

RCA AMATEUR RADIO CLUB

APRIL, 2013 MONTHLY NEWSLETTER INDIANAPOLIS, IN

THE NEXT MEETING OF THE RCA AMATEUR RADIO CLUB WILL BE
TUESDAY, APRIL 9th, 6:30 PM AT [G.T. SOUTH'S](#),
5711 E. 71st STREET, INDIANAPOLIS, IN

RCA ARC NEWS

SUMMARY OF THE MARCH MEETING – Thanks to all those who attended to 12-March meeting. Some positive progress has been made on getting our Echolink connection for the repeater. A big thank you to Terry Evans, WD9HQB, for donating and installing connectors on a fiber cable for us. One big hurdle out of the way! A couple of Field Day Sites are under consideration for the W9RCA/W9JP joint operation. Camp Belzer and the Children's Museum are under consideration. The Indy Radio Club is again chartering a bus to the Dayton Hamvention on Saturday, May 18th. See the IRC website for details (www.indyradioclub.org). The RCA Club will again meet for dinner after the Hamvention closes on Fri, May 17th evening. K9RU discussed the plans for the W9IMS special event station operation during May. Plans are being made to operate one of the stations by remote control. Other discussions involved terrestrial OFDM TV, white spaces, and related subjects.

NEXT TEST SESSION: Saturday, 04/13/2013, 12:00 PM (Walk-ins allowed)

Location: Salvation Army EDS Training Facility, 4020 Georgetown Rd., Indianapolis IN 46254

Sponsor: Indianapolis Radio Club, W9JP

Contact: James K. Rinehart, K9RU **Phone:** (317) 495-1933 **Email:** k9ru@arrl.net

INDIANAPOLIS RADIO CLUB BUS TO THE DAYTON HAMVENTION– The Indianapolis Radio Club will have a bus going to Dayton again this year. This is a great way to go, no worries about parking with drop off and pick up at the Hamvention. And, you can drop off purchases at the bus during the day.

The date this year will be Saturday, May 18. The bus leaves Indy at early-AM and return Indy at 7PM. It will stop at the Richmond McDonalds for breakfast and at MCL at Richmond for dinner on the return trip (meals not included in price of the ticket). Tickets are \$30.00 per person; roundtrip, No Refunds. Contact: Rhonda Curtis, WS9H for tickets.

Pick up will be at 2 locations :

- ♦ **1st.** South Side.... Departure : at **6:30AM "Southern Plaza"** Just north of I465 & South US31 (west side of US31) , Southern Plaza; PARK just south of PIZZA HUT parking lot.
- ♦ **2nd.** East side.... Departure : at **7:00AM** Just East of I465 & US40 (East Washington street), [Us 40 & Franklin Rd.] Use Parking Lots south side of US40, (East Washington Plaza "**Peddlers Mall**").

INDIANA QSO PARTY – The Indiana QSO Party starts at 1600 UTC Saturday and ends at 0400 UTC Sunday, May 4 – 5. (Saturday noon to midnight EDT or 11am to 11pm CDT). The objective is to work all the 92 Indiana counties and contact Amateurs worldwide as possible on the 160, 80, 40, 20, 15 and 10 meter Amateur bands. All stations may operate the full 12-hour period.

You can operate from your home station, portable or mobile (rover). There will be other QSO parties the same weekend: W7 and New England. N1MM software will allow you to work and log all three at the same time.

The INQP is a great time to work on your [Worked All Indiana Award](#). It only takes 60 confirmed counties to earn the initial certificate. Your INQP QSOs count as confirmed QSOs toward your WAI. Just indicate the INQP QSOs on your GCR, and we'll use your submitted log to [confirm](#) the QSOs. Rules: www.hdxcc.org/inqp/rules.html List of county abbreviations: www.hdxcc.org/inqp

REMEMBER THIS LUSO TOWER ON DISPLAY AT THE DAYTON HAMVENTION? – Take a look at this web site <http://www.lusotower.com/KM8AM.html> this is the tower on display at the 2010 Dayton Hamfest and now installed in Ohio. Can you imagine having this in your yard?? Thanks, Bill, K9YDO.

HAMFESTS, OPERATING EVENTS & TESTING

Apr 13	Columbus Hamfest, http://www.carcnet.org/
Apr 20	North Central Indiana Hamfest, http://nci-hamfest.net/
Apr 21	Rookie Roundup – Phone
May 4-5	Indiana QSO Party (INQP) http://www.hdxcc.org/inqp/rules.html
May 17-19	Dayton Hamvention, Hara Arena, Trotwood, OH
June 8-9	June VHF Contest
June 22-23	Field Day
July 13	Indy Hamfest, Marion Co. Fair Grounds

All dates, unless otherwise stated, are UTC.

<http://www.arrl.org/contest-update-issues> Contests updates

<http://www.hornucopia.com/contestcal/> WA7BNM Contest Calendar

<http://www.arrl.org/special-event-stations> ARRL Special Event Stations page

http://www.arrl.org/exam_sessions/search ARRL training page for test sessions

<http://indyhams.org/events/> Indiana events and public service opportunities.

DAYTON HAMVENTION® ANNOUNCES 2013 AWARD WINNERS

The Dayton Amateur Radio Association (DARA) -- host of the [Dayton Hamvention®](#) -- has announced the [winners of its four annual awards for 2013](#): the Amateur of the Year, the Technical Excellence Award, the Special Achievement Award and the Amateur Radio Club of the Year. These recipients will be honored at Hamvention in May. Each year, DARA invites the amateur community to nominate hams who have made significant contributions to the Amateur Radio Service.

Amateur of the Year Mustapha Landoulsi, DL1BDF, was named the Dayton Hamvention Amateur of the Year for 2013. Landoulsi -- for many years a fixture at the DARC table at Hamvention -- has been instrumental in promoting Amateur Radio all over the world. Fluent in Arabic, French, German and English, Landoulsi has worked tirelessly to bring radio amateurs together in the Middle East, Africa and other parts of the world. He established six Amateur Radio stations in Tunisia and continues to help re-establish them after the Arab Spring, the pro-democracy uprisings in the Middle East and North Africa that began in December 2010. As a pilot for Lufthansa Airlines, Landoulsi has organized the delivery of emergency medical equipment and medicine to African countries. The Amateur of the Year Award is given to an well-rounded radio amateur who has contributed to and made a long term commitment to the advancement of Amateur Radio.

The Technical Excellence Award: DARA named two radio amateurs -- Dave Witten, KD0EAG, and David Rowe, VK5DGR -- as the recipients of its 2013 Technical Excellence Award. Recognized for their [FreeDV](#) software -- a GUI application for *Windows* and *Linux* systems that allow any SSB radio to be used for low bit rate digital voice -- Witten and Rowe developed *FreeDV* using open source Codec2 software. The Technical Excellence Award is given to an amateur or amateurs who have made an outstanding technical advancement in the field of Amateur Radio.

The Special Achievement Award: George Thomas, W5JDX, was named the winner of the 2013 Special Achievement Award for his work on [Amateur Logic TV](#) and [Ham Nation](#), both Internet-only broadcasts featuring Amateur Radio. Thomas -- who co-founded *Amateur Logic TV* in August 2005 -- serves as the show's producer and co-host. He has produced the "Smoke and Solder" segment on *Ham Nation* for more than 80 episodes. The Special Achievement Award is given to an amateur or amateurs who have made an outstanding contribution, usually spearheading a single, significant project, to the advancement of Amateur Radio.

Amateur Radio Club of the Year: The West Palm Beach Amateur Radio Group in West Palm Beach, Florida was named the 2013 Amateur Radio Club of the Year. The club was selected based on its contribution in mitigating the effects of disaster situations, support of public service events, Amateur Radio education and recruitment, youth programs, years of service and number of members. The selection committee noted the club's work with the South Florida Science Museum, youth recruitment, ARISS participation in the ARISS program and training classes.

The 2013 Dayton Hamvention is scheduled for May 17-19 at Hara Arena in Trotwood, Ohio, located just outside Dayton. --**ARRL Letter**

FCC GRANTS ARRL'S REQUEST FOR TEMPORARY WAIVER FOR TDMA SYSTEMS

Acting upon a [subsequent request by the ARRL](#), the FCC issued an *Order* ([WT Docket No. 12-283](#)) on March 25, granting a temporary waiver to transmit communications on amateur service channels above 30 MHz using single time-slot Time Division Multiple Access (TDMA) systems. The temporary waiver was granted pending the resolution of a related rulemaking proceeding ([RM-11625](#)).

Currently, amateur stations are authorized to transmit messages using telephony and data emissions. The ARRL noted in its request that Amateur Radio Service licensees have recently established numerous narrowband repeater facilities using multiple time-slot TDMA repeaters and single-slot TDMA handheld digital transceivers in the 70 centimeter (420-450 MHz) band, but Part 97 as it currently stands does not permit amateur stations to transmit single-slot TDMA emissions on Amateur Radio Service channels above 30 MHz.

The FCC stated in its *Order* that the purpose of specifying emission designators for the Amateur Radio Service "is to relegate the transmission of certain inharmonious emission types to different segments of the frequency bands, while still allowing great flexibility in the types of emissions that may be transmitted by amateur stations." In granting the temporary waiver, the FCC agreed with the ARRL, noting that the digital systems that radio amateurs have recently implemented are "compatible with existing amateur repeater channelization plans."

The FCC also noted that allowing FXE and F7E as phone emissions and emission type FXD as a data emission "is unlikely to result in inharmonious emission types being used in the same segments of the frequency bands. We also conclude that allowing amateur stations to transmit these emission types is consistent with the basis and purpose of the amateur service, specifically to continue to contribute to

the advancement of the radio art. We conclude that good cause has been shown for temporary waiver of Section 97.3(c)(5) to allow amateur stations to transmit emission types FXE and F7E as a phone emission and Section 97.307(f)(8) to allow amateur stations to transmit emission type FXD as a data emission. We therefore waive these rules accordingly, conditioned on the outcome of the pending rulemaking proceeding.” --**ARRL Letter**

BOB BRUNINGA, WB4APR, TAKES APRS UNDERGROUND

Bob Bruninga, WB4APR, led a group of radio amateurs earlier this month to Mammoth Cave -- the world's longest known cave system -- at [Mammoth Cave National Park](#) in Kentucky to test how the Automatic Packet Reporting System ([APRS](#)) can be used as a [means to extend radio communications underground](#). “When used underground, VHF and UHF radios can only work within a few hundred feet of each other and only when in the line of sight of another radio,” Bruninga explained. “This makes routine use of these radios of little value when underground; however, when APRS radios act as packet digipeaters, these few hundreds of feet can be extended by an order of magnitude.” Bruninga, a senior research engineer at the US Naval Academy, developed APRS as a global, on-air protocol for supporting handheld position reporting and text messaging via VHF radio.

Bruninga's team used 14 APRS radios to establish a network that provided real-time position and text message communications along a route nearly a mile long in the cave. “Cavers carried a cave map that had a latitude and longitude grid so that they could know their exact coordinates when manually entering their position into their handheld transceivers,” Bruninga said. “Texting via APRS provided communications end-to-end, and even included e-mail into the topside global APRS system.” The team set up the APRS network in what Bruninga called “large subway-sized cave passages” that were 30-50 feet wide and 10-20 feet tall.

Bruninga said that extending the communications system along the cave was easy: “We would walk until we lost the signal, then back up 20-30 feet and set a digipeating APRS handheld transceiver on a rock and then keep going, repeating the process. This proved to be far more convenient than current methods, such as dragging along a World War II-era twisted pair phone line and Army field phones, or using HF and LF systems with their large antennas.”

After going over the data from the cave test, Bruninga found two interesting facts: Even with the average link between each radio at 450 feet, UHF outperformed VHF by about 13 percent. In addition, power did not make much of a difference, with the APRS-compatible handheld transceivers performing as well as several portable 10 W mobile radios. “One of the advantages of using UHF for this APRS network was that individual links in other caves can just as easily be pre-tested by cavers without an Amateur Radio license by using an inexpensive Family Radio Service (FRS) radio,” Bruninga noted. “This way, cavers can plan and individually test the topology of an APRS network before actually gathering the APRS equipment and setting up the actual expedition.”

Bruninga said that APRS radios bring “a new range multiplier dimension to in-cave communication. In the past, a paltry few-hundred foot VHF/UHF radio range has not been impressive to cavers, but now with APRS, they can be linked up to 14 times in series, demonstrating some real potential for ham radio caving support. This is especially true when some of those few-hundred foot distances may take an hour or more to crawl, whereas APRS can get the message through at the speed of light.”

Bruninga welcomes cavers who have VHF/UHF-range data experience with other types, sizes, shapes and humidity of cave passages to contact him via [e-mail](#). --ARRL Letter

ARRL ANNOUNCES A CAMPAIGN FOR ITS SECOND CENTURY

As the ARRL draws closer to celebrating its Centennial in 2014, its Board of Directors has launched an [unprecedented \\$10 million fundraising initiative to build the ARRL Endowment and strengthen the organization's financial future](#). Led by the ARRL Board and an eight-member Second Century Campaign Committee -- headed by David W. Brandenburg, K5RQ -- the campaign has already raised more than \$4 million toward this goal. Plans are to reach that goal by the end of ARRL's centennial year in 2014.

"Plans for this campaign have been brewing for several years," said ARRL Chief Development Officer Mary Hobart, K1MMH. "Now the campaign is a reality and it has already made significant progress toward that ambitious \$10 million goal. The ARRL Board of Directors, the Second Century Campaign Committee and dozens of leaders in the Amateur Radio community have already contributed generously. Over the course of the campaign, all ARRL members and interested radio amateurs will be invited to join the campaign and embrace the campaign's vision."

Hobart explained that contributions and pledges to the campaign are all included in the ARRL Endowment as a "savings account." Contributions will be invested to spin off earnings to support ARRL operations on an annual basis. The ARRL Endowment -- created by the Board of Directors in 2003 -- includes funds that mirror the vision of the Second Century Campaign.

"The vision of the ARRL Second Century Campaign is to secure significant financial resources that will open a path to passionate involvement in Amateur Radio for new generations," she said. "In this, it will provide opportunities for educational enrichment, community service and personal achievement through the exploration and use of the magic of radio communication."

In its second century, the ARRL Endowment will fund a permanent commitment to the following objectives:

To build upon its historic role as a responsive, flexible and progressive organization dedicated to the promotion and advancement of the art, science and enjoyment of Amateur Radio.

To organize, promote and manage a national program to offer a 21st century experience to young people as they build skills in scientific and technological discovery through Amateur Radio in a safe, competitive and collaborative environment for their curiosity and creativity.

To enhance Amateur Radio's capacity to serve local, national and global communities by applying and sharing our radio communication skills, technical knowledge and volunteer ethic in response to disaster and in public service communications.

To increase Amateur Radio's capacity to serve local, national and global communities by sharing our radio communication skills and knowledge, and by strengthening and expanding partnerships with organizations pursuing similar or complementary goals.

To commemorate the contributions and accomplishments of the Amateur Radio community since 1914.

"The world of Amateur Radio is rapidly changing," Hobart said. "New technologies and new challenges are sure to be a part of the organization's future. The ARRL must be financially prepared to face what lies ahead. Even though we cannot predict that future with any certainty, the organization will need to adjust to ensure its service to Amateur Radio. By increasing the ARRL Endowment, the League's financial position will be stronger and the organization will be able to continue its dedication to members and to Amateur Radio."

Hobart knows that each radio amateur has his or her personal story to tell. "Those stories are similar in many cases," she explained. "Many current ARRL members tell us that they earned their first license in their early teens when it gave them an outlet for their curiosity and interest in science. Since those first years, many members have found both vocations and avocations that have led them on a path to professional success. A gift to the ARRL Endowment encourages members who have enjoyed pleasure and success because of their involvement in Amateur Radio, ensuring that the ARRL will be there to support radio amateurs in the years ahead."

More information and updates on the progress of the campaign will be included in *QST*, on the ARRL website and in other communications. --ARRL Letter

SHORTS

AMATEUR RADIO AT THE NATIONAL ASSOCIATION OF BROADCASTERS CONVENTION – The ARRL will be promoting Amateur Radio at the annual convention of the National Association of Broadcasters -- NAB Show -- scheduled for April 6-11 at the Las Vegas Convention Center. Members of the Las Vegas Radio Amateurs Club will staff the ARRL booth at NAB, providing attendees with information about Amateur Radio. The booth also serves as a meeting place for radio amateurs attending the convention where they can talk with local leaders, as well as ARRL Pacific Division Director Bob Vallio, W6RGG. Arrangements for the ARRL booth are being provided by NAB Science & Technology Vice President John Marino, KR1O. Read [more](#). --ARRL Letter

NATIONAL TRAFFIC SYSTEM DEVELOPER GEORGE HART, WINJM (SK) – George Hart, WINJM -- the chief developer of the National Traffic System -- passed away Sunday, March 24. He was 99. An ARRL Charter Life Member, Hart spent more than four decades as a member of the ARRL Headquarters staff and continued to be an active amateur and regular participant in Field Day. In 1984, the ARRL Board of Directors named Hart as an ARRL Honorary Vice President.

First licensed in 1929 as W3AMR in Pennsylvania, Hart began his ARRL career in August 1938 as a second operator at the W1AW Maxim Memorial Station, which was new at the time. He took over as Acting Communications Manager in 1942 when then-Acting Communications Manager John Huntoon, W1LVQ, left the ARRL for active duty in the US Coast Guard during World War II. Beginning with the December 1942 issue, Hart contributed almost 1000 articles to *QST*, with topics ranging from public service to simulated emergency tests to traffic handling pointers; he also penned the monthly columns "Operating News" and "Amateur Radio Public Service." Hart served in the Army Air Force from 1944-1946, returning to his job as a Communications Assistant at ARRL Headquarters under Ed Handy, W1BDI, after the war. During his tenure at the League, Hart served as Communications Assistant, National Emergency Coordinator and ultimately as Communications Manager from 1967 until his retirement in 1978. Read [more](#). --ARRL Letter

CHANGES COMING TO THE LEADERSHIP AT THE FCC - This as Chairman Julius Genachowski announces his plans to step down from his post in the coming weeks. Genachowski, a Democrat, was nominated by President Obama and confirmed for the post by the Senate in 2009. The announcement of his departure comes only a few days after Commissioner Robert McDowell announced he was stepping down from his FCC post. McDowell was the first Republican appointed to an independent agency by President Obama.

According to the on-line newsletter Politico, Genachowski's decision was predicted for months and was likely to come the same week McDowell was to announce that he was resigning. Politico added that since nominations for agencies like the FCC are paired by political party, leaving one seat on the commission for a Democrat and one for a Republican would smooth the path for the new nominees.

The FCC is led by five commissioners who are appointed by the President and must be confirmed by the Senate. They each serve a five year term. (Politico.com and other news sources)

FCC REDUCES PENNSYLVANIA HAM'S FINE – After affirming it was going to uphold a forfeiture in the amount of \$4000 to Jose Torres, N3TX, of Philadelphia, Pennsylvania, the FCC decided to lower the fine to \$3500. The FCC issued the fine in May 2011, saying that Torres' willful and repeated operation on an unauthorized frequency in April and June 2008 was in violation of Section 1.903(a) of the FCC's rules. Torres filed a *Petition for Reconsideration* in July 2011, asking that the FCC cancel or reduce the fine based on his inability to pay the full amount. Read [more](#).
--ARRL Letter

FCC ENFORCEMENT NEWS: ALLEGED DELIBERATE INTERFERENCE LEADS TO \$25,000 FINE FOR FLORIDA HAM – On March 1, the FCC issued a Notice of Apparent Liability for Forfeiture (NAL) in the amount of \$25,000 to Terry L. VanVolkenburg, KC5RF, of Cocoa, Florida. The FCC alleged that VanVolkenburg "apparently willfully and repeatedly violated Sections 301 and 333 of the Communications Act of 1934, as amended..., by operating a radio transmitter without a license on...465.300 MHz and for interfering with licensed communications." VanVolkenburg holds an Advanced class license.

According to the Commission's Forfeiture Policy Statement and Section 1.80 of the rules, the base forfeiture amount for operation without an instrument of authorization is \$10,000, and the base forfeiture amount for interference is \$7000. In assessing the monetary forfeiture amount, the FCC must also take into account statutory factors that include the nature, circumstances, extent and gravity of the violations, and with respect to the violator, the degree of culpability, any history of prior offenses, ability to pay and other such matters. "We find Mr VanVolkenburg's misconduct particularly egregious because his unlicensed operation involved willful and malicious interference to the communications of the Brevard County Sheriff's Department, which included threats against the officers, after being told (multiple times) to cease his interfering communications," the FCC stated in the NAL. "Thus, we find that an upward adjustment of \$8000 to the combined base forfeiture of \$17,000 is warranted. Applying the Forfeiture Policy Statement, Section 1.80 of the rules and the statutory factors to the instant case, we conclude that Mr VanVolkenburg is apparently liable for a forfeiture in the amount of \$25,000." Read more here. --ARRL Letter

US POSTAL SERVICE INTRODUCES GLOBAL FOREVER STAMP – In addition to an [increase](#) in postal rates in January 2013, the US Postal Service introduced a new [Global Forever First-Class Mail International stamp](#). Priced at \$1.10 each and offered in a pane of 20, the *new* stamp offers a single price for any First-Class Mail International 1-ounce letter to any country in the world, as well as 2-ounce letters to Canada. The stamp is available [online](#), at post offices in the US or by calling 1-800-782-6724. --ARRL Letter

REP. GREG WALDEN, W7EQI TO DISCUSS TV SPECTRUM AUCTION AT NAB - Top government officials, including Representative Greg Walden, W7EQI to address public policy issues related to media, entertainment and technology at NAB, Show in Las Vegas, April 6-11. Topics will include the FCC implementation of television spectrum incentive auctions, retransmission consent, media ownership rules and content streaming regulations.

IF YOU HAVE MORE THAN ONE MANUFACTURER'S HANDHELD RADIO - you'll be glad to hear of an open source tool used to program different radios called [CHIRP](#). At the moment it covers the basic programming needs - frequency, tone, offset, etc - of a wide variety of handhelds. Since it is an open source project, there may be additional features added in the future.

AS MANY OF US DISCOVERED THROUGH OUR EARLY HAM RADIO ADVENTURES, AN FCC LICENSE CAN ALSO LEAD TO A PROFESSIONAL CAREER. The burgeoning population of makers is also finding this out as in the EDN article, "[DIY movement Sparks Engineering Education](#)" by Louis Frenzel W5LEF. This article is one of several recent articles about

education and engineering in Frenzel's [blog](#).

This [video from AMSAT-UK](#) is an excellent interview describing NASA's CubeSat Launch Initiative and how it enables students and professionals to launch their own satellites.

A [HANDY TOOL FOR CONVERTING A STREET ADDRESS INTO LATITUDE/LONGITUDE COORDINATES](#). It is useful for determining locations for propagation prediction and other programs based on FCC database address records or for your own location.

SCOTT, N3FJP ANNOUNCES THE RELEASE OF [VHF Contest Log 4.0](#), replacing both VHF Contest Log 3.0 and VHF Network Log 2.5. The new program supports both Fixed and Rover stations for the ARRL VHF+ contests and CQ World Wide VHF.

MANY DIGITAL CONTESTERS ARE AWARE OF DL4RCK'S RCKSKIMMER SOFTWARE, (<http://www.walter-dallmeier.de/software-by-dl4rck/rckskimmer/>) which allows skimming of RTTY and other digital signals by scanning for them with a conventional receiver. Now Wes, WZ7I has come up with an ingenious way to generate seven bands of CW spots and two additional bands of digital spots, all from a single QS1R receiver. The [Reverse Beacon Network](#) is ready for digital spots - this will definitely increase the number of spots available to digital DXers and contesters worldwide. (Thanks, Pete N4ZR)

UK SAYS AM RADIO TO GO AWAY BY 2016 - On the other side of the globe, broadcast AM radio for emergency alerts appears to be on its way out in the United Kingdom. This even though at present it remains the quickest and easiest way to reach the masses in time of national crisis. UK Government reports indicate an intention to abandon AM broadcast radio for emergency communications and to phase-out AM broadcasting from 2016.

The report Impact of a Radio Switchover on the Government's Emergency Communications Policy says that the coverage of AM services are near universal across the UK, delivered by a small number of transmitters which could more easily be restored in the event of a national disaster. However, while AM services are universally available, the number of households which both have access to and choose to access such services is on the decline. --Amateur Radio Newline

BBC WORLD SERVICE REDUCES SHORTWAVE BROADCASTS - A new schedule with reduced shortwave [transmissions](#) begins on April 1st. As part of the change shortwave and medium wave transmissions in English will be reduced to a minimum of 6 hours in total each day. You can read the full BBC announcement at tinyurl.com/BBC-World-English, (Southgate, BBC)

INTERNATIONAL MARCONI DAY - will take place on April 20th. For more information and to see which stations are taking part in this event please take your web browser to www.gb4imd.com. (IARU)

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