



ROUNDTABLE

PRESIDENT'S MESSAGE

By Gerry Villhauer-W0GV

Hello DRC Members,

I can see Spring Time out there; I think it is about to come into view. Sure seems like it has been a long cold winter...maybe I am getting older, do you think? We need to count our blessing if we compare our winter to many places on the east coast of the U.S. Sure is hard to beat Colorado, would you not agree?

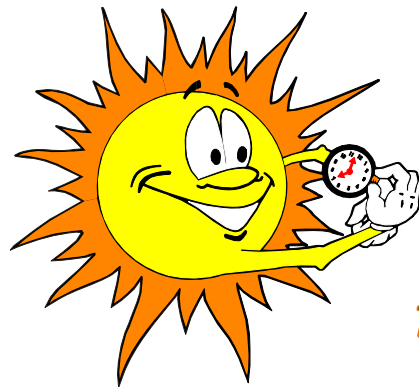
You may have noticed some audio problems with the Echo Link connection on our 449.350 repeater. Thanks to the expertise of Scott, N0OBA, and Mark, WOQL, the problem has been resolved. I understand they replaced an audio card in our server and set all the levels. Sounds great now! Thanks Guys.

Thanks to Bill, W6OAV for his EZNEC antenna modeling presentation at last months meeting. I have heard discussion about EZNEC on the repeaters since his presentation so I would say it was a successful program. Paul Deeth, WAQ2YZT, will present our March program. Paul was born in upstate New York and his first ham license was obtained in 1973. His present position is Transmitter Maintenance Supervisor for KCNC-TV CBS 4 here in Denver. Paul had the responsibility for the installation of the new HD digital transmitters first installed on the Republic Plaza downtown and later the high power installation on Lookout Mountain. Paul is the winner of 5 Emmy awards for TV engineering. He will be talking to us about Digital HD TV and answering your questions. It goes without saying; this will be a "don't miss this one" presentation for sure.

I would like to welcome and thank new DRC members Jenna Balcome, KD0KJD, Travis Balcome, KD0JJP, Morse Bertron, KD0FDH, Federico Herrera, KD0KTA, John Huise, KC0VJB, Rick Jackson, KD0FKZ and Austin Peterson, KD0GMX. Please check in on the nets, come to the meetings and activities and remain an active member.

See you all at the meeting March 17th at the St. Joseph's Episcopal Church, 11202 West Jewell Ave., Lakewood, CO. That is about two blocks West of Kipling on West Jewell. And remember to check our website, www.w0tx.org, for lots of important information about the DRC. The Elmer Session and Tech Meeting start at 6:30 pm followed by the Regular Meeting and Program at 7:30 pm.

Gerry, W0GV
President



**DON'T FORGET
DAYLIGHT
SAVINGS TIME!
AND SPRING IS
JUST AROUND
THE CORNER TOO!**

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FEBRUARY MEETING – WHAT'D I MISS?

By Bill – W6OAV

Fifty folks attended this month's meeting! Bryan, KB0A, began the meeting with introductions. He then announced that the club was offered an opportunity to purchase a near new, 5 month old, Kenwood UHF Repeater which had been operating on the 447.850 frequency on Lee Hill, Boulder. That repeater was replaced last weekend with a new Motorola Digital Repeater. The Kenwood was offered to the DRC at a price of \$850 which a significant savings (over \$350, plus shipping and tax) from what a new unit would cost. The current owner will set up and tune to radio to our repeater frequency so that it will be ready to put on the air.

Bryan announced that the board believes that this was a good opportunity to replace the 448.625 repeater and move a step closer to replacing all our old gear with Kenwood repeaters. The DRC is currently using the same type of Kenwood repeaters on the Squaw (449.350) and Hudson (147.33) sites. The club bylaws require that all board expenditures over \$500 need a vote of approval from the club membership.

Bryan brought the item to a vote of the members at the club meeting where it received unanimous approval. The money for this purchase comes out of the profits from the DRC 2009 Hamfest.



Bryan then turned the meeting over to Bill, W6OAV. Bill gave a presentation about EZNEC, a powerful, but easy

to use, program for modeling and analyzing nearly any type of antenna in its *actual operating environment*. He demonstrated using EZNEC to design antennas, to analyze antenna performance and parameters. He also demonstrated how to determine what type of antenna is best for a given type of operation a given lot size.

The meeting concluded with several lucky attendees winning door prizes.

TECHNICAL COMMITTEE REPORT

By Bill – W6OAV

This report provides an overview of items discussed during the February Technical Committee meeting.

Voter System

Goal: Design and build a voter site and a remote site for the 147.33 voter system.

WW0LF plans to have the remote station completed by the March Tech Committee meeting.

Voter System

Goal: Determine link frequencies and coordinate with CCARC as needed.

KB0A is working with the frequency coordinator to pick link frequencies.

Interference to 449.35

Goal: Determine the commercial source that mixes with the RMRL 449.45 repeater and produces a spur on the 449.35 input. This might require a visit to Squaw.

KC0CZ & W6OAV will monitor the 449.45 repeater. When it is very active, they will turn off the 449.35 PL to see if they can hear and determine the type of traffic, or possible ID of, the commercial repeater mixing with the RMRL repeater.

W9UW will continue to identify the ham and commercial repeaters on Squaw using the FCC databases.

Temporary Salvation Location:

Goal: Determine feasibility for installing VHF/UHF systems and for installing a temporary NVIS station should the need arise for the latter.

(Continued on page 3)

(Continued from page 2)

KOSSE plans to attend the March 3rd meeting at the temporary location and will inspect the site for issues, such as coax routing, size of room relative to the club's radio desk, etc.

K0HTX will measure the club's radio desk and forward the measurements to KOSSE who will make sure the desk will fit the room (see above).

TS-940 Failure at Station 4

Goal: Determine if re-soldering and cleaning connectors will fix the transceiver.

KB0A & KK0JD will team up to analyze this issue.

Remote HF Transceiver

Goal: Determine the feasibility of building an Internet accessible Remote HF station for club member use.

The Tech Committee agreed that it is a feasible project at this time. The board needs to decide on whether the tech committee should start seriously investigating the various ways of providing this project.

Station 4 Antennas Verses New Fire Station

Goal: Determine if the height and proximity of the new building to the tower is blocking antenna coverage.

KB0A showed pictures of the tower relative to the new building. A brief discussion followed. The antenna blockage does not look too serious. Issue tabled until next meeting.

Tech Committee Meeting Productivity

Goal: Investigate the possibility of increasing the tech committee meeting productivity by using tools like Skype audio conferencing.

Issue tabled due to time constraints.

Field Day

Goal: Start laying the ground work for the 2010 Field Day.

KOSSE reviewed his preliminary plans with the tech committee.

THE W6RYX ANTENNA – PART 1

A GROUND-PLANE, PHASED, 90° CORNER REFLECTOR
By Norwood J. "Pat" Patterson – W6RYX

Several years ago, while living in San Francisco, I saw the statement, "Find a need and fill it," displayed on a large, pink, concrete-delivery truck. This made a profound impression on me.

When Dawn, KB6CTJ, and I moved to the Santa Ynez Valley, 150 miles north of Los Angeles, we found a big "need" for amateur communications. We invited the 35 hams who live in the valley to our home for a get-acquainted barbecue and formed the Santa Ynez Valley Amateur Radio Association. We discussed the need for an amateur repeater to serve the valley during emergencies and to provide communications for other functions such as Danish Days in Solvang, Old Santa Ynez days, - Lompoc's Flower Festival, the Santa Maria Elks' Rodeo and Queen Festival, and the 100-mile bike races each year.

We explored using a 2-meter repeater, but Santa Barbara's experience with repeaters located on Santa Ynez Peak showed interference from mobiles transmitting on hills and mountains in the Los Angeles area. One-sided conversations from mobiles operating into the WB6BJM repeater in Los Angeles are very common on the N6ZF machine in Santa Barbara because of close proximity and use of the same frequency, 147.00 MHz. With such 2-meter congestion in the area, we decided to use 220 MHz. A coordinated frequency of 224.04 MHz resulted in duplicating the frequency of W6VIO in Los Angeles. To avoid interference problems, we decided to install a directional antenna system that would reduce radiation toward W6VIO and severely attenuate any signals coming from the Los Angeles area. Antenna criteria included a 3-dB beamwidth of 160° from southwest to northeast, and elimination or severe reduction of radiation toward Los Angeles and the mountainous, unpopulated area to the east.



(Continued on page 4)



The DRC is
an ARRL
Special Service Club!
Join the Team
Today!



(Continued from page 3)

We obtained a high antenna site in the mountains east of Santa Ynez Valley. Trees and small scrub oaks on the site dictated an antenna height of 35 feet. My wife, Dawn, arranged for the donation of a damaged fight standard. Replacing the lower three feet with a new base and extending the top with a 2-inch-diameter, 10-foot pole provided the needed 35 feet. The refabrication was organized and supervised by my son, Sherwood, WD6FZQ, and done by various hams in the club. After these modifications to the mast, Ed Putnam, WB6AWQ, and his crew began their work. The hole was dug, concrete mixed and poured on location, and mounting bolts for the base were aligned with meticulous accuracy so the pole would stand vertical when installed.

ABOUT THE AUTHOR

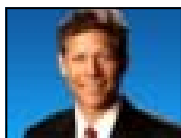
Norwood J. "Pat" Patterson (A DRC Member) received his Advance amateur License In 1938 and still carries his original call, W6RYX. He studied engineering at Pacific Radio School, San Francisco City College and San Mateo City College, and is an alumnus of Stanford University. He has appeared as an expert witness on numerous occasions before the state and federal courts of the U.S., the Federal Communications Commission and the U.S. Senate Hearing Committees, and has been accepted as an expert witness in radio, television and electronic engineering matters since 1947 by the FCC. Pat has been actively engaged in the design of directional antenna systems for over 35 years, and has been a consulting radio engineer with Radio Engineering Company, Santa Ynez, California. He is a consultant to manufacturers of radio and electronic equipment, doing measurement work and representation for type acceptance and certification grants from the FCC. Pat has been a member of ARRL for over 40 years, is a member of Old Timers' Club and the Broadcast Engineering Society, and holds the WAS and WAC Operating Award Certificates.

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In the April issue of the RT: In Part 2, you will learn the details of designing the W6RYX Antenna.

BOULDER SKIER'S HAM RADIO KEY IN SAVING HIS LIFE

By Howard Nathan



Howard Nathan

BOULDER, Colo. (CBS4/AP) — A backcountry skier who injured himself in a fall west of Eldora Mountain Resort was rescued after using a handheld ham radio to call for help.

Boulder County sheriff's officials say Steve Priem, 60, of Boulder used the radio after falling Friday afternoon. Another ham radio operator heard the call and called 911. Priem was able to provide GPS coordinates for his position and had a rescue whistle. Rocky Mountain Rescue Group located Priem.

"I said, 'Where are you at?' And he said, 'I'm in Colorado Springs, Colorado Springs, Guinn Mountain, Boulder County, 120 miles away,'" Priem said of the other ham radio operator.



Steve Priem's portable ham radio

Jeff Sparkhawk of the Rocky Mountain Rescue Group praised Priem for being so well prepared.

"Had he not been able to communicate with us, we might still be searching for him now," Sparkhawk said.

Priem's rescue whistle was also key in the rescue.

"The snow is blowing, it's dark, it's cold, and when we're on snow machines we can't hear very well, but we turn them off and we listen and we can hear his whistle from a long way away," Sparkhawk said.

He was treated at a hospital for two cracked ribs and his knee was swollen to the size of a grapefruit.

Sheriff's officials described Priem as an experienced backcountry skier.

He said he wants to find the other ham radio operator so he can thank him for saving his life.

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SIMPLIFY SOLDERED SPLICES

By Bill – W6OAV

Sometimes insulating soldered wire splices can be a challenge or a bit of work. Over the years I've used black tape (not reliable), heat shrink tubing (a bit of work) and insulated crimp connectors (again a bit of work and unwieldy). Then one day I discovered "Brush on Electrical Tape". The picture shows one of several brands available at any hardware store. You just solder the splice, brush on the liquid and in 5 minutes you will have a nice rubber insulator.



Before running the app, you must be a registered Echolink user. If you are not registered for EchoLink, go to www.echolink.org for information on how to download and install the Windows edition first.

More information can be obtained at: <http://appshopper.com/lifestyle/echolink>

ARRL ROCKY MOUNTAIN DIVISION MEMBERSHIP SURVEY

We want your feedback! The online survey that's been mentioned over the past few months is ready for you and all members of ARRL's Rocky Mountain Division to take. The survey period will begin Saturday, February 6 and remain open until Saturday, March 6.

In order to take the survey, you will be asked to provide your ARRL membership number to verify membership within the League and our Division. You can find your membership number on your ARRL membership card, the mailing label of QST magazine, and via the ARRL website. For those unable or unwilling to take the survey online, a printable version will be made available.

Head over to the Rocky Mountain Division website, www.RockyMountainDivision.org and you'll find a link to the questionnaire once the survey period has began. Please spread the word to all the ARRL members you know who live in the Rocky Mountain Division.

GET ON ECHOLINK WITH YOUR IPHONE OR IPOD TOUCH

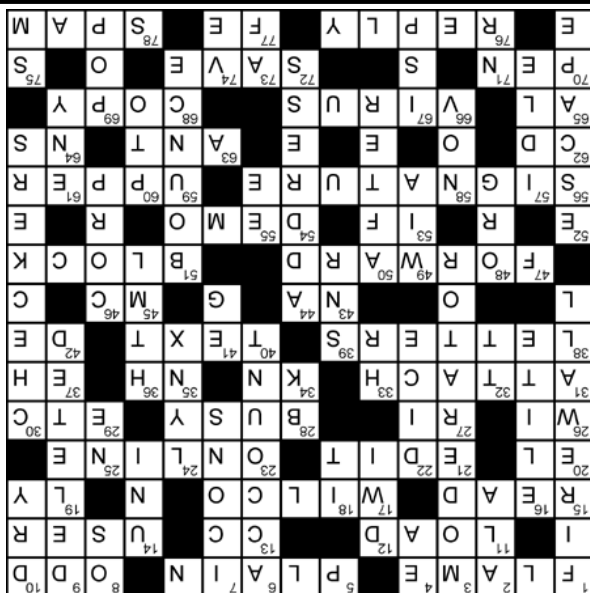
By Bill – W6OAV

A new iPhone Echolink app is available! It is drawing rave reviews from hams. Even more exciting is that it is free from ITUNES.

You can use this app to connect to the EchoLink system from almost anywhere, using either an iPhone or an iPod touch. (For an iPod touch, you will need an external headset or microphone/earphones combination). iPhone users can use either a WiFi or 3G (cellular) Internet connection.

"HAM RADIO PROVIDES VITAL HELP TO HAITI"

Miami News Story - WPLG Miami Check this out maybe you will be inspired to volunteer. Click the link below or copy & paste it in your web browser. <http://www.justnews.com/news/22594520/detail.html?af=mia>



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UP COMING EVENTS

BIKE MS 2010 NEEDS YOUR HELP

Bike MS 2010 (AKA the MS-150) is June 26th and 27th and we are now actively recruiting radio operators for 1 or 2 day assignments. This year's route is a repeat of the popular round trip Broomfield/Ft. Collins route, spanning over 150 miles of foothills terrain.

Our mission is to support the lead team, logistical and emergency support communications requirements for the ride. In this capacity we serve over 3400 customers during the 2 day event which is a marvelous communications experience for a tremendous cause.

We will have mobile, stationary, remote and roving position requirements for this event, including Rest Stop operators, logistics support, medical/emergency support, net controls and route support. Those supporting 2 day assignments will also have the option of free accommodations in Ft. Collins.

Anyone wishing to participate please contact myself per the information below. Please include your comm and mobile capabilities including vehicle type. Also state any preferences relative to a mobile versus stationary assignment.

Thanks in advance for your interest and support.

73,
Paul Garvey – K0BLM
Bike MS 2010 Communications Coordinator
303-520-5545
k0blm@arrl.net

HAMFEST LIST

April 3, 10 – Longmont ARC, LarcFest, Boulder County Fairgrounds

June 26-27, 10 – ARRL Field Day

July 17, 10 – PPRAA Megafest, Lewis-Palmer High School








August 22, 10 – DRC Hamfest, Jefferson County Fairgrounds. This is the BIG one, start planning to participate now.

Contact Bryan - KB0A for more information.

**YOU MIGHT BE ADDICTED
TO HAM RADIO IF:**
If you ever tried to figure out the operating frequency of your microwave oven.



*Happy
St. Patrick's
Day*

MARCH 2010							<i>DRC Net Sunday 8:30pm Local</i>
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
	1	2	3 <i>Learning Net 7pm</i>	4	5	6 <i>ARRL Int'l CW DX Contest Begins 0000U</i>	
7 <i>ARRL Int'l CW Phone Ends 2400U</i> 	8	9	10 <i>Learning Net 7pm</i>	11	12	13	
14 	15 	16	17 <i>DRC Meeting Elmer 6:30pm General 7:30pm</i> 	18	19	20 <i>FIRST DAY OF SPRING</i> 	
21	22	23 	24 <i>Learning Net 7pm</i>	25	26	27	
28	29	30 	31				

Check www.ARRL.org for Contests and Rules!

DRC BOARD OF DIRECTORS

President	W0GV	Gerry Villhauer	303-467-0223	W0GV@hotmail.com
Vice-President	KB0A	Bryan Steinberg	303-987-9596	KB0A@arrl.net
Secretary	WA9TVH	Orlen Wolf	303-279-1328	owolf@mines.edu
Treasurer	K0TOR	Jim Beall	303-798-2351	K0TOR@arrl.net
Board Member	WG0N	Dave Baysinger	303-987-0246	WG0N@arrl.net
Board Member	K0HTX	Dave Gillespie	303-880-1938	K0HTX@comcast.net
Board Member	AC7SX	Joe Delwiche	303-233-6229	lakewoodjoe@aol.com
Board Member	K0RCW	Robert White	303-619-1048	rcwhitejr@mac.com

DRC STAFF AND VOLUNTEERS

Trustee	WA9TVH	Orlen Wolf	303-279-1328	owolf@mines.edu
Net Control	K0TOR	Jim Beall	303-798-2351	K0TOR@arrl.net
Emergency Coordinator	K0SSE	Oscar Hall	303-375-0627	oscarh1934@aol.com
Membership	KC0OUQ	Bob Proctor	303-986-0612	KC0OUQ@att.net
Club Librarian	WG0N	Dave Baysinger	303-987-0246	WG0N@arrl.net
VE Team	AC0T K0MEL	Wally Gamble Mel Minnick	303-202-0339 303-761-3456	wallygamble@comcast.net k0mel@msn.com
Swapfest Mgr	KB0A	Bryan Steinberg	303-987-9596	drcfest@comcast.net
Field Day	K0SSE	Oscar Hall	303-375-0627	oscarh1934@aol.com
Tech. Committee Chair	W6OAV	Bill Rinker	303-741-2537	W6OAV@arrl.net
APRS Chair	KB0MQQ	Lloyd Plush	303-277-0785	LloydPlush@aol.com
Benevolent		Carolyn Wolf	303-279-1328	
RT Editor	AG0S	George McCray	303-751-7246	AG0S@arrl.net
Education	K0RAR	Robert Rude	303-841-6443	K0RAR@comcast.net

DRC REPEATERS

BAND	Freq / Shift / PL Tone	Additional Information
10m	29.620mHz (-100kHz) FM	Not In Service
6m	53.090mHz (-1mHz)	
Packet	145.05mHz<>14.105mHz	
2m	145.490mHz (-) 100Hz PL	Linked to the 70cm - 448.625mHz machine.
2m	147.330mHz (-) 100Hz PL	Local Area, Members Auto-Patch Does Not TX a PL!
2m	147.330mHz (-) 131.8Hz PL	NE Area Remote Does Not TX a PL!
1.25m	224.380mHz (-) 100Hz PL	
70cm	448.625mHz (-) 100Hz PL	Linked to the 2m - 145.490mHz machine.
70cm	449.350mHz (-) 100Hz PL	Wide area coverage with Echolink Node # 4140.

EDITOR'S NOTE

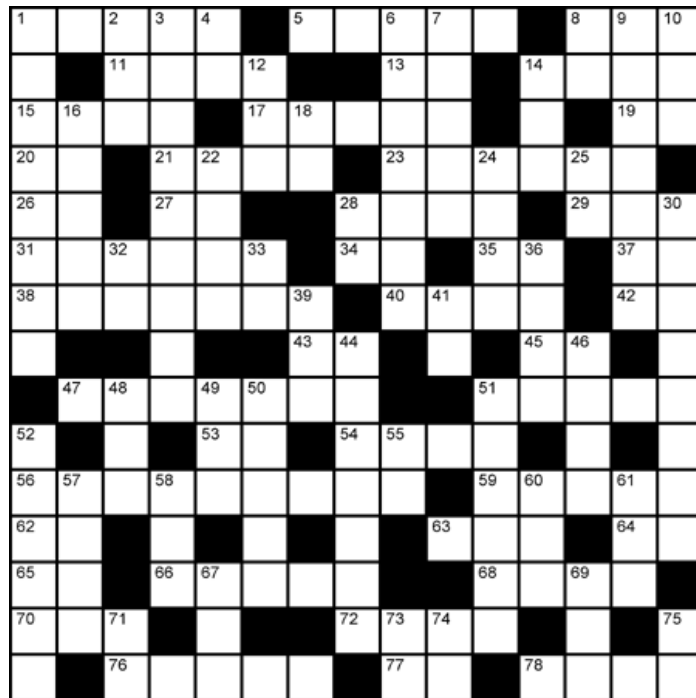
DRC members - this is your newsletter. If there is something which is club or amateur radio related that you'd like to see as a regular feature, email suggestions to the editor. Members are the heart and sole of The Denver Radio Club, if you have an expertise or an interest in a particular segment of ham radio that you'd like to write about, you may email your submissions to DRC_RT@comcast.net. Submission deadline is the 25th of the March. **Editor**

Puzzle Page

"You've Got Mail!"

By H. Ward Silver, N0AX

Can you imagine the days before email when we had to use a machine to strike a cloth soaked in waxy ink, forcing it against a sheet of paper? Or worse, laboriously drag a writing instrument across the paper, character by lonely character? Oh, the inhumanity? Life is different these days, by far, with email connecting us electronically. How much do you know about email? Puzzle on, Garth!



Puzzle solution on page 5.

Across

- 1. Hostile angry email content
- 5. Simplest text format
- 8. Unusual
- 11. Transfer a program to memory to run
- 13. Send a copy also
- 14. Person applying a program
- 15. Open and look at
- 17. Roger's companion
- 19. Next door to Latvia (prefix)
- 20. Angular distance from the horizon (abbr.)
- 21. Mark or change
- 23. Connected
- 26. Fi or Max
- 27. Smallest of the 48 (abbr.)
- 28. Occupied
- 29. And so on (abbr.)
- 31. Put together to send
- 34. Go ahead only (CW prosign)
- 35. Between VT and ME (abbr.)
- 37. Two components of RF
- 38. Email replaced these
- 40. Characters that make up the message
- 42. From (CW prosign)
- 43. Our continent (abbr.)
- 45. Net master (abbr.)
- 47. Send on
- 51. Prevent or stop
- 53. Where a receiver's gain stages lie (abbr.)
- 54. Prototype program for show
- 56. Closing identification
- 59. You're shouting in this case
- 62. Non-volatile data storage (abbr.)
- 63. Skyhook (abbr.)
- 64. One of the Maritime provinces (abbr.)
- 65. Soft, conductive metal (chemical symbol)
- 66. Type of malware
- 68. Reproduce
- 70. Used in the old days with ink
- 72. Store
- 76. Respond to
- 77. Metal that rusts (chemical symbol)
- 78. Unwanted email

Down

- 1. Device or program that protects a computer
- 2. Chicken or mode
- 3. Person that approves content
- 4. Spanish prefix
- 6. Your identity at a bank or data service
- 7. Symbols that represent data or programs
- 8. Program that runs the computer (abbr.)
- 9. Removed
- 10. Not wet
- 12. Don't drink or else you'll be cited for this (abbr.)
- 14. Prefix meaning single
- 16. Top-notch or highly trained
- 18. The network and computer department (abbr.)
- 22. Cubical random number generator
- 24. This cat was an early Web surfer
- 25. The most easterly US ARRL Division (abbr.)
- 28. Break (CW prosign)
- 30. Spelling and call sign testers
- 32. That (CW abbr.)
- 33. Between a minute and a day (abbr.)
- 36. Language that defines Web pages
- 39. Measure of signal versus noise (abbr.)
- 41. Example (abbr.)
- 44. Destination
- 46. Type of company (abbr.)
- 48. Non-profit company email suffix
- 49. Australian peer to ARRL (abbr.)
- 50. When Jill came tumbling
- 51. Rejection of email
- 52. The key to get out
- 55. Computer designers (abbr.)
- 57. Not doing anything
- 58. Month of Sweepstakes (abbr.)
- 60. Oscillator tuned with inductor core (abbr.)
- 61. One of the Hudson Division sections (abbr.)
- 67. Where you get on the Internet
- 69. Type of email server (abbr.)
- 71. Number (abbr.)
- 73. One of the armed services (abbr.)
- 74. Canadian prefix
- 75. In charge of a section (abbr.)