

# Zero Beat



Montgomery Amateur Radio Club Newsletter

Established 1938

1st Quarter 2007

## MARC CALENDER OF EVENTS

**MONTHLY CLUB MEETING** every 3<sup>rd</sup> Monday 7:00 PM  
American Red Cross 5015 Woods Crossing Dr.

**FELLOWSHIP BREAKFAST** every Saturday preceding the  
monthly club meeting at Flip's on the corner of Perry Hill Rd. &  
Atlanta Hwy at 8:30 AM

## FCC EXAMS

**ARRL** Last Saturday each month at 1:00 PM at  
American Red Cross, 5015 Woods Crossing Dr.  
**For Info** contact Scott, W4SPA (334) 262-0412  
Or email (w4spa@arrl.net)

**CAVEC** every 2<sup>nd</sup> Monday at 6:30 PM at American Red Cross,  
5015 Woods Crossing Dr.  
**For Info** contact Steve, K4NM ([padgett@jschool.troy.edu](mailto:padgett@jschool.troy.edu)) or Jim  
KR4JY ([jeiland@knology.net](mailto:jeiland@knology.net))

### Additional Exam Info:

<http://www.arrl.org/arrlvec/examsearch.phtml?State=AL>

## Club Nets

**Central Ala 2 meter Net** on 146.84 at 8:00 PM every Sunday  
night. A controlled net with information about amateur radio  
subjects including information bulletins, hamfest info, satellite  
info, local club info. Net manager ?????.

**Skywarn/Emergency Net Golf** Thursday at 7:00PM on 146.84.  
Net manager Mark, WB5NMZ.

*The end  
Of  
Morse Code?*

## 2007 Officers

**President:** KG4PNL-Rick Seeders  
**Past Pres:** W4SPA-Scott Poole  
**VP:** K4DJL-EI Erby  
**Secretary:** KG4MIQ-Tim Dixon  
**Treasurer:** K4APG-Paul St. John  
**Publicity:** KI4OZW-Bruce Jenkins  
**Trustee:** KR4JY-Jim Eiland  
**Trustee:** K1AZE-Lew Nyman  
**Trustee:** K4OZN-Phil Salley  
**W4AP Trustee:** K4TK-Tim Moore

## Local Repeaters

146.840(-) W4AP Wetumpka  
146.920(-) W4AP Eastdale  
147.180(+) W4AP Baptist Tower (Autopatch)  
444.5(+ ) W4AP Wetumpka--Linked to IRLP 100 Hz  
53.350(-) W4AP Baptist Tower 100 Hz  
444.450(+ ) WD4JRB Baptist Tower 100 Hz  
(Echolink Node 212144)  
446.450 (Splx) IRLP (4845) Baptist Tower 110.9 Hz  
147.200(+ ) KE4LTT Friendship 107.2 Hz  
444.575(+ ) KE4LTT Friendship 100 Hz  
147.380(+ ) W4KEN Santuck  
145.690 Simplex Packet  
144.390 Simplex APRS- W2



## From the President's Shack

By KG4PNL, Rick Seeders

2007 is here and I am proud to call myself the President of the Montgomery Amateur Radio Club! Most new administrations bring some level of change to any organization; our radio club is no different. Some of the change, however, will be based on our last presidents' efforts. Yes, I am talking about 501(c) 3 status. I sound rather confident, and I have a right to be. W4SPA has laid the ground work for me to finish this process with the help of yet another generous member of the club. WN9J - John Garman has offered to use his legal skills and resources to bring this to fruition.

We can also look forward to a spring picnic. Mid April is our target date and we hope to have it at Ida Belle Young Park (5400 Vaughn Rd.). The club is footing the bill for hot dogs and burgers (and all the 'fix-ins'), and our members will bring drinks and side items. We want to get together, eat, and simply enjoy each others company. We will bring the communications trailer out and set up our radios so our members can get warmed up for the Alabama QSO Party and Field Day, there is a great park for the kids to play on, and a covered area for everyone to enjoy.

D-Star is on the verge of becoming a reality in Montgomery as well. The grant is in its final steps, the bids are in and we are requesting additional frequency coordination. While the D-Star system is expected to replace the 146.920 repeater, it will add a new club owned 70cm repeater and a 1.2GHz repeater as well. D-Star adds some exciting new tools to our belt, which we can use not only for fun, but for emergency communications. We are accepting your pledges now; you can give it to us at the next meeting or feel free to mail it in.

MARC has also joined forces with the local V.O.A.D. chapter. The Montgomery Amateur Radio Club is now listed with Volunteer Organizations Active in Disaster. We hope that this partnership will further alert the community to our strengths and abilities.

Field Day Leadership will be filled with new faces this year. Phil Salley (K4OZN) and Scott Poole (W4SPA) are traveling this year and will sadly not be able to participate with the W4AP Field Day Exercise. Mark Wintersole (WB5NMZ), who did an outstanding job as chairman last year, is unable to take this role again in 2007. We need your help to make Field Day happen. Sign up for the Field Day committee by emailing myself (president@w4ap.org) or our Vice President El Erby at vp@w4ap.org.

I cannot write an article for this issue and not speak of the WT Docket 05-235. The "morse-code preceding" will surely impact everyone in different ways. It will excite some while sadden others. One thing is for certain, we can expect new General Class licensees. This is not only good for the hobby, but will increase our ability to assist the community when called upon.

Join us each month as we are planning to have great topics following the business portion of each meeting this year. January we covered a basic introduction to HF Digital modes. February will bring a timely discussion of APRS (which will be used in the March 1 ADPH Push Pack Exercise). Help us come up with other topics that you want to hear, email me so I can tune the meetings to everyone's taste and interest.

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## CD Available

By KG4MIQ, Tim Dixon

Hello all! If you remember during Press Jones' (aka "The Wireman") visit during our June club meeting, he resented a video produced in the 50's by Bell Labs entitled "Similarities in Waveform Behavior" by Dr. John Northrup Shive. This video was very impressive in the way it presented basics of waveform behavior. Dr. Shive has done a masterful job at making the material enlightening and easy to understand.

I'm proud to announce, we now have DVD copies of this video available for \$8 each, of which, MARC receives \$3, with the remaining \$5 for production and duplication costs. If you're interested in obtaining a copy, please email me at: secretary <at> w4ap <dot> org. By the way, while they don't replace the valuable information in the video, there are soft copies of the accompanying manuals located at:

<http://home.att.net/~wb9kzy/tebehav.pdf> - Teacher's manual (7.1Mb)

and

<http://home.att.net/~wb9kzy/behavior.pdf> - Student version (1.3Mb)

73,  
/tim

**Zero Beat is published by the Montgomery Amateur Radio Club.  
Editor, N4AU. Hard Copy, W4MF and KU4PY.**



### Southeastern Division Leadership

**Director**--Frank M. Butler Jr--W4RH-- w4rh@arrl.org

**Vice Director**--Sandy Donahue--W4RU-- w4ru@arrl.org

**Assistant Director** --Alabama--Rik Doll--KU4PY--ku4py@arrl.net

**Section Manager**--Greg Sarratt-- W4OZK-- w4ozk@arrl.org

**ARRL Alabama Section Cabinet at**

**Ala Section Web Page** [www.arrl-al.org](http://www.arrl-al.org)

### League Notes

*By Rik Doll, KU4PY*

*ARRL Assistant Director*

*Southeastern Division*

"Morse code requirement ends Friday, February 23." This is the title of the most recent bulletin from the ARRL that highlights the demise of Morse code as a requirement for any level of Amateur Radio licensing. The much anticipated/ dreaded event, depending on your perspective, has come to pass and there is no turning back. Past generations of hams will look back on this event with nostalgia but undoubtedly, the newer generations will see this as part of the normal evolution of the technology. Much as we would like to see things stay the same, they cannot and continue to evolve. We will, as hams have always done, lead the charge toward the advancement of the hobby and the incorporation and exploitation of new technologies. The following is the body of the ARRL bulletin describing this landmark change.

"Circle Friday, February 23, on your calendar. That's when the current 5 WPM Morse code requirement will officially disappear from the Amateur Radio Service Part 97 rules. On or after that date, applicants for a General or Amateur Extra class Amateur Radio license no longer will have to demonstrate proficiency in Morse code. They'll just have to pass the applicable written examination. Federal Register publication January 24 of the FCC's Report and Order (R&O) in the "Morse code proceeding," WT Docket 05-235, starts a 30-day countdown for the new rules to become effective. Deletion of the Morse requirement - still a matter of controversy within the amateur radio community - is a landmark in Amateur Radio history.

"The overall effect of this action is to further the public interest by encouraging individuals who are interested in communications technology or who are able to contribute to the advancement of the radio art, to become Amateur Radio operators; and eliminating a requirement that is now unnecessary and may discourage Amateur Service licensees from advancing their skills in the communications and technical phases of Amateur Radio," the FCC remarked in the "Morse code" R&O that settled the matter, at least from a regulatory standpoint.

The League had asked the FCC to retain the 5 WPM for Amateur Extra class applicants, but the Commission held to its decision to eliminate the requirement across the board. The R&O appearing in the Federal Register constitutes the official version of the new rules. It is on the web in PDF format at, <http://a257.g.akamaitech.net/7/257/2422/01jan20071800/edocket.access.gpo.gov>

/2007/pdf/E7-729.pdf.

Until 1991, when a Morse code examination was dropped from the requirements to obtain a Technician ticket, all prospective radio amateurs had to pass a Morse code test. With the change the US will join a growing list of countries that have dropped the need to demonstrate some level of Morse code proficiency to earn access to frequencies below 30 MHz.

The new rules also put all Technician licensees on an equal footing, whether or not they've passed a Morse code examination. Starting February 23, Technicians will gain CW privileges on 80, 40, 15 meters and CW, RTTY, data and SSB privileges on 10 meters.

Once the revised rules are in place, an applicant holding a valid Certificate of Successful Completion of Examination (CSCE) for Element 3 (General) or Element 4 (Amateur Extra) may redeem it for an upgrade. A CSCE is good for 365 days from the date of issuance, no exceptions. For example, a Technician licensee holding a valid CSCE for Element 3 may apply at a Volunteer Examiner Coordinator (VEC) test session, pay the application fee, which most VECs charge, and receive an instant upgrade.

The FCC R&O includes an Order on Reconsideration in WT Docket 04-140 - the so-called "omnibus" proceeding. It will modify Part 97 in response to ARRL's request to accommodate automatically controlled narrowband digital stations on 80 meters in the wake of other rule changes that became effective last December 15. The Commission designated 3585 to 3600 kHz for such operations, although that segment will remain available for CW, RTTY and data. The ARRL had requested that the upper limit of the CW/RTTY/data subband be set at 3635 kHz, so that there would be no change in the existing 3620 to 3635 kHz subband.

The ARRL has posted all relevant information on these important Part 97 rule revisions on its "FCC's Morse Code Report and Order WT Docket 05-235" Web page, <http://www.arrl.org/fcc/morse/>.



*dahdididit dahdidahdah dit*



## 73 to Morse?

*Courtesy N3FJP*

On a separate note, since this group represents a high percentage of contesters and CW enthusiasts, I wanted to pass along my thoughts on Friday's FCC announcement that the CW requirement is in fact being dropped for all license classes. If your group is anything like ours here in Maryland, there have been quite a few passionate thoughts expressed on this subject in the last 48 hours.

Since the debate is over and the decision is now final, the focus is turning from whether it is a good idea or not to the future of Morse code. In response to a thread on our local club e-mail entitled "73 to Morse", I wrote the following:

One thing is certain - CW is fun. Hams had to learn CW to get their licenses, but we didn't have to use it once we had ticket in hand. The fact that CW remains a very popular mode is proof positive that it can stand on its own.

My hope is that this move will help infuse the hobby with the fresh minds and passions that it sorely needs. If our numbers rise, a portion of this new group will learn code, not because they have to, but because they want to.

One incentive [to learn CW] is certainly contesting. There are lots of CW only contests to participate in, and the multi mode contests usually give double the points to CW. [W3JX] and N3HCN accounted for more [than double the] Field Day points on the CW station than the rest of us did on the phone station combined!

Another incentive is that it is truly fun. CW can be both relaxing when you are rag chewing at a nice comfortable speed and challenging when you are trying to nab that high speed DX or contest station in ways that other modes simply don't offer.

I know that it will take some creative thinking on our part to help newcomers see CW's value. The joys of CW - the sense of accomplishment, the fun of the rag chew, the thrill of nabbing a DX station, the excitement of being at the bottom of a CW contest pileup; can only be experienced by doing. It is not easy to communicate with words, but it is incumbent on all of us to try.

I welcome the new hams that will come to the hobby. I hope that once they have ticket in hand and the newness of the phone contacts have worn off, a worthwhile percentage will discover the fun and enduring qualities of CW.

Let's hope that we are wishing 73 to Morse in the sense of best regards, and not as part of a farewell. If indeed this is farewell, there will be many who will never know what they missed.

73, Scott  
N3FJP  
<http://www.n3fjp.com/>

Serving the Amateur Radio Community with contesting and general logging software since 1997.

## ANTENNA GOES UP-HAM GOES DOWN

*Submitted by W4KEN, Ken. Author unknown*

Dear Insurance Agent:

I am sitting at my desk answering your letter in which you ask for additional information for block No. 3 of the Accident Report (Form 15A). I put "poor planning" there as the cause of my accident. You said in your letter that I should explain more fully and I trust that the following details will be sufficient.

I am an amateur radio operator and on the day of the accident I was working alone at the top section of my 80-foot tower. When I had completed my job, I discovered that I had brought up about **300** pounds of tools and spare hardware over the course of several trips up the tower. Rather than carry the now unneeded tools and materials down by hand, I decided to lower the items a small barrel by using a pulley which happened to be attached to the gin pole at the top of the tower.

Securing the rope at ground level. I climbed back to the top of the tower and carefully loaded the tools and materials into the barrel. Then I went back to the ground and untied the rope, holding it tightly to assure a slow descent of the **300** lbs of tools. You will note in block No. 11 of Form 15A that I weigh only **155** lbs.

Due to my surprise of being jerked off the ground so suddenly, I lost my presence of mind and forgot to let go of the rope. Needless to say, I proceeded at a rather rapid rate of speed up the side of the tower. In the vicinity of the 40-foot level, I met the barrel coming down. This explains my fractured skull and broken collarbone. Slowed only slightly, I continued my rapid ascent, not stopping until the fingers of my right hand were two knuckles into the pulley sheave.

Fortunately, by this time I had regained my presence of mind and was able to hold on to the rope in spite of my pain. At approximately the same time, however, the barrel of tools hit the ground and the bottom fell out of the barrel. Now free of its contents, the barrel now weighed only 20 pounds. I refer you again to my weight in block 11. As you might imagine, I began a rapid descent down the side of the tower. In the vicinity of the 40-foot level I once again met the barrel---this time coming up---which accounts for the two fractured ankles and the lacerations of my legs and lower body.

The encounter with the barrel slowed me enough to lessen my injuries when I fell on to the pile of tools and so I only cracked three vertebrae. I am sorry to report, however, that as I lay there on the tools, in pain, unable to stand, and watching the empty barrel 80 feet above me I again lost my presence of mind. I let go of the rope!

de 4RF Carnier5 via "Key-Clix" of Santa Barbara ARC

## THE END OF A RADIO ERA

By K4TK, Tim Moore

I know we all have our opinions on the subject of morse code as a license requirement. And much will be written about this highly controversial subject in the coming weeks and months. I'll try to remain as politically correct as I possibly can in writing this article. First, let me say I am DEEPLY saddened and disappointed by the recent decision by the FCC to remove morse code as a licensing requirement for Amateur Radio. There, I've said it. And while life goes on and the sun will still rise in the East tomorrow morning, for me and many others like me, it's a sad, sad day for Amateur Radio.

Years ago when I entered the Hobby, my grandfather helped Elmer me into Amateur Radio. My grandfather was a simple man, with no college degrees, he barely made it out of High School. And he struggled mightily to earn his Amateur General class license, which back in those days required you to pass a 13 wpm test (at an FCC official testing location....in his case, he had to travel all the way to St. Louis every time he took the test!). But after a couple of attempts, he finally passed the test, just like thousands and thousands of Hams before him. He proudly displayed that license, and rightfully so, as he had earned it! When I tried to join the hobby (as a young man in my early teens), at first, that old morse code requirement (5 wpm for the Novice class) offered something of a barrier to me. But my grandfather (wise man that he was) explained to me it was worth learning, it was part of the Hobby...part of what made us unique in the Hobby. Sort of like a fraternity, if you will. So like all those Hams that had come before me, I dutifully studied the code.....and finally passed the 5 wpm test. (I also came to realize how EASY we had it...compared to folks in the Hobby years before us....as we no longer had to travel to far away FCC testing centers, didn't have to take fill in the blank tests where you couldn't memorize a test pool, etc. But I digress.....)

As I mentioned above, back then, to advance to General, and get any phone privileges, one had to pass the 13 wpm test. AT THE TIME, it seemed impossible to me. In fact, I resented it. But I wanted those voice privileges badly, so like ALL those Hams before me, I continued to study the code. Working diligently I practiced a couple hours a day whenever I could find the time. I told myself if I could JUST pass that "stupid" 13 wpm code, I'd be done with it forever....and I'd have my cherished voice privileges....and I would NEVER have to mess with that silly morse code again!

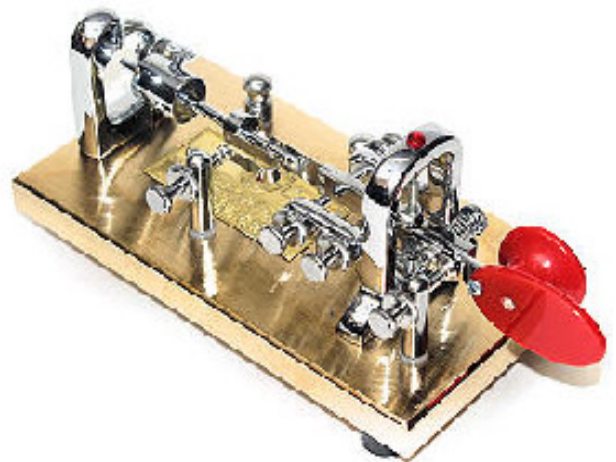
But a funny thing happened along the way. The more I practiced the code, the better I got. The better I got, the easier it became. Letters soon became words.....and words became sentences. And the next thing you know, "working" another Ham over the air with morse code became ....well....almost second nature! I passed my 13 wpm code (the written exams were NEVER a challenge....I could easily just memorize the test pool!)....and told myself I had achieved my goal and I never had to mess with that old code stuff again. But alas, I had been "bitten". Like so many

before me, not only had I accomplished my goal and was proud to join the ranks of those who had mastered the code, but I found myself wanting to do the "unthinkable". I bought a new iambic keyer to use with my radio's electronic keyer (yes, I had been working nothing but straight key up to 13 wpm) and started working more and more code QSOs.

Next thing you know, I was approaching 20 wpm. And becoming an Extra.....something I NEVER would have imagined in my wildest dreams....became a possibility. And soon it became a reality. And just like that, like so many Hams before me, the phone privileges I so cherished, suddenly were no longer such a desirable thing. Now, I work 90% cw. If someone would have told me years ago I would be telling you THIS story, I would have laughed in their face!

OK, I've told you my story. I told myself IF this day ever came....and sadly, I anticipated it probably would....that I would tell this story. It's a story that was repeated by thousands of others....over and over and over. I am not unique. But, it's a story that probably will NOT be repeated in the future....for obvious reasons. Because I can honestly say, without a doubt, had I not been FORCED to learn morse code years ago as a "dreaded" licensing requirement, I surely NEVER would have taken it upon myself to learn it on my own. And I would never have known the joy of mastering another language as it were, the language that is morse code!

That said, I'm sure there are others among us who are rejoicing over this decision to drop the code requirement. For those who wanted to see this day come, I offer congratulations. For those of us who dreaded it, I offer condolences. And I thank my lucky stars that I was one of the privileged ones who were convinced to learn this part of the radio art that was once a requirement for licensing and advancement in Amateur Radio. The radio art they call morse code!



Vibroplex®

Editor: **CW**—Til death, or the FCC, do us part.

## THE MAGIC OF DUPLEXERS

*by Bobby Chandler, N4AU (1991 ZB)*

First, why do you need a duplexer? Well, think about it! When you press your PTT on your radio what happens? The antenna and active circuitry is switched from the receiver to the transmitter of your radio.

Now, what is meant by 'duplexing?' Well, that means you transmit and receive at the same time (like a telephone). The repeater (or your dual band rig) must receive a signal at the same time the transmitter is active. What about the 50 to 100 watts of power at the input of the receiver if you are using the same antenna? This is where the duplexer comes into the picture.

You would not think of keying a 100 watt rig directly into the antenna terminal of your receiver. Bad things would happen! The duplexer is sort of a traffic cop that sends the transmitted RF power to the antenna instead of into the receiver front end. It also allows the receive signal to pass from the antenna into the receiver while the transmitter is on the air.

Remember, the transmit and receive frequencies are not the same (600 kHz different on two-meter repeaters) so this allows us to use very high Q selective circuitry to direct the different signals where we want them to go. You know what probably would happen if the transmitter power got into the receiver, even if the front end wasn't burned out, severe desense due to overload would occur. Even if we prevent the carrier of the transmitter from reaching the receiver, the transmitter is not pure and transmits a band of 'noise' which contains the receiver frequency in its signal. Even though this noise is 60 to 80 dB below the power of the carrier, our receiver sensitivity is around -130 dBm so this on-frequency noise is seen by the receiver as an on-frequency signal.

There are two sections in the duplexer which take care of both of these problems. The section in the receive leg reduces the carrier from the transmitter by 60 to 100 dB (over a million times). The part of the duplexer in the transmit leg attenuates the transmitter 'white noise' which reaches the antenna

terminal of the receiver by 60 dB or more (again, over a million times) so our receiver can hear the desired signal and not the white noise from the transmitter

## Questions Withdrawn From Use in the Current Amateur Radio Question Pools

*Courtesy ARRL.org*

Due to errors, omissions, FCC Rule changes or the like, the National Conference of VECs Question Pool Committee has formally withdrawn the following questions:

Technician Element 2 (pool effective July 1, 2006):

T2A02                      T6B09  
T7A08                      T5D06

T3B11

Technician Element 2 (pool effective July 1, 2006):

G1A02                      G1D12  
G1A03                      G1F02  
G1A06                      G1F03  
G1A10                      G1F04  
G1B05                      G1F10  
G1C01                      G1F11  
G1D01                      G2F02  
  
G1D02                      G4B14  
G1D04                      G5B11  
G1D11                      G8A06

Extra Element 4 (pool effective July 1, 2002):

E1A01                      E1F20  
E1A02                      E1F26  
E1A10                      E1F27  
E1A11                      E1F28  
E1E05                      E1G02  
E1E08                      E2E09  
E1F04                      E2E10  
E1F05                      E5C12  
E1F06                      E6B17

# MEMBERSHIP APPLICATION

Year \_\_\_\_\_

Montgomery Amateur Radio Club – PO Box 3141 – Montgomery, AL. 36109

**Renewals** enter, name and callsign and any changes in status.

**\*Note: Senior Members** over 70 please send in application to keep roster updated.

**New Members** enter all available information.

Name: \_\_\_\_\_ DOB: \_\_\_\_\_ Call: \_\_\_\_\_ Class: \_\_\_\_\_ ARRL Member(Y/N) \_\_\_\_\_

E-mail: \_\_\_\_\_

## Family Members

Name: \_\_\_\_\_ DOB: \_\_\_\_\_ Call: \_\_\_\_\_ Class: \_\_\_\_\_ ARRL Member(Y/N) \_\_\_\_\_

E-mail: \_\_\_\_\_

Name: \_\_\_\_\_ DOB: \_\_\_\_\_ Call: \_\_\_\_\_ Class: \_\_\_\_\_ ARRL Member(Y/N) \_\_\_\_\_

E-mail: \_\_\_\_\_

Name: \_\_\_\_\_ DOB: \_\_\_\_\_ Call: \_\_\_\_\_ Class: \_\_\_\_\_ ARRL Member(Y/N) \_\_\_\_\_

E-mail: \_\_\_\_\_

Class of License: N= Novice, T= No Code Technician, T+= Code Technician, G= General, A= Advanced, E= Extra

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Home Phone: \_\_\_\_\_ Work Phone: \_\_\_\_\_

Indicate Membership type below. Membership fees are **due every January 1<sup>st</sup>**. There is a 60-day grace period.

**Family membership** is for immediate family with 2 or more amateur radio license holders **residing at the same address**.

**Associate Membership** is for individuals who **do not have** an amateur radio license, but are interested in the activities of the club and are preparing for exams.

**Senior Membership** is for an amateur age 65 or older.

Check type of membership:

\_\_\_\_\_ Single Membership (\$25 per year)

\_\_\_\_\_ Family Membership (\$40 per year)

\_\_\_\_\_ Senior Membership - age 65-69 (\$15 per year)

\_\_\_\_\_ Senior Membership - age 70+ (no charge)

\_\_\_\_\_ Associate Membership (\$10 per year)

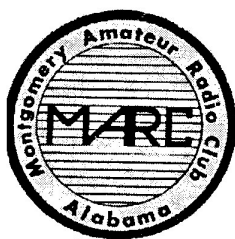
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**Public Service Since 1938**

**Amateur Radio**

[www.arrl.org](http://www.arrl.org)

[www.w4ap.org](http://www.w4ap.org)



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