

# The Hertzian Herald



## Off the KUF:

By Mike - N8KUF

By now you've certainly realized that December is here, and that Christmas is right around the corner. I can tell, not by the calendar, but by the faint holiday lighting glow in the sky over Dundee.

NOW is the time to plan the quickest route to your local variety / drug store. They almost always have a few giftable items left on the shelf long after dark on Christmas eve. After all, why waste time getting caught up in the crowds and traffic jams that typically exist in the early weeks of December when the roads, along with the checkout lanes, are practically deserted on Christmas Eve.

I hope you were able to join me at the November meeting, and I hope you had a good time (and maybe even learned something new) while observing the power point presentation that was developed to explain some level of detail regarding the 146.72 repeater system. This presentation had been given previously, but its been a while ago. Perhaps you were able to ask a few new questions this time around.

I certainly hope you've made plans to attend the December MCRCA meeting (now just a few short days away). This meeting is one of the highlights of the year for the MCRCA and its members. The celebration meeting will include the annual Christmas potluck (club supplies meat tray & fixings - you bring a dish to pass). Also included is the giveth then taketh awayeth gift exchangeth. If you've never taken part in one of these exchanges, you absolutely owe it to yourself to live the experience. If you've taken part in one of them previously ... perhaps you've had a chance to fine tune your trading strategies.

Dont forget, ..... bring a dish to pass, lots of smiles, and a basket full of good cheer.

I'll see you at the meeting,  
Mike Karmol - N8KUF  
2010 President - MCRCA



### Club Officers

#### PRESIDENT

Mike Karmol N8KUF  
mkarmol@verizon.net

#### VICE PRESIDENT

Paul Trouten W8PI  
ptrouten@aol.com

#### SECRETARY

Fred VanDaele KA8EBI  
ka8ebi@yahoo.com

#### TREASURER

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#### DIRECTOR

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#### DIRECTOR

John Bills N8RWI  
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#### DIRECTOR STATION TRUSTEE

Rita Baker WB8FBG  
wb8fbg@chartermi.net

### Inside This Issue

Minutes.....	2
Puzzle.....	3
Gas mantles &.....	4
Amateur radio.....	5
Puzzle answers.....	6
425 DX.....	7

## MCRCA Minutes:

**November 18, 2010**

Meeting called to order at 7:31 pm, by Mike N8KUF  
Pledge of Allegiance

PROGRAM: Power Point program on the 146.720 repeater.

BREAK

DOOR PRIZE DRAWING: Fred KA8EBI, Olimpio WB8SEZ, Mike K8MLH

50/50: K8MLH donated to Scholarship

MINUTES: Motion by John N8RWI, supported by Mike K8MLH, to approve as written in the Herald. Approved.

TREASURER REPORT: Motion by Terry KC8RQI, supported by Olimpio WB8SEZ, to approve the treasurers report as passed out to the membership. Approved.

DX REPORT: By Olimpio - CQ contest coming up

FUTURE PROGRAMS: December Christmas party

HERTZIAN HERALD: Keep those article coming in folks.

TESTING: Next session Dec. 18th.

FOX HUNTS: Mike K8MLH congratulated Mike and Dale for finding the fox for the first time with the help of the Boy Scouts. Now we need to concentrate on recovering the wire fox trophy from Ann Arbor club next season.

ARPSC: meeting December 2<sup>nd</sup> at the Red Cross 7:00 PM. Dundee parade coming up in December.

RRRA: Dale announced all is OK. Looking for someone with a truck to help pick up a donated repeater up in Mason, Michigan.

OLD BUSINESS: none

NEW BUSINESS: Mike N8KUF is looking for someone to organize special operating events for the club using the new HF radio at the Red Cross. Ideas: Custer week, 911 etc. A nominating committee has been formed consisting of Mike K8MLH, chairman, Dale WA8EFK and Fred KA8EBI, if you would like to run for an office please contact these people.

ANOUNCEMENTS: Condolences to the family of Hank Kohl K8DD SK.

ADJOURNED: 8:04 pm

ATTENDANCE: 17

AF8CS Nick	K8MLH mike	KA8EBI Fred
KA8PQHNeil	KB8KQCBrenda	KC8AZZPeter
KC8RQI Terry	KD8BBF Ed	KG8P Tom
N8KUF Mike	N8RWI John	WA8EFK Dale
WB8FBGRita	WB8JAIBill	WB8SEZ Olimpio
KB8ZRXTJeffrey	WA8ZPWRick	

## Committees

### Classes

Rita Baker WB8FBG

### Club Station

Rita Baker WB8FBG

### DX Net

Olimpio Varsogea WB8SEZ

### Field Day

Jeff Breitner KA8NCR

### Finance

Paul Trouten W8PI (chair)  
Fred VanDaele KA8EBI  
Dale Williams WA8EFK

### HamFest

Fred VanDaele KA8EBI

### Hertzian Herald

Fred VanDaele KA8EBI

### Historian

Nick Peth AF8CS

### Public Relations

Jeff Breitner KA8NCR

### Scholarship

Fred VanDaele KA8EBI

### School Liaison

Eric Worstell KC8QAH

### Programs

open

### Membership

open

### Planning

open

### Property Custodian

open

CHRISTMAS WORD SEARCH WITH A HIDDEN MESSAGE

T	R	A	N	S	C	E	I	V	E	R	W	L	H
F	I	T	S	H	S	R	E	M	L	E	I	A	N
O	H	R	U	S	D	N	E	I	R	F	P	C	L
O	A	A	Y	N	O	M	R	A	H	P	G	I	A
D	P	N	Y	O	E	U	E	T	I	E	H	T	P
G	P	S	N	R	E	R	Y	N	V	N	E	R	T
F	Y	M	A	E	B	R	E	G	L	O	Y	E	O
U	N	I	M	T	T	S	K	R	O	H	M	V	P
N	E	T	P	U	S	N	B	O	V	P	O	E	S
P	W	T	L	P	T	I	A	U	E	L	B	N	Y
E	Y	E	I	M	T	H	E	N	N	L	I	E	A
A	E	R	F	O	H	A	N	D	H	E	L	D	G
C	A	W	I	C	R	E	V	I	E	C	E	R	I
E	R	R	E	T	E	M	R	W	S	Y	E	A	R
M	E	R	R	Y	C	H	R	I	S	T	M	A	S

- MOBILE
- ANTENNA
- RECEIVER
- COMPUTER
- HAPPINESS
- SWR METER
- FUN
- TRANSCIVER
- GROUND
- TUNER
- CELLPHONE
- KEYER
- TRANSMITTER
- FOOD
- PEACE
- BEAM
- HARMONY
- ELMERS
- VERTICAL
- HANDHELD
- MERRY CHRISTMAS
- LAPTOP
- GPS
- HAPPY NEW YEAR
- YAGI
- AMPLIFIER
- LOVE
- FRIENDS

Thanks to Rita WB8FBG for this puzzle.  
Answers Page 6.

**MCRCA Membership/Change of Address Form**

**Monroe County Radio Communications Association** was founded

In May of 1941. Our Purpose is to further the cause of Amateur Radio, to teach fundamentals, code, and to hold classes for the same. To further the exchange of information and co-operation between members, to promote radio knowledge, fraternalism and individual operating efficiency, and to so conduct club programs and activities as to advance the general interest and welfare of amateur radio in the community. Fill out the form below and send it with a check or money order to MCRCA, PO Box 237, Monroe, MI 48162.

NAME: \_\_\_\_\_ CALL: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_

PHONE: \_\_\_\_\_ E-MAIL: \_\_\_\_\_

ADDITIONAL FAMILY MEMBERS \_\_\_\_\_

**DUES:**

**Regular member \$10.00 Add'l Family members (under 18) \$5.00ea.**

Please Check All That Apply:

New Member [ ] Renewal [ ] Address Change [ ]

ARRL member Yes [ ] No [ ]

RRRA member? Yes [ ] No [ ]

If you would like to join the **River Raisin Repeater Association**, please include an additional \$15.00 and we will forward it along with your information to the RRRA .



### Gas Mantles and Amateur Radio

**Harry Heap, G5HF**, was first licenced as 2BZZ in 1932. In this article he tells how he got started in Amateur Radio

As far as I can remember, I started life as a small boy. We lived near Wimbledon Common, which has numerous ponds where, in winter, we skated and when warm enough I sailed my model boats with friends- sailing boats, electric boats and Toc-Tocboats (remember them?).

It was the mid 1920s and I was reading several books about the sea battles of the Great War, the Battle of Jutland, the Battle of the Falklands and two or three more. Looking back at those battles now, I feel that they must have been horrendous, as many thousands were killed and injured in terrible conditions. But to a small boy they looked very exciting and great fun! I was 8 or 9 at the time. I used to day-dream of being able in some magical way to control my model boats so that we could have model sea battles on Wimbledon Common, with guns, smoke, torpedoes and great sinkings.



Then about 1928 I saw an article in *Boys Own Paper* entitled "How to build a wireless controlled model boat." Eureka!! This was it! I assumed that the article described the state of the art on wireless, but I now see that the circuits were the same as Marconi used thirty years earlier, but the advantage was you could make almost all the components needed. The transmitter was spark, using a Ford ignition coil, and the receiver used a coherer, which they said could be purchased from Gamages for five shillings.

The coils were made from the inside of toilet rolls dipped in paraffin wax and the condensers (capacitors to the young) were made from 2lb jam jars lined inside and out with tinfoil. This was REAL tinfoil stripped from the insides of tea chests and beautiful material to handle and solder. No araldite then, so we used Secotine, a glue made from animal bones, very smelly, but a good sticker.

The Ford coil was a wonderful construction, being mounted in a wooden box with dovetailed corners and filled with paraffin wax. Almost bomb-proof and fitted with a trembler on one end, so all you needed was a 6 volt battery. I used a 12 volt battery and got sparks up to 2 inches long with needle spark gaps.

The next problem was how to make a coherer. I couldn't afford 5 shillings to buy one as my pocket money was only about 2 pence per week, and it all went on sweets. So I said to my Dad, "How do I get a coherer and one or two other bits, like relays?" He was manager of a gas mantle factory in Wandsworth and he took me there to get help from the chief engineer and the chief chemist, who were friends of mine as I used to spend time there during school holidays ("We must be nice to him. He's the boss's son"). The engineer machined up a piece of ebonite to make a cup-shaped coherer and fitted it onto an old bell for a tapper.

The next problem-was to get iron filings. Every chemical laboratory had a bottle of "Iron Filings" but this material was made chemically pure by reducing a chemical salt to pure iron but this was much too fine for a coherer. So the engineer said he would file some iron in his workshop. The workshops in those days were very simple as they dealt with either steam or gas engines. so the main tools were the blow-torch and the sledge hammer. but as steel and iron were the main materials the whole place was saturated in oil and grease. Taking an oily file and an oily piece of steel, the engineer produced some beautiful filings liberally coated with oil the chemist degreased them with Ether. Why Ether? I'll explain.

Gas mantles are made from Ramie fibre from China. This is a very fine, strong fibre like a silky kind of cotton and very strong. The mantles were made on knitting machines in many shapes, domes, tubes and the Max Miller. This last one was so-called because Max Miller used to describe a pretty girl as "A little bit, some more and then not quite so much" and this described the mantle perfectly! The knitted mantles were then attached to a clay ring by tying and then dipped in Thorium Nitrate solution. Thorium is radio-active but nobody bothered in those days and although the whole factory was thick in Thorium dust nobody seemed to suffer. My Dad was handling Thorium all his life and lived to 93. He said radiation was good for you! There is no truth in the rumour that the cemeteries in Wandsworth glow in the dark'.

Next the mantles were fired on high pressure gas flames to burn off the fibre and convert the Thorium Nitrate into Thorium Oxide ash, which took up the same shape as the original knitted fibre. Thoria ash has the same strength as cigarette ash and is very fragile, so the finished mantle could not be despatched to all countries of the World and parts of Glasgow. I mention Glasgow because huge quantities of mantles were purchased by the occupants of the tenement buildings where gas lighting was widely used. as it provided heat as well as light. In those days (perhaps even today) it was customary to drink a glass of whisky on Saturday night and they found by bubbling coal gas (containing 30-40% carbon monoxide) through the whisky, the drinker got an extra kick! However, in order to bubble gas through the liquid it was necessary to break the mantle and fit a new one later. Hence good business for Dad.

To protect the mantle during transit, it was dipped in Nuskin which mothers used to treat small cuts and abrasions on their children. It stung like hell when put on an open wound, but in a few seconds it left a film over the wound and kept out the dirt.

Nuskin is a solution of Cellulose Nitrate in Ether. Cellulose Nitrate is also called Guncotton, because it was used as a propellant in the guns of the Great War. Today the police would clear a radius of 5 miles if you reported a tank of 50,000 gallons of Guncotton in Ether; but in those days no one bothered. Father thought it might be a bit dangerous in a factory of 500 girls, so he put it in a little wooden shed. In the 25 years it was there, I never heard of any trouble, though they did call the Fire Brigade to do a test.

They put some Ether in a shallow tray, set it alight and asked the Fire Brigade to put it out. Water was no use at all, so they tried foam which appeared to smother the fire, but in a few seconds the Ether pushed its way through the foam and re-ignited. When the foam finally ran out, the Fire Brigade said "Sorry, we can't help you," so they packed up and went home. So, we used Ether to de-grease the iron filings and a better degreasant you couldn't find because Ether dissolves almost anything!

One day a small procession headed for Wimbledon Common - the chief engineer, the chief chemist and myself with Father tagging along for a laugh. We set the spark transmitter and the boat on the bank, degreased the filings and tested the system. It worked OK. The boat tiller was kept central by a spring and solenoids were fitted to both sides to attract a soft iron strip attached to it. A four way switch operated by a pawl and ratchet allowed selection of the boats heading, position 2 for starboard, position 4 for port and 1 and 3 for ahead. The receiver operated the magnet connected to the switch.

We launched the boat, switched on the 6 volt motor and pointed it out to the middle of the pond. I pressed the key, a burst of wireless waves and the boat started turning to starboard. Another burst and it went ahead. A third burst and it moved to port and a fourth and it went ahead. All worked magnificently. When the boat reached the middle of the pond, someone said "Now try and make it come back." I pressed the key and it turned gently to starboard, but when the boat was pointing straight back to us I pressed the key..... nothing! I pressed the key frantically a dozen times but there was no response. The boat was now turning in tight circles in the middle of the pond.

As we had half expected something might go wrong. An essential part of our equipment was a highly trained dog - "Go fetch, boy!" And off he went. The trouble with dogs is that they are so intelligent. A dog swims under the surface, with only his nose, ears and eyes showing, so to grab a floating boat he has to stretch up and paddle like mad to bring it back. In a few seconds he discovers that by dragging the boat down and flooding it he can swim back comfortably, but all the electrics are drowned and that is the end of experiments for the day.

The trouble (rather obvious today) was that clean, dry degreased iron filings rust over in a couple of minutes in the humid atmosphere which exists just over a pond's surface. Rusty filings don't work a coherer! However, Nickel filings work fine for several days, before they need cleaning with acid.

After several trials we got it working quite well but it was rather long-winded and I got more fun operating the spark transmitter. I had learnt Morse by now and it gave a great sense of power - the loud rasping sound and the thought that you could send messages to the Nation. I never got a reply, probably because I didn't have a receiver.

I bought a copy of Short Wave World and discovered a Telsen kit for making a one valve receiver for receiving the BBC. This used "Reaction" to feed back the output to the input and so increase the signal strength and selectivity, but too much made it oscillate and, to my great joy, I found that it made a noise on Father's receiver. I could now send Morse and interfere with the Stock Exchange reports when Father returned from work. I also read that if you modulate the anode current of an oscillator, you could transmit speech. I had an earphone in the anode circuit of the receiver (not recommended today in case you hear 120 volts) and if I shouted into the earphone when the set oscillated, my Mother could hear me clearly in the other set. I could now make rude remarks to Father when he switched on.

I read somewhere that you needed a licence to do that sort of thing so I joined the RSGB and got an "Artificial Licence" by saying I wanted to carry out experiments on oscillators. Nowadays, we talk of dummy loads, but the term Artificial Aerials suggests dipoles and the like are natural and grow in gardens. My late wife, Pippa, insisted that they did.

A well known amateur John Curnow, G6CW, lived nearby and acted as my Radio Father, so I asked him how to get a full licence. He explained that you had to write a letter to the Headmaster (the Postmaster General) detailing experiments you wished to carry out and that were not possible with the Artificial Aerial. Only propagation and aerial design came in that category, so I chose aerial design and got my licence in 1933 - or to be honest my Father got the licence on my behalf. The Post Office would not write to me direct as I was under 21.

What a charade that licence business was. The terms made it clear you were not allowed to send CQ. You were only supposed to be carrying out technical experiments, so you had to send TEST. The rest of the world knew that TEST meant a British amateur was calling CQ and from then on we chatted to each other, much as we do today. For some reason the Headmaster never found out that the whole system was widely abused and just as well it was, because so many operators were already Morse friendly when WW2 broke out.

If I hear Test today I switch off immediately.

*Harry Heap G5HF*

CHRISTMAS WORD SEARCH WITH A HIDDEN MESSAGE



- |                 |                |
|-----------------|----------------|
| MOBILE          | PEACE          |
| ANTENNA         | BEAM           |
| RECEIVER        | HARMONY        |
| COMPUTER        | ELMERS         |
| HAPPINESS       | VERTICAL       |
| SWR METER       | HANDHELD       |
| FUN             | LAPTOP         |
| MERRY CHRISTMAS | TRANSCEIVER    |
| GROUND          | GPS            |
| TUNER           | HAPPY NEW YEAR |
| CELLPHONE       | YAGI           |
| KEYER           | AMPLIFIER      |
| TRANSMITTER     | LOVE           |
| FOOD            | FRIENDS        |

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### Local six meter nets

Wednesday nights 52.525 fm 9:00pm local.  
Thursday nights 50.270 usb 9:00pm local.  
Saturday nights 50.170 usb 8:00pm local.

73, Frank N8UAS

### Strange radio waves from Saturn

A YouTube video shows the unusual radio waves from Saturn picked up by the space probe Cassini.

The YouTube description reads:

On July 1, 2005 at 01:12 SCET-UTC, Cassini started the engine burn required to insert the spacecraft into orbit around Saturn (SOI).

Almost 30 minutes later, Cassini was occulted by Saturn's rings as seen from the Earth. The geometric ring occultation covered all main ring features, starting at the outer edge of Ring A at 01:42 and ending at the inner edge of Ring C at 02:40. From 01:12 to 03:07, Cassini X-band radio signal (3.6 cm-wavelength) was turned on, primarily to monitor the burn.

The sinusoidal transmitted signal was referenced to the on board ultrastable oscillator, allowing measurement of the signal amplitude and phase at the 70-m ground receiving station of the Deep Space Network at Canberra, Australia. As a useful by-product, a complete ring occultation observation, including free-space baseline, was achieved. Because of the special orientation of the spacecraft during the burn, the Cassini low-gain antenna was used to transmit the signal.

Nominal radio occultations are conducted using the high-gain antenna, hence have intrinsic free-space signal-to-noise ratio (SNR) higher by a factor of ~10,000 than the SOI occultation. Nonetheless, clearly detectable signal was observed during occultation by features in Rings A, Cassini Division, and Ring C, but not Ring B. The measurements, after reconstruction to remove diffraction effects, may be used to obtain an optical-depth and phase-shift profiles of resolved ring features.

Achievable radial resolution primarily depends on the ring-opening-angle  $B$ , available free-space SNR, and occultation geometry. We compare radial resolution achievable for the Cassini SOI occultation ( $B = 24.7$  deg, SNR = 10 dB-Hz) with those of the Voyager ring occultation ( $B = 5.9$  deg, SNR = 50 dB-Hz), and contrast the results with those expected from nominal radio occultations during the Cassini tour. Example optical depth profiles from the Cassini SOI occultation are presented.

Watch Strange radio waves picked up by Cassini from Saturn

[http://www.youtube.com/watch?v=Z9PAxFzxx9M&feature=player\\_embedded#!](http://www.youtube.com/watch?v=Z9PAxFzxx9M&feature=player_embedded#!)

Thanks to **George Boorer ZL3PN** for spotting this.

DX Net, Tues. 8:30pm  
Olimpio Varsogea  
WB8SEZ



The editors of 425 DX News Mauro and Valeria Pregliasco (I1JQJ and IK1ADH) are the first Italian inductees into the CQ DX Hall of Fame (May 07)

till 04/12	HC2/SM6MCW and HC2/SMOCOP: Ecuador	till Aug 2011	RI1FJ: Franz Josef Land (EU-019)	1008
till 04/12	HC2/SM7BUA, HC2/SM6FKF, HC2/SM6LJU:	till Sep 2011	ZD9GI: Gough Island (AF-030)	1011
Ecuador	1019till 05/12 5X1NH: Uganda	till 25/10/11	5B50J: special callsign (Cyprus)	1001
till 05/12	AU2JCB: special callsign 1019	till Nov 2011	9Q6CC: Democratic Republic of the Congo	
till 05/12	LU/F5AHO: Tierra del Fuego (SA-008)	till 31/12/11	BP100: special callsign	1001
till 05/12	VP2MVX, VP2MSC, VP2MFO, VP2MNR: Montserrat (NA-103) 1019	till 31/12/11	BV100: special callsign	1001
till 05/12	VP9/SM3TLG: Bermuda (NA-005)	till 31/12/11	RI1ANC: Vostok station, Antarctica	1019
till 05/12	ZL8X: Kermadec Islands (OC-039) 1019	04/12-04/01/11	K8LJG/4: Amelia Island (NA-138)	
till 06/12	C6AQQ: Bahamas (NA-001) 1020	04/12-05/12	LU/F5AHO: Redonda Island (SA-049)	
till 06/12	CW3TD: Timoteo Dominguez Island (SA-057)	04/12-05/12	TC2LSV: special event station	1022
till 06/12	WHO/WH7C: Mariana Islands 1022	05/12-03/01/11	DU9/DK2PR: Mindanao Island (OC-130)	
till 06/12	XV4SP: Phu Quoc Island (AS-128) 1020	05/12-13/12	J6/K4MK, J6/K8EAB, J6/N4LA, J6/N7UN: St Lucia (NA-108)1005	
till 06/12	ZD9AH: Tristan da Cunha (AF-029) 1014	05/12-13/12	J6/NX8L, J6/W3FF, J6/W4OKW, J6/W7ZT: St Lucia (NA-108)1005	
till 07/12	C6AKQ, C6ARU, C6AUM: Grand Bahama (NA-080)	05/12-07/12	V73TM and V73QQ: Enewetak (OC-087)	
till 08/12	TP60CE: special callsign (France) 1021	05/12-19/12	VK9NN: Norfolk Island (OC-005)	
till 08/12	ZD9T: Tristan da Cunha (AF-029) * by DJ2EH	06/12-13/12	AA4VK/CY0, NOTG/CY0, WA4DAN/CY0: Sable Isl (NA-063) 1020	
till 09/12	ZL7/W1SY and ZL7A: Chatham Islands (OC-038)	06/12-17/12	Z21DXI: Zimbabwe 1021	
till 10/12	C6APT: Bahamas (NA-080) 1020	07/12-08/12	II2IGTO and II7IGPR: special stations	
till 13/12	9Q50ON: Democratic Republic of the Congo	08/12	5K3B: special event station (Colombia) 1022	
till 14/12	VP5/W5CW and VP5CW: Caicos Isls (NA-002)	08/12-13/12	CW5R: Lobos Island (SA-039)	
till 15/12	AT10BP: Maitri Base, Antarctica 967	08/12-11/12	V73RRC: Ujelang Atoll (OC-278)	
till 17/12	3B8/F1BCS: Mauritius Island (AF-049)	10/12-12/12	VK4LDX/p: Magnetic Island (OC-171)	
till 18/12	5R8IC: Sainte-Marie Island (AF-090) 1019	12/12-16/12	V73TM and V73QQ: Enewetak (OC-087)	
till 29/12	CY0/VE1AWW: Sable Island (NA-063)	15/12-31/12	OE40ADXB: special event station	
till 31/12	3ZORADIO: special event callsign 974	16/12-21/12	S21FGC: Bangladesh 1022	
till 31/12	4A1B: special callsign (Mexico) 973	18/12-23/12	PJ7/KCOVKN: Sint Maarten (NA-105)	
till 31/12	4B: special prefix (Mexico) 987	21/12-03/01	H40FK and H40FN: Nendo Island (OC-100), Temotu 1015	
till 31/12	4M200AJ, YV200D, YW200A: special callsigns	24/12-03/01/11	JD1BLY: Ogasawara (AS-031)	
till 31/12	9A10P: special event station 1002	26/12-31/03/11	CE2/CX1EK: Chile 1020	
till 31/12	9A500AA: special callsign 973	30/12-08/01/11	JD1BMH: Ogasawara (AS-031)	
till 31/12	9Q50AR: Democratic Republic of The Congo	December	OJ1ABOA: Aboa Station (Antarctica)	
till 31/12	DR2010L, DR2010O, DR2010N: special callsigns	December	PJ4/PE1MAE: Bonaire (SA-006)	
till 31/12	HA2010S: special callsign 976	December	XR33M: special station (Chile) 1019	
till 31/12	HG30FHA: special event station 994	01/01-31/12/11	II1ITA, II5ITA, II0ITA: special callsigns	
till 31/12	II7IASM and II7IADU: special event callsigns	06/01-01/02/11	DXODX: Spratly Islands (AS-051)	
till 31/12	IR1C: special callsign 984	07/01-22/01/11	CE9/VE3LYC & CE9/PA3EXX: Diego Ramirez Isls (SA-097) 1022	
till 31/12	IR7WFF: Italian national parks 1014	07/01-22/01/11	CE9/VE3LYC & CE9/PA3EXX: Wollaston Isls (SA-031) 1022	
till 31/12	LM50NRK: special event station 976	27/01-08/02/11	VP8: South Orkney Islands (AN-008)	
till 31/12	OE50AMRS, OE50XAM, OE50XCL: special callsigns	January 2011	OJ1ABOA: Aboa Station (Antarctica)	
till 31/12	OE50XCW, OE50XLC, OE50XMA, OE50XRM: special callsigns 991	January 2011	PJ4/PE1MAE: Bonaire (SA-006)	
till 31/12	XR200R: special event station 995	01/02-05/02/11	CN: Herne Island (AF-068) 1019	
till 31/12	YW200ER, YW200L, YW200T: special callsigns	04/02-17/02/11	S9DX: Sao Tome (AF-023)	
till 01/01/11	E51AND: Rarotonga (OC-013), South Cook Islands	22/02-05/03/11	VK9C/G6AY: Cocos (Keeling) Islands (OC-003)	
till 15/01/11	CT7/ON4LO/p: Portuguese lighthouses	February 2011	PJ4/PE1MAE: Bonaire (SA-006)	
till 31/01/11	DT8A: King Sejong Base, South Shetlands (AN-010)	01/03-17/03/11	T30AQ and T30RH: Tarawa (OC-017), West Kiribati 1013	
till 23/02/11	EA8/ON5JV and EA8/ON6AK: Canary Islands (AF-004) 1013	March 2011	9L5MS: Sierra Leone 1005	
till 24/02/11	OR4TN: Princess Elisabeth station, Antarctica	April 2011	T31A: Central Kiribati (OC-043) 1015	
till Apr 2011	9M2MRS: Penang Island (AS-015)	May 2011	T6PSE: Afghanistan 1017	
till Mar 2011	D2SG: Angola 1009			
till 22/04/11	D2QR: Angola 993			
till May 2011	D2AK: Angola 993			
till May 2011	Z58M: Marion Island (AF-021) 993			

## Amateur Radio Examinations Monroe, MI

Monroe County Radio Communications Association Amateur Radio examinations are held the 3<sup>rd</sup> Saturday of every even numbered month at:

**American Red Cross Chapter Bldg.**  
1645 North Dixie Highway  
Monroe, MI 48161

Walk-ins are always welcome.

### 2010 Schedule:

February 20	April 17
June 19	August 21
October 16	December 18

### TESTING BEGINS PROMPTLY AT 9:00 AM

Applicants are expected to have all forms filled out and be ready to take tests at that time. Coffee and doughnuts are available at 8:30 AM. For more information or to make reservations, call Paul Trouten - W8PI at 734-854-2224

### Join us at the next meeting

December 16th at 7:30 pm  
American Red Cross Chapter Bldg.  
1645 North Dixie Highway  
Monroe, MI 48162

### Local Nets

**ARPSC Net** - Every Monday evening on '72-Monroe (146.72 Mhz) starting at 9:00pm.

**DX Net** - Every Tuesday evening on '72-Monroe starting at 8:30pm.