

# Z E R Ø BEAT

## CLUB OFFICERS

### **President:**

JIM MEACHAM KK4A

### **Vice-President:**

WAYNE GENTRY AA4BL

### **Sec./Treasurer:**

ROGER LITTLEFIELD N4LKM

### **Publicity Officer:**

KEN COPELAND WB4MMB

### **Trustees:**

FRANK GOLDEN W4DQF

RANDY SMITH N4KTX

BOBBY CHANDLER N4AU

PETE SIDES W4AUP

## REPEATERS/CUSTODIANS

146.04/64 MONTGOMERY, AL

WAYNE GENTRY AA4BL

146.24/84 WETUMPKA, AL

TOMMY GARRETT WA4FYU

147.78/18 GRADY, AL

ROLAND TOWNLEY K4BOJ

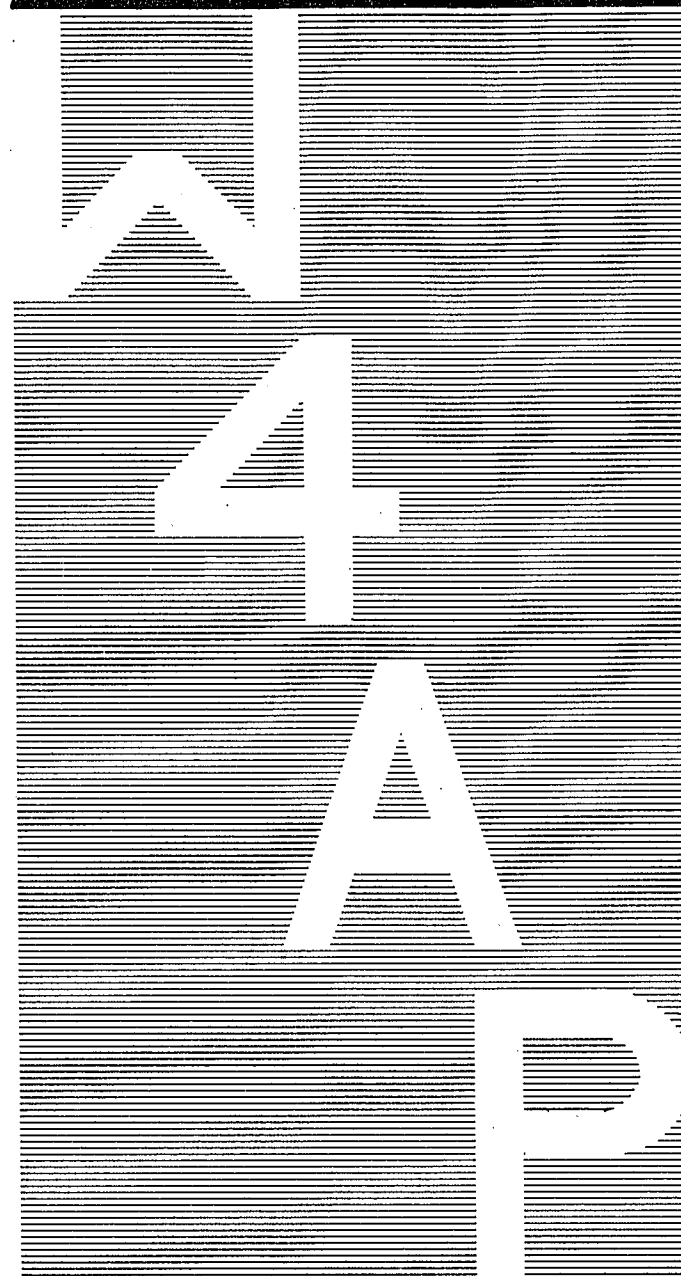
145.01/DIGI WETUMPKA, AL

TOMMY GARRETT WA4FYU

444.5/449.5 WETUMPKA, AL

BOBBY CHANDLER N4AU

**MAR 86**



**OFFICIAL NEWSLETTER OF THE**

# MARC

**MONTGOMERY AMATEUR RADIO  
CLUB, INC. P. O. BOX 3141  
MONTGOMERY, ALABAMA 36109**

## OFFICERS FOR 1986

Election of club officers for 1986 took place during the December '85' meeting of the MARC. The results, of course, can be seen on the front cover of this issue of Zero Beat. As you can see there was a pretty large turnover in officers with Vice-President Wayne Gentry, AA4BL, and Trustee Frank Golden, W4DQF, being the only two incumbents to remain in their respective offices. All of the new officers plus the incumbents are entering their new terms with a lot of enthusiasm, but regardless of how hard they work the MARC cannot succeed in its endeavors without your help. We are anticipating a very active year so be ready to participate when you're called on; even better, don't wait until you're called.....you do the calling and offer your support.

As for the editorship of this newsletter, I will continue in that capacity even though I have taken on the office of President of the MARC. Of course if there is an aspiring writer out there in the ranks of the membership, I am confident that we could work a deal which would place the reins of Zero Beat in his or her hands. However, if there is no one that crazy amongst us then maybe I could coerce a few of you into writing an article every now-and-then. I could really use the help.

Finally, the current Board of Directors of the MARC is off to an energetic start. We have had two meetings as of this writing with 100% attendance at the January meeting and 80% at the February meeting. The MARC board members for 1986 are as follows:

Jim Meacham, KK4A - President  
Jim Minor, K4BTP - Past President  
Wayne Gentry, AA4BL - Vice-President  
Roger Littlefield, N4LKM - Sec/Treasurer  
Bob Lieberman, KA4WZI - Past Sec/Treasurer  
Ken Copeland, WB4MMB - Publicity Officer  
Frank Golden, W4DQF - Trustee  
Bobby Chandler, N4AU - Trustee  
Randy Smith, N4KTX - Trustee  
Pete Sides, W4AUP - Club Call Trustee

## THE MEMBERSHIP

The beginning of each calendar year signifies that it is time to do two major things. 1) Start worrying about your income tax return; 2) Pay your annual dues to the MARC. There's not much I can say about item 1 but item 2 deserves some comment. As of this writing there are approximately 170 members on the MARC roster and over 110 of them have paid or renewed their membership for 1986. If that doesn't sound significant to you then let me explain. At this same time in years past we normally have about one-third as many paid-up members and it usually takes into the fourth quarter to build the paid-up membership to around the 150 mark. So as you can see we're doing great compared to our past track records but why stop here. I personally feel that the MARC can attain a total membership in excess of 200 and I think we should make this a club goal. If each reader of this newsletter will do just two things we can achieve this goal in no time. First of all, assess your own

situation; are you a paid-up member? If not, do something about it. Secondly, seek out a potential new member and get him or her to join the MARC. If everyone will do their part we cant fail.

In closing this article let me tell you about the official membership roster. We should be printing and mailing a copy to each individual on the roster shortly after the March club meeting. The established policy for having your name appear on the roster is that you be a current paid-up member or were a paid-up member during the preceding year. In other words, there is a one year grace period before dropping a name from the roster. If your name appears on the roster, that doesn't necessarily mean you are paid up for 1986. It does mean you were paid-up through 1985 at the least. If you're not paid-up in either 1985 or 1986 then your name will not appear on the roster. Also, receipt of this newsletter doesn't mean you're paid-up. We're using this issue as formal notification that dues are due. If you're not sure of your status just ask Roger, N4LKM, at the March meeting. Finally, if you see an error in your listing, please notify either myself, Wayne Gentry, or Roger Littlefield.

#### NEW OLD MEET'N PLACE

The Board of Directors of the MARC decided during their meeting on February 24, 1986 to change the location of the regular monthly club meetings back to the State Trooper Headquarters building at the corner of Coliseum Boulevard and Federal Drive. This move was a unanimous decision by the board and of course was discussed with the general membership during the January club meeting. This move does not preclude the fact that we shall continue to search for a more appropriate location with an ultimate goal of someday owning our own facility.

As most of you know we have been at the Alabama Emergency Management Agency (AEMA) headquarters for exactly one year now and this has aided in establishing the RACES organization as well as an excellent relationship with AEMA. However, the physical facility where the meetings have been conducted has proved to be inadequate in several ways including size, accessibility, and ease of set-up. In light of these restraining characteristics it was decided that it would be in the best interest of the club to discontinue regular monthly meetings at AEMA headquarters and return to our old home in the State Troopers Headquarters building.

This change will begin with the next regularly scheduled meeting which will be Monday, 17 March 1986 at 7:00 P.M. I'm sure you 'ol timers remember how to get there but for those of you who have joined up during the past year it may help you to know that the State Trooper building fronts on Federal Drive but the entrance driveways are actually on Coliseum Boulevard. There is one driveway for the front parking lot and another for the rear parking lot. They're not to easy to see at night so look carefully. The front parking area usually fills up quickly so you may have to park in the rear. Enter the building at the front (it wont be locked). Once inside, take a left and follow the long corridor to the auditorium at the end. Take a look at the map at the end of this newsletter and if that doesn't help then ask someone who's been there before or get someone to talk you in on 2-meters.

## TALL TOWER WOES

You may recall that I reported on the prospect of a new Tall Tower machine in the September '85' issue of Zero Beat. Well it appears now that this prospect may not materialize after all. The new machine was to be furnished by the Alabama Emergency Management Agency and was going to replace the existing 147.78/18 machine. However, it was finally determined that the new machine was physically too big to fit in the cabinet which presently houses the existing machine. This leaves us in a pickle because additional cabinet space is simply not available on the tall tower. There does not seem to be an immediate solution to the problem so we'll just have to continue to tolerate the intermod for the time being. The 147.78/18 repeater is still a mighty good one and it is the home of the Tall Tower Net which is probably one of the best VHF nets in the country.

## 15 KHz OR 20 KHz ???

I'm sure that most of you are painfully aware of the recent controversy over "which 2-meter band plan" the State of Alabama should endorse and subsequently abide by. To be frank with you, I've heard it discussed so much that mere mention of the topic irritates me and thus it is indeed very difficult for me to write this article. But on the other hand this article hopefully will be your introduction to the resolution of the matter, therefore I will press on. I will also endeavor to make a long story very short and non political.

For years most areas of the country (including Alabama) used 15 KHz channel spacing for locating repeaters in the 2-meter repeater sub-band. However, somewhere along the way someone decided that 20 KHz channel spacing was more desirable than 15 KHz spacing. I am led to believe by most of what I hear and read that the 20 KHz idea was born out of densely populated areas; specifically California. The pros and cons for each band plan are many and I will not attempt to address them here so you may want to look back at the June '85' issue of Zero Beat for a little more information.

How are we affected by all this? In March of 1985 the Alabama VHF-UHF Repeater Council (now just Alabama Repeater Council), which is the frequency coordinating body for Alabama, voted to adopt the 20 KHz band plan and then subsequently advised all Alabama repeater owners that they must comply with the new plan by July 1, 1985 or they would be considered "uncoordinated" and their frequencies would be reassigned. The MARC only had one repeater which was affected by the change, that being 146.25/85 which of course is now 146.24/84.

The change-over from 15 KHz to 20 KHz channel spacing took place about a year ago as of this writing but it hasn't been smooth sailing here in the State of Alabama since the change was enacted. As time has passed more and more opposition to the 20 KHz band plan has surfaced in the state. Complaints include dissatisfaction with the Alabama Repeater Council, questioning of their authority, dissatisfaction with their methods, and interference to repeaters

resulting from poor frequency coordination as well as 20 KHz channel spacing. I'll point out here that the MARC has not experienced any interference problems on any of its 2-meter repeaters.

In light of all the controversy, the Alabama Repeater Council (ARC) has admitted that it handled the change-over poorly and in a rather undemocratic manner but still insist that 20 KHz channel spacing is best for Alabama. This position is maintained even though all neighboring states to Alabama have elected to stay with 15 KHz spacing thus rendering Alabama an "island". I'm not saying this is necessarily bad; rather its just part of the facts. In an attempt to smooth some ruffled feathers the ARC has now sent out ballots to all repeater owners in the state which will allow each owner to vote for the band plan that he or she so favors. To be eligible to vote, a repeater owner must pay \$5 and join the ARC. Only those repeater owners operating repeaters in the 146 MHz to 148 MHz range will be allowed to vote. The MARC operates three repeaters in that range and thus will have three votes.

At the MARC meeting on Monday, March 17, 1986 the general membership will be ask to vote for either 15 KHz spacing or 20 KHz spacing. The results of the vote will determine how the MARC casts its three ballots. All three ballots will be voted alike; i.e. all three for 15 KHz or all three for 20 KHz. If you want to have your say in the matter then then you must be a member in good standing of the MARC in accordance with Article II, Sec. 5 of the By-Laws of the Montgomery Amateur Radio Club, Inc.

#### TRANSMITTER HUNT

Get out your old DF antenna and get ready to have some fun cause the MARC is gonna have a transmitter hunt. The day and date will be Saturday, 12 April 1986. We'll meet at 8:00 A.M. for breakfast at Shoney's on the Southern By-Pass across from K-Mart if you so desire. The hunt will begin at 9:00 A.M. sharp in the parking lot of the old Service Merchandise building right next door to Shoney's. Get there early enough to register. The registration fee will be \$1.00 per club member and \$5.00 per non club member. The prize for the winner(s) will be \$100.00. How about that! K.C., WB4MMB, is in charge of the hunt so if you have any questions get in touch with him. He's also the man to bribe cause he's gonna hide the transmitter. Commercial direction-finding equipment will not be allowed, however this is not to say that you cant use commercially built beam antennas and step attenuators. By the way, I'm told that some type of directional antenna plus a step attenuator is very helpful in an event of this type. Of course a 2-meter rig with an S-meter or at least a bar-graph meter is imperative. Check out the various publications for info on homebrew beams, DF loops, and step attenuators. Get started building what you need because April 26 will be here before you know it. Also decide who your partner will be if you intend to take the team approach.

#### UHF FUND RAISER

The new club sponsored UHF repeater which I told you about in the December issue of Zero Beat has now been moved to its new home on Bald Knob where the 146.24/84 machine resides. Special thanks go

to Fred Springall, KB4EGH, for donating an antenna to use with the machine. Repeater custodian Bobby Chandler, N4AU, advised that the machine needed a duplexer and purchase of same was approved by a vote of the general membership during the January club meeting. The duplexer has since been purchased and installed and the repeater is operational.

Keeping in mind that the 444.5 machine is "on loan" to the MARC and that it is not really a state-of-the-art repeater, a question has been raised; how much money would it take to put a top notch UHF repeater on the air? The answer is that approximately \$1000 would buy us a new Icom UHF repeater plus a few miscellaneous items that would be required. The existing antenna and duplexer would be reused with the new machine.

Randy, N4KTX, Bruce, KA4GWM, and Jimmy, WB4ZOR, were the local hams whom raised the question one day during lunch. Between the three of them they pledged (and since donated) \$300 toward the purchase of a new repeater for 444.5 MHz and thus was born a fund raising effort which was subsequently approved by the MARC Board of Directors on 24 February 1986. Bobby, N4AU, brought the total to \$400. If we continue with that kind of batting average we'll undoubtedly reach our goal in no time at all. Randy, N4KTX, was appointed to head up this fund raising effort so if you have any questions, give him a call. As of press time for this issue of Zero Beat the fund had grown to a total of \$460. Not bad for a fund raiser that hasn't been publicised in writing until now. So, if you think you might like to help out you can do so at a club meeting, or through any club officer, or by sending your check to the club address on the front of this newsletter. In closing, I'd like for you to note one final point of interest; two of the three hams that started all this dont even own any UHF gear!

#### PUBLIC SERVICE

The Montgomery branch of the National Multiple Sclerosis Society will be sponsoring a bicycle tour called the MS Tour for Cure on Saturday, May 31, 1986. The tour will be a cross-country cycling event designed to raise funds for the fight against multiple sclerosis. The MARC has been asked to be in charge of and to provide the necessary communications throughout the duration of the event. Coca-Cola is the major sponsor with Y102/WHHY being the commercial radio sponsor. The tour will be a 75 mile ride from Montgomery to Tallassee and back to Montgomery. The specifics haven't been worked out yet but its my guess that we'll need to provide several mobiles along the course to monitor the event and provide communications when necessary. I have appointed Roy Jarrett, WB4TKU, to be in charge of the event for the MARC so if you're interested in helping out, give Roy a call.

Along the same lines of public service, Roy has asked that we remind you of the March of Dimes Walk America to be held here in Montgomery on Saturday, 26 April 1986. Roy says that if you're interested in being the eyes and ears for this event then you should call Roger Littlefield, N4LKM, and advise him of your availability. Like the MS Tour for Cure the Walk America is very worthy of your efforts and should be fun to boot.

### HIGH TOWER REPEATERS

The High Tower repeaters. Maybe thats what we ought to call the new pair of repeaters that the Selma-Dallas County ARC will soon install at the 1490 foot level of the new WAKA TV tower which is approximately half way between Montgomery and Selma. And yes I said repeaters, plural. There will be a pair of them; a VHF and a UHF machine. The VHF machine will be a 2-meter FM unit operating on 145.31 MHz with a -600 KHz input (i.e. 144.71 input). The UHF machine will have an output at 447.025 MHz and an input at 442.025 MHz. The receiving antennas will be 100 feet above the repeaters and the transmitting antennas will be 60 feet below the repeaters. The tower itself is 1689 feet high with its base at 300 feet above mean sea level. This puts the receiving antennas at 1890 feet above sea level. I'm told that they are just waiting on some good weather to haul it all up the tower so the machines may or may not be operational by the time you read this article. So keep an ear out for these two new ones; they should be fine repeaters.

### FOUNDING FATHERS

Have you ever wondered about the history of the MARC? Did you know that the MARC is approximately 57 years old? Its true according to the newspaper article given to me by Burt Pratt, K4PRF. Sunday, September 22, 1929 was the date at the top of the page and a headline read "Amateur Operators Form Montgomery Radio Club". Another headline read "Montgomery Talks With Rest Of The World Through Local Amateur Radio Operators". According to the article the officers of the newly formed club were President Jeff Bayne, W4AAQ, Vice-President Robert Troy, W4AHP, and Secretary/Treasurer Carroll Kilpatrick, W4AHR. There were pictures of these three fellows in the newspaper article and although their ages were not given, they appeared to be highschool age or slightly older. The other members of the new club were Wallace Nelson, Haynes Thompson, R.G. Carrie, Alex Trum, and Gerald Goodson. These eight hams made up the entire amateur radio operator population of the City of Montgomery. The article also stated that all eight were members of the ARRL. Wouldn't it be great if 100% of Montgomery's present ham population were members of the MARC and the ARRL.

### MONTGOMERY HAMFEST COMMITTEE

In accordance with the 1985 agreement between the Montgomery Amateur Radio Club, the Capitol City Amateur Radio Association, and the Montgomery-Tuskegee Technicians Amateur Radio Society, I have appointed the following individuals to serve on the 1986 joint hamfest committee as representatives of the MARC:

Phil Salley WB4OZN  
Fred Springall KB4EGH  
Al Erdman W4CNQ

Each of the other two clubs is supposed to appoint three members to complete the nine member joint committee, however I have not yet been advised of their selections. I am in hopes that this matter will be finalized quickly so that hamfest planning can procede without further delay.

## DIGIPEATER ????

The MARC has put a "packet digipeater" on the air on 145.010 MHz. The only thing we had to purchase was a TNC for \$200. The general membership approved this expenditure at the January '86' meeting. All other hardware is on loan to the club. The following article, compliments of Phil Salley, WB4OZN, will tell you more.

### PACKET RACKET

It appears that Packet Radio is here to stay. In late February a meeting of Hams throughout the state was held on the Alabama State University campus to try and bring more order to the rapidly developing mess for Packet Radio. Time and space does not permit the detail necessary to thoroughly discuss the background problems, and proposed solutions; but, hopefully the brief outline here will keep you abreast of the main points.

As you know VHF Packet Radio now uses 145.01 Mhz as the primary frequency. Packet by nature makes good use of a frequency via the intelligent Terminal Node Controller (TNC). The TNC checks the frequency before transmitting, if busy, it waits for a clear channel, then transmits. "Packets" of up to 128 characters are sent at each transmission and must be acknowledged by the target station before another packet can be sent. Each packet of 128 character takes less than one second of transmission time at the standard 1200 bits per second. Work it out yourself, 128 characters X 8 bits per character / 1200. Fast ain't it?

Even at these speeds, with the number of Packet Stations around the state as well as surrounding states, at times communication is quite difficult. To solve this problem the group proposed the formation of ALA-NET which would divide the state into four nearly equal districts and assign each a local frequency for a local area network (LAN) and link these four LAN's and the surrounding states through a second frequency. The LANS of North, Central, Capital and South contain Huntsville, Birmingham, Montgomery and Mobile as major cities. The LAN frequencies are to be on VHF alternating between adjacent LAN's, as North - 145.07, Central - 145.67, Capital - 145.07 and South - 145.67. The LAN linking frequency to be used for inter-district and inter-state traffic will be on the UHF frequency of 448.4 which VHF stations in the state access through Gateway Digi-peaters which receive on the VHF LAN frequency and transmit on either the UHF gateway or the VHF LAN frequency depending on the routing information of the Packets. Let's make it clear here and now, you WILL NOT need to be equipped with UHF radios to access the gateway.

All of this sounds expensive? You bet it could be, but a little luck has come our way, some surplus UHF digital radios were donated by a large corporation in quantities to establish the entire UHF backbone for the gateway stations and have some left over for spares. The only cost for getting these on the air is power supply, crystal, some minor modification to the audio circuits in the

transmitter and receiver, and antenna. By the way, the UHF gateway stations (digi-peaters) will be operating at 4800 bits per second as a minimum, and at 9600 baud if it can be made to work reliably. Remember the one second packet? It's down to .10887 second at 9600 baud and twice that for 4800. For you that like all this expressed the WPM: 1200 baud = @ 1800 WPM, 4800 baud = @ 7200 WPM and 9600 @ 14,400. The actual size of a 128 character packet is somewhat larger since the sending call, receiving call and any relay station I.D. must be added plus data necessary for the receiving station to verify what it received is = what was sent. Worst case this might double the packet time. Gee Whiz! What's a second here and there?

The ALA-NET charter group elected two directors for each district and one at large for a total of 9 directors to serve until the ALA-NET is fully chartered with constitution and bylaws. Each packet user is a voting member, new elections will be held to select the first slate of officers under the constitution. Bob - N4HY of Auburn/Opelika and Phil - WB4OZN of Montgomery were selected as Director and Vice-director of the Capital LAN respectively. The proposed districts as well as all other facets of the charter proposal are subject to revision as the organizational process progresses. No one clique is jamming this through, every packet user and hopeful packet user is encouraged to be involved in the organization process. If you are a packet operator now, watch for announcements of meetings and such for review of proposed constitution bylaw review in your LAN. These proposals will be widely publicized on Packet Bulletin Boards and any other means available, including AENM, local VHF nets, etc.

On the subject of Bulletin Boards, the Montgomery area BB is operated by WB4OZN and is accessible by the command C WB4OZN. If you can't hit that station direct try C WB4OZN V W4AP-1. W4AP-1 is the Montgomery Amateur Radio Club's digi-peater operating on 145.01 for the moment. The frequency will change to 145.07 Mhz when the UHF gateways are operating state wide. BB operating hours are 1700-2200 M-F and 0800-2200 SS and holidays. Operating hours depend on availability of computer time and a sys op. The computer is one of one and I can't be around all of the time, so there will be holes in the schedule. Why not 24 hour ops? The FCC requires the control operator present with third party traffic, and a BB handles some of that. There is a proposal before the FCC to exempt Packet, but????

73, Phil de WB4OZN



## NOVICE CLASSES

Bobby Chandler, N4AU, our training officer, has advised me that a new session of Novice classes will begin in late March. They will be held at the Bridge View Baptist Church which is on Highway 231 just south of the river bridge. Most of the candidates for this class are the results of the "fair booth" sponsored by the MARC last October. Also, the MARC needs instructors! The same people cannot continue to teach the license classes over and over. So call Bobby and offer your services.

## DON'T FORGET

Central Alabama Two-Meter Net every Sunday night at 8:30 P.M., local time, on the 146.24/84 repeater.

Tall Tower Net every Monday and Thursday night at 8:15 P.M., local time, on the 147.78/18 repeater.

Club meetings over the next quarter will be on March 17, April 21, and May 19, 1986 at 7:00 P.M. local time. These dates are the third Monday of each month. Check this issue of Zero Beat for detailed instructions on how to get to the new meeting place.

Join or renew your ARRL membership through the MARC to maintain ARRL affiliation. The MARC gets \$2 for each renewal and \$5 for each new member.

Club callbook is in the possession of Wayne Gentry, AA4BL. Call him if you need an address.

Central Alabama Two-Meter Sideband Net every Thursday night at 9:00 P.M., local time, on 144.190 MHz, USB.

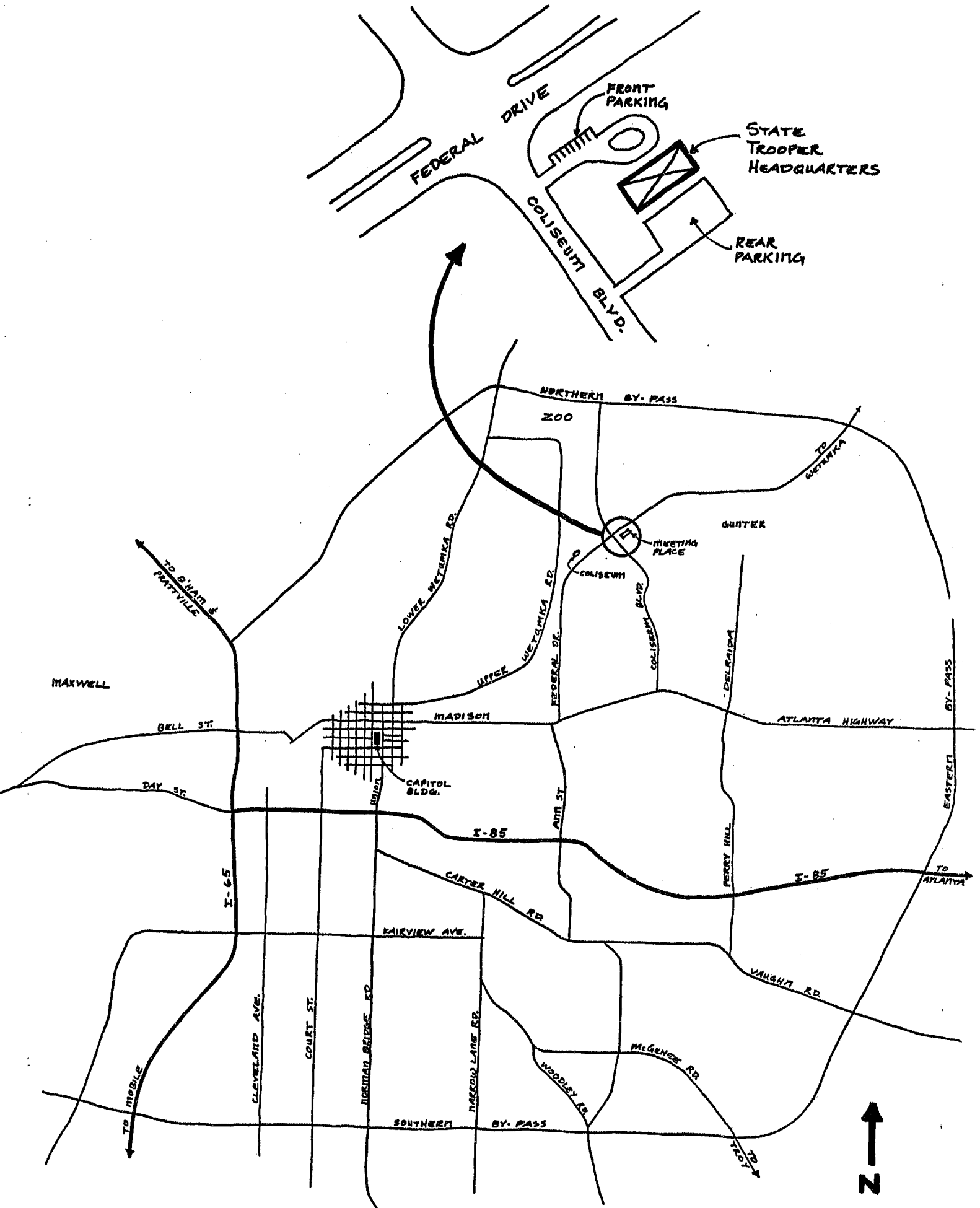
New club roster plus membership cards will be mailed shortly after the March club meeting. If you want to be on the roster you need to pay your dues.

Novice classes to begin in late March 1986. See text of this newsletter for more details.

Columbus Georgia Hamfest March 22-23, 1986 at the Columbus Municipal Auditorium.

Transmitter hunt on Saturday, April 12, 1986. See text of this newsletter for more details. A lot of planning is going into this and it promises to be quite an event.

73 DE JIM, KK4A



MONTGOMERY AMATEUR RADIO CLUB, INC.

APPLICATION FOR MEMBERSHIP OR RENEWAL

NAME \_\_\_\_\_ HANDLE \_\_\_\_\_ CALL \_\_\_\_\_

ADDRESS \_\_\_\_\_ TELEPHONE \_\_\_\_\_

CITY & STATE \_\_\_\_\_ ZIP \_\_\_\_\_

ARRL MEMBER ? \_\_\_\_\_ LICENSE EXPIRATION DATE \_\_\_\_\_

Those wishing to join the MARC or members wishing to renew, please fill out this application and return with \$10.00 annual dues (\$15 for families) to:

Montgomery Amateur Radio Club, Inc.  
P.O. Box 3141  
Montgomery, Alabama 36109

Non-members receiving this newsletter are invited to join the MARC and receive each quarterly issue of Zerø Beat.

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OFFICIAL NEWSLETTER OF THE

**MARC**

MONTGOMERY AMATEUR RADIO  
CLUB, INC. P. O. BOX 3141  
MONTGOMERY, ALABAMA 36109

First  
Class