

# THE AERO AERIAL



*Why we should NOT complain about summer heat*

The newsletter of the Aero Amateur Radio Club  
Middle River, Md  
Volume 7 Issue 7  
July 2010

Editor Frank Stone AC3P

## Officers

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Pat Stone AC3F
Bob Landis WA3SWA
Al Alexander K3ROJ
Frank Stone AC3P
Joe Miko WB3FMT

## ABOUT THE AERO AMATUER RADIO CLUB

Meetings: First and Third Wednesdays at 7:30 pm at Coffman's Diner  
(Middle River and Orem's Rd.)

Nets: See Local Area Net Schedule

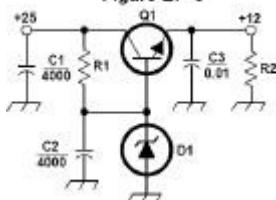
Repeaters: W3PGA (147.24 MHz - / 449.575 MHz -)

WEBSITE: [www.aeroarc.us](http://www.aeroarc.us)

## Tech Test Gets a Little More Technical

By Dan Romanchik, KB6NU

Figure E7-3



Ever since the FCC dropped the code requirement and the Novice license exam, the Technician Class license has really been misnamed. Being the first license that most hams obtain, it really should have been called the Novice license. The question pool was arguably at the appropriate level for newcomers to amateur radio, being heavy on rules and operating practices, and perhaps a little light on technical topics.

That's about to change. On July 1, 2010, the question pool for the Tech test changes, and this version has noticeably more technical questions than the previous test. You could say that the Tech test is getting, errrr, a little more technical.

For example, the new question pool contains more questions about electronics components and their functions. In addition to that, examinees must also be able to identify the symbols for these components on a schematic diagram. This is a big change from the previous test, which had no diagrams at all. There are also more detailed questions about transistors and how they work.

There are also questions on how to make basic measurements with a multimeter how to troubleshoot basic problems that Technicians are likely to encounter. One question asks, "What two measurements are commonly made using a multimeter"? Answer: voltage and resistance. A follow up question asks, "What is the correct way to connect a voltmeter to a circuit"? Answer: in parallel with the circuit.

To make room for these questions, the committee dropped questions on operating practices and rules and regulations. In general, these are not big losses, but two questions that I was sorry to see go are the questions on the "basis and purpose" of amateur radio. I think these are very important for new amateurs to learn and keep in mind. (If you don't recall them, go to <http://www.arrl.org/part-97-amateur-radio> and review them.)

By the time you read this--or shortly thereafter--the new version of my No-Nonsense, Technician Class License Study Guide should be available. You can download it free of charge from my website, [www.kb6nu.com](http://www.kb6nu.com). Look for the link in the right-hand column. It's currently in the hands of more than two dozen reviewers, who are proofreading it right now.

While it may not be in the initial release, I plan to include a section that contains links to websites that cover topics included in the study guide. That way, students can find more information on a topic, if they choose to do so. If you have any favorite websites that discuss making measurements with voltmeters or how to read schematic diagrams, I'd love to hear from you.

# VE Corner *by Pat Stone AC3F*

We had an unexpectedly high turnout for our test session on May 29<sup>th</sup>. Initially we had five applicants pre-register, but only two of them turned up. The surprise was the seven walk-ins who came to test and drove our applicant count to nine.

Of the nine taking tests, seven applicants became new technicians. The remaining two upgraded to General.

Congratulations to New Techs; Ken Stewart **KB3UQE**, Bernie Behling **KJ4VOV**, Kirk Lattner **KB3UQF**, Charlene Lattner **KB3UQG**, Robert Loomis **KB3UQH**, and Malcolm Pehlam **KB3UQI**.

Congratulations to new Generals; Tom Hier, **KB3UKK**, Rick Armiger **KB3UQJ**, and Edgar McKinney **KD8NZD**.

Thanks to our fellow VEs; Dave KB3KRV, Al K3ROJ, Joe WB3FMT, and Frank AC3P for helping.

A special thank you to VE Doug N3VEG who helped us out after a grueling two days of testing 340+ applicants at Dayton. Now THAT's a high turnout.

We will be taking the summer months off. So our next test session is September 25<sup>th</sup> at White Marsh.

## 2010-2011 Aero Test Schedule

All sessions for 2010 – 2011 will be at the White Marsh Branch of the Baltimore County Public Library. Registration begins at 1 p.m.

Amateur Radio Exams will be given on the following dates:

September 25

November 20

January 22

March 26

May 28.

Contact Pat Stone AC3F  
email only to [testing@aeroarc.us](mailto:testing@aeroarc.us)

Walk-ins welcome.

# Crochet and Ham Radio (A YL's Perspective)

*by AC3F*

With Field Day approaching many of our club members were busy getting various pieces and parts of radios, antennae, cables, computers and other sundry gear together for the big weekend. Locating the stuff is only part of the yearly challenge. Somehow at the end of Field Day every year, we all vowed to put things in a nice, safe place and then we promptly forgot where that safe place is! Ahhh the joys of aging but that's another story.

As the poem goes "What a tangled web we weave when...." we throw 100 feet of coaxial cable in the back of a van for a few months. As we drive to and from many destinations over time the coax manages to slide to and fro, back and forth finally emerging as that tangled web I mentioned above.

My OM, Frank was working furiously to get a vertical together and running on 10 meters for Field Day. Having finally assembled all of its pieces (more or less) and having checked it with the analyzer it was time to hook it up to the tuner and apply some RF. So Frank went to the van to retrieve his 100 foot coil of coax. It was then that he was confronted with what generally resembled the vacant home of a rather large arachnid.

Looking rather dejected, he dropped the twisted mess on the living room floor and said, "I'm going to have to untangle this mess before I can use it." I smiled reassuringly and told him I'd take care of it. "Oh, you won't be able to do anything with it!", he retorted. I reminded him that I have been untangling and rolling yarn for more than 50 years. "So this is just a ball of yarn to you, huh?", he asked. "Yep," I said and proceeded to apply all of the same procedures and techniques I use for untwisting my yarn. After all coax is expensive and so is yarn and they both work best when neatly organized. While holding one end, Frank watched in amazement as I carefully managed to get the 100 foot jumble neatly coiled and ready for use in about 20 minutes time. He seemed pleased and he had the ol' vertical radiating that RF a few minutes later.

The point of this little story? It pays to have an experienced needle crafter around to take care of coax, wire and other materials that seem to have a penchant for tangling. (Bye the way, did you know that some types of wire can be used in place of yarn for crocheting and knitting? I have made prize winning bracelets using wire and beads.) I love combining two of my favorite pastimes. Now if I could just find a way to send cw with knitting needles??? 73

# From the Skies over Mt. Essex

## SKY Events for July 2010

July 4 <sup>th</sup>	Happy Birthday U.S.A. 234 years young.
July 4 <sup>th</sup>	Last Quarter Moon
July 6 <sup>th</sup>	Earth is 94,508,351 miles (aphelion) from the Sun.
July 9 <sup>th</sup>	Venus and Regulus are 1.1 degrees apart.
July 11th	Total Eclipse of the Sun visible in the South Pacific and South America. (Easter Island)
July 11 <sup>th</sup>	New Moon
July 18 <sup>th</sup>	First Quarter Moon
July 25 <sup>th</sup>	Full Moon aka "Full Buck Moon"

## Planet Lookout

Mercury – Low in the West at Sunset.  
Rises higher by mid-month.

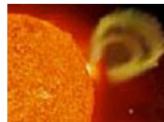
Venus - Bright Evening Star in the  
West at Sunset. 1.1 degree from  
Regulus on the 9<sup>th</sup>.

Mars – Upper left of Venus and Regulus,  
Western sky at Sunset.

Jupiter- Rises in the middle of the night.

Saturn- In the West at Sunset. Less than  
2 degrees from Mars on the 30<sup>th</sup>.

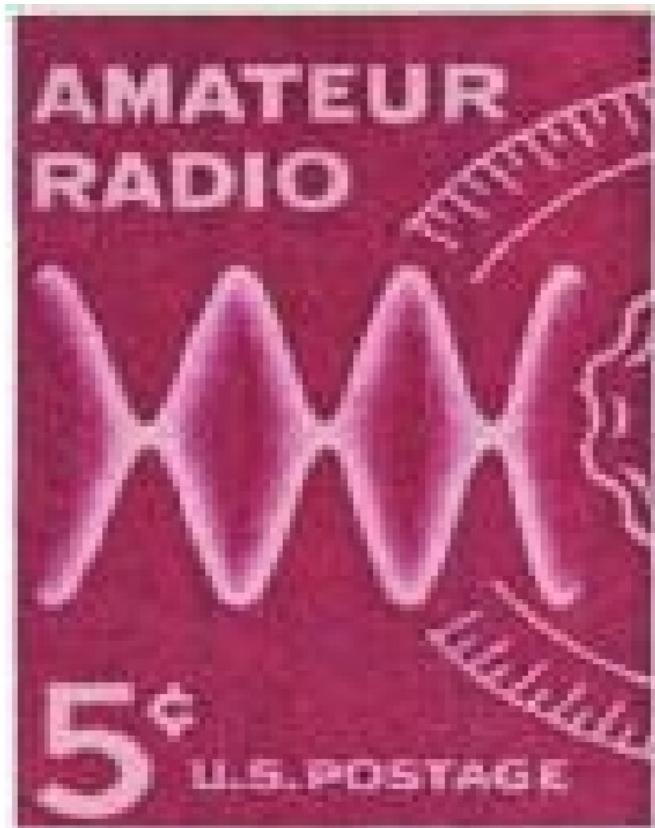
## Twinkle Twinkle Little Star



NASA uses a satellite called the **Solar and Heliospheric Observatory** (SOHO), to predict solar weather. In the event of a solar storm, **SOHO** provides a 2-3 day warning.

### SUN FACTS

1. The Sun is a star. It is a medium size Yellow star. Stars come in colors, ranging from Blue the hottest to Red the coolest. Yellow is in the middle.
2. The Sun is the closest star to our planet. The next nearest star is Alpha Centauri and is 4.4 light years (41.5 trillion miles) from Earth.
3. The Earth orbits around the Sun. We are 8 minutes and 20 seconds from the Sun at the speed of light.
4. The Sun's diameter is 109 larger than the Earth. 1.3 million Earth would fit inside the Sun.
5. The surface temperature of the Sun is about 10,000 degrees F. The nuclear core is 25 million degrees F.
6. The Sun is about 5 billion year old and will last another 5 – 6 billion years.
7. The Sun rotates at 26 days at the equator and 36 days at the poles.
8. The Sun is located 25,000 light years from the center of the Milky Way Galaxy. It takes 250 million years to orbit the Milky Way.
9. Sunspots are magnetic storms on the sun and occur in 11 year cycles. Sunspots are dark in color because they are cooler, than the surface of the sun by about 2,000 degrees F.
10. The sun effects our weather, the more sunspots the hotter the sun. The next sunspot maximum should occur around May 2013 (sunspot cycle 24).



**July 2010**

					<b>1</b>	<b>2</b>	<b>3</b>
<b>4</b>	<b>5</b>	<b>6</b>		Meeting Coffman's 7:30 pm	<b>7</b>	<b>8</b>	<b>9</b>
				10 Meter Net 28.445 Mhz 8 pm	<b>14</b>	<b>15</b>	<b>16</b>
<b>11</b>	<b>12</b>	<b>13</b>			<b>17</b>		
BRATS HAMFEST Howard County Fairgrounds				Meeting Coffman's 7:30 pm	<b>21</b>	<b>22</b>	<b>23</b>
<b>18</b>	<b>19</b>	<b>20</b>		2 Meter Net 147.24 Mhz 8 pm	<b>28</b>	<b>29</b>	<b>30</b>
<b>25</b>	<b>26</b>	<b>27</b>			<b>31</b>		