



SOLID COPY

The monthly Newsletter of the Monongalia Wireless Association
Morgantown, West Virginia

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Co-Editor: Bill Jacobs, WA8YCG

Corrections

Please change the article that has the information about Solid Copy by e-mail to my e-mail. You can use N8TJM@arrl.net

Norene N8TJM

Next Meeting

MWA Club meeting April 16 will be in Room G-39 of the WVU Engineering Sciences Building. The MWA meeting is the third Tuesday of the month.

Solid Copy via Email

Solid Copy by email. It's for you ! More and more members are opting to get Solid Copy by email. Why?

- 1) It's prettier in color.
- 2) Delivery is fast.
- 3) It's anthrax-free.
- 4) Each email member saves the club 75¢ per month in printing and postage. If you want email delivery, send Norene Arnold an email at N8TJM@arrl.net giving her the email address where you want it delivered.

Field Day Rule Change

The ARRL has announced a change to the field day rules. They have added a new "Get-On-The-Air" station category. The station may make 400 QSO's and does not count as a transmitter. The intention of

the new station position is to provide an operating space for un-licensed people to have fun at field day.

Code Class!!

If any person is interested in a MWA Morse code class, one has forming. Talk to Bob, WA8YCD. It meets on Thursday, in room 355 of the Engineering Sciences Building. The primary interest is with Tech licenses wanting to upgrade.

Thanks Bob, WA8YCD wa8ycd@arrl.net

Notes on the code class

While the class was intended to be a Morse code learning experience, discussion on other subjects were entrained. Some discussion on satellite work following the program at the last meeting and code practice were mentioned. Randy, N8OZY, offered to archive some nice programs on one of his web sites. You can check out <http://crowe.geo.wvu.edu/ham/> for interesting ham radio related information.

Thanks Randy, N8OZY

Operating Tips and Anecdotes for the HF Operator

by Rich, W8PT

This month's tip comes from a local HF user who casually operates on evenings and weekends, mostly on 10M and 20M with a dipole and 100 watts.
"Hey Rich, last week (March 20th) I was tuning around 10M SSB after work (2100Z) and answered

a CQ from a station in California. Our frequency was exactly 28.504 mhz and he was 5 and 8 on my Kenwood and the band was pretty quiet. About 10 minutes later, all of a sudden, we both get bombarded by stations from all over the US giving their callsigns. In just a minute or so we could hardly hear each other so we had to QRT. What was going on? Why were they giving only their callsigns?"

Thanks for that question. Based on the operating frequency, time of day, and what you reportedly heard I'd say that what probably happened was that one of the two current big DXpeditions came on SSB and operated in a mode called "split". This past week saw the start of two large DXpeditions: San Felix Island (callsign XR0X) and Ducie Island (VP6DI). VP6DI is a brand new entity (country) so everyone in the world who chases DX will be going after it. That's a pileup, and these pileups can be dozens of khz wide.

DXpeditions almost exclusively use split operation. This means that they transmit on a set specific frequency, say 28.495 mhz or 14.025 mhz and listen either up or down from that frequency. Usually, the DX station will announce where he/she is listening. They may say, "VP6DI listening 500 to 510" or simply "QRZ up". So on March 20th, VP6DI came on at 28.495 and immediately started working stations split. Once the fact that Ducie Island was spotted on 10M (BBS and the internet) literally hundreds of stations would move there and try and work the "new one". This is why you only heard the callsigns of the stations calling them (with recognized DX protocol, you don't give the callsign of the DX station, just your own). The DX station then scans up and down picking out stations that they can readily copy. Sometimes the pileups are so great that individual callsigns are nearly impossible to make out ... the same holds true for CW and RTTY modes. I can imagine that it must have been overwhelming for you and the CA station when the hordes of stations began descending on the DX. Here's an important tip involving split operation never tune up on the DX's transmit frequency (in the above example, 28.495). Lots of guys seem to do

this ... it creates QRM and stations trying to hear the DX are often blocked out by some "local" tuning up their KW. Operate smart - go below the DX (if he's listening up) say around 28.480 and do your on-the-air fine tuning. Then check your VFOs to make sure that when you do transmit, it is where the DX will be listening.

In further articles, I'll detail more operating tips for the other bands/modes too. If there is something about operating in the HF spectrum that you'd like to have discussed, feel free to drop me a line at w8pt@qcol.net. 73s, Rich, W8PT

LIGHT BENDS MAGNET

Previously, directed light has produced a magnetic response in metallic materials but physicists at Ohio State are now the first to produce light induced magnetization in an organic material. The material, tetracyanoethylene (TCNE), was exposed to blue light which caused the magnetization to increase by as much as 50%. The new magnetism could then be undone by green light. The researchers (Arthur Epstein, 614-292-1133, epstein@mps.ohio-st.edu) believe that the light can be selectively targeted to domains as small (or smaller) as the wavelength of the light itself, thus possibly enabling information storage. Currently a magneto-optic effect is used to store information, but only in the write mode. The new process promises to offer both reading and writing capability. As usual, the benefits of using plastic electronic components include flexibility, low cost, and tunability.

(Pejakovic et al., Physical Review Letters, 4 Feb; text at www.aip.org/physnews/select)

Editors Note:

Think about this as a way to make memory that is written with a light. A very fast nonvolatile memory.

Bill WA8YCG

Special Olympics Time

Special Olympics will be held on June 7, 8, and 9, 2002. Mike Palmer K8LG will lead the expedition. The Olympic Village will again be at the WVU

Coliseum. If history is any indicator, 10 radio operators will be needed to handle the communications duties. If you want to help and have a good time please return the enclosed sign up form to Norene, N8TJM

State Radio Council Meeting

WA8YCD reported that the next State Radio Council meeting will be Saturday May 2, 2002 at the Weston Western Steer. This is about 1 1/2 miles east of I-79 on route 33.

WV QSO party

The WV QSO party will be June 15, 2002. For details see QST of later in Solid Copy.

TESTING IN THE AREA

The next test session sponsored by the MWA will be at 7:00 PM on April 25, 2002. It will be in room 355 of the engineering Sciences Building.

The Uniontown Amateur Radio Club, W3PIE, also conducts tests on May 5th. Plan to arrive at the club before 2 PM. Technician, General, and Extra exams will be available. Walk-ins are welcome.

A Simple Crystal Controlled Transmitter

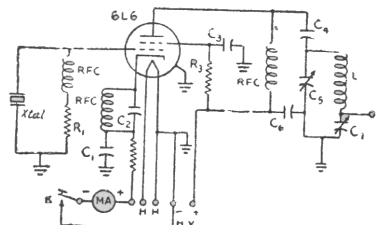


Fig. 1302 — Circuit of the crystal-oscillator transmitter.
 C₁, C₃, C₆ — 0.01- μ fd. paper.
 C₂ — 100- μ fd. mica.
 C₄ — 0.001- μ fd. mica.
 C₅, C₇, 250- μ fd. variable (National STH250).
 R₁ — 7500 ohms, 1/2 watt.
 R₂ — 200 ohms, 2 watts.
 R₃ — 15,000 ohms, 2 watts.
 RFC — 2.5-mh. r.f. choke.
 L — 1.75 Mc. — 65 turns No. 22 d.s.c., close-wound.
 3.5 Mc. — 32 turns No. 20 enam., 1 1/2 inches long.
 7 Mc. — 16 turns No. 20 enam., 1 1/2 inches long.
 All coils wound on 4-prong Hammarlund coil forms, 1 1/2 inches in diameter.
 A — Antenna terminal.
 K — Key.
 MA — Milliammeter, 100- or 200-ma. scale.
 Xtal — Crystal for desired frequency.

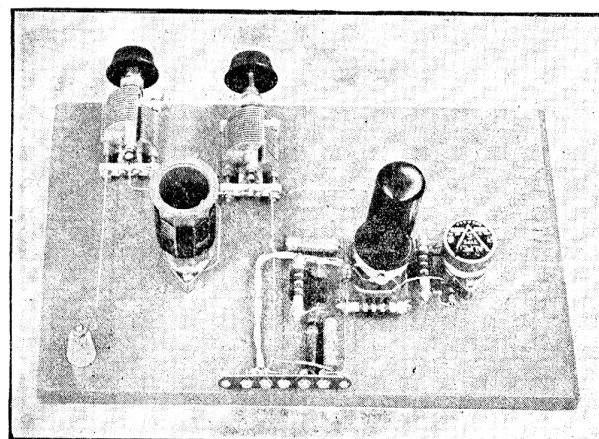


Fig. 1301 — A simple "breadboard" crystal-controlled-oscillator transmitter which is capable of a power output of approximately 10 watts.
 Thanks ARRL Handbook 1946

Using a Computer and Sound Card for Digital Modes in Ham Radio Jan Ditzian, KX2A

Computers are as common as cw keys in ham radio stations (perhaps more common). Every ham with computer with a sound card and an SSB-capable radio can add a number of operating modes to his or her station's capabilities. Additional hardware can be purchased (in the \$100 and under range) or built (in the \$5 to \$15 range). As for software, there is a free version of almost everything, and much of the free software is the best you can get.

Let's first consider what digital modes are operable

ANOTHER NEW HALLICRAFTERS

With features every ham wants

Hallicrafters S-38 about \$30.00 in 1950

with a setup using a computer, sound card, and radio: PSK31, RTTY (Baudot radioteletype), SSTV (slow-scan TV), packet, MTTY, Throb, Hell (Hellschreiber), MFSK16, MT63, and Amtor/Pactor FEC, are some of those modes.

The sound card operates these modes by modulating your radio in SSB mode. You connect the audio output of the sound card (the line that goes to your speakers) to the audio input of your radio (either the microphone input, or a back-panel input provided on many modern radios). This allows you to send the digital mode while your radio is in SSB mode. The sound card acts as a D/A (digital to analog) converter, changing the digital operation of the computer into an analog signal that modulates your radio with the tones needed for the mode.

Reception of digital signals also uses the sound card, but this time as an A/D (analog to digital) converter, changing the analog signal from the speaker, headphone, or back-panel output to a digital signal usable by the computer.

You may also have heard of an interface between the sound card and the radio. There are commercial interfaces, but you can also build one. The interfaces have a number of purposes, depending on what you want and need, but they got popular because they all do one important thing—they reduce the voltage of the analog signal output from the sound card, the one that modulates the radio during transmit, to a level that can be handled without distortion by the audio input of the radio.

In our next discussion, we'll look at how we can generate digital signals using the sound card in a computer and using that as the input to a single-sideband transmitter.

Contest for the Month of April

VHF Spring Sprints--CW/SSB--sponsored by the Eastern Tennessee DX Association as follows: 50 Mhz--2300Z May 11 through 0300Z May 12; 144 Mhz 7-11 PM local time, 1 Apr; 222 Mhz--7-11 PM Apr 9; 432 Mhz--7-11 PM Apr 17; Microwave--902 Mhz and higher--6 AM-1 PM May 4. Fixed and Rover categories. Exchange is Grid Square only, count 1 pt per QSO. Score is QSO Points x Grid Squares, score each sprint separately. Rovers and Microwave sprints total all points and all grids worked from each grid. For more information--<http://www.etsdx.org/vhf.htm>. Logs must be emailed or postmarked within 4 weeks of the

contest to springsprints@etdxa.org or Jeff J Baker, 8218 Foxworth Tr, Powell, TN 37849 USA.

April 6-7

Missouri QSO Party--CW/SSB--sponsored by the Boeing Employees Amateur Radio Society of St Louis (BEARS) from 1800Z Apr 6 to 0500Z Apr 7, and 1800Z Apr 7 to 2400Z Apr 7. Frequencies: CW--40 kHz from band edge and 1810 kHz; Phone--1850, 3980, 7280, 14280, 21380, 28310 kHz, work MO stations once per band and mode. Categories: Fixed and MO mobile/portable. Exchange: RST, serial number, and MO county or ARRL/RAC Section. QSO Points: CW--2 pts, Phone 1 pt. Score: MO stations--QSO Points x Sections + MO counties + MO zones; non-MO stations--QSO Points x MO counties + MO zones. Multipliers count once only, see web site for MO zone info. QSOs with WØMA count additional 100 points. For more information--<http://www.qsl.net/wØma>. Logs must be emailed or postmarked by May 4 to n0aj@worldnet.att.net or James L. Kinser, NØAJ, 2147 Encino Dr, Florissant, MO 63031-7627.

MARAC County Hunters Contest--SSB--sponsored by The Mobile Amateur Radio Awards Club from 0000Z Apr 6 to 2400Z April 7. Frequencies: 3880, 7240, 14275, 21340, 28340 kHz. Work fixed stations once/band and mobiles once for each county and band. Exchange: RST and county or SPC. County line QSOs count as one QSO but separate multipliers. QSO points: Fixed stations in NA--1 pt, Mobile/Portable--15 pts, DX--5 pts, one station must be in a US county. Score is QSO pts x US counties (count only once). Mobile/Portables sum score from each state. For more information <http://www.countyhunter.com/>. Logs must be postmarked by 10 May to (US logs) Duane Traver, WV2B, 99 Oregon Hill Rd, Lisle, NY 13797-1002 or (non US logs) Scott Nichols, VE1OP, 387 Rudderham Rd, Point Edward, NS B2A 4V6, Canada.

EA RTTY Contest--sponsored by the Unión de Radioaficionados Españoles (URE) from 1600Z Apr 6 to 1600Z Apr 7. Frequencies: 10, 15, 20, 40 and 80 meters, according to IARU band plan; SOAB, SOSB, MOAB, SWL categories. Exchange: RST and serial number or EA Province. QSO points: 10-20 meters: own continent--1 pt, different cont--2 pts; 40-80 meters: own cont--3 pts, diff cont--6 pts. Score is QSO points x (DXCC entities + EA provinces + W/VE/JA/VK call areas) counted once per band. If operating portable, sign/call area. Logs must be emailed as ASCII text or Cabrillo format or postmarked by May 10 to eamv@retemail.es or Antonio Akolado, EA1MV, PO Box 240, E-09400 Aranda de Duero (Burgos), Spain.

46th Annual QCWA QSO Party--CW/Digital/SSB--sponsored by the Quarter Century Wireless Association from 1900Z Apr 6 through 1900Z April 7. Frequencies: CW--1.910, 3.540, 7.035, 14.040, 21.050, 28.050 Mhz; Phone--1.910, 3.890, 7.244, 14.262, 21.365, 28.325 Mhz plus all VHF/UHF bands, no crossband or repeater QSOs. 15 QSOs with each station maximum and only one QSO with stations in home QCWA chapter. Exchange: Last two digits of year licensed and QCWA chapter or SPC. QSO Points: Phone--1 pt, CW/Digital--2 pts. Score: QSO Points x QCWA chapters + SPC counted once per band. W2MM counts as a 3-point multiplier on each band. For information and log sheets, send SASE to

QCWA HQ, 159 East 16th Ave, Eugene OR 97401-4017. Send logs to WØHXL, Dick Newsome, 2924 North 48th St, Omaha, NE 68104-3726.

SP DX Contest - CW/SSB - sponsored by the PZK Polish Amateur Radio Union and the SP DX Club from 1500Z, April 6 to 1500Z April 7. Frequencies: 1.8 to 28 Mhz, according to the IARU Region I band plan, no crossmode QSOs. Categories: SOAB and SOSB (CW, SSB, or Mixed), MS Mixed (incl. Nets, packet, Internet), SWL Mixed. Exchange: RS(T) and serial number or Polish province letter abbreviation. QSO Points: 3 pts for each Polish contact, Polish stations count 3 pts outside EU, 1 pt for EU (no pts for SP-SP QSOs). Score is QSO points x provinces (counted once per band and mode) or DXCC entities (for Polish stations). For more information - <http://www.qsl.net/la0fx> or sp6cik@op.onet.pl. Logs must be emailed (Cabrillo format preferred) or postmarked by 30 April to spdxc-logs@pzk.org.pl or to Polski Związek Krotkofalowcow, SPDX Contest Committee, PO Box 320, 00-950 Warszawa, POLAND.

April 13-14

QRP ARCI Spring QSO Party--CW--sponsored by the QRP ARCI, from 1200Z Apr 13 through 2400Z Apr 14. (See Oct 2001 QST, p 103 for Fall QSO Party information.)

April 20-21

4th Annual SETI QSO Party - CW/SSB - sponsored by the Search for Extraterrestrial Intelligence League and Burley (WA) Amateur Radio Club from 0000Z to 2359Z Apr 20. Frequencies: 14.204, 21.300 and 28.408 Mhz, work SETI League members. Exchange: RST, Grid Square, and SETI member status. For more information - ww2end@aol.com. Send logs by June 16 to Burley Amateur Radio Club, PO Box 262, Burley, WA 98322 attn: SETI

Michigan QSO Party--CW/SSB--sponsored by the Mad River Radio Club, from 1600Z Apr 20 through 0400Z Apr 21, no time limit. Bands: 80-10M; frequencies: CW--45 kHz from band edge, Phone--3850, 7225, 14250, 21300, 28450 kHz. Work stations once per band and mode, MI-to-MI QSOs allowed, mobiles and portables can be worked from each county. Categories: SO, MO, and Mobile. Exchange: serial number and MI county or SPC. QSO Points: CW--2 pts, Phone--1 pt. Multipliers for MI stations are states, provinces and MI counties; multipliers for non-MI stations are MI counties. Multipliers count once per mode. Score: QSO points x multipliers. For more information--<http://www.mrrc.net/>. Logs must be emailed or postmarked within 30 days of the contest to mmp@contesting.com or to Mad River Radio Club, c/o Dave Pruett, 2727 Harris Rd, Ypsilanti, MI 48198.

TARA PSK31 Rumble--sponsored by Troy ARA, 0000Z--2400Z, April 20. Frequencies: 80.40,20, 15,10.6 meters, workstations once per band. Categories: Club Challenge (see Web site), Normal (100 W), Great (20 W), Super (5 W), Novice, SWL. Exchange: Name and SPC. Score: QSOs x (W + VE + JA + VK call areas + 1 point per entity). Multipliers count once per band. For more information--<http://www.qsl.net/wm2u/rumble.html> or <http://www.n2ty.org/>. Logs must be received by 18 May via the contest Web site or email to wm2u@n2ty.org.

GACW DX Contest "Mr. Samuel Morse Party - CW - sponsored by the Grupo Argentino de Radiotelegrafia (GACW) from 1200Z Apr 20 through 1200Z Apr 21. Frequencies: 3.5 - 28 Mhz work stations once per band; SO-SB and SO-AB (HP, LP, and QRP), MS and MM categories, no time limit. MS category subject to 10-min band change rule - see web site. Exchange RST and CQ Zone. QSO Points: same continent - 1 point, diff cont. - 3 pts, DX-to-South America add 2 points, own country - 0 pts (but counts for zone and country credit). Score is QSO points x DXCC, WAE and GACW countries + CQ Zones from each band. For information - <http://www.geocities.com/gacwar>. Logs must be emailed

as ASCII text or postmarked by 30 May to uranito@infovia.com.ar or GACW DX CONTEST, P.O. Box 9, B1875ZAA Wilde, Buenos Aires, Argentina.

Holyland DX Contest--CW/SSB--sponsored by the Israel Amateur Radio Club from 0000Z to 2359Z Apr 20. Frequencies: 1.8-28 Mhz according to IARU Region 1 band plan, work Israeli stations once per band and mode. Categories: SO (Mixed Mode, CW, SSB), MS, MM, SWL. Exchange RST and serial number or Israel district. QSO Points: 1.8 or 3.5 Mhz--2 pts; other bands 1 pt. Score: QSO Points x districts counted once per band. For more information--hamradio.iarc.org/contests/holy2002rules.html. Logs must be emailed or postmarked by 31 May to 4Z4KX@iarc.org or to Contest Manager 4Z4KX, Israel Amateur Radio Club, Box 17600, Tel Aviv, 61176.

Ontario QSO Party - CW/Phone - sponsored by the Ontario DX Association from 1800Z, April 20 to 1800Z April 21st. Frequencies: SSB - 1.870, 3.735, 3.860, 7.070, 7.260, 14.130, 14.265, 21.260, 28.360 Mhz; CW - 30 kHz above band edges; VHF-SSB: 50.130, 144.205, 432.105 Mhz; VHF-FM 52.540, 146.550, 446.1 Mhz, no repeater QSOs. Categories: SOAB and SOSB (HP, LP <150W HF & 50W VHF, QRP <5W) and (CW, Phone, and Mixed Mode), SO VHF FM QRP (< 5W), MS, SWL, Mobile, Rover. Exchange: RST(T) and S/P/C or Ontario QTH. QSO Points: HF SSB - 1 pt, HF CW - 2 pts, VHF - 5 pts (work stations once per VHF band), 10 bonus pts for each QSO with VE3ODX and VA3RAC. Score is QSO Points x Ontario QTHs (non-VE3 stations) or S/P/C + Ontario QTHs; all multi count once per band. For more information - <http://www.odxa.on.ca/oqphone.html>. Logs must be emailed or postmarked by May 31 to ve3src@rac.ca or to Ontario QSO Party, Ontario DX Association, PO Box 161, Station "A", Willowdale, Ontario, M2N 5S8 CANADA

April 27-28

Florida QSO Party--sponsored by the Florida Contest Group from 1600Z April 27-0159Z April 28 and 1200Z-2159Z April 28, no time limit, work FL stations. Frequencies: CW--35 kHz from band edges (Novices/Technicians--10 kHz from segment edge), Phone--7.260, 14.260, 21.335, and 28.485 Mhz, no 160, 80, VHF/UHF. Categories: SO, MS, MM (one signal per band), Mobile, Novice/Technician, School Club, all categories can enter as HP/LP (150 W)/QRP (5 W) and Mixed Mode/CW/SSB. Exchange: RST and FL county or SPC. QSO Points: CW--2 pts, SSB--1 pt. Score: FL stations/QSO points x SPC (WVE/KH6/KL7 do not count as DXCC entities) x power multiplier; non-FL stations--QSO points x FL counties x power multiplier. All multipliers count once per mode. Power multiplier--HP x1, LP x2, QRP x3. For more information--<http://www.qsl.net/fcp>. Logs must be sent by May 28 as email to FLQSOParty@aol.com in ASCII text or in Cabrillo format or by post to Florida QSO Party, c/o Ron Wetjen, WD4AHZ, 5362 Castleman Dr, Sarasota, FL 34232. Nebraska QSO Party--CW/SSB--sponsored by the Heartland DX Association 1700Z Apr 27 through 1700Z Apr 28. Frequencies: 160, 80, 40, 20, 15, 10, 6 and 2 meters; CW--1.805 Mhz and 35 kHz up from band edge; Phone--1.915, 3.865, 7.265, 14.265, 21.365, 28.465, 146.460 Mhz; Novices/Technicians--10 kHz from band edge and 28.465 Mhz. Categories: SO, MS, Mobile. Work stations once per band/mode and NE mobile stations can be worked again in each county. County lines count as one QSO. Exchange: RST and NE county or SPC. QSO Points: CW--2 pts, Phone--1 pt. Score is QSO Points x SPC for NE stations or NE counties (multipliers count only) x Power Multiplier (QRP x3, 150 W x2, HP x1). For more information--<http://www.qsl.net/hdxa>. Logs must be emailed or postmarked by 31 May to hdxa@qsl.net as ASCII text or to Nebraska QSO Party, PO Box 375, Elkhorn, NE 68022-0375.

Special Event Stations on the Air in April

Port St Lucie, FL: Port St Lucie Amateur Radio Association, K4PSL. 1500Z Apr 1 to 2100Z Apr 30. Commemorating the discovery of Florida by Ponce de Leon in 1513. 28.310 21.350 14.250 14.030. Certificate. Dr Maurice I. Sasson, W2JAJ, 8598 Florence Dr, Port St Lucie, FL 34952.

Caldwell, NJ: West Essex ARC, W2EF. 1400Z to 2200Z Apr 6. Operating from President Grover Cleveland's birthplace. 28.350 21.330 14.250 7.250. Certificate. West Essex ARC, PO Box 54, Essex Fells, NJ 07021.

Pine Bluff, AR: Pine Bluff Amateur Radio Club, K5DAK. 1500Z to 2100Z Apr 6. 819 Steam Locomotive. 14.250. QSL. PBARC, PO Box 1402, Pine Bluff, AR 71613.

Marathon, NY: Skyline Amateur Radio Club, K2IWR. 0400Z Apr 6 to 1100Z Apr 7. Celebrating the history of maple syrup production in central New York state. 14.300. Certificate. Skyline ARC, PO Box 5241, Cortland, NY 13045.

Timonium, MD: Baltimore Amateur Radio Club, W3FT. 1300Z Apr 6 to 1700Z Apr 7. 31st Annual Greater Baltimore Hamboree & Computerfest. 147.55 28.415 14.260 7.230. Certificate. BARC c/o Awards Mgr, PO Box 120, Reisterstown, MD 21136.

Harrisburg, PA: Harrisburg Amateur Radio Club, W3UU. 1300Z Apr 6 to 0200Z Apr 8. Celebrating the 100th anniversary of the world's longest masonry railroad bridge. 28.450 21.350 14.260 7.250. QSL. C. T. Greiner, 403 Allendale Way, Camp Hill, PA 17011.

Myrtle Beach, SC: SMART Ham Club, KG4RAS. 1400Z Apr 11 to 0300Z Apr 15. Celebrating the 20th birthday of SMART and 18th National Muster. 28.465 14.265 7.265 3.965. Certificate. SMART Ham Club, 600 University Office Blvd, Ste 1A, Pensacola, FL 32504. For more information, go to <http://www.smartrvclub.org/>.

Casper, WY: Casper Amateur Radio Club, N7NPC. 0000Z Apr 12 to 0000Z Apr 13. Boy Scout-O-Rama, Casper Wyoming Council. 28.380 14.239 7.225 3.900. Certificate. Dr J. L. Martin, N7NPC, 1441 Ivy Ln, Casper, WY 82609. Special certificates and QSL upon request.

Del Mar, CA: Desert Pacific Council of Boy Scouts of America, WB6BSA. 1700Z to 2359Z Apr 13. Operating from the Del Mar Scout Fair "Merit Badge Midway" to help Boy Scouts earn radio merit badges. 28.390 21.360 14.290 7.270. QSL. Scout Ham Radio, Desert Pacific Council, BSA, 1207 Upas St, San Diego, CA 92103.

Emmett, ID: Voice of Idaho, W7BOI. 1600Z to 2400Z Apr 13. Celebrating the annual Willow Creek Challenge BSA. 28.385 14.239 7.225. Certificate. Richard Dees, 2265 W Sandalwood Dr, Meridian, ID 83642. Frequencies are in order of use depending on conditions starting with 10 meters.

Hawthorne, NJ: Bergen Amateur Radio Association, KO2FB. 1300Z to 2100Z Apr 13. Hawthorne Schools Cel-Earth-Bration. 28.335 21.335 14.235 7.235. Certificate. Fred Buchner, 202 Tenth Ave,

Hawthorne, NJ 07506.

New York City, NY: Monster Island Amateur Radio Society, K2G. 0000Z Apr 13 to 2400Z Apr 14. Commemorating the 40th anniversary of the debuts of Gorath and King Kong vs Godzilla. 28.440 21.240 14.340 7.240. QSL. Barry A. Schwartz, N2SHP, 72-22 153rd St #2H, Flushing, NY 11367-2642.

Vieques, PR: Cadena El Conquistador, Inc, NP3P. 1600Z Apr 13 to 1600Z Apr 14. Celebrating the Cultural Festival at Fort Count Mirasol. 80- 40 m--28.350 21.350 14.300. Certificate. Cadena El Conquistador, Inc, NP3P, PO Box 161, Fajardo, PR 00738-0161.

Tulsa, OK: Tulsa Amateur Radio Club, W5IAS. 1300Z Apr 13 to 0100Z Apr 14. Tulsa Health Department's "Sooner Spring" bioterrorism drill. 28.320 21.320 14.230 7.235. Certificate. Dave Cox, Tulsa Health Department, 5051 S 129 E Ave, Tulsa, OK 74134.

Godalming, Surrey, UK: Titanic Wireless Commemorative Group, GB90MGY. 0930Z Apr 13 to 0647Z Apr 15. Commemorating the 90th anniversary of the Titanic disaster. CW only, HF bands 80-10 m (including 30, 17 and 12). QSLs for every contact will automatically be sent via the bureau. QSL claims, if desired, to GB90MGY via the bureau. Visit www.gdrs.net/titanic for more information.

Jefferson City, MO: Mid-MO ARC, K0C. 0000Z Apr 19 to 0000Z Apr 22. Honoring Earth Day, from the front lawn of the Missouri Sate Capitol. SSB 28.480 21.340 14.340 CW 28.060 21.060 14.060. QSL. Tom Hammond, N0SS, 5417 Scruggs Stn Rd, Lohman, MO 65053. Main operating time, 1500Z to 2200Z on Apr 20. Updates at www.mmcsc.com/mmarc.

Ames, IA: Cyclone Amateur Radio Club, W0I. 0000Z Apr 19 to 2400Z Apr 23. VEISHEA at Iowa State University. 28.475 28.055 14.225 14.085. QSL. WOISU, 132 Broadmoor Cr, Ames, IA 50010.

Dallas, GA: Paulding & Douglas County Amateur Radio Clubs, W4SCR. 1200Z to 2300Z Apr 20. Promoting awareness of the Silver Comet Trail recreation area. 28.460 21.370 14.270 7.240. QSL. SCARS, PO Box 6481, Douglasville, GA 30154.

Lexington, KY: Bluegrass Amateur Radio Society, KG4LDL. 1500Z to 2200Z Apr 20. Scout World 2002--Boy Scout event at Kentucky Horse Park. 28.400 21.350 14.300 7.250. Certificate. Lou Berry, 160 W Tiverton Way, Lexington, KY 40503-4468.

Piscataway, NJ: Piscataway Amateur Radio Club, K2VOA. 0000Z to 2400Z Apr 20. Voice of America relay station WBOU. 28.345 21.345 14.245 7.245. Certificate. Bill Toth, W2BT, 6 Rivercrest Dr, Piscataway, NJ 08854.

Palo Cedro, CA: EMCOMM 2002, W6E. 1900Z Apr 20 to 1900Z Apr 21. Emergency Commu-nications Conference. 21.390 14.250 7.232 3.987. QSL. EMCOMM 2002, POB 99, Macdoel, CA 96058. Go to www.emcomm2002.net for more information.

Waco, TX: Heart Of Texas DX Society, W5DXS. 1500Z Apr 20 to 2400Z Apr 27. Celebrating the 75th Anniversary of the State Bird. 28.475 21.375 14.275 7.275. QSL. HOTDXS, Larry Merritt, KCSBFM, PO Box 3501, Waco, TX 76707-0501. Visit www.geocities.com/w5dxs for more information.

Paducah, KY: Paducah Amateur Radio Association, W4NJA. 1400Z to 2200Z Apr 27. American Quilter's Society Annual Quilt Show. 28.400 14.265. QSL. Bruce Huyck, 243 Japonica Dr, Paducah, KY 42003.

Wall, NJ: Ocean Monmouth Amateur Radio Club, N2MO. 0000Z to 2400Z Apr 27. Official Marconi Day Station. 28.380 21.260 14.270 3.890, CW-SSB HF General bands. QSL. OMARC, PO BOX 267, Oakhurst, NJ 07755.

Manitowoc, WI: Mancorad Radio Club, W9DK. 1400Z Apr 27 to 2200Z Apr 28. WWII USS COBIA Sub Memorial Radio Reactivation. 28.343 21.343 14.243 7.243. QSL. Fred Neuenfeldt, W6BSF, 4932 S 10th St, Manitowoc, WI 54220.

Nutley, NJ: Robert D. Grant United Labor Amateur Radio Association, N2UL. 1300Z Apr 27 to 2300Z Apr 28. "CQ Scout Invitational Camporee" at Great Adventure NJ. 28.420 21.375 14.260. Certificate. RDGULARA c/o WA2VJA, 112 Prospect St, Nutley, NJ 07110-0716. Camp theme "United We Stand."

Roanoke, VA: Roanoke Valley Amateur Radio Club, W4CA. 1300Z Apr 27 to 2300Z Apr 28. Red, White and Blue Roanoke Star for the victims of 9/11. 28.460 21.360 14.260 7.260. QSL. Ray Crampton, 1670 Catawba Rd, Troutville, VA 24175.

Kill Devil Hills/Kitty Hawk, NC: Tri-County ARC, NC4AR. 0900Z Apr 27 to 1200Z Apr 30. Anniversary of the first powered aircraft flight at Kill Devil Hills, North Carolina. 14.260 7.260. Certificate. Harrison J. Faust, WW4HF, 509 Player Dr, High Point, NC 27260.

Mt Clemens, MI: Utica Shelby Emergency Communications Association, W8A. 1200Z to 1800Z Apr 28. March of Dimes Walk America Walkathon. 28.465 14.260 7.260. Certificate. USECA, 45061 Grant Park, Utica, MI 48317-5522.

Wells County, IN: Grant County Amateur Radio Club, W9EBN. 1700Z to 2200Z Apr 28. McNutt United Methodist Church Ham Sunday Fellowship Event. 146.79 28.410 14.230 7.295. Certificate. L. B. Nickerson, K9NHQ, 517 N Hendricks Ave, Marion, IN 46952.

