruction* is the [first major revision to MARS since January 26, 1988](#) -- as such, the first revision since the 9/11 attacks and Hurricane Katrina, two major events that changed the way Amateur Radio dealt with emergency communications.

The DOD defines a "military auxiliary" as "an organized body of volunteers prepared to supplement the uniformed services or any designated civilian authorities by provision of specialized autonomous services when called upon or when situations warrant," and gives the Civil Air Patrol and Coast Guard Auxiliary as examples of auxiliaries.

In the past, MARS had focused primarily on emergency communications and health and welfare support. The DOD's *Instruction* now directs the three MARS services to provide "contingency radio communications" to support US government operations, DOD components and "civil authorities at all levels," providing for national security and emergency preparedness events. MARS units will still continue to provide health and welfare communications support "to military members, civilian employees and contractors of DOD Components, and civil agency employees and contractors, when in remote or isolated areas, in contingencies or whenever appropriate." MARS must also be capable of operation in "radio only" modes -- without landlines or the Internet -- and sustainable on emergency power (when public utility power has failed); some MARS stations must be transportable for timely deployment.

The *Instruction*, however, does not mention which of the three MARS services will take the lead when responding to events. According to sources, this has been seen as a critical issue in conforming to the National Incident Management System (NIMS) that calls for "unity of command." As now constituted, the three separate MARS services are supposed to "interoperate," but command-wise, each operates independently. Some MARS members had urged clarification on this issue to avoid confusion during an emergency, sources said.

The Secretaries of the Army, Air Force and Navy are to encourage participation in MARS, the *Instruction* states, saying this may be accomplished "by establishing and funding an active MARS program within each Military Department, which shall then assign a MARS-licensed staff representative to manage operations, readiness, planning, procedural and technical development, documentation, standards, training, equipment, program and membership administration, and other matters necessary for mission accomplishment."

The Secretaries are also tasked with bringing new personnel into their MARS services. The *Instruction* calls on them to establish programs "to promote civilian interest, recruit qualified volunteers, sponsor them for basic background checks and furnish them suitable training in contingency support communications."

The *Instruction* also dictates that MARS leaders will now report to three DOD officials; before this revision, they only reported to one person. The Assistant Secretary of Defense for Homeland Security and Americas Security Affairs (ASD [HD&ASA]) now has primary responsibility for the MARS Defense Support of Civil Authorities (DSCA) mission. In addition, MARS leaders will report to the Assistant Secretary of Defense for Networks and Information

Integration/DOD Chief Information Officer (ASD[NII]/DOD CIO) and the Assistant Secretary of Defense for Logistics and Material Readiness (ASD[L&MR]). In the 1998 charter, oversight of MARS was assigned to a single top official, the Assistant Secretary of Defense for Command, Control, Communications and Intelligence.

This revision -- which was years in the making -- keeps the Navy/Marine Corps MARS intact; until now, members of this MARS service were concerned that their part of MARS might be terminated by Navy commanders.

The *Instruction* also gives some new perks to MARS members. Active duty military personnel who are affiliated with MARS may be able to earn Reserve points based on service in MARS and, in cases of permanent change of station, qualify for weight exemption for transportation of MARS communications equipment. All members may be considered for benefits associated with DOD civilian service, such as access to DOD morale, welfare and recreation Category C recreational facilities and access to DOD credit unions.

Membership in any of the three MARS services is open to qualified active duty, Guard and Reserve personnel, as well as those in civilian agencies who report to civil authorities or their supporting organizations (including nongovernmental organizations) and private US citizens who meet age, education and other criteria -- such as an FCC-issued Amateur Radio license -- imposed by a DOD Component MARS office.



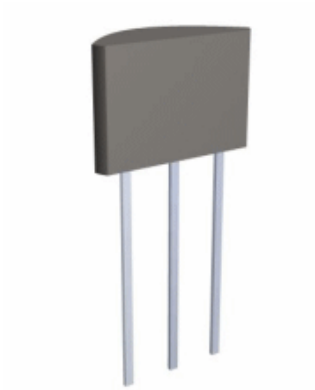
NCVEC Releases New Technician Class Question Pool (Jan 4, 2010) -- The Question Pool Committee ([QPC](#)) of the National Conference of Volunteer Examiner Coordinators ([NCVEC](#)) released the [new Technician class \(Element 2\) question pool](#) on Monday, January 4. This new question pool will become effective for all examinations administered on or after July 1, 2010; it will remain valid until June 30, 2014. The current Technician question pool that became effective July 1, 2006 will expire June 30, 2010. The new Technician pool contains approximately 400 questions, from which 35 are selected for an Element 2 examination; it will contain graphics and diagrams, something new for this element. The [current General class question pool](#) was effective July 1, 2007 and is valid through June 30, 2011. The [current Amateur Extra class pool](#) was effective July 1, 2008 and is valid until June 30, 2012.

Skywarn Training
February 4, 2010
6 PM

Transistors

Transistors can be regarded as a type of switch, as can many electronic components. They are used in a variety of circuits and you will find that it is rare that a circuit built in a school Technology Department does not contain at least one transistor. They are central to electronics and there are two main types; NPN and PNP. Most circuits tend to use NPN. There are hundreds of transistors which work at different voltages but all of them fall into these two categories.

TWO EXAMPLES OF DIFFERENT SHAPES OF TRANSISTOR



Transistors are manufactured in different shapes but they have three leads (legs).

The BASE - which is the lead responsible for activating the transistor.

The COLLECTOR - which is the positive lead.

The EMITTER - which is the negative lead.

The diagram below shows the symbol of an NPN transistor. They are not always set out as shown in the diagrams to the left and right, although the 'tab' on the type shown to the left is usually next to the 'emitter'

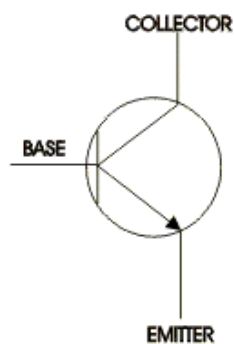


DIAGRAM 'A'

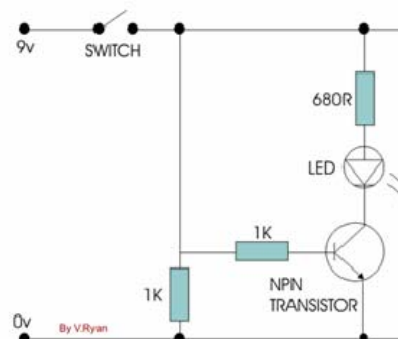


DIAGRAM 'B'

Diagram 'A' shows an NPN transistor which is often used as a type of switch. A small current or voltage at the *base* allows a larger voltage to flow through the other two leads (from the *collector* to the *emitter*).

The circuit shown in **diagram B** is based on an NPN transistor. When the switch is pressed a current passes through the resistor into the *base* of the transistor. The transistor then allows current to flow from the +9 volts to the 0vs, and the lamp comes on.

The transistor has to receive a voltage at its '*base*' and until this happens the lamp does not light.

The resistor is present to protect the transistor as they can be damaged easily by too high a voltage / current. Transistors are an essential component in many circuits and are sometimes used to amplify a signal.

What is SKYWARN?

SKYWARN™ is a nationwide network of volunteer storm spotters trained by the National Weather Service (NWS) to report significant weather. Anyone with an interest in weather is welcome to participate. To become a trained storm spotter, you need to attend a [storm training session](#), offered at various times and places across the Morristown [County Warning Area](#).

Why SKYWARN

The National Weather Service's mission is **to protect lives and property** with safety being the top priority. When weather conditions are favorable for severe thunderstorms or tornadoes to develop, a severe thunderstorm or tornado **watch** is issued. A severe thunderstorm or tornado **warning** is issued when severe weather has been reported by a SKYWARN™ spotter or indicated by Doppler radar. SKYWARN™ volunteers become the NWS's and local Emergency Management's eyes and ears, helping them to provide the public with better weather watch and warning services.

Who will activate SKYWARN?

The NWS and/or the local emergency management authorities may activate the SKYWARN™ net whenever there is a threat of severe weather or when the NWS issues a severe thunderstorm or tornado watch. In this case, information may be relayed through amateur radio repeaters. Localized events may be phoned directly to the NWS and/or local emergency management.

Where will SKYWARN observations be taken?

SKYWARN reports are relayed from on the road, while at work, or at your home.

It is important not to jeopardize your own safety by placing yourself in the path of severe weather while participating in SKYWARN.

SKYWARN and Amateur Radio Operators

HAM radio operators have a special place in the SKYWARN program. NWS offices have HAM equipment on site. SKYWARN™ nets run by the volunteer amateur radio net control operators allow for reports to be directly heard at National Weather Service offices.

How do I join SKYWARN?

For additional information on SKYWARN including times and locations of storm spotter training sessions, please e-mail [Tim Troutman](#) (Warning Coordination Meteorologist) or phone (423) 586-8706, Monday-Friday, 8 AM to 4 PM.

- [Storm Ready](#)
- [Local Emergency Managers Page](#)
- [Emergency Managers Weather Information Network \(EMWIN\)](#)
- [NWS Weather Radio Information Page](#)
- NWS Publication [Aware](#)
- [Federal Emergency Management Agency \(FEMA\)](#)
- [FEMA's "Resolve to be Ready" website](#)
- [Tennessee Emergency Management Agency \(TEMA\)](#)
- [Virginia Department of Emergency Management](#)
- [North Carolina Emergency Management Division](#)
- [National Skywarn](#)
- [Disaster Education](#)

Club Dues Are Due

Please get your dues in before April 1 2010; this will help the club keep expenses down

Also if you have any changes to your address or other information please fill out this application and send it in with your updated information and dues

Minutes of January 21, 2010 CARC Meeting
(make-up meeting)

In the absence of President Mark Rose (KAØYDC) the meeting was called to order by Vice-president Rick Curtis (W4ATX).

Members present were Mark Rose (KAØYDC), Lou Carter (KE4DGW), Jim Bowman (W4DFS), Jack Green (AD4LP), Tom Morgan (K4VCM), Jim Knight (KD4EHN) and Bill Dobbs (K4TSF). Mark (KAØYDC) made an early exit.

No visitors were present.

Treasurer's report was presented by Jim (KD4EHN).

A new member was accepted into the club. He is Vince Vaughn (N4KIG).

There was no VE report tonight.

On a suggestion by Mark (KAØYDC) it was discussed and agreed upon that the 3rd weekend of the month will be our project weekend, if we have a project.

Discussed the recent donation of radio equipment.

Discussed and viewed drawings for the new radio room.

Discussed issues such as:

- Existing cabinets and disposal
- Possible working hours in radio room
- Required electrical work
- Antenna coax feed-through
- Paint
- Floor cleaning

Viewed the radio room.

Bill (K4TSF) reminded attendees of the February 4th Sky Warn meeting. It will begin at 6 pm at the American Red Cross building with Tim Troutman of the National Weather Service doing the honors. Please spread the word.

Meeting adjourned at approximately 8 pm.

No formal installation of officers took place.

Respectively submitted,
Bill, K4TSF