



NAWCC NEWS

National Association of Watch and Clock Collectors
Atlanta Chapter 24
June, 2011

Electronic Horological Testing

by Tom Noesges

For as long as people have built and owned clocks, the clocks have required adjustments. These adjustments and tests have been tedious, not always reliable, and time consuming - sometimes requiring several weeks before a repairer was completely



MicroSet III Precision
Clock & Watch Timer



Tom Noesges

satisfied that all was well with a clock. Tom Noesges, not the most patient clock repairer, demonstrated to our membership how he had learned to use computer-age technology to improve the

accuracy and timeliness of his horological testing from the top of the escape wheel to the bottom of the pendulum bob.

The MicroSet III Precision Clock & Watch Timer and its use in horology was the subject of Tom's lecture. The MicroSet device is a computer that accepts information not from a keyboard or a disk drive, but through electronic sensor devices such as Acoustic, Optical and Magnetic Switches. These "input devices" provide data in terms of ticks, oscillations and on/off states which allow the MicroSet to perform the desired measurements and then display the resulting information on a small computer screen. With this new data, the clockmaker can then proceed to confidently perfect and warrant the repair work. Tom's presentation in PowerPoint contrasted some of the standard manual testing methods with the electronic method in several areas:

Beat Error or setting the beat on a clock is one of the first operations a clockmaker must do in order to get the clock to run for testing. Beat is the amount of time between pallet strikes on the escape wheel. From strike-to-strike, the time interval must be nearly the same. When the amount of time between strikes is sufficiently uneven, the clock won't run. A

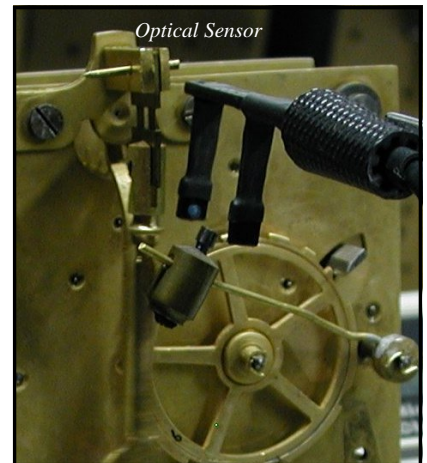


clockmaker can listen to the beat of a clock and adjust the level of the clock to correct the error to within 10%. If the clockmaker doesn't have a good sense of rhythm, if the beat is faint, or if it is desired to

reduce beat error to the absolute minimum, the MicroSet tool will help. By simply attaching an Acoustic sensor to the movement and selecting the correct function, the MicroSet will provide a display of the beat error in terms of error percent. The clockmaker can then proceed to adjust the crutch, level the clock, etc. until satisfied with the beat.

Correct Striking Sequence is often determined by moving

the minute hand through each hour and listening to the strike-count to make sure the number of strikes matches the hour indicated on the dial. This is tedious and errors can be missed because the clockmaker will assume they miss-counted as long as the count continues counting correctly. By setting up the MicroSet with an Optical sensor positioned to have its beam broken by a rising strike hammer and selecting the proper mode,



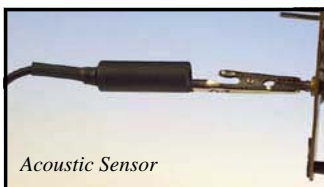
Optical Sensor

the MicroSet will record strike counts for a large number of strike observations. Removing the pendulum bob and allowing the clock to "wag" will permit a complete 24 hour test to be completed in six hours - without the clockmaker's presence. At the completion of the test, the clockmaker can determine, within five minutes, the correctness of the recorded strikes.

Correct Chiming Sequence is tested in much the same manner as the Striking Sequence test. The difference here is that the clockmaker should choose the number one chime hammer to break the Optical sensor's beam. Then he or she simply looks to the MicroSet tool to display results: 1=1, 2=2, 3=3, 4=4, 5=1, 6=2, etc. An improperly adjusted quarter-cam (for instance) will quickly show itself.

Time & Strike Run Days - The clockmaker can save the expense of replacing what appears to be a marginally "set" mainspring by testing the Time and Strike mainsprings. On the *Strike Side* this is accomplished by winding the mainspring, blocking the Drop Lever from entering the cam wheel, selecting the Count mode on the MicroSet and setting up an Optical sensor so that each strike of the hammer will break its beam. Then let the strike train run until it stops. Assuming the clock being tested has a half-hour strike, the clockmaker can be assured that if the MicroSet displays a count of 1,260 or more, the clock's strike mainspring is strong enough to run seven days. In a similar manner, the *Time Side* is counted. Here the anchor (verge) is removed, a magnet is attached to the minute hand, and a MicroSet Magnetic

(Continued on page 2)



Acoustic Sensor

Minutes of NAWCC Atlanta Meeting: April 3, 2011

- ◆ President George Waterhouse called the meeting to order following a lively auction led by Brooks Coleman.
- ◆ George Waterhouse asked that guests and visitors introduce themselves. Guests were Emma Collom and Richard “Bud” Horning (Greg Horning’s father).
- ◆ Tom Noesges read the Minutes of the February 6, 2011 meeting. The Minutes were unanimously approved as read.
- ◆ Donna Kalinkiewicz gave the Treasurer’s Report, including our account’s beginning balance, receipts, expenses and ending balance. Name tags with the date 2010 shown will need to renew their membership now. Membership dues will be \$15 for one year and \$25 for two years.
- ◆ Old Business
 - ◆ Peter Schreiner stated that the maintenance effort by himself, Brenda Wiggins and George Waterhouse continues on the Governor’s Mansion clocks.
 - ◆ Bernie Tekippe gave a brief status on the progress being made on the 2011 Mid-South Regional Convention .
- ◆ New Business
 - ◆ Renee Coulson (Director NAWCC) announced that NAWCC has approved a “trial” membership classification for first time members - \$20 for four months.
 - ◆ George Waterhouse stated that a regional planning meeting will be held at Wally’s Restaurant on April 30, 2011.
 - ◆ A motion was made by George Waterhouse to donate \$100 to aid in the upcoming National Convention. The motion was approved unanimously.
 - ◆ Robert Collom (General Chairperson) gave an update on the 2014/2015 National Convention to be held in Atlanta (see article in this publication).
- ◆ Program
 - ◆ Jae Martin introduced Gary Walton with Gel-Gloss (see Tips, Hints, Products & Procedures in this publication).
 - ◆ Jae Martin introduced Gary Walton and his unusual Morbier Clock (see Show & Tell in this publication).
 - ◆ Jae Martin introduced Tom Noesges and his Electronic Horological Testing lecture (see article this publication). ■

Electronic Horological Testing

(continued from page 1)

sensor is aligned so that every revolution of the minute hand will trip the sensor switch. The clock is then allowed to run down. The clockmaker can feel comfortable that the clock will run for eight days if the count displayed on the MicroSet tool is 192 or greater.

Regulation to within four minutes per week of the correct time is “Keeping Good Time” for an eight-day mantle clock. There exist several methods for adjusting the timekeeping accuracy of a clock. One of the most predominate methods is to use a reliable clock as a master and measure the clock in test against it. This is done by setting the test clock to match the master, and then, after a pre-determined amount of time (one week), to make an adjustment (plus or minus) to the test clock, reset it to the master and wait another week. Another is to determine the rate (beats per hour) for the clock and count the pendulum swings between two events (hour strike) and adjust the clock until the correct pendulum swings occurs. Rate can be determined accurately by counting teeth and doing some simple arithmetic. The MicroSet tool provides a practical method called Rate Finder for determining the



Using MicroSet Rate Finder

BPH for the test clock. This is done by attaching a magnet to the minute hand, setting up the MicroSet Magnetic sensor to trigger when the minute hand passes, and setting the Optical sensor to allow pendulum swings to break its beam. Doing this, the MicroSet will calculate a very accurate BPH without the clockmaker’s presence. Once the target rate is known for a clock, set up the Optical sensor to measure pendulum swings and adjust the rate until the desired BPH rate is obtained. There are other methods, but this is the one Tom Noesges chooses to use.

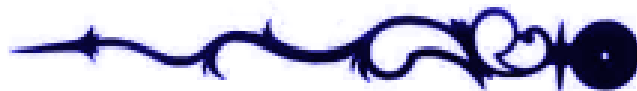
The MicroSet III Precision Clock & Watch Timer has many, many other uses in the horological field and outside of it as well. Tom Noesges has chosen to describe and demonstrate the functions which he uses most frequently while performing repairs in his own repair shop. If you would like to receive a copy of Tom’s PowerPoint presentation on this subject, send him an e-Mail at Thomas@Noesges.com. For more detailed information and pricing on the MicroSet Timer, see www.BMumford.com. ■

GROANER by George Waterhouse

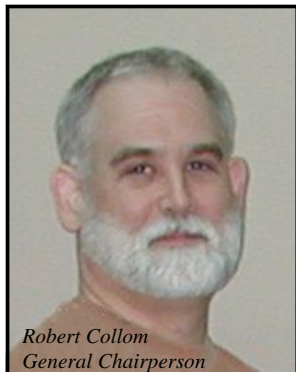
In one hospital’s Intensive Care Unit, patients in one bed always died at about 11AM on Sunday morning. A worldwide team of experts was assembled to investigate.

On Sunday, they waited outside the ward to see what the terrible phenomena was all about. Some prayed or held holy objects to ward off the evil spirits.

As the clock struck 11AM, Pookie Johnson, the part-time Sunday cleaning person, entered the ward. He unplugged the life support system so he could plug in the vacuum cleaner! ■



Atlanta 2015 National Convention Status *by Robert Collom*



Robert Collom
General Chairperson

Robert Collom reported that he, Jae Martin, George Waterhouse, Jim Coulson, and Renee Coulson met with the Georgia International Convention Center and the Cobb Galleria the first week of March to discuss our needs for our 2015 national convention. They also met with the Marriott Gateway and Renaissance Waverly hotels. They have received and negotiated pricing with both locations. Unfortunately both are over the budget.

Collom said that they are planning to meet with the Gwinnett Convention Center and Gwinnett Place Marriott the week of April 18. Brooks Coleman has offered to attend the meeting with the Gwinnett facilities to provide us with his considerable influence and negotiating ability.

Collom said that the Georgia Convention Center and Gateway Marriott have the facility that will best meet our needs. The Gwinnett Convention Center is the least favored location because the mart would have to be split up between the exhibit hall and the ball room. The nearest host hotel to the Gwinnett Convention Center is the Gwinnett Place Marriott, about 5 minutes away. An 80,000 square foot exhibit hall is needed for our national convention mart.

Collom said that he will provide the chapter with another update on the 2015 national convention facility location at our next meeting. ■



Georgia International Convention Center

Treasurer's Report *By Donna Kalinkiewicz*

Fifty-five members enjoyed our April, 2011 meeting, and three guests signed our Guest sheet: William Lincoln of Snellville; Richard Horning, father of member Greg Horning; and Emma Collom, daughter of Robert Collom.

We deposited \$180 from membership renewals and \$72 from the 50/50 raffle. Since so many now receive the newsletter electronically, I will send an email to everyone whose membership is expiring. If you still get a paper copy of the newsletter, check your label, if it has 2010 or earlier, you need to renew.

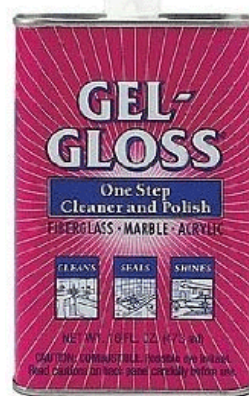
A donation of \$100 was made to support the 2011 National Convention.

There will be copies of the roster at the June meeting. Please email Donna Kalinkiewicz at dmktimes2@att.net or Tom Noesges at Thomas@Noesges.com to keep us informed of your address, phone and email changes. If we don't have your right information, you just might miss something. ■

Tips, Hints, Products & Procedures

Gel-Gloss – Gary Walton has successfully used Gel-Gloss to clean and polish Adamantine clocks. A celluloid veneer, Adaman-

tine cannot be polished like wood or marble, yet it gets dirty and cloudy looking. Gel-Gloss is advertised for synthetic marble and fiberglass, but it works wonderfully on the Seth Thomas Adamantine veneers according to Gary. ■



Gary Walton

Photo by Peter G. Schreiner III

Show & Tell

Gary Walton shared his unusual Morbier Clock with Atlanta Chapter 24 Members on Sunday morning.

The French Morbier clock is known as a provincial clock, to distinguish it from clocks made in major urban centers, primarily Paris.

The clock was named after the village of Morbier, a rural community on a trade route between Paris and Geneva, and near the Swiss border. There, beginning in the 18th Century, farmers began to manufacture clock parts during the winter months to be purchased by finishers, who



Morbier Movement

Photo by Peter G. Schreiner III

would assemble the parts to create clocks which they sold to passing travelers. Morbier clocks are also known as Comtoise clocks because the whole region was called the Franche-Comt region. They were produced until about 1914, when production was discontinued because of World War I.

These clocks were the first popularly priced time-keepers in France -- the clock everybody could afford, the French equivalent to the mid-1800s Connecticut shelf clocks in the USA.



Photo by Peter G. Schreiner III

These clocks were the first popularly priced time-keepers in France -- the clock everybody could afford, the French equivalent to the mid-1800s Connecticut shelf clocks in the USA.

(Continued on page 4)

Show & Tell Morbier *(Continued from page 3)*

They were generally weight-driven, robustly built, low maintenance striking clocks with a long pendulum and non-plated movements structurally built from iron straps. These clocks were essentially built to be put into utilitarian, wooden grandfather type cases either locally built or commissioned by their ultimate owners. A related prominent style hung on the wall, with an ornate or themed brass face surrounds/hoods that had been pressed or hammered from brass, and had ornate pendulums. While some were exported into select foreign markets, the bulk of them initially went all over the rural areas of France. In spite of being one of the most common clock styles in the world, there are relatively few of them in North America.

Morbier clocks have several distinguishing features. They are of the iron strap design with arbors and wheels in a vertical pattern. The time train is on the left and the strike train on the right—the opposite of most German and American movements. They are very rugged (the Bailey movement weighs a good 4 pounds). The springs are very large for a spring driven clock, and the huge snail is connected to the hour gear. The heavy rack is unusual in that it is double sided with one side acting as the lift for the gathering pallet and the other side acting as the locking mechanism. The gathering pallet is like a paddle with both sides of the paddle lifting the rack as the movement turns. Instead of a spring to pull the levers back into position, there is a large brass ball acting as a counter weight inside the movement. A typical clock hammer lift consists of pins protruding from a wheel; but the Morbier has a heavy brass lift mechanism resembling the shape of an escape wheel affixed to the wheel. The clock does not go into warning prior to strike.

There are no maker's marks on the movement being shown. That is not unusual since the vendor/seller usually put his name on the dial rather than a clockmaker's name.

The strike pattern of the Morbier is also unusual. The clock strikes once on the half hour as many other clocks do, but it strikes twice on the hour: for example, at 6:00, the clock strikes six times, and at 6:02, the clock strikes six times again. My understanding is that the first strike was a call to prayer and the second strike was to indicate when to begin prayer. The religious tradition seen here dates back to the 12th Century when most clocks were built for churches. People listened to the church bells to know what time it was, when to pray, and when to eat. The plates holding the gears together in Morbier clocks are somewhat similar in design and construction to the medieval church tower clocks, made of strips of forged iron, as if the Morbier clocks were small versions of the great tower clocks.

Case- The style of the case appears to be of German style, although it could be French.

Dial- The dial has flat sides on the left and right. This might be original for a Morbier clock, perhaps because the dial met the sides of the case at that point. Some Morbiers have minimum cases and some just hung on brackets on the wall. In addition, many Morbiers had a pressed or hammered brass hood around the dial. Perhaps the original dial (minus any brass hood) was used on this movement when it was put in the new case that was not originally designed for the movement. Hence the flat sides that look like they don't go with the case. ■

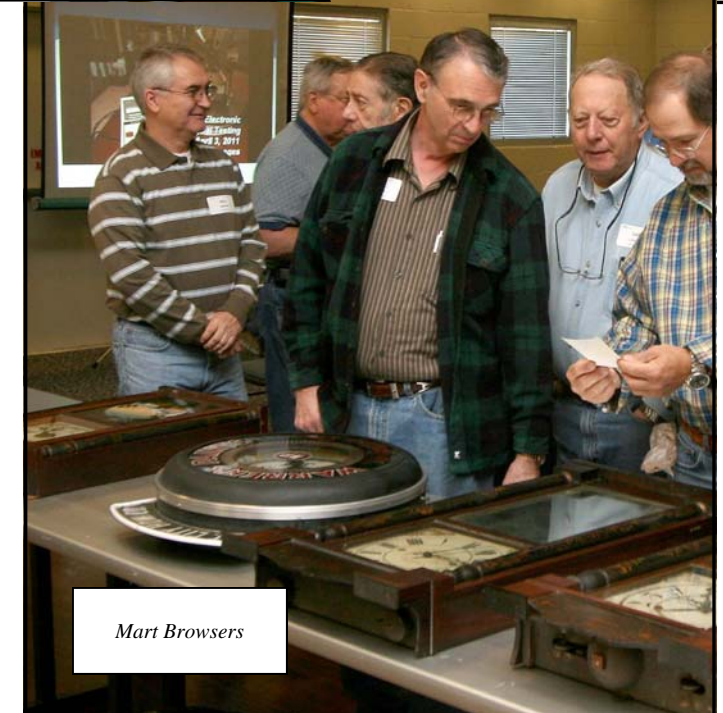
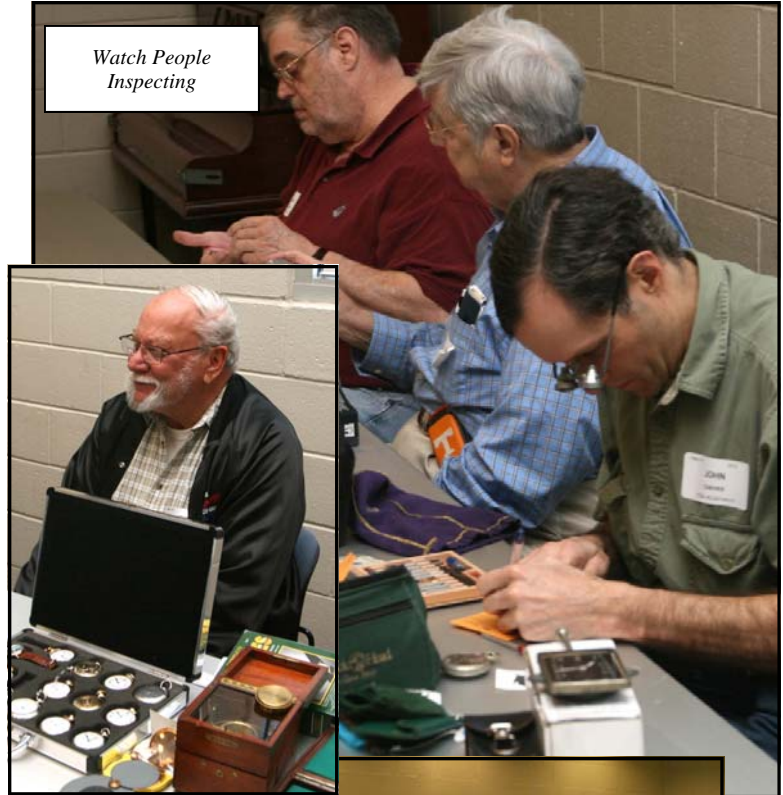
Up-Coming Programs & Presentations

PLEASE bring clocks, watches and other items of horological interest to share with your fellow members. Call Jae Martin (770) 813-8140 and tell him what you would like to bring. Don't be bashful or feel that you're endorsing the item. This is an opportunity to share your experience—small or great!

June 2011

Pendulums - Bernie Tekippe will present some questions and discussion related to the reason for use of pendulums in clocks. What makes a good pendulum and what is the quality factor? Further, Bernie will describe circular error, escapement error and practical conclusions in everyday clock repair. ■

Watch People
Inspecting



Mart Browsers

Classified Section

This area is dedicated to advertising for Chapter 24 members. Of course, it's free

WANTED WANTED WANTED WANTED WANTED

🕒 One of the clocks from the Lapham-Patterson house in Thomasville needs a two vial mercury pendulum (not faux) for a French H&H (Japy Freres) movement. If you have this pendulum or even possibly know where one can be acquired, please contact Pete Schreiner PGS3@Mindspring.com or call (404) 633-4772.

🕒 Two matching brass weights 4" long, 1.75" diameter, 3 to 3.25 lbs each for a Gustav Becker Vienna Regulator. Contact Warren Brook at 678-777-3333.

FOR SALE FOR SALE FOR SALE FOR SALE FOR SALE

🕒 Howard figure 8's 6 thru 10 S.T.#11 D.D. wall all real beauties. William Byrd bbyrd1243@bellsouth.net

If you would like to place an ad in this space for your items needed, services you offer or horological items for sale, contact Tom Noesges - email Thomas@Noesges.com or call (770) 262-0883.



NAWCC Atlanta Chapter 24 Officers and Directors

George Waterhouse	President	ClockDoc35@yahoo.com	(770) 939-5799
Jae Martin	Vice-President	Info@clockgalleryinc.com	(770) 813-8140
Thomas M. Noesges, Jr.	Secretary	Thomas@Noesges.com	(770) 262-0883
Donna Kalinkiewicz	Treasurer	DMKTimes2@Att.net	(770) 321-1057
Christian H. Brown	Past President	Browncg@Bellsouth.net	(770) 962-7480
Brenda Wiggins	Director 2011	Brenda232@Comcast.net	(770) 979-5197
Peter G. Schreiner III	Director 2012	PGS3@Mindspring.com	(404) 633-4772
Robert Collom	Director 2013	RobertCollom@gmail.com	(770) 715-9957



MEMBERSHIP RENEWAL TIME

➡ **Is it time to renew your membership in Chapter 24?** If your address label says 2010, your membership expired at the end of 2010. It's time to renew. Renewal is easy: just fill out the form below and write a check.

➡ Your Treasurer will take care of the rest.

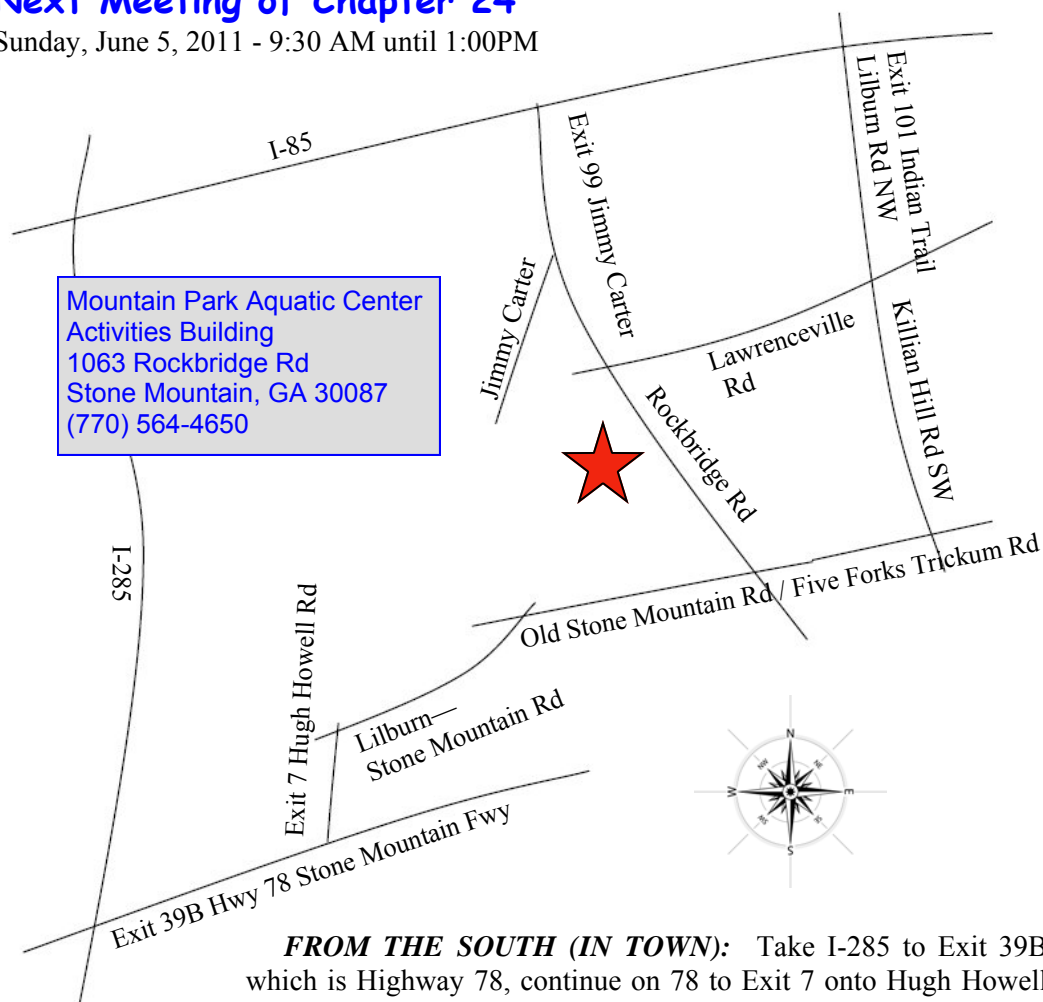
CHAPTER 24 NAWCC MEMBERSHIP APPLICATION/RENEWAL

Name(s) _____ Phone _____
 Address _____
 City _____ State _____ Zip _____
 Email _____ Fax _____
 Special Interests _____

Annual Dues, single or family: \$15 for 1 year or \$25 for 2 years. Please send this form with your check payable to **Chapter 24, NAWCC**, to Donna Kalinkiewicz, Treasurer, 3645 Allpoint Drive, Marietta, GA 30062

Next Meeting of Chapter 24

Sunday, June 5, 2011 - 9:30 AM until 1:00PM



FROM THE SOUTH (IN TOWN): Take I-285 to Exit 39B which is Highway 78, continue on 78 to Exit 7 onto Hugh Howell Road. After this exit, immediately turn right onto Lilburn-Stone Mountain Road. After 0.2 mile, turn right onto Old Stone Mountain Road. Continue to the intersection of Rockbridge and Five Forks Trickum. Turn left on Rockbridge Rd. The Aquatic Center is two blocks north on left.

The Atlanta Chapter of the NAWCC typically meets the first Sunday of February, April, June, August, October and December. As part of the Mid-South Group, it also sponsors the regional meeting in Chattanooga on Labor Day Weekend each year, in rotation with the Alabama and Tennessee chapters.

FROM THE NORTH-WEST: Take the I-85 east exit from I-285. Exit 99 and turn right on Jimmy Carter (Hwy 140). Continue and bear left onto Rockbridge Rd. Aquatic Center will be on right—two blocks before Five Forks Trickum Rd.

FROM CUMMING / HALL COUNTY: Take Exit 101 Indian Trail / Lilburn Rd NW off southbound I-85. As you cross Hwy 29 Lawrenceville Rd, Indian Trail becomes Killian Hill Rd. Turn right onto Five Forks Trickum Rd.

Turn right onto Rockbridge Rd. Aquatic Center is two blocks north on left.

Tom Noesges, Secretary
NAWCC Chapter 24
5211 Willow Creek Overlook
Woodstock, GA 30188

Membership paid through...