

Finger Lakes  
Chapter #29  
Founded March 29, 1966  
W2PPS



November  
2009  
Newsletter

## Chapter Information

President	Fred Herbs-WB2PEM	115 Hunter Drive	Baldwinsville, NY 13027	635-5947
Treasurer	Jack Roubie-K2JDD	7205 Coventry Road N	E. Syracuse, NY 13057	656-2480
Newsletter	Steve Auyer-N2TKX	3925 Cloverfield Circle	Liverpool, NY 13090	451-7359

N2TKX E-Mail: N2TKX@ARRL.NET

[www.qcwa.org/chapter029.htm](http://www.qcwa.org/chapter029.htm)

## October Meeting

The weather was sunny and warm (for October), and Denny's Restaurant had provided the U-shaped table arrangement that we had requested for our meetings. Twenty-four of us were present on October 30<sup>th</sup> for our monthly meeting: Tim Colson-N2VZD; Rita Colson-KC2GFT; John McKee-WB2YGN; Sharon May-KA2TNK; Jim O'Keefe-W2SY; Roger Hamilton-WA2AEW; Jerry Voorhies-KA2DDN; Mark Chamberlin-WB2PKO; John Soergel-WA2DGC; Chuck Silva-KB2DIO; Ken Blume-K2UPI; Dick Steinbach-WA2MRU; Viv Douglas-WA2PUU; Al Obrist-N2AO; Jerry Storrs-K2QJB; Steve Auyer-N2TKX; Frank Decker-W2XF; Jim Mozley-W2BCH; Jack Roubie-K2JDD; Fred Legawiec-W2LGA; Diane Legawiec-K2LGA; John Rockdashil-WB2DVE; Charlie Floring-W2AK and Norm Hinkle-W2NNJ.

K2JDD opened the meeting at 11:30am and noted that he was again filling in for Fred Herbs-WB2PEM who is undergoing ultrasound and cystoscopy procedures today to determine the cause of his urinary problem. WB2PEM's XYL still needs an additional 6-8 weeks of physical therapy to eliminate her "while walking the dog ....." problem. A card was passed around and signed before being sent to Tom Cantine-W2TQF who reentered the hospital for an above-the-knee amputation after his below-the-knee amputation did not heal properly. The word is, however, that W2TQF is now healing nicely and making good progress with physical therapy and in fact will be going home today.

WB2PEM passed on a request via K2JDD that someone step forward to assume the Presidency of the chapter as he has now been doing it for a number of years and feels that it is appropriate for someone else to take over.

Showing willful violation of New York's "No Cell-phone Use While Driving" law, Frank Wiethuechter-K2RSY called in from the New York State Thruway to let WA2PUU know that he had to be in Albany today and was not missing the meeting on purpose.

WA2DGC complained about the \$57 cost of ham plates for two years. On the other hand, while all regular plates are being replaced next year with plates that are more reflecting (or something) to allow automatic reading of plate numbers, it appears that ham plates may not use the new technology. WA2DGC also commented on his pleasant meeting with Riley Hollingsworth at the recent Society of Broadcast Engineers convention at the Turning Stone Casino - we hear the convention was held there because the ionospheric propagation was better there - yeah, sure. There was also some discussion of possible use of ham frequencies by emergency responders for drills as well as in actual emergencies.

For the 50/50 raffle, KA2DDN picked the winning ticket of KA2TNK who pocketed \$17. N2TKX had provided door prizes of a "Nipper" mug, and two tee shirts silkscreened with vacuum tube logos. WA2MRU picked WA2DGC's ticket for one of the tees, and WB2DVE picked WA2PUU's ticket for the second

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tee. The Nipper mug was won by KC2GFT after K2QJB picked her ticket. N2AO had donated a nice set of headphones as a door prize – which was also won by WA2PUU after WB2PKO picked her ticket.

The meeting took a decided downturn when WB2YGN told the following joke:

A Teacher in a Psychology class stood before her class and asked the question:

T: Will anyone in this class who has ever felt stupid please stand up? After a moment of silence, little Billy stood up.

T: Billy, why did you feel stupid?

B: I didn't want you to be the only one standing up.

At a previous meeting, N2TKX had put on a presentation about “netbooks” – basically small, inexpensive laptops. At the November meeting he will present a followup to that presentation, demonstrating how a netbook may be coupled with a small transceiver from Small Wonder Labs to form a very compact and portable PSK-31 system.

And so you can plan your calendar for December, the Chapter 29 meeting for this month will be held one week earlier than usual – on Friday, December 18<sup>th</sup>. Holding to our usual date of the last Friday would have had us meeting on Christmas Day!



## Upcoming Birthdays

### November

- 1<sup>st</sup> - John Gonroff-NT2D
- 1<sup>st</sup> - James Mozley-W2BCH
- 7<sup>th</sup> - Henry Hampel-KA0TUP
- 23<sup>rd</sup> - Von Campbell-W2RDC
- 28<sup>th</sup> - Ike Hathaway-W2IH

### December

- 2<sup>nd</sup> - Samuel Semel-W2SHE
- 5<sup>th</sup> - David Moon-N2RGU
- 14<sup>th</sup> - Thomas Cantine-W2TQF
- 30<sup>th</sup> - Ken Blume-K2UPI

## January

- 10<sup>th</sup> - Roger Hamilton-WA2AEW
- 12<sup>th</sup> - John Soergel-WA2DGC
- 14<sup>th</sup> - Al Obrist-N2AO
- 17<sup>th</sup> - Donald Taylor-KB2BU
- 25<sup>th</sup> - Lloyd Caves-N2PU
- 27<sup>th</sup> - James Murray-K2HN



## Links

Some internet links passed on by WB2PEM –

Information on using amateur satellites, etc.

[web.me.com/clintbradford/k6lcs/Docs.html](http://web.me.com/clintbradford/k6lcs/Docs.html)

Amateur Radio iPhone applications

[www.nicholson.com/rhn/hotpaw/](http://www.nicholson.com/rhn/hotpaw/)

Some other sites

[www.hp.com/united-states/reallife/hamradio.html](http://www.hp.com/united-states/reallife/hamradio.html)

[radialstaple.wordpress.com/](http://radialstaple.wordpress.com/)

[www.mydarc.de/dl8wx/baken\\_kw.htm](http://www.mydarc.de/dl8wx/baken_kw.htm)

[hunting.com/beaconclock/index.html](http://hunting.com/beaconclock/index.html)



## Hugo Keller - W8MLM/ W2OVT/K2HH

I was born on May 24, 1919 in Oneida, NY. My father had been the Oneida Ford dealer there since 1916.

I learned code as a 12 year old Boy Scout and got interested in amateur radio when I bought QST at a newsstand for 25 cents. I built a receiver using a type 30 tube as a detector and another type 30 tube as an amplifier. Using the receiver and a longwire antenna I was able to listen in to amateurs on 75 meters. My first QSO was with Bob Jackson who lived 5 blocks away – using my receiver by removing the grid leak resistor and keying the antenna on 80 meters during the day-time.

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Bob and I took amateur exam at age 14 in 1934 in Troy, NY. The exam was conducted by R. I. Batchelor from New York City. It was an essay type – no multiple choice questions – plus code at 10 wpm. Both of us felt very lucky when we passed on the first try - He was assigned W8MJV and then in 1936 W2GOW. I received the call of W8MLM. My first transmitter used four tubes: a type 47 as an oscillator, a type 46 as a buffer, and parallel 46's in the output stage. The plate input to the output stage was 25 watts. The rig was breadboard, using parts from cannibalized Atwater Kent battery model radios. My Dad had a PA system that used push-pull type 250's and I used that to modulate the output stage of my transmitter on 160 meters. My receiver was a National SW 3 receiver. My antenna on 80 meters was an end-fed Zepp and on 160 meters I tied the feeders together and worked it against the ground as a Marconi

I became a member of the AARS (Army Amateur Radio Service – an unofficial, not sworn-in service) in 1940 and drilled on the air weekly. I was 1A in the draft on December 7, 1941 (an easy date to remember!) but the Army had nothing that interested me at the start of WW 2. The Navy however, had the V6 (Radar) program which did sound a lot more interesting so I went into the Navy on January 4, 1942 as a RadioMan 2<sup>nd</sup> Class. That was followed by a year as a 1<sup>st</sup> Class RadioMan - training in Aviation Radio (Radar) Material School in Corpus Christi, Texas. 16 of us stayed for MAD (Magnetic Airborne Detection system) training. Following completion of that training I was assigned to LTA (Lighter Than Air) duty and was sent to ZP 51 Blimp Squadron in Trinidad and British Guiana for 18 months. I became Lead Technician and the squadron had best worldwide record - zero days lost due to radar failure. I ended my service at Lakehurst, New Jersey on September 4, 1945.

After getting out of the service I headed back to Oneida and became Secretary-Treasurer at the Ford dealership and eventually General Manager. Dad fancied himself as an inventor and was pleased to devote his time to his creations. I sold the dealership in 1968 but stayed on in sales and inventory control till I retired in 1981.

I got my Class A license and a new call of W2OVT in 1946. Now I was able to have QSOs with some of the

wonderful guys I had first heard as an SWL, running 100 watts output on AM and CW, also on SSB starting in 1971. I upgraded to Extra Class in 1970 and the K2HH call in 1971.

I joined the QCWA in 1959 as number 04949, sponsored by Charlie Smith-W2DSS, the Section Manager for the ARRL's Western New York Section. Initially I joined Mohawk Valley Chapter which ultimately failed because it didn't recruit enough younger hams. My first wife died in 1979 and I married Betty in 1986, we live pretty quietly in Wampsville. My activities currently are lots of travel, golfing, gardening, and of course, Chapter 29 meetings! Long live the Finger Lakes Chapter 29 of the QCWA and amateur radio.

Sincerely, 73's, Bud Keller-K2HH, Wampsville, New York



This was taken at the 1936 ARRL Field Day held in Woodgate, NY by the Utica Amateur Radio Club.

In the back row are (left to right): Al Bujarowicz, now an SK, Clark Berry W8LGV/K4GJB, originally from Ilion and now living in Massachusetts, Roger Berry W8PDO/W8RTO, originally from Ilion, probably an SK now, "Bud" Keller W8MLM/W2OVT/K2HH, originally from Oneida and now living in Wampsville, Fred Schremp W8MKA/W6JAG, originally from Ilion and now living in California, Ken Hanson W8MKA/NC4J, originally from Ilion and now living in Florida.

In the front row are (left to right): Frank North W8DNE/W2DNZ, originally from Utica, now an SK, Bill Jones W8LVZ/W2QDO, originally from Remsen, now an SK, Bill Keneficek W8QFE/W2QFZ, origi-

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nally from Utica, now an SK Frank Landing W8LGR, now an SK.



## VOA Transmitter

W2TKG was recently having a QSO with a ham in North Carolina who, it turns out, had recently retired from the Voice Of America station there. W2TKG mentioned that he had retired from General Electric and the other ham commented favorably on the 250,000 watt HF transmitters built by General Electric in Syracuse and used at the station. Several weeks after the QSO, W2TKG received the following letter:

“Joe Dreher-W2TKG  
1 MacArthur Rd  
Baldwinsville NY 13027

Dear Joe,

As per our recent QSO, I thought you might enjoy some of my observations regarding the GE transmitters that we used at the Voice of America. Enclosed you will find some photos of the VOA's GE transmitters, model 4BT250A, built in the early 60's and still in use. These are 250KW plate-modulated rigs, capable of 4 thru 26 MHz operation. At Greenville, the 4 MHz band was disabled and we only used them on 6 thru 26 MHz (SW Broadcasting from the USA is not allowed below 6 MHz). Greenville has 6 of these transmitters - 3 at Plant A (which is now on standby status) and the other three are at Plant B which is operational. Monrovia Liberia had 6 transmitters also, but Monrovia was lost during a rebellion some years ago and the transmitters were stripped by the rebels for their copper.

These transmitters are in daily use. I consider them to be the best value that VOA ever got from a transmitter. They are simple and rugged in construction, well-designed and laid out and not difficult to maintain. They have been modified somewhat down thru the years, but not extensively. The original tube-type exciter was replaced by a solid-state unit; other than that, the transmitters are largely the same as they were in 1962 when first commissioned. That certainly speaks well for GE's expertise, doesn't it.

The RF tube lineup is as follows -first 1 PA is a 4CX5000A, followed by the 2nd IPA which is a power triode, type 7482 operated in grounded grid. This drives the PA which is a pair of 7482's in Grounded Grid. The transmitter modulator consists of a pair of 7482's in push-pull. The 7482 is a power triode developed by Machlett Laboratories and uses GE's "Vapor Phase" cooling system, in which the tube anode is immersed in a tub of water and steam is generated which is fed to a radiator system and cooled back into water. There are no pumps used in this cooling system. One of our measurements that we were required to take periodically (similar to the Proof of Performance tests that commercial broadcasters are required to perform), would show that the transmitters were capable of much more power output than 250 KW -

indeed, I've seen them putting out over 280 KW (dead carrier) and the modulator was capable of modulating this power level 100% and then some. Grounded Grid amplifiers in the 2nd IPA and PA no doubt contribute to this high output.

The PA is operated at 12 KV @ 26 amps on the plates for an input of 312 KW which indicates an efficiency of around 80% - however, this cannot be, this merely shows that the power from the first IPA and 2nd IPA is being fed straight thru to the PA stage. Both the 2nd IPA and PA are modulated so that true 100% modulation can be achieved. Distortion is very low and fidelity is excellent, due to GE's use of direct coupling between audio stages.

There is one thing about this transmitter that I have never known and that is why the antenna matching circuit is called the "PINGLE". The output of the transmitter is 75 OHMS unbalanced. All the VOA antennas are fed with 300 ohm balanced lines. Therefore, there is a tunable matching device that transforms the 75 ohm unbalanced transmitter output to a 300 ohm balanced line. If you know why the matching unit is called "The Pingle", please let me know.

I had some great photos of the transmitters, but unfortunately I cannot access these photos. They were lost in the flood of 1999 (Hurricane Floyd in September 1999). All I can find right now are a shot of the front panel of the transmitter, taken from the PA and modulator end of the transmitter looking toward the exciter which is at the far left. I have also enclosed some pictures of the antenna switching matrix, which is a separate building adjacent to the transmitter building. This matrix is nothing but a bunch of BIG knife switches that are pneumatically operated and electrically controlled from inside the transmitter building. Basically, the transmitter output lines feed into one end of the matrix and the antenna lines feed out of the matrix at right angles to the transmitter lines. Thirty-nine antennas can be selected (antenna #39 is actually a 500 KW dummy load located inside the transmitter building).

Some general info about the sites. Each transmitter site occupies approximately 2600 acres. Antennas are Rhombics and "USIA CURTAIN" antennas (most definitely NOT Sterba Curtains). There is also a 2-element phased dipole array for 6 MHz (a so-called Collins or bow-tie dipole with a driven reflector) that is designed to propagate into the Caribbean/Central America area. Most of the Curtains are sited so that they propagate to Northern, Central and Southern Europe (i.e. Russia) and also to the overseas stations so that they could pick up the signal off-air and relay it into parts of Russia that that would not propagate directly from the USA (this is no longer done, as all overseas stations now get their signals from satellites). Up until 1995, Greenville had three sites; Plants A and B were transmitter plants, each with 11 transmitters (8 high power - three, 250 and five, 500 KW - SW BC transmitters, plus three 40 KW ISB transmitters for overseas program relay). These sites were arranged in an equilateral triangle around Greenville - 25 miles apart, with Plant C west of Greenville, Plant A north of town and Plant B south of town. Plant C was the "receivers" site which served as the HQ building and occupied approximately 600 acres. This site was the terminus of the microwave system that sent programs down from Washing-

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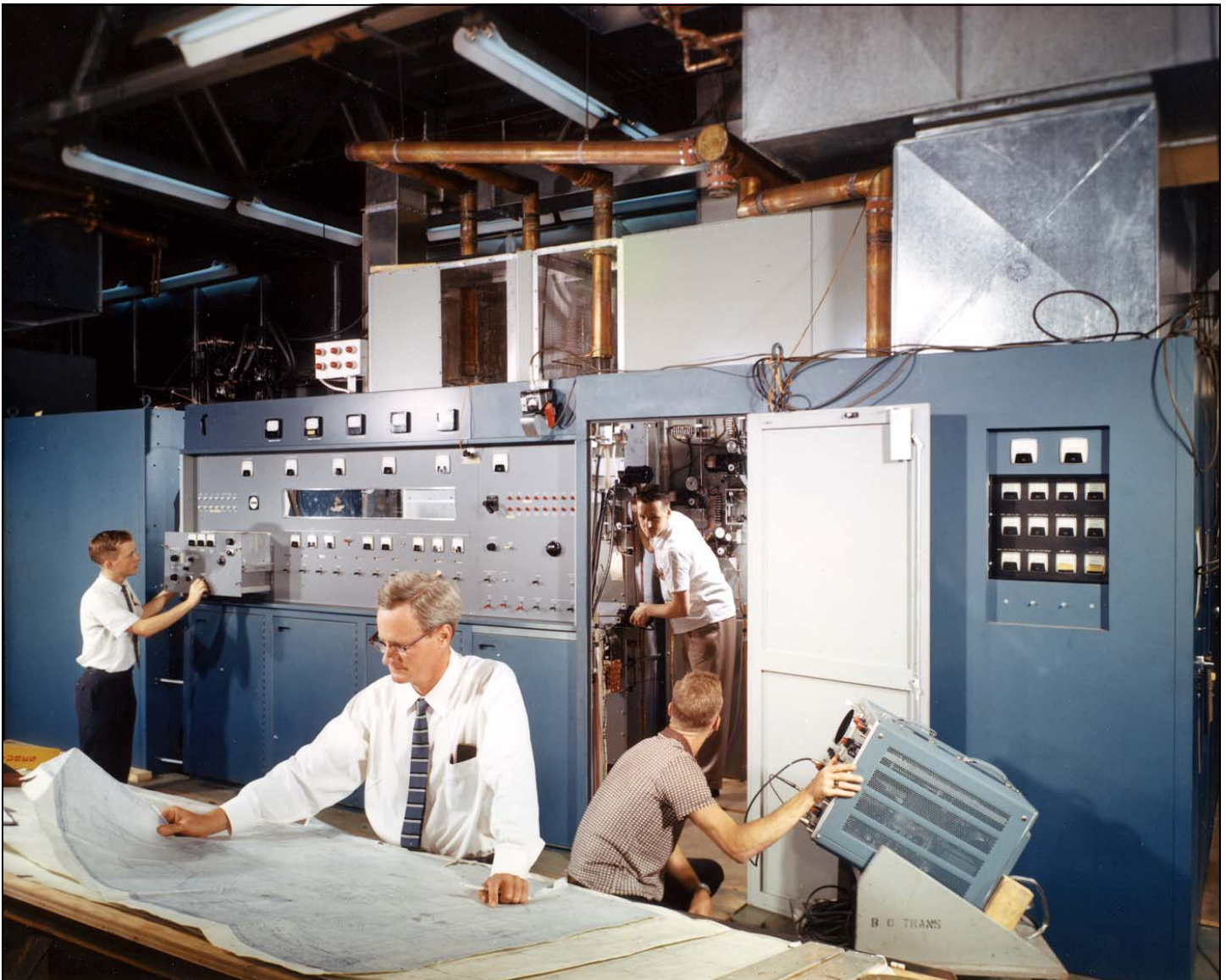
ton DC. These programs were then routed and relayed to Plants A and B for broadcast. They also had a large number of HF dual-diversity receivers, made by RCA, that picked up HF signals from overseas sites for both monitoring and program relay (we sometimes re-broadcast BBC and other broadcast programs). That plant was shut down in 1995 when the plants were furnished satellite downlinks. This site has been sold to East Carolina University; however the local amateur radio club has been granted access to a room in the rear of the building and access to some of the antennas that remain. By the way, the gain of the Transmitting Rhombics is typically around 16 DB and the Curtains is around 20 DB. This is POWER GAIN. Put a 250 or 500 KW transmitter into one of these antennas and the signal WILL "get

out". Info about the VOA Curtain antennas can be obtained from the W4RNL antenna website, if you can get on-line.

I enjoyed my tenure at VOA, it is a truly unique place and the experience is like nothing else. I had 50 KW broadcast experience before I came to work for VOA and even then I was astounded when I first came to work here in 1985. This stuff is BIG, believe me!

Hope you've enjoyed the info I have presented. I also hope to work you again some day.

73, Paul W. 'SLIM' Copeland-K4KCS  
2044 Mozingo Rd  
Greenville, NC 27834"



**General Electric 4BT250A 250,000 watt transmitter undergoing final assembly and test in Building 7 at Electronics Park in 1960.**

# November 2009

Sun	Mon	Tue	Wed	Thu	Fri	Sat
<p><b>1</b></p> <ul style="list-style-type: none"> <li>• 2:00am—Daylight Savings Time Ends</li> </ul>	<p><b>2</b></p> <ul style="list-style-type: none"> <li>• 7:30pm—OCREC Net, 147.30R (WA2PUU) (1st)</li> </ul>	<p><b>3</b></p> <ul style="list-style-type: none"> <li>• Election Day</li> <li>• 8:00pm—"This Week In Amateur Radio", 147.18R (KB2FAF)</li> </ul>	<p><b>4</b></p> <ul style="list-style-type: none"> <li>• 7:00pm—Rome Radio Club Meeting, Griffiss (1st)</li> <li>• 7:00pm—Swap Net, 147.00R</li> </ul>	<p><b>5</b></p> <ul style="list-style-type: none"> <li>• 7:00pm—Camillus VE Session (KB2ERJ) (1st)</li> </ul>	<p><b>6</b></p> <ul style="list-style-type: none"> <li>• 7:00pm—Rome ARC VE Session (K2GVI) (1st)</li> </ul>	<p><b>7</b></p> <ul style="list-style-type: none"> <li>• 2100Z—ARRL CW Sweepstakes begins</li> <li>• 0000Z—ARRL EME Contest begins</li> </ul>
<p><b>8</b></p> <ul style="list-style-type: none"> <li>• ARRL CW Sweepstakes continues</li> <li>• 2400Z—ARRL EME Contest ends</li> </ul>	<p><b>9</b></p> <ul style="list-style-type: none"> <li>• 7:00pm—Utica ARC Meeting (2nd)</li> <li>• 0300Z—ARRL CW Sweepstakes ends</li> </ul>	<p><b>10</b></p> <ul style="list-style-type: none"> <li>• 8:00pm—"This Week In Amateur Radio", 147.18R (KB2FAF)</li> </ul>	<p><b>11</b></p> <ul style="list-style-type: none"> <li>• Veteran's Day</li> <li>• 7:30pm—Skyline ARC Meeting (AB2G)</li> <li>• 7:00pm—Swap Net, 147.00R</li> </ul>	<p><b>12</b></p> <ul style="list-style-type: none"> <li>• 7:30pm—RAGS Meeting, "Fall Auction", (AB2PG) (2nd)</li> </ul>	<p><b>13</b></p>	<p><b>14</b></p>
<p><b>15</b></p>	<p><b>16</b></p> <ul style="list-style-type: none"> <li>• 7:30pm—OCREC Net, 147.30R (WA2PUU) (3rd)</li> </ul>	<p><b>17</b></p> <ul style="list-style-type: none"> <li>• 8:00pm—"This Week In Amateur Radio", 147.18R (KB2FAF)</li> </ul>	<p><b>18</b></p> <ul style="list-style-type: none"> <li>• 7:00pm—Swap Net, 147.00R</li> <li>• 7:00pm—Fulton ARC/RACES Combined Meeting.</li> </ul>	<p><b>19</b></p> <ul style="list-style-type: none"> <li>• 7:00pm—LARC Meeting, "Old Radio with K2JDD", (N2IK)</li> </ul>	<p><b>20</b></p> <ul style="list-style-type: none"> <li>• 7:00pm—MOARC VE Session (KG2DI) (3rd)</li> </ul>	<p><b>21</b></p> <ul style="list-style-type: none"> <li>• 2100Z—ARRL Phone Sweepstakes begins</li> </ul>
<p><b>22</b></p> <ul style="list-style-type: none"> <li>• ARRL Phone Sweepstakes continues</li> </ul>	<p><b>23</b></p> <ul style="list-style-type: none"> <li>• 0300Z—ARRL Phone Sweepstakes ends</li> </ul>	<p><b>24</b></p> <ul style="list-style-type: none"> <li>• 7:30pm—Madison-Oneida ARC Meeting, Verona (last)</li> <li>• 8:00pm—"This Week In Amateur Radio", 147.18R (KB2FAF)</li> </ul>	<p><b>25</b></p> <ul style="list-style-type: none"> <li>• 7:00pm—Swap Net, 147.00R</li> </ul>	<p><b>26</b></p> <ul style="list-style-type: none"> <li>• Thanksgiving Day</li> </ul>	<p><b>27</b> <b>QCWA</b></p> <ul style="list-style-type: none"> <li>• 11:30am—QCWA Luncheon, Denny's Restaurant (WB2PEM) (last)</li> </ul>	<p><b>28</b></p> <ul style="list-style-type: none"> <li>• 12:00 noon—Syracuse VE Team, Liverpool Public Library</li> <li>• CQWW DX CW Contest</li> </ul>
<p><b>29</b></p> <ul style="list-style-type: none"> <li>• 0000Z—CQWW DX CW Contest begins</li> </ul>	<p><b>30</b></p> <ul style="list-style-type: none"> <li>• Atlantic Hurricane Season Ends</li> <li>• 2400Z—CQWW DX CW Contest ends</li> </ul>	<p><b>1</b></p> <ul style="list-style-type: none"> <li>• 8:00pm—"This Week In Amateur Radio", 147.18R (KB2FAF)</li> </ul>	<p><b>2</b></p> <ul style="list-style-type: none"> <li>• 7:00pm—Rome Radio Club Meeting, Griffiss (1st)</li> <li>• 7:00pm—Swap Net, 147.00R</li> </ul>	<p><b>3</b></p> <ul style="list-style-type: none"> <li>• 7:00pm—Camillus VE Session (KB2ERJ) (1st)</li> </ul>	<p><b>4</b></p> <ul style="list-style-type: none"> <li>• 7:00pm—Rome ARC VE Session (K2GVI) (1st)</li> <li>• 2200Z—ARRL 160M Contest begins</li> </ul>	<p><b>5</b></p> <ul style="list-style-type: none"> <li>• ARRL 160M Contest continues</li> </ul>