



YAVAPAI SIGNAL



The Yavapai Amateur Radio Club • Prescott, Arizona • DM-34 • Volume 28- No. 9A • September 2013



A Message from the President...

Well, here we come into the fall months already. Are you anxious to see what your YARC is doing? While I love our meetings and programs, I have to admit that I am disappointed and perplexed. We have several places up for election on the Board of Directors and two officer positions. It is not difficult or very time consuming to be an officer or director. It is the responsibility of every club member to serve the organization in some way. Run for office, or be on a committee (we have several that need people).

I am not sure why some folks join organizations (not just YARC) and then don't participate. About half of our membership even come to meetings. And then several leave before the program. Please enlighten me. I really don't understand this. If the meeting time or program doesn't suit you, at least speak up. Nothing changes or improves without input.

YARC exists for you the member. But, it cannot and will not continue to serve the membership without individuals stepping up and volunteering. Don't ask the same small group of people to volunteer their time for everything that needs to be done. It is time to serve. I realize this kind of soapbox lecture can cost the club a few members, but the way I see it right now, we have about twenty members who do everything, and another ten or so who have done so much that they are literally burned out. Thanks go out to each of these from me, and should from each of you. But the very best thanks you can provide is to stand up next to them and serve. Newer members can serve as well, and should. If you don't think you are familiar enough, you can serve with another member who is well acquainted with policy and procedure. So, don't let that stop you.

See you at the meeting on September 5th, and please be a real member, and support your YARC.

Don, WB7TPH

September Program:

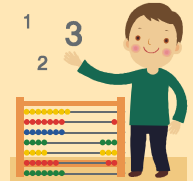
Our program for September is "All about flying an amateur radio equipped balloon into orbit." OK, OK, how about very high? Seriously, our own Jack Crabtree will present the ins and outs of high altitude balloon flights. If you have not participated in one of these balloon launches, this should be very interesting. I know I'm looking forward to it. So, join me September 5th for a virtual launch.



73, Don, WB7TPH

Membership Count:

2nd Thurs. in July.....	184
Gain/Loss.....	+2
1st Thurs. in August	186



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Welcome to the Yavapai Amateur Radio Club

The Yavapai Amateur Radio Club (YARC) is an ARRL affiliated Special Service Club. The club participates in many activities in the tri-city area by providing communications for local events, emergency communications, and promotion of the hobby throughout the community.

Membership in the YARC is open to any interested amateur or non-amateur alike. Dues are \$20.00/year (Full-time students \$15). The YARC meets at 7:00 p.m. local time on the first Thursday of every month in the Technology Room 404, at the Granite Mountain Middle School, 1800 Williamson Valley Road in Prescott. It is about ½ mile north of Iron Springs road, and all amateurs and non-amateurs as well are invited. Programs of interest are included as part of the meeting.

The weekly Net is held every Wednesday at 7:00 p.m. local time on 146.880- repeater. All amateurs are invited to participate, and visitors are always welcome.

The Yavapai County ARES/RACES Net is held on Monday nights approximately at 7:00 p.m. local time on the 145.290- repeater on Mingus Mountain. A PL of 127.3 is required.

Club Repeater

The YARC 146.880- repeater is located on the hill above Willow Creek road and requires a PL of 100.0 Hz. Our deepest gratitude to Bill Kafka, W2YAV, (SK) for allowing us to acquire the original club repeater. ■



Minutes of July 25, 2013 Board Meeting at Coco's Restaurant, Prescott, Arizona

Present: WB7TPH, W7BJ, AE7CG, AD7YR, W7HAM,
KD5VRW, WB7RRQ

The meeting was called to order by WB7TPH at 1835 MST.

According to WB7TPH, henceforth board members should arrive at the restaurant at 1800 MST if they choose to dine at the restaurant. The meetings will begin at 1830 MST.

Agenda:

Old Business:

1. Recent Expenses: W7BJ reported recent expenses including Field Day, refreshments, Arizona State Credit Union charitable donation (Prescott Firefighters), postage stamps for newsletters, etc.
2. Donated Equipment: WB7TPH reported that K6VVR has verified the functionality of donated equipment:
 - a. Kenwood R-1000 communications receiver, estimated fair market value (FMV) of \$175-\$200
 - b. Yaesu FT-990 HF transceiver without a microphone and with an external loudspeaker, estimated FMV of \$800

The board decided to dispose of this equipment through the holding of a "Dutch auction" during the November 2013 general meeting. The club auctioneer will state the estimated FMV and the range of acceptable bids, and start the bidding from the estimated FMV downwards in stepped decrements until the item is sold.

3. Consignment Equipment: WB7TPH mentioned that N5RO has an Astron 35A power supply that he wishes to sell through the club. WB7TPH stated that club would retain 15% of the selling price as a selling fee.
4. Newsletter Notification: Details of the sales of the aforementioned donated and consignment equipment will be made in the September, October, and November issues of the club newsletter, the Yavapai Signal. All current club members are welcome to bid on the donated equipment and to purchase the consignment equipment.
5. Officer's Books: WB7TPH mentioned possible revisions of club policies and procedures in the books provided to club officers. WB6ODR will be asked to contact Sandy Rackoff regarding retrieval of the vice president's books held by KE7NAP (SK).

New Business:

1. Distinguish Field Day from Picnic: WB7TPH suggested that the club's Field Day activities should center on radio operating and related tasks, and that the club picnic should be a separate and strictly social event.
2. Officers, Elections, Board of Directors: WB7TPH mentioned that nomina-

**Minutes of August 1, 2013 General Meeting
at Granite Mountain Middle School, Prescott, Arizona**

tions for club vice president and secretary will be accepted at the November 2013 general meeting, as well as for open positions for board members. KV8TD has accepted the board's invitation to complete the vice presidential term of KE7NAP (SK), and AE7CG will finish serving as secretary for calendar year 2013 and completing the term began by KE7KEV and W7BJ.

3. Dues Incentive for Officers and Board Members: W7BJ made a motion that was seconded by WB7RRQ. In the motion, W7BJ proposed that club officers and board members receive dues credit for their appropriate service. The credit will be prorated on a monthly basis if the officer or board member is not serving a full term (2 years for officers and 1 year for other board members). The credit will be booked at the end of each year by extending the dues expiration date one year or prorated portion into the future. This will become effective January 1, 2014. WB7TPH said that this measure will be added to the club's written policies and procedures. The motion was unanimously approved by acclamation.

4. Swap Meet: W7BJ asked that in the absence of a YARC swap meet in calendar year 2013, would the club consider renting a block of spaces at the Williams Hamfest in 2014? AD7YR reported that the rented space in Dewey was no longer available, and that the proprietors of the Mortimer's Farm site in Dewey were not amenable to an amateur radio swap meet on their premises. WB7TPH said that a club swap meet would aid in the disposal of donated equipment and that the club could claim a 15% sales commission on the sale of consignment equipment. WB7TPH said that WB7RFY and ARCA are favorable towards YARC participation in the Williams Hamfest in 2014. W7BJ said that a 20 ft. by 40 ft. vendor's space cost \$20 at the Williams Hamfest in 2013. KD5VRW asked whether the club would have any responsibility for consignment equipment if it would be lost or stolen at the hamfest? The board agreed that there would be no such responsibility, and that the consignee would have to agree to written terms of consignment releasing the club from any such financial responsibility. KD5VRW will broach the subject of YARC participation at the Williams Hamfest in 2014 at the August 2013 general meeting to determine the club's interest in the subject, and possibly to ascertain the amount of space required.

5. Adjournment: WB7TPH adjourned the meeting at 1943 MST.

Respectfully submitted by

Loren Singh, AE7CG

YARC Secretary

The meeting was called to order by WB7TPH at 1900 MST, and the Pledge of Allegiance to the Flag was recited by all present. All members present did self-introductions and visitors AD5SU and Pat Eastman were welcomed.

WB7TPH asked for a motion to approve the minutes of the July 11, 2013 general meeting as published in the Yavapai Signal. N7RIS made the motion. K6VVR seconded the motion. The motion was unanimously approved by acclamation.

WB7TPH asked for a motion to approve the treasurer's report for July 2013 as published in the Yavapai Signal. WB6ODR made the motion. W7HAM seconded the motion. The motion was unanimously approved by acclamation.

A new membership application was submitted by Mike Temple, AD5SU. His membership was unanimously approved by acclamation.

Committee Reports:

1. Event Communications: KD7VVBG reported that September 2013 will be a very busy month for event communications:
 - a. 9/7 – March of Dimes event
 - b. 9/15 – Skull Valley Loop Challenge
 - c. 9/21 – Tour de P.V.
 - d. 9/28 – Groom Creek Classic

KD7VVBG presented sign-up sheets and asked for volunteers to participate in all the upcoming events.

WB7RRQ mentioned that the Prescott Road Rally will take place on Friday, October 4 and Saturday, October 5, 2013.

2. Newsletter: AC6AA said that all is well with the Yavapai Signal.
3. AZWAC: WN7L reported that there were no applications for the Arizona Worked All Counties award during July 2013.
4. Badges and Patches: W7BJ announced that club badges are available with magnets, pins, or clips at \$7.00 each, and club patches are available for \$3.00 each.

5. Shirts: K6VVR mentioned the availability of club shirts and their cost.
6. Repeater: K6VVR said that he had obtained an updated controller card, and that an uninterruptible power supply (UPS) was donated by W7BJ. K6VVR also said that he is looking at Mt. Union as a possible site for the 450 MHz repeater. He said that changing the 2M repeater's antenna from a uni-directional to multi-directional orientation would make accessibility more available.
7. Fox Hunt: K6VVR announced that the next fox hunt will be on August 4, 2013 at 1300 MST. The event will begin at the parking lot of the Arizona State Credit Union located near the intersection of Gail Gardner Way and Willow Creek Road in Prescott. He said that the activity usually is over by 1500 MST.
8. K7GMG: KB7TRE reported that Granite Mountain Middle School radio club would resume activities probably by the second full week of August.

Old Business:

1. Donated Equipment: WB7TPH discussed equipment donated to the club, including a) a communications receiver; b) an HF transceiver without a microphone and with an external loudspeaker; and c) a power supply. The board decided to dispose of this equipment through the holding of a "Dutch auction" during the November 2013 general meeting. The club auctioneer will state the estimated FMV and the range of acceptable bids, and start the bidding from the estimated FMV downwards in stepped decrements until the item is sold. If the item is not sold, then the club will decide what to do with equipment.
2. Special Event Station: YARC will try to secure a special event call sign to commemorate the heroism of the Granite Mountain Hotshots firefighters who perished on June 30, 2013 while fighting the Yarnell Hill fire. The proposed special event station will operate on June 30, 2014. Considerations to be decided include where the station will be located and what kind of radio equipment will be operated.

New Business:

1. Nominating Committee: WB7TPH announced that a nominating committee is required to select candi-

dates for club vice president, secretary, and three other members of the board of directors. WB7RRQ and W7HAM indicated that they are willing to continue serving on the board and consented to be candidates for open positions in 2014.

2. Dues Incentive for Officers and Board Members: At its July 25, 2013 meeting, the board of directors approved a measure that provides for club officers and board members receive dues credit for their appropriate service. The credit will be prorated on a monthly basis if the officer or board member is not serving a full term (2 years for officers, 1 year for other board members). The credit will be booked at the end of each year by extending the dues expiration date one year or prorated portion into the future. This will become effective January 1, 2014. This measure will be added to the club's written policies and procedures.
3. Williams Hamfest 2014: YARC will have a sales booth at the Williams Hamfest in July 2014. The club will sell donated and consignment radio parts and equipment. The club will retain a 15 percent commission on all items sold on consignment. The club will reserve two spaces — one space in which to park a recreational vehicle (RV), and another space for tables and chairs.
4. Two Meters SSB Net: WN7E mentioned that a new, informal 2M SSB net is now meeting on Wednesday evenings at 2000 MST on 144.200 MHz, upper sideband. All licensed amateur radio operators are welcome to check into the net and to participate.
5. Adjournment: WB7TPH adjourned the meeting at 1935 MST.
6. 50-50 Drawing: KB7TRE drew winning ticket number 531367. WN7L was the lucky winner of \$33.50.
7. Program: "Equipment Checking" — K6VVR uses test equipment to check the deviation and power output of 2M FM hand-held transceivers submitted by YARC members.

Respectfully submitted by

Loren Singh, AE7CG


YARC Secretary



Yavapai Amateur Radio Club
 PO Box 11994
 Prescott, AZ 86304-1994

TREASURER'S REPORT
July 2013

			General Fund	Repeate Fund
BEGINNING CASH BALANCE - June 30, 2013			8,027.53	1,886.29
Dues - Frank H Bender	K8FB	new	18.00	2.00
Dues - George T Imburgia	AD7RL	new	18.00	2.00
Dues - Jim Behnke	KJ6CDK	new	18.00	2.00
Dues - Jerry O'Connor	W7JPO		18.00	2.00
Dues - Richard Myers	AD7UR		18.00	2.00
Dues - Dan Crouch	KF7TZT		18.00	2.00
Dues - Phillip Seese	W7JGJ		18.00	2.00
Dues - Richard Bozeat	KE7DTR		18.00	2.00
Dues - Dennis Grady	KF7INF		18.00	2.00
Dues - Pete Morrison	K6VVR		18.00	2.00
Dues - Doug Freeman	KV8TD		18.00	2.00
Dues - Doreen Freeman	K7DRV		0.00	0.00
Dues - John Maslowski	KK4HJG		18.00	2.00
Dues - Marjorie Cole	KF7RIG		18.00	2.00
Dues - Robert Cole	KF7RXU		0.00	0.00
Dues - Diane Dutkevitch	KE7ODP		18.00	2.00
Donation - Frank H Bender	K8FB			5.00
Shirt - Ken Nelson	KF7MMS		22.00	
50/50 Raffle			77.00	
50/50 Raffle - Doug Freeman	KV8TD		(38.50)	
Interest Income				0.08
TOTAL INCOME			312.50	33.08
Terry Pemberton - Field Day Expense	1166		35.85	
David Passell - Refreshments	1167		66.04	
AZ State Cr Un - 19 Firemen Fund	1168		300.00	
Joe Oliver - Stamps	1169		9.20	
Don Bauer - Field Day Expense	1170		114.87	
AZ Corp Commission - Annual Fee	Dr Cd		10.00	
TOTAL EXPENSES			535.96	0.00
ENDING CASH BALANCE - July 31, 2013			7,804.07	1,919.37

Signature: 
 David B Hanson, W7BJ, Treasurer

Date: 8/2/2013

AMATEUR RADIO EVENT COMMUNICATIONS.....

By Lloyd, WA6ZZJ



There are a few new operators signing up for communications events which is encouraging, but with the number of members in the club it would be nice to see more stepping up. Some of the upcoming events are good for operators who would like to volunteer for the first time. Event communications isn't hard and if you are a first time volunteer, you will be assigned with a veteran communicator until you feel ready to go it on your own. We also make every attempt to assign two operators to a location.

Participation in public service events provides an opportunity to practice communications skills that would be used during an emergency and to test equipment and techniques. Think of these events as an opportunity to build, enhance, and practice your communications skills under real "out in the field" conditions, albeit not a real emergency. We look at them as 'planned emergencies'...

The upcoming YARC Event Communications schedule for the rest of 2013 is:

September 7 (Saturday), 2013 The March of Dimes March for Babies

This is another long standing event for YARC's communications. **This event is staffed.**

September 15 (Sunday), 2013 The Skull Valley Loop Challenge

Another event to put on your calendar... **2 more operators could be used for this event.**

September 21 (Saturday), 2013 Tour de Pee Vee
1/2 marathon, 10K, 5K, 2 mile.... **4 more operators could be used for this event.**

You can sign up for the above three events by email to: wa6zzj@arrrl.net

September 28 (Saturday), 2013 The Groom Creek Classic 1/2 marathon, 10K, 5K, 2 mile.... Sponsored by the Groom Creek Fire Fighters Assn.

Patti, KD7VBG, will be coordinating this event. **2 more operators could be used for this event.**

You can sign up for the above event by email to: kd7vbg@arrrl.net

October 4 - 5 (Friday - Saturday), 2013 Prescott Rally

Go to www.prescott rally.com and click on "Volunteers" to go to the sign up form. If you have a preference as to where you would like to work, please add a comment in the box at the bottom of the page just above the "Submit" button. Be sure to check the boxes in the form for when you will be available.

October 19 (Saturday), 2013 Step Out Walk for Diabetes

Contact John, WB9VGJ, for this event.

Participation in these events also helps YARC maintain its ARRL Special Service Club status .. So.... If you haven't already signed to one or more of these events, now is the time to check your calendar and get your name on the list. ■

- The worst thing about accidents in the kitchen is eating them.
- Don't argue with an idiot; people watching may not be able to tell the difference.
- Wouldn't it be nice if whenever we messed up our life we could simply press 'Ctrl Alt Delete' and start all over?
- Stress is when you wake up screaming and then you realize you haven't fallen asleep yet.
- My husband says I never listen to him. At least I think that's what he said.
- Why is it that our children can't read a Bible in school, but they can in prison?
- If raising children was going to be easy, it never would have started with something called labor!
- Brain cells come and brain cells go, but fat cells live forever. ■

November Program

We will be having a "Dutch Auction" for our November meeting night program. That is a kind of auction in reverse. We will start each item at the highest asking price, and then the clock will dictate each price drop until someone buys the item or until we reach the lowest acceptable price. The catch is to choose where you are willing to go. If you hold out till the very end, you might miss out because someone else wasn't willing to risk it and bid \$5.00 higher.

Should be fun and we are going to have several items on the block. For starters, we have a Kenwood Communications Receiver, Model R-2000, and a Yaesu FT-990 Transceiver with accessories. This is an opportunity for someone to walk away with some good stuff at bargain prices. Pete K6VVR has checked them out and both work well.

Anybody have some donations, big or small, to add to the fun, bring them to the September or October meeting.



Yaesu FT-990



Kenwood R-2000

YARC Officers for 2013

President

Don Bauer, WB7TPH
president@w7yrc.org

Vice President

Doug Freeman, KV8TD
vice.president@w7yrc.org

Secretary

Loren Singh, AE7CG
secretary@w7yrc.org

Treasurer

David Hanson, W7BJ
treasurer@w7yrc.org

Board of Directors (includes Club Officers)

Creighton Grotbeck -- AD7YR

Ralph Gendron -- W7HAM

Bob Rosevear -- WB7RRQ

Roger Nash -- KD5VRW

Newsletter Editor: Joe Oliver, AC6AA
newsletter@w7yrc.org

Need a Hand?

If you need assistance, we want to help you. If you are just starting out in ham radio, or simply have run across something that you could use a hand with... technical assistance or answers to questions about the Yavapai Amateur Radio Club, are available from knowledgeable club members.



Don't Hesitate to Ask for Help!!

CALL:

Bud Semon, N7CW at: (928) 771- 8267

or

Jim Zimmerman, N6KZ at (928) 713- 0542

Three old guys are out walking.
First one says, "Windy, isn't it?"
Second one says, "No, it's Thursday!"
Third one says, "So am I. Let's go get a beer".

All The Fox Hunters

Left to Right:

Frank, LF7ANX,
John, No0N,
David, W7BJ,
Doug, KF7YZT,
Pete, K6VVR,
Bob, WB6ODR,
Brian, W7BNW,
Linda, KD7EEO, &
Brian, KW7J

Photo by Jeff
Hanna, WB7RFY



August 2013 T-Hunt

By Jeff Hanna, WB7RFY

The August fox (WB6ODR and KD7EEO) added an extra twist to our T-Hunts. Routinely the main transmitter of 1/2 watt is in area of a tiny secondary transmitter, but this time there were TWO about a hundred yards apart and timed to cycle on the same secondary frequency. Fun and challenge enjoyed by all, and all teams were successful - - eventually.



Quickest to succeed, Bryan, W7BNW with David, W7BJ, not so closely followed by Jeff with Frank and John, then Pete with Brian and Doug. Additional photos from the foxes @ <http://tinyurl.com/ljoc8lv> . Come and join in, next hunt September 8th. ■

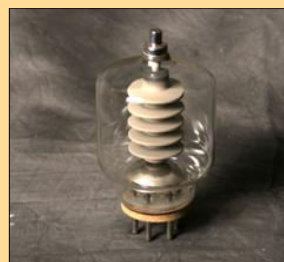
Need Cards Checked for ARRL Operating Awards?

Jim Zimmerman, N6KZ can check your QSL cards for DXCC, WAS, VUCC, WAC, etc.

For information contact Jim at: (928) 713-0542.

Jim's QTH is at: 778 Grapevine Lane,
Prescott, AZ 86305.

RF Concepts has secured a line of Vacuum Tubes for use in Alpha and other manufacturers' amplifiers! These are NOT new old stock, but instead are brand new production tubes. They are warranted for a full two years. The pricing is very attractive on these tubes.



They now carry a full line of Transmitting tubes from around the world.

Upcoming Events

- September 7, 2013 – March of Dimes event
- September 15, 2013 – Skull Valley Loop Challenge
- September 21, 2013 – Tour de PeeVee.
- September 28, 2013 – Groom Creek Classic
- October 4 - 5, 2013 - Prescott Rally
- October 19, 2013 - Step Out Walk for Diabetes
- October 26, 2013 - Licensing Class

Club contacts - At a Glance

President - WB7TPH	president@w7yrc.org
Vice President -	vice.president@w7yrc.org
Secretary - AE7CG	secretary@w7yrc.org
Treasurer - W7BJ	treasurer@w7yrc.org
Board Member - AD7YR	cgrobeck@gmail.com
Board Member - W7HAM	smokey7@cablone.net
Board Member - WB7RRQ	rosevear520@cablone.net
Board Member - KD5VRW	rnpublic@sbcglobal.net
Arizona WAC Administrator	az.wac@w7yrc.org
Ask Elmer for Help	ask_elmer@w7yrc.org
Badges	badges@w7yrc.org
Field Day Chairman	field.day@w7yrc.org
Fox Hunts	fox.hunt@w7yrc.org
License Classes	classes@w7yrc.org
Mail List	yarc_mail@w7yrc.org
Membership Application	membership@w7yrc.org
Net Manager	net.manager@w7yrc.org
Newsletter Editor	newsletter@w7yrc.org
Program Inputs	programs@w7yrc.org
Public Information Officer	pio@w7yrc.org
Public Service - DEC	public.service@w7yrc.org
Repeater Trustee	repeater@w7yrc.org
Special Events	special.event@w7yrc.org
VE Test Liaison	testing@w7yrc.org
YARC Party Coordinator	yarc.party@w7yrc.org
Information	info@w7yrc.org
Webmaster	yarc@w7yrc.org
Webmaster	w7yrc@w7yrc.org
Webmaster	webmaster@w7yrc.org

VE Testing

By Don Bauer, WB7TPH

Friday evening, August 2, 2013, saw seven applicants show up to test. In all, they tested nine elements. A couple braved the General test after passing their Tech. Trying the General cold turkey isn't easy, but they tried anyway.



The results were 6 new Technician licensees. Congratulations to all you new amateurs. And a very big thanks to our VE team who gave of themselves so that some new folks could join the ranks.

Next testing session will be Saturday, November 2, 2013.

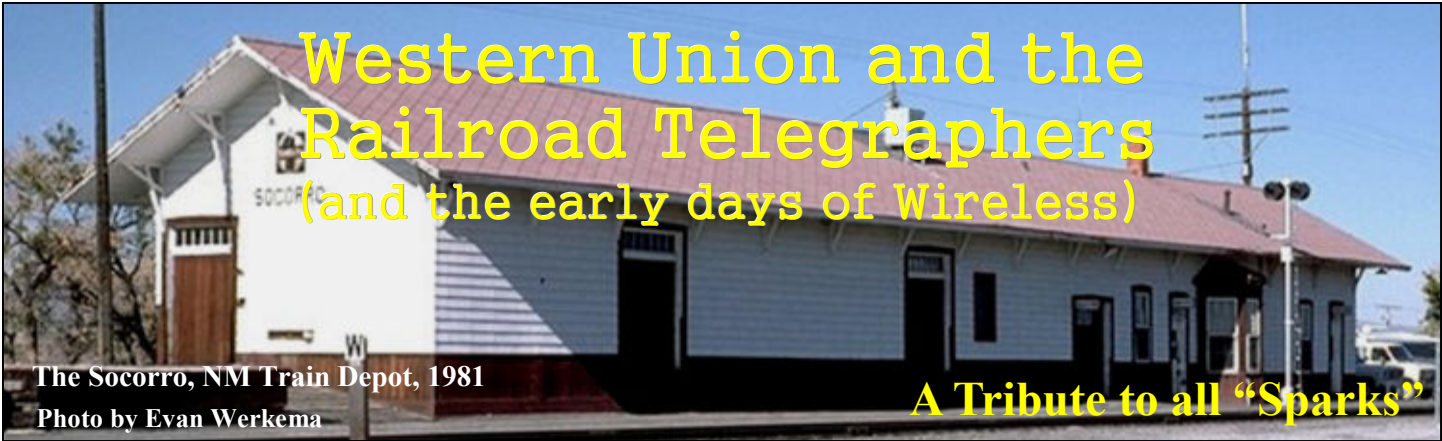
The next licensing class is scheduled on October 26, at Embry-Riddle. Jack Crabtree will be announcing the details soon. Watch our "classes" page on the club website. ■

Editor's Note:

I continually ask members to submit articles for the "Signal" newsletter. Well, thanks to Ken Nelson, KF7MMS, who brought the following article "**Western Union and the Railroaders Telegraphers (and the early days of Wireless)**" to my attention.

Paul Harden, NA5N, has written a fascinating article about a major part of American History fading into obscurity. Needless to say, Morse code is not dead, as evidenced by thousands of Amateur Radio Operators still using CW as a matter of choice.

The following article is lengthy, and adds several more pages to this edition of the newsletter, but I believe members will enjoy it, and agree that it is a worthwhile addition. ■



Originally published in the *El Defensor Chieftain* newspaper, March 4, 2006, Socorro, New Mexico. Additional photographs included not appearing in the original article.

(Reprinted with Permission from Paul, NA5N)

By Paul Harden, NA5N
 For El Defensor Chieftain
na5n@zianet.com

Last month, a briefly worded press release went nearly unnoticed. It simply read: "Effective January 27, 2006, Western Union will discontinue all Telegram and Commercial Messaging Services. We regret any inconvenience this may cause you, and we thank you for your loyal patronage."

After 155 years, and millions of telegrams and Telex messages, a major part of American history quietly slipped into obscurity. For more than 100 years, Socorro was part of that history.

With today's telephones, cell phones and e-mail, we can contact almost anyone we wish immediately and cheaply. This wasn't always the case. In Socorro's early days, and throughout the West, the mail was the only means of long-distance communications — and very slow mail at that.

With the mail being carried on stage lines and military supply trains, it was not unusual for a letter from Socorro to take three or four weeks to reach St. Louis or Chicago. That means if you were lucky, you might get a reply in only two months.

That all changed in 1830, when Samuel Morse invented his telegraphic code. Within a few years, regional telegraph companies were springing up everywhere along the East Coast. Many of the railroads were installing their own lines as well. Converted to "dits and dahs," messages could be sent to cities hundreds or thousands of miles away; and now it would be de-

livered in hours, not weeks. This was a tremendous leap in technology.

In 1851, the New York & Mississippi River Printing Telegraph Company was formed, with lines from New York to Boston and St. Louis. With a true vision for the future, the company began to purchase the smaller, local companies to form a single, consolidated telegraph system. In 1856, they changed their name to the Western Union Telegraph Company, or simply, Western Union.

With their own lines, and those leased from the railroads, Western Union suddenly controlled almost the entire telegraphic industry from the Atlantic Ocean to beyond the Mississippi River. Thousands of telegrams a day were now buzzing along their lines, earning the company record profits.

Determined to become the dominant telegraph company in the country, Western Union built a telegraph line from their western terminus at Omaha, Neb., to Carson City, Nev. By 1861, the line extended to Sacramento, Calif.



This was eight years before the completion of the transcontinental railroad. For the first time in human history, people on opposite sides of a continent could quickly communicate.

The first message tapped out in morse code over Western Union's transcontinental telegraph line was from Stephen Field, the California Chief Justice, to President Abraham Lincoln, declaring California's loyalty to the Union. After all, the Civil War had just begun, and Western Union now controlled 90 percent of all telegraphic communications. This became a

huge asset to the Union Army. The secret Telegraphic Corps was formed, accompanying the major armies with telegraphic equipment and operators. For the first time in warfare, troop movements could be tracked, supplies ordered, sightings of the enemy reported and details of engagements immediately transmitted to the president. Also for the first time, telegraphic news reports from the field allowed newspapers to carry stories literally hours after a battle, creating yet another industry — telegraphic news services.

The Confederacy was quick to develop their own telegraph system, but without the huge network of the Western Union lines in the north, communications were spotty and poorly developed.

Telegraph Arrives in Socorro

After the Civil War, the railroads made their push to the west, entering New Mexico over Raton Pass to Las Vegas by the end of 1880. The following year, the railroad tracks arrived in Socorro — and with it, the telegraph lines and Western Union. Socorroans could now send a 30-cent telegram to San Francisco or Chicago ordering a piano, a new stove or ceiling tiles, and know it would arrive at the Socorro depot a few days later. In 1880s Socorro, this was absolutely astounding. How quickly Socorro must have changed.

And who sent and received these telegrams? It was the railroad telegrapher. While the movies always portray the telegrapher as an old, white-haired man wearing a visor, the truth is, most telegraphers were very young men (although they did wear visors).

It was the fastest growing occupation in America. The railroads and Western Union recruited thousands of young men for the lines — as young as 16. And, it was a good occupation, paying good wages. In order to retain telegraph operators, Western Union and the railroads offered incentives, such as paid vacations, annual bonuses and health care — unheard of perks at the time.



The 1950s Western Union sign from the Socorro depot is now in the author's possession.



A typical Western Union “relay station” in the early 1900s. From here, received messages were retransmitted, or relayed, onto the proper destination circuit.



Photo by Even Werkema
The Albuquerque Western Union Relay Station in 1991. The AT&SF depot on the right, with South-western design, was destroyed by fire two years later.

Telegrapher Sam Zimmerly

The first native to become a Socorro telegrapher was Sam Zimmerly, hired by the Santa Fe Railroad, in 1917, in the heyday of steam locomotives. As the station telegraph operator, and later agent-telegrapher, it was a busy job. The first priority was handling the railroad traffic. All train movements were carefully ordered and reported along the line. The telegraph circuit that serviced Socorro ran from Albuquerque to El Paso, Texas, and east to Clovis. All messages to every station along this circuit were “heard” by all stations at once, such that the clicking of the telegraph sounder droned on almost continuously.

Every railroad depot and siding along the line had a station number. Albuquerque was No. 1340, Socorro was 1416, and El Paso 1594, to name a few. As Zimmerly helped the customers, sold tickets and processed freight, he was always listening to the click-click-clack of the telegraph to sound out “1416” — signifying a message for Socorro.

If that wasn't bad enough, the Socorro railroad telegrapher was also the Western Union operator. This was a separate circuit, and a separate telegraph sounder clacking away. As Zimmerly conducted his daily business, his finely tuned ear was constantly listening to two different sounders with a message for Socorro. The skill of talking to a customer, drinking a cup of coffee, sending a Western Union message on one circuit, while copying a train order on another, became second nature. It was a skill that made the railroad telegrapher legendary. And, Sam Zimmerly was one of the best. Able to send and receive morse code messages at 50 words-per-minute, he was considered the "best fist" in the district, a telegraphers term that his code was easy to copy and flawless.

In the mid-1960s, Sam Zimmerly had a most memorable experience. It was a particularly busy day when a passenger train arrived at Socorro. The station filled with passengers as Zimmerly had a full "weigh bill" of freight to load on the train. Suddenly, both telegraph circuits came alive with traffic for Socorro. Just as Zimmerly reached for his key to inform the Western Union circuit to wait, a passenger grabbed a piece of paper from the counter and said, "I'll get it for you."

As Zimmerly copied the train message on one circuit, the stranger held the paper against the wall and began writing down the other message. When the sounder quit clattering, the stranger handed the perfectly copied message to Zimmerly and introduced himself. The stranger was Gene Autry, an old railroad telegrapher before his movie days, claiming that was the first telegram he had copied in more than 20 years. Zimmerly gave his telegraph sign, a cartoon of a telegrapher busily at work, to Autry as a memento.

Zimmerly retired from the Socorro depot, in 1967, after 50 years of service with AT&SF. Two of Sam's brothers were also AT&SF railroad telegraphers: Joe worked most of his life at the Bernalillo station, while brother Charlie worked at Engle.

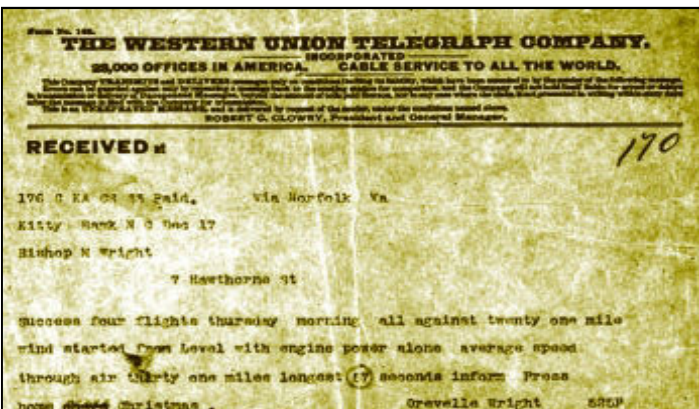


Photo: IEEE History Archives

Western Union telegrams were the primary means of communications for the first half of the 20th century. This is the original telegram sent by "Orevelle Wright" announcing their successful first flights.



Photo: Roy Carrejo

A northbound freight rumbles through Socorro in the early 1970s – when train orders and movements were still being handled by morse code.

Everyone loved receiving a telegram, except once. Receiving a telegram during World War II usually meant only one thing. Every mother and wife dreaded the knock on the door from the Western Union delivery boy.

Through the 1960s, telegrams continued to be a popular and inexpensive means to communicate across the country.

Telegrapher Roy Carrejo

In the early 1950s, Roy Carrejo was assigned to the Tiffany station (north of San Marcial). In those days, Tiffany had a small station building and a siding, servicing the freights and passenger trains as they entered or left the 90-mile run through the Jornada del Muerto. Keeping track of all train movements was an important job for the railroad and the telegrapher. Simply put, if a train failed to show or was late, there was a problem, or there would soon be one.

Very few accidents or train wrecks occurred on the AT&SF line due to the diligent actions of the telegraphers and dispatchers. Train wrecks were expensive, often closing a line for days as the debris was cleared. This cost the railroad thousands of



Job one for railroad telegraphers was keeping track of train positions. When two trains met on the same track – it was not a pretty sight.

After Tiffany, Carrejo was transferred to Socorro, where he worked for the next 34 years as telegraph operator, agent-telegrapher and station manager. During most of this time, all telegrams continued to be sent across the country in dits and dahs. Morse code was used on the AT&SF line in New Mexico for nearly 100 years.

Carrejo copied the last morse code message in 1976, when the old trusty telegraph sounders were replaced with teletype machines. Socorro was the last AT&SF depot to cease using morse code. The final dit-and-dah to travel down a telegraph line in New Mexico was sent by Roy Carrejo.

Asked if he ever delivered a singing telegram, Carrejo said, "only once."

One day, he delivered a telegram to radio station KSRC. Owner Walter Shrode, surrounded by several other people, insisted Carrejo sing the telegram.

Finally, Carrejo submitted. He opened the telegram and in the most melodious voice he could muster, sang out: "Your order can not be processed until you pay your \$300 past due bill."

Carrejo's face wasn't nearly as red as Walter Shrode's.

Roy Carrejo faithfully served the railroad, and the people of Socorro for years. He retired Nov. 30, 1988 — the same day the AT&SF permanently closed the Socorro depot. He and his wife, Delores, still live in Socorro; and every once in awhile, Roy will pull out his code key, a 12-volt battery and old morse code sounder to hear the sounds of an age now gone.

Telegrapher Sam Padilla

Socorroan Sam Padilla was another AT&SF telegrapher. Padilla worked for the Albuquerque District, which controlled all train traffic from Albuquerque to Needles, Calif., and Phoenix to the Grand Canyon. Socorro was in a different district.

Upon graduation from telegraphers school in Pueblo, Colo., the AT&SF gave him a choice to work in Wisconsin or the Grand Canyon in Arizona. He and his wife discussed it, deciding it was a no-brainer. As a result, Padilla spent his entire career working the main line between Albuquerque and Kingman, Ariz. More than 30 AT&SF freight trains, and two AmTrak passenger trains, rumble over these tracks everyday, still making it one of the busiest sections of track in the country.

In his younger days, Padilla worked as the telegraph operator at Williams Junction (west of Flagstaff) and at the Grand Canyon station. In those days, the hotels at the Grand Canyon were owned by the railroad. As a result, all reservations for lodging, dining, transportation and even the mule rides into the canyon were railroad telegraphic messages. Plus, all the Western Union traffic to and from the guests. All of these messages and telegrams would arrive at Williams, where they were relayed to the Grand Canyon, making these two stations among the busiest on the AT&SF line.



Photo: El Defensor Chieftain archives
Agent-telegrapher Roy Carrejo prepares for an arriving freight train at the Socorro depot in 1982. He retired as Station Manager in 1988 — when the Socorro depot was closed.



Photo: Paul Harden
Roy Carrejo sends morse code on his Vibroplex speed-key and sounder — still in working condition.

At this time, Padilla and wife, Susie, lived in Williams. He worked two days a week at Williams Junction and three days a week at the Grand Canyon station, traveling back and forth on the train. At least he got to ride the famous Grand Canyon train for free! Since the passenger cars were often full, he usually rode in the forward engine (where it was nice and warm in the winter).

After 11 years in Arizona, Padilla transferred back



Photo: El Defensor Chieftain archives



Photo: Paul Harden

(Left) Sam Padilla works the “mainline track” between Albuquerque and Kingman from the Gallup, N M depot. Teletype replaced morse code shortly after this 1972 photo.

(Right) Today, Sam Padilla, like all true railroad telegraphers, keep their speed-key and sounder in working condition.

to New Mexico, working at the Gallup station for the next 25 years. Morse code was replaced by teletype machines along this mainline track in the early 1970s, several years ahead of Socorro.

Padilla completed his career in Gallup as the assistant train master, retiring Dec. 13, 1993. After 36 years with the railroad, the Padilla's returned to Socorro.

And like Roy Carrejo, Sam Padilla still keeps his old morse code keys and sounder in working condition. They were the tools of the trade. No true telegrapher could ever part with them.

The Age of Wireless

When one thinks of "wireless," cell phones come to mind, or perhaps your television remote control. However, wireless was actually invented by Guglielmo Marconi in the 1890s.

As a young man, Marconi began experimenting with transmitting energy long distances through the air. Building powerful transmitters, Marconi successfully sent the first morse code message across the Atlantic Ocean in 1901. America and Europe were now connected, not through wires, but through what Marconi termed "wire-less."

In short, Marconi invented radio. In 1902, he formed the Marconi Wireless Telegraph Company, hiring railroad telegraphers to send the morse code messages between the two continents.

Soon, Marconi's "spark gap" transmitters were placed on-board ships. For the first time, ships could communicate with land, using morse code to report their position, receive weather reports, and messages to and from the passengers

— This revolutionized the maritime industry almost overnight.

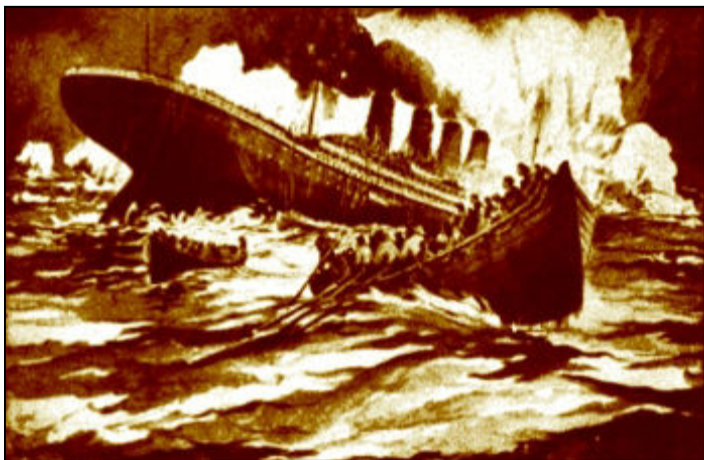
To add the new-fangled wireless station to a ship, a small wooden room was built behind the bridge, from which the term "radio shack" originated. Within a few years, hundreds of ships at sea were outfitted with radio shacks.

One of the first new passenger ships to be built with a dedicated radio room was the R.M.S. Titanic.

Marconi received the Nobel Prize for Physics, in 1909, for his invention. And rightfully so, as wireless communications



Photo: Marconi Calling Musuem
Guglielmo Marconi, inventor of “wireless” radio, sent the first telegraphic message across the Atlantic Ocean in 1901.



transformed the 20th century, with no signs of slowing down in the 21st.

Telegraphy and the Titanic

When the *RMS Titanic* set out to sea on its maiden voyage, two Marconi wireless telegraphers manned the radio room: Jack Phillips and Harold Bride. Hundreds of messages to and from the passengers, using the new, novel wireless, kept the two busy.

One message received was the infamous iceberg report — the very iceberg the Titanic struck around midnight on April 15, 1912. Immediately, the two telegraphers began sending out distress calls. They alternated between sending the then common "CQD" and the newly adopted "SOS" (dit dit dit – dah dah dah – dit dit dit).

With the Titanic taking on water with a heavy port list, the Captain briefly entered the “Marconi Room” and ordered Phillips and Bride to leave for the lifeboats. Phillips told Bride that he would send a couple more distress signals and join him shortly.

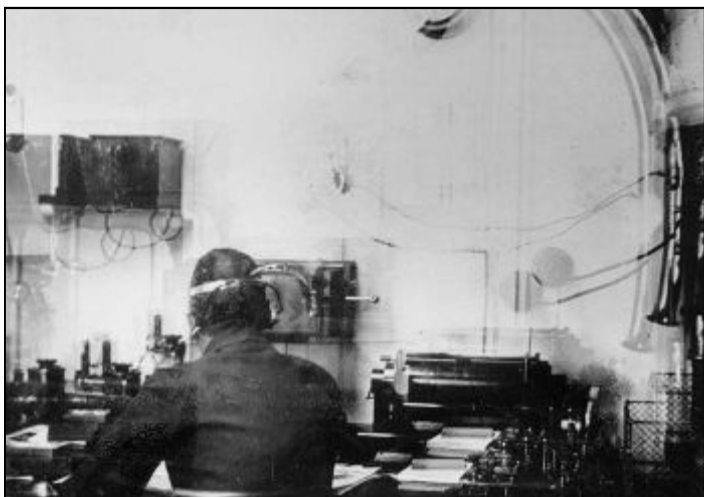


Photo: British Maritime Museum
The only known photo of the Titanic “Wireless Room.”



**Marconi Titanic Operator
 Jack Phillips**



**Marconi Titanic Operator
 Harold Bride**



A morse code key identical to that used on the Titanic. Keying the “spark gap” transmitter could fuse the contacts together. The long brass lever was an emergency disconnect should this occur.

Harold Bride survived the disaster; Jack Phillips remained at his post as telegrapher and went down with the ship, along with 1,300 others.

Numerous ships listened as Phillips' transmissions went silent. To this day, a telegrapher who passes away is known as a "silent key." In 1985, Dr. Robert Ballard used Phillips' last message, a final position report, to help locate the wreckage of the Titanic.

The ship *Carpathia* rescued the 700 lifeboat survivors. Immediately, *Carpathia's* telegrapher, Harold Cottam, and the surviving Harold Bride, informed New York of the disaster over the wireless. The two worked tirelessly sending the names of the survivors as they became known, messages to family, and answering the incoming inquiries, some of which were from the press.

Young David Sarnoff was the New York telegrapher on duty who received the first messages of the Titanic disaster. For the next 72 hours, Sarnoff was in constant communications with Cottam and Bride. Furnished by Sarnoff, the names of the survivors were printed in the *New York Times*, giving the young telegraphers, and the Marconi Company,



Photo: Marconi Calling Museum

The actual telegram from the White Star Line, owners of the Titanic, to the captain of the Carpathia: "Vitaly important that we receive names balance survivors including third class and crew - last message received with the names nine a.m. today - please do your utmost - give us this information at earliest possible moment."

instant national fame — and the world an instant look at the disaster.

When the Carpathia pulled into New York harbor on April 18, the two telegraphers, Cottam and Bride, were met on the dock by none other than Guglielmo Marconi. He put the two men up in the Astoria Hotel with "anything they wanted" to repay their tireless and faithful service. Marconi then sent a heartfelt telegram to the father of Jack Philips, the Marconi telegrapher lost on the Titanic.

David Sarnoff went on to form the Radio Corporation of America and is often credited as the father of television. At the time, investors wondered who would watch wireless broadcasts of moving images. Sarnoff served as the CEO of RCA until 1970.

The Telegraph Industry

Following the Titanic disaster, the value of wireless telegraphy was clearly established.

Wireless stations began cropping up everywhere and, for the first time, Western Union had competition to its "land line" telegraph service. However, both industries flourished and made record profits.

The demand for telegraphers exploded. There never seemed to be enough telegraphers to fill the jobs. Schools around the country trained thousands of young men, all of whom were assured a job upon graduation. It was the fastest growing industry in America, with telegraphers needed for the railroad, Western Union, the ocean-cable circuits, newspaper news rooms, wireless stations and as shipboard operators. Even dur-

ing the 1930s depression, telegraphers were seldom unemployed.

The Socorro Chieftain employed a news telegrapher from about 1890 to 1920, and printed the messages in the newspaper under the heading "Telegraphic News."

As the telegraph industry grew, the demand often exceeded the capacity of the lines, creating a push to find ways to send the morse code messages faster to process more messages per day.

The familiar morse code key allows an operator to send a message about 20 words-per-minute, or about as fast as the receiving operator can write with pencil and paper. Around 1910, several semi-automatic keys were invented that allowed an operator to send morse code in excess of 35 words-per-minute. With names like Vibroplex and the McElroy, these "speed keys" became instantly popular. Messages could now be sent so fast that only a trained operator using a typewriter could keep up. Soon, this became the norm and by the 1920s, telegraph and wireless offices were filled with speed keys and typewriters, doubling the number of messages an operator could process in an eight-hour shift.

Since then, there has hardly been a railroad telegrapher, radio telegrapher or amateur radio operator using morse code that doesn't own a "bug," as the mechanical contraptions are called. They are prized possessions, finely tuned and adjusted until they feel "just right" to the operator.

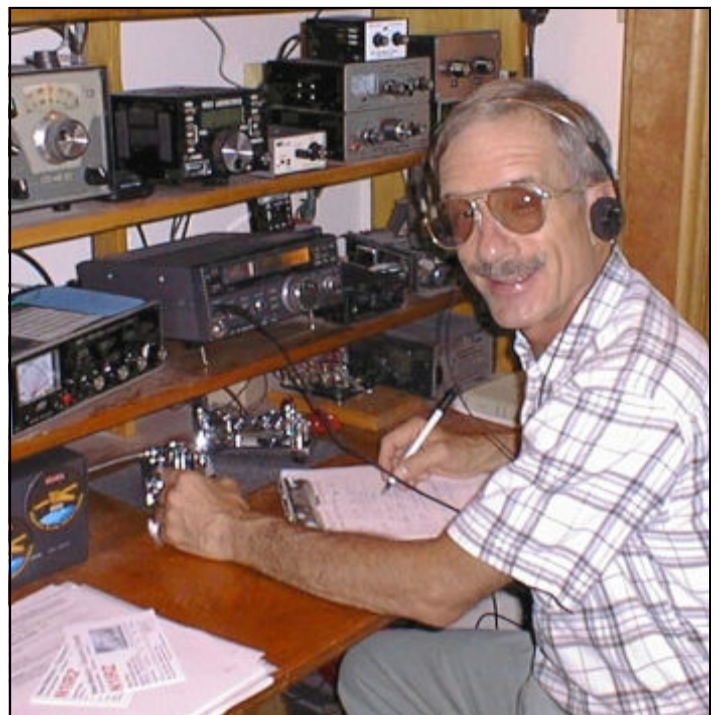


Photo: Dave Finley
Dave Finley, N1IRZ, is one of the Socorro "hams" that regularly uses morse code on amateur radio. He is shown using his Vibroplex "bug" speed-key.

Today, the Vibroplex Company is still in business, selling their famous speed keys for about \$200.

The Death of Morse Code

Thousands of former telegraphers shudder when they hear about the "death of morse code." However, it is not entirely dead. Some ship-to-shore stations still use CW (as morse code is called in the radio world), and by many amateur radio operators (or hams). Thousands of hams around the world still communicate exclusively in morse code by choice. Dave Finley, N1IRZ, Paul Harden, NA5N, and Jan Harden, NØQT, are three of the active morse code hams in Socorro.

There is a "romance" to communicating with another person in morse code that is hard to explain. Only an old telegrapher can explain it to you. The next time you see Roy Carrejo or Sam Padilla, ask them.

Although morse code is nearly obsolete, it does not mean it is not still efficient.

This was proven in April 2005 on NBC's "Tonight Show with Jay Leno" when a contest was held between "the fastest text messagers in the country" and two old telegraphers. The contest was to see who could send a prearranged message the fastest — the contest was clearly designed to poke fun at morse code.

The two old telegraphers chosen were amateur radio operators, who happened to be accomplished CW operators. When the showdown began, one young man began madly punching buttons on his cell phone. The CW operator smoothly worked his speed key, sending dits and dahs across the studio at 28 words-per-minute. After about 15 seconds, the telegrapher on the receiving end waved his piece of paper with the completed message in the air, easily beating the text messenger, who hadn't even come close to completing his message to send. The message read: "I just saved a bunch of money on my car insurance."

With the exception of amateur radio, morse code is virtually dead. Like the railroads, the old telegraphers and the Western Union delivery boys are now part of an era gone by — never to return. It is a shame this era came to end last month with hardly a notice.

So the next time you send an e-mail across the country, think of the old railroad and wireless telegraphers that started it all.

— 73, Paul Harden, NA5N

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The contest on the "Tonight Show" between the fastest text messenger and a CW operator proved morse code is still fast and efficient.

Some of the references used in this article: AT&SF Railfans Web site; "Marconi Calling" online museum; a special thanks to railroad photographer Evan Werkema; "Western Union" Web site; interviews with Chuck and Albert Zimmerly, Roy Carrejo and Sam Padilla; El Defensor Chieftain archives;

The International Morse Code			
The American Morse Code, used by railroad telegraphers, differs slightly.			
A	••—	K	—••
B	—•••	L	—•••
C	—••••	M	—•—
D	—•••	N	—••
E	•••	O	—••••
F	•••••	P	•••••
G	—••••	Q	—••••
H	•••••	R	•••••
I	••••	S	•••••
J	•••••	T	—•••
U	•••••	V	•••••
W	•••••	X	•••••
Y	•••••	Z	•••••
1	•••••	2	•••••
3	•••••	4	•••••
5	•••••	6	•••••
7	•••••	8	•••••
9	•••••	0	•••••

Be a Telegrapher
Using the Morse Code chart above, decode the following:

• TELEGRAM •

—	—	—	—	—
—	—	•••	•••	•
—	—	—	—	—
•••••	—	—	•	—
—	—	—	—	—
•••	—	••	•••••	•••••
—	—	—	—	—
•••••	—	•••	•••••	•••

Area Repeaters

Weekly Breakfasts



Wed. Morning Breakfast:

7:00 a.m. at

Iron Horse Restaurant

(Hwy 89 in Chino Valley)

(N 34°43'56.5" W112°27'15.4")

informal – all are invited

Breakfast at Masonic Lodge: 3rd Saturday of each Month at 9:00 a.m.

(1280 Willow Creek Road,


2nd Floor; above Bank of America)

informal – all are invited

* Location data (per WGS84) provided
by Fred Zimmermann, N7PJJ

Freq.	PL	Location	Owner/ Club	Auto- Patch	Links	Vo IP	Notes:
52.560-	100.0	Mt. Union	N7NGM			IRLP	Node 3301
144.390	Simplex						APRS- www.aprs.fi
145.290-	127.3	Mingus Mtn.	K7YCA				ARES/RACES
145.350-	162.2	Wildflower	W7QHC				Dawn
146.760-	131.8	Hayden Peak	N7SKO				WECOM INC
146.780-	91.5	Bill Williams Mtn.	K7NAZ			IRLP	BWMRC LITZ, 3178
146.880-	100.0	Prescott Heights	W7YRC				YARC
146.920-	162.2	Mount Ord	W7MDY				ARA
146.980-	162.2	Mt. Elden	W7ARA				ARA
147.000+	162.2	Mingus Mt.	K7MRG				MMRG
147.140+	162.2	Mt. Elden	W7ARA				ARA
147.220+	162.2	Mingus Mtn	W7EI				VVARA LITZ
147.260+	103.5	Mt. Union	K7YCA				ARES/RACES
147.260+	127.3	Mt. Francis	K7YCA				ARES/RACES
147.360+	162.2	Mt. Ord	W7MDY				ARA
442.150+	100.0	Mingus Mtn	WA7UID				MMRG
446.025	Simplex		N7NGM			Echo	
448.475-	100	Mt. Elden	W7ARA				ARA
448.875-	100.0	Mt. Elden	W7ARA				ARA
449.250-	192.8	Chino Valley	K7POF				
927.0875-	151.4	Mingus Mtn	WB7BYV				
927.3875-	151.4	Prescott	WB7BYV			Echo	ARA

Y.A.R.C. IRLP NODE
Node Number 3182
146.100 MHz No PL Tone

T-Hunt Frequencies:

Primary - 145.100 MHz
Secondary - 146.565

For more Repeater Information & Listings refer to:

- www.w7ara.org/Web/
- www.azrepeaters.net
- www.azfreqcoord.org/listings.htm

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Many thanks to Dick Hughes, W6CCD, our Webmaster

