Lewisville Amateur Radio Association

THE ARRAY

JANUARY 2020

From the President's Shack, Ron Ford, KF5OMH:

By the time you read this article, well hopefully you read it, we will be well on our way into the year 2020. I hope that all of you and your families had a wonderful holiday season and that the new year will bring everyone good health and prosperity.

Thanks to Frank, KG5ZNJ, for a great presentation entitled **Getting started with YAESU C4FM** at the November meeting. If you missed the meeting you can find Frank's presentation on the LARA web site by clicking here. After seeing Frank's presentation and his enthusiasm for Fusion I became a lot more interested in the mode and will probably be gearing up in the near future. I should have asked Santa to bring a new radio but I'm not sure I was good enough last year to deserve one under the tree.

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Web Site: W5LVC.org

Check us out

facebook.com/w5lvc/

Lewisville Amateur Radio Association
Is a 501(c)(3) organization

LARA Upcoming Events

Business Meeting

8:00 AM Saturday
January 18, 2020
Lewisville Central Fire Station
188 North Valley Parkway
Lewisville, TX

Weekly Nets

"Information and Help Net"

Wednesday, 7:00 PM on 145.170
PL 110.9, -.600 repeater

Saturday Breakfast

(except 3rd Saturday)

Main Street Cafe
208 E. Main Street
Lewisville, TX 75057

Association Contact Information

Email: W5LVC.Club@gmail.com

Mailing Address:

LARA, P.O. Box 292282
Lewisville, TX 75029

Welcome New Members

Ferris L. Watson, WT5B

Jay Skidmore, KI5HHQ

Kelly Lancaster, KI5HHO

2019-2020 Officers

President
Ron Ford, KF5OMH
rfavcon@verizon.net, 972-742-7839

Vice President
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Ae5ez.radio@gmail.com, 817-966-3412

Secretary
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Lronswain@gmail.com, 210-410-2008

Treasurer
Clark Highsmith, K5LGX
alacrity@bennoah.net

Technical Director
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wb8ywa@arrl.net, 972-523-8467

Operations Director
Mike Reitz, W5EVT
w5evt@sbcglobal.net, 214-535-1368

VE Coordinator
Steve Kline, W5JK
skline4@verizon.net, 972-679-6288

Public Information Officer
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meweston55@gmail.com, 460-781-5803

Youth Education Coordinator
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desertyachter@gmail.com, 505-221-3993

Newsletter Editor
David Jackson, W5YS
w5ys@aol.com, 940-345-0060

THE ARRAY

Association membership is open to all persons interested in amateur radio. Join at any meeting, by mail or on-line through our web site. Annual dues are $25 individual, $30 family.

EVENTS

Winter Field Day, January 25-26, 2020

Location: Conner Pavilion at Lake Park on Lake Lewisville
Time: 1:00 pm Sat. until 1:00 pm Sunday

General License Classes

The Lewisville Amateur Radio Association (LARA) will be conducting a General Licensing Class with the classroom sessions being conducted in early March (dates TBD). The class will be held at the Lewisville Central Fire Station, 188 N. Valley Pkwy in the Training Room located at the rear of the station. Entrance is adjacent to the fuel pumps.

The preferred text for the class is the Gordon West 2019-2023 General Class Study Manual which is available at Amazon.com, local book stores or the Gordon West web site, W5YI.org. An alternate manual is the ARRL General Class Study Guide. Both manuals contain the same material only presented in a much different manner.

To successfully pass the test the student must spend self-study time prior to the classroom sessions reading and taking practice tests. Once you register for the class a training coordinator will contact you with pertinent information to prepare you for the self-study and classroom sessions.

The fee for the class is $15.00 payable in advance through PayPal on the LARA web site, w5lvc.org. Click on the Training tab and use the PayPal button at the bottom of the page. We'll also accept your personal check mailed to LARA, PO Box 292282, Lewisville, TX 75029. This fee will also cover the testing fee at the end of the class.

The test will be administered on March 21 following the final classroom session. You must bring a non-returnable copy of your Technician license along with two forms of identification, one of which should be a picture ID.

To register complete the General Class Registration and submit your payment for the class. Once the payment is received a training coordinator will contact you at the email address provided.

Questions can be directed to Jim Horton, WB8YWA@arrl.net.

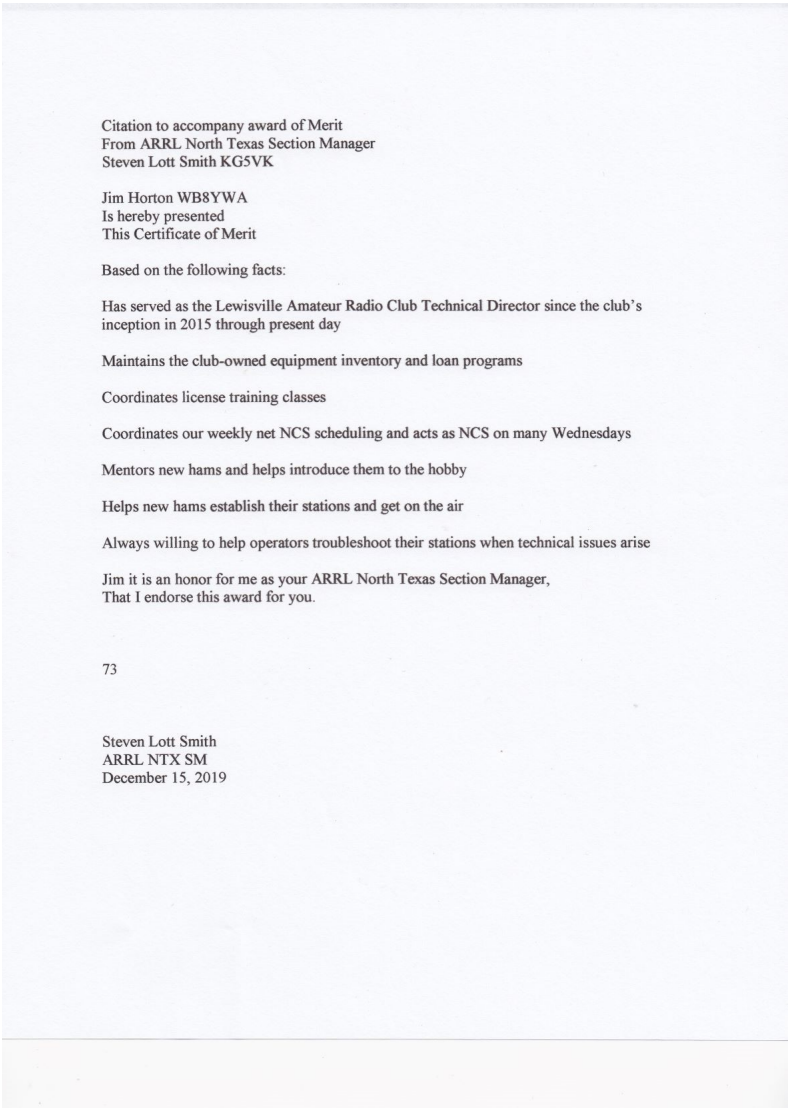
SPECIAL RECOGNITION

Jim Horton, WB8YWA

At the LARA Officer's Meeting on January 14, Jim Horton, WB8YWA received a Certificate of Merit from the North Texas Section Manager of the American Radio Relay League (ARRL). LARA President, Ron Ford, KF5OMH, presented the certificate to Jim on behalf of North Texas Section Manager Steven Lott Smith.

Jim has been a cornerstone member of the association since it's inception in 2015. As you can see in the accompanying citation from Steve, Jim has fulfilled a lot of roles for the organization and is well deserving of this recognition. In addition to all of these accomplishments Jim is also a Life Member of the ARRL.

Congratulations Jim on a job well done.



Citation to accompany award of Merit
From ARRL North Texas Section Manager
Steven Lott Smith KG5VK

Jim Horton WB8YWA
Is hereby presented
This Certificate of Merit

Based on the following facts:

Has served as the Lewisville Amateur Radio Club Technical Director since the club's inception in 2015 through present day

Maintains the club-owned equipment inventory and loan programs

Coordinates license training classes

Coordinates our weekly net NCS scheduling and acts as NCS on many Wednesdays

Mentors new hams and helps introduce them to the hobby

Helps new hams establish their stations and get on the air

Always willing to help operators troubleshoot their stations when technical issues arise

Jim it is an honor for me as your ARRL North Texas Section Manager,
That I endorse this award for you.

73

Steven Lott Smith
ARRL NTX SM
December 15, 2019

ARRL

The American Radio Relay League

Certificate of Merit

Jim Horton WB8YWA

in
Recognition of
Your Outstanding Service
to the
Amateur Radio Community

NTX SM Steven Lott Smith KG5VK

President Ron Ford, KF5OMH
from page 1

Speaking of Santa and Christmas, the club Christmas Party on December 14 was another roaring success. Good food, good company and making new friends was enjoyed by all; not to mention all the gift stealing that went on. There are way too many stories to relate here so catch some of the folks who were there and ask them to relate some to you. Ask Mike, W5EVT, how many times he opened gifts only to have someone else steal them. Wish I had taken a video of Les, WF5E, as he came wheeling down the aisle with a look of determination on his face looking for a USB Magnifier to steal. He had it well planned as his steal was the 3rd time the item moved and it was frozen so Les got to take it home with him. Finally, a big **THANK YOU** to Mike, W5EVT, for coordinating the party. Check out the photo gallery on the w5lvc.org web site for some great party pictures.

The election of officers for the 2020-2021 club year is drawing close. Nominations will close on March 31 at 1700 (5:00 PM). Ballots will be distributed shortly thereafter and voting will close April 17 at 1200 (12:00 PM). I would like to encourage all members to consider taking a leadership role in the organization; after all, this is YOUR club, so how about stepping up to help lead it. The elected positions are President, Vice President, Secretary, Treasurer, Technical Director and Operations Director. Job descriptions can be found in the by-laws on the web site. Just an administrative note – the office of President must be filled by a new candidate this year as I will have served two terms which is the max permitted by the by-laws. If you would like to put your name in nomination or nominate another individual contact Steve Kline, W5JK, the election coordinator.

If you are interested in taking SKYWARN training, it will be conducted on February 22, 8:00 – 12:00 at the MCL Building on the TWU campus in Denton. If you are an ARES member or are contemplating ARES membership this training is required at least every two years. Even if you're not interested in ARES activity this training is good knowledge to have in your toolbox and it's free.

Are you a Technician looking to upgrade to General? Here's your opportunity coming up in February and early March. LARA will be conducting self-study guidance and classroom sessions in the near future. See details elsewhere in this newsletter.

Just a reminder that club dues are payable in the month of January. If you don't renew by January 31 the automated roster system will drop you from active membership. See the Treasurer's page for more details or contact Clark, K5LGX for questions.

Looking forward to seeing everyone at the meeting on January 18. Come out and bring a guest.

73, Ron KF5OMH

SOLAR CYCLE

From Wikipedia

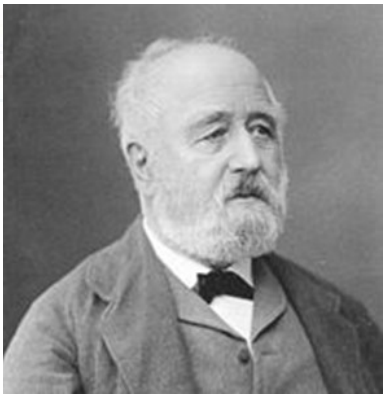
The solar cycle was discovered in 1843 by Samuel Heinrich Schwabe, who after 17 years of observations noticed a periodic variation in the average number of sunspots.[2] Schwabe was however preceded by Christian Horrebow who in 1775 wrote: "it appears that after the course of a certain number of years, the appearance of the Sun repeats itself with respect to the number and size of the spots" based on his observations of the sun from 1761 and onwards from the observatory Rundetaarn in Copenhagen.[3] Rudolf Wolf compiled and studied these and other observations, reconstructing the cycle back to 1745, eventually pushing these reconstructions to the earliest observations of sunspots by Galileo and contemporaries in the early seventeenth century. Following Wolf's numbering scheme, the 1755–1766 cycle is traditionally numbered "1". Wolf created a standard sunspot number index, the Wolf index, which continues to be used today.
The period between 1645 and 1715, a time of few sunspots,[4] is known as the Maunder minimum, after Edward Walter Maunder, who extensively researched this peculiar event, first noted by Gustav Spörer.
In the second half of the nineteenth century Richard Carrington and Spörer independently noted the phenomena of sunspots appearing at different solar latitudes at different parts of the cycle.
The cycle's physical basis was elucidated by George Ellery Hale and collaborators, who in 1908 showed that sunspots were strongly magnetized (the first detection of magnetic fields beyond the Earth). In 1919 they showed that the magnetic polarity of sunspot pairs:

- Is constant throughout a cycle;
- Is opposite across the equator throughout a cycle;

Reverses itself from one cycle to the next.

Hale's observations revealed that the complete magnetic cycle spans two solar cycles, or 22 years, before returning to its original state (including polarity). Because nearly all manifestations are insensitive to polarity, the "11-year solar cycle" remains the focus of research; however, the two halves of the 22-year cycle are typically not identical: the 11-year cycles usually alternate between higher and lower sums of Wolf's sunspot numbers (the Gnevyshev-Ohl rule).[5]
In 1961 the father-and-son team of Harold and Horace Babcock established that the solar cycle is a spatiotemporal magnetic process unfolding over the Sun as a whole. They observed that the solar surface is magnetized outside of sunspots, that this (weaker) magnetic field is to first order a dipole, and that this dipole undergoes polarity reversals with the same period as the sunspot cycle. Horace's Babcock Model described the Sun's oscillatory magnetic field as having a quasi-steady periodicity of 22 years.[2][6] It covered the oscillatory exchange of energy between toroidal and poloidal solar magnetic field ingredients.

Samuel Heinrich Schwabe (1
1875). German astronomer, d
the solar cycle through exten
observations of sunspots



lf (1816–1893), Swiss
, carried out historical
ion of solar activity back to
enth century

TECHNICAL DIRECTOR
Jim Horton, WB8YWA

Information and Tips on How to properly tune older tube type Radios and Amplifiers.

By Jim Horton WB8YWA

Back when I started in this awesome hobby all the radios and amplifiers had to be tuned to be able to transmit. Lower power radios like CB's and VHF radios were solid state and the design allowed them to be fixed tuned and they did not have to be adjusted. These were single band radios and as for CB was narrow band and tor 2 meters (VHF) the higher the frequency the wider the bandwidth. Thus allowing no tune up required on its frequency. On the HF multiband radios it was a different story and they had to be adjusted when changing frequency. The multiband tube type amplifiers fell into this same design where tuning up was needed. If you are a ham of just a few years this technique might be unfamiliar to you and a bit scary. The scary comes because large amounts of damage can happen when operating either a tube type radio or amplifier that is not tuned to specifications. Even though this is a past designed issue there still is a lot of this older equipment around and being used. Also today they are still building tube type amplifiers and they need to be tuned in a proper way.
So what are some of these older radios that have tubes for drivers and finals? Here are a few.
The Yaesu FT-101 B, E or F is one.

Notice tuning knob labeled **PRESELET** (middle just right of large VFO knob). Then above that is a knob called **PLATE** and to its right a knob called **LOADING**. Later we will discuss these.

Another is the Kenwood TS-520,530,820,830 and others.

On the Kenwood the same three knobs are on the top row left of the VFO but are arranged different and instead of **PRESELECT** it is called **DRIVE**. The **LOAD** is on a double knob where the second part selects different meter functions than the **PLATE** control.

My beloved Drake T4, T4X, T4XB. T4XC, and TR4, C & CW.

On the Drake T4XB instead of **PRESELECT** it is called **RF TUNE**, **PLATE** and **LOAD**. You can get the idea that different brands might call the controls different but are all used the same.

Before going farther let's look at a statement you will find in all of the brands operator manual.

It states: CAUTION

Do not allow the plate current to exceed 0.15 amps for more than 5 or 6 second if the plate control is not tuned for plate current dip or maximum RF output. Failure to observe this warning will result in rapid final amplifier tube deterioration due to excessive plate dissipation. Incorrect setting of RF Tune may cause illegal output from the transmitter on frequencies other than intended. Always preset the RF Tune control before proceeding with other steps in tune up procedure.

This statement alone could cause a seasoned ham to sweat just thinking about it. Forty years ago a set of tubes were around $20, Amp tubes ever more. Today they are very expensive and hard to find.

With all that said above I have good news, it is really easy to tune these devices. With a little knowledge you can feel comfortable in the tuning / loading up any of this equipment including the 1500 watt amplifiers..

#1 A dummy load should be used when you tune any equipment. Set Band Switch to the proper band setting.

#2 Always tune up at first with a low drive setting. Most radios have a knob called Drive, Carrier and or Gain – Look at the radios operator's manual.

#3 After first two steps adjust the knob called **PRESELECT**, **RF TUNE** or **DRIVE** on Kenwood's for maximum receive signal. (Air Noise)

#4 Refer to owner's manual on how to switch radio to transmit. On Yaesu it is a switch called MOX. On the Kenwood it is a switch called SEND. On the Drakes it is called TUNE. They will all be a switch and you should read the owner's manual to be familiar with this switch.

#5 Now with **PRESELECT** adjusted for maximum receive signal and drive set low, coax hook to dummy load and meter set for reading Plate AMPS, with one hand be ready to adjust the **PLATE** Control and with the other hand key the transmit. Move the knob left and right watching the meter dip (go lower in value). Remember to only key the transmitter for 5 or 6 seconds. You might have to do this two or three times but each time no longer than the 5 or 6 seconds. Please note that if you have a watt meter in line as you dip the Plate the watt meter increases.

#6 Now the **LOAD** control. Either switch meter to RF Output or watch your external watt meter. Key the transmitter and adjust the **LOAD** for maximum output. Since Plate current is low the 5 or 6 seconds is not that important as long as it is not too long.

#7 Now go back to redo **PLATE** control for dip in current or max in RF output.

#8 Now touch **LOAD** one more time. Transmitter should be tune for maximum output into a perfect load. Remember we are not on the antenna but the dummy load. Now we switch over to our resonant antenna or tuned antenna. It will be different than dummy load.

#9 You should only have to adjust the **LOAD** slightly – so get on the air find a clear frequency and ask, "is this frequency is in use". Remember we do not always hear all of the stations that are talking. If clear go ahead and key your transmitter and while keyed adjust your **LOAD** slightly for maximum output. Note you should be tuned good enough to make a short call.

The **PRESELECT** is adjusting all the stages in the radio, like all the mixing stages, the RF pre amp and so on. The **PLATE** is use to adjust the RF Driver and Final Stages Impedance. The **Band Switch** selects the taps on coil and is not adjustable. The **LOAD** adjust the impedance to the load or antenna.

So you see it is not that hard, just some simple rules to remember. Now let's look at the amplifiers.

Ameritron 811H –and most amps are the same.

You see the same controls, **Band Switch**, **LOAD**, **PLATE** and other switches for the meters and standby.
It is tuned in the same matter as the radio. Remembering to set radio controls first, then with radio output adjusted low, key the radio and amp and adjust plate for a dip or a peak RF output. Keeping the same 5 to 6 second rule. Once Plate Current is Dip Adjust Load for maximum output. Do this two or three times each time obtaining more power out. Again look at the owner's manual.
Some tips:

- Some manuals show pre settings. This might get you in the ball park but many times not. Create your own pre settings by writing down settings when radio and amp are adjusted.
- Not all Amplifiers require the same drive level from your transmitter. Read your manual and adjust to that setting. I adjust my radio to the point of output just reaches max output of the amplifier, then I back off a little more.

Just for fun here is my new to me old **Drake L4B**.

As you can see it still has the same type of controls, **PLATE**, **Band**, **LOAD** and meter switches plus on/off and SSB/CW. A lot of Amps have a SSB setting and a CW setting. What this switch does is switch the High Voltage transformer windings to a lower value. The reason they do this is the duty cycle of the tubes.

SSB is about 50% duty cycle. CW is a lot higher, say 70%, it varies with CW speed. AM and FM is a 100% duty cycle. In tune mode it is a solid carrier which means 100%. This is why the short key down in tuning.

Support LARA with AmazonSmile

AmazonSmile is a simple and automatic way for you to support your favorite charitable organization every time you shop, at no cost to you. When you shop at smile.amazon.com, you'll find the exact same low prices, vast selection and convenient shopping experience as Amazon.com, with the added bonus that Amazon will donate a portion of the purchase price to LARA. To shop at AmazonSmile simply go to smile.amazon.com from the web browser on your computer or mobile device. You may also want to add a bookmark to smile.amazon.com to make it even easier to return and start your shopping at AmazonSmile. The AmazonSmile Foundation will donate 0.5% o the purchase price from your eligible AmazonSmile purchases. On your first visit to AmazonSmile (smile.amazon.com), you need to select Lewisville Amateur Radio Association as the charitable organization to receive donations from eligible purchases before you begin shopping. AmazonSmile will remember your selection, and then every eligible purchase you make at smile.amazon.com will result in a donation to LARA.

Kroger Rewards

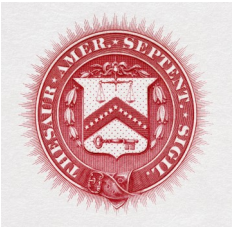
If you shop at Kroger and are a member of their Rewards Program you can also support LARA by selecting Lewisville Amateur Radio Association as your charitable organization of choice. Simply sign in to your account and select us and Kroger will donate 0.5% of your eligible purchases to LARA.

Matching Funds

Many employers will match hours that employees spend supporting a non-profit with donations to that non-profit. If your employer has such a program LARA may qualify to receive these types of funds as we are an approved 501 (C)(3) organization. So, you're retired? Some companies even support a program of this nature for their retirees. Check with your current, or former, employer to see if they have a program of this nature. If 501 (C)(3) details are needed contact the club treasurer.

TREASURER'S REPORT

Clark Highsmith, K5LGX



Happy New Year to the Friends and Members of LARA!

We had a great time at the Christmas party. If you were unable to attend, make plans to be there next year. Before we talk about 2020, let's take a quick look at last year's finances. We started the year with a bank balance of $3,591.69 and finished the year with a balance of $2,670.25. The largest impact on the budget was the purchase of quality radio equipment that our club desperately needed. In addition, membership renewals seemed to slow down after an initial surge in early December. If you have not renewed, you still have time. HamClubOnline will keep you in the system as an active member until the end of January. At that time, unpaid members will be moved to inactive status. Don't miss out as the new year is going to get off to a strong start with Winter Field Day. I hope to see you there.

Clark Highsmith, K5LGX
LARA Treasurer

LARA Treasurer's Report--December 31, 2019

Checking Account				
Beginning Balance				$2,511.68
Income				
	Dues		$335.00	
	Donations		$0.00	
	Miscellaneous		$0.00	
		Total Income	$335.00	
Expenses				
	Fees		$11.61	
	Events		$164.82	
		Total Expenses	$176.43	
Ending Balance				$2,670.25
Petty Cash (Included in balance)				$0.00
Club Assets				
	For Sale	$0.00		
	Stock (Not for Sale)	$2,703.36		
	Loaner Equipment	$375.00		
			$3,078.36	
NET VALUE				$5,748.61

AREA REPEATERS

FREQ	SHIFT	PL	CALL	NAME	ALLSTAR
144.9100	none	none	W5NGU-4	DCARA DIGIPEATER DENTON	
144.9900	none	none	KC5GOI	DCARA DIGIPEATER ROSSTON	
144.9900	none	none	KD5EOC-10	DCARA WL GATEWAY	
145.1700	-0.600	110.9	W5FKN	DCARA DENTON COUNTY EOC	
145.2100	-0.600	110.9	N5MJQ	METROCREST ARA CARROLLTON	
145.4000	-0.600	110.9	NETARC	GRAPEVINE	
145.4900	-0.600	85.4	WD5U	ROSSTON TOWER	41089
146.6200	0.600	110.9	N5ERS	GRAPEVINE	
146.7800	0.600	131.8	WQ5A	WISE COUNTY SKYWARN	
146.9200	-0.600	110.9	W5NGU	DCARA DENTON	41087
146.9400	-0.600	110.9	K5FTW	FT. WORTH SKYWARN	
147.3800	0.600	110.9	K5LRK	LAARK THE COLONY	47668
147.4500	-1.000	none	W5NGU-C	DCARA EOC D*STAR "C"	
147.4900	-1.000	none	KE5YAP-C	DCARA ROSSTON D*STAR "C"	
147.9700	none	none	K5YX-10	WINLINK GATEWAY	
224.0000	-1.600	110.9	K5LRK	LAARK THE COLONY	
224.2000	-1.600	110.9	KE5GDB	DCARA DENTON	43409
224.9200	-1.600	110.9	AF5RS	AF5RS	43784
440.6625	5.000	none	N5LS	DMR MARC CC1	
440.6875	5.000	none	W5NGU	ROSSTON DMR MARC CC1	
440.7125	5.000	none	KE5YAP-B	DCARA ROSSTON D*STAR "B"	
441.3250	5.000	88.5	W5NGU	PORTABLE DCARA REPEATER	
442.1750	5.000	110.9	NETARC	SOUTHLAKE	
442.6000	5.000	131.8	WQ5A	WISE COUNTY SKYWARN	
442.6500	5.000	110.9	N5MJQ	METROCREST ARA CARROLLTON	
442.7500	5.000	110.9	KA5R	TROPHY CLUB	
442.9250	5.000	none	W5NGU-B	DCARA EOC D*STAR "B"	
443.2250	5.000	110.9	N5ERS	DECATUR	
443.3000	5.000	110.9	K5LRK	LAARK C4FM ONLY	
443.5250	5.000	118.8	WA5LIE	DCARA DENTON	
443.7375	5.000	141.3	N6LXX	ROSSTON TOWER	
443.8250	5.000	103.5	KC5BY	COPPELL HIGH SCHOOL	40666, 50187
443.8750	5.000	110.9	NETARC	DFW AIRPORT	
444.0500	5.000	110.9	W5NGU	DCARA DENTON COUNTY EOC	
444.2250	5.000	110.9	K5CFD	COPPELL	
444.5125	5.000	123.0	KE5UT	CELINA	
444.7000	5.000	110.9	NETARC	SOUTHLAKE	
444.8500	5.000	110.9	N5ERS	GRAPEVINE	
927.0500	-25.000	110.9	W5FKN	DECATUR	
927.4125	-25.000	432.0	N5LS	DENTON	
927.6125	-25.000	110.9	W5NGU	DCARA DENTON COUNTY EOC	
927.6625	25.000	none	N5LS	DMR MARC CC1	
1253.6000	none	none	W5NGU-G	DCARA EOC D*STAR "G"	
1259.2000	none	none	KE5YAP-G	DCARA ROSSTON D*STAR "G"	
1293.2000	-20.000	none	KE5YAP-A	DCARA ROSSTON D*STAR "A"	
1293.4000	-20.000	none	W5NGU-A	DCARA EOC D*STAR "A"	

KPH Maritime Radio Station

From Wikipedia, the free encyclopedia

KPH is a public coast radio station on the West Coast of the United States. For most of the 20th century, it provided ship to shore communications including telegrams (using Morse code) and marine telex service (using radioteletype). The station discontinued commercial operation in 1998, but is operated occasionally as a historic service – its signal can be tuned in throughout a large portion of the western hemisphere.

(Ship to shore telephone calls were not handled by KPH but by other stations such as the nearby AT&T high seas station KMI.)

Revenue service and preservation

KPH would broadcast regular bulletins of news, weather and other general information to the shipping community, then relay business and personal messages to and from individual ships. Station operators also monitored the international distress frequencies for calls from ships in trouble.
With the decline of Morse code the station was retired, but volunteers have preserved it in operating condition so that it can still be heard on the air on weekends and special occasions, sometimes using the alternative callsign KSM and the amateur radio club callsign K6KPH. KPH is located within the Point Reyes National Seashore in Marin County, California, north of the San Francisco Bay.

History

The station dates back to the dawn of the radio era in the early years of the twentieth century when it began operations at the Palace Hotel in San Francisco, California, using the callsign "PH". Forced out by the 1906 San Francisco earthquake and fire, the station moved from one temporary site to another until it was acquired by the Radio Corporation of America (RCA) and relocated to Marin County. Subsequently, it was owned by MCI Communications and finally Globe Wireless, who still own the KPH operating license

Physical plant

The receiving station and control point now occupy a classic white 1920s' Art Deco building on Sir Francis Drake Boulevard in the Point Reyes National Seashore whereas the similarly styled[3] transmitter buildings are about 20 miles south at the town of Bolinas. The reason for siting the transmitters so far away from the receivers is that their powerful outgoing signals would make it difficult to hear weak incoming signals from faraway ships on the same frequency (or channel). Operators at the receiving site remotely control and key the transmitters by means of landlines connecting the two sites.

Radio operations

KPH has always been mainly a Morse code station. International Morse code is used on the air, but American Morse code was once used on the telegraph lines ("land lines"), so operators at the station had to learn both varieties until the landline telegraph was replaced by the teleprinter.
In the beginning, all traffic was sent by Morse code ("CW") using hand-operated Morse keys. Devices were introduced to allow messages to be typed or "punched" onto a paper tape so that they could be sent automatically at any time. Station IDs and other repeated announcements pre-recorded by this method are called "wheels".
In the 1930s, landline teleprinter operation was adapted for radio use (radioteletype or "RTTY") which allowed for faster, more efficient messaging. This did not replace Morse code entirely, because many vessels had no teleprinter equipment and because Morse was the most reliable transmission mode available: when faced with bad atmospheric conditions and weak signals, dots and dashes are easier to pick up than teleprinter or the human voice, and all the coding and decoding are done in the brain.
Over the years radioteletype was improved and computerized, giving rise to new digital transmission modes such as Clover and PACTOR. Satellite communications became a technically and commercially viable alternative to terrestrial radio links. Ship radio equipment became more advanced and automated, requiring fewer radio officers – or none. By the 1990s few ship stations were equipped for Morse code or had any use for it, so coast stations re-allocated their Morse frequencies to other uses. Some stations disappeared from the airwaves altogether, as did KPH after being acquired by Globe Wireless in 1997.[2] Its Morse code traffic was then diverted to other stations such as KFS in Half Moon Bay, California, another Globe Wireless station. KFS continued to handle Morse code traffic until July 13, 1999 (Universal time; actually July 12 in the Pacific time zone) when it made its "last ever" Morse transmission, ceremonially marking the supposed end of commercial Morse code usage in America (as distinct from amateur Morse code usage, which continues). This anniversary is commemorated on the air every July as the "Night of Nights" by KPH and other coast radio stations, along with radio amateurs who participate on their own frequencies.

Survival and preservation

KPH is now a part of the Point Reyes National Seashore and is maintained and operated by former KPH employees and volunteers of the Maritime Radio Historical Society. There are several reasons that the station was able to survive decommissioning and make a comeback. First, the equipment was old and not suitable for resale, so much of it was left where it was, with connections to power, antennas and land lines still intact. Second, the real estate taken up by buildings and antenna farms, while desirable, was also unsuitable for resale (especially to the extent that it lay within the Point Reyes National Seashore), meaning that the properties were not bought and redeveloped the way some other stations were. The KPH license and the frequencies assigned to it are made available to the MHRS by the license holder, Globe Wireless. In addition, the Federal Communications Commission (FCC) has granted the MHRS a new coast station license with the callsign **KSM**, as well as the amateur radio club callsign **K6KPH** for communicating with radio hams on amateur frequencies. K6KPH is unusually powerful and well-equipped for an amateur station, with its professional grade transmitters, antennas and operators. Operating in amateur radio mode means following a different set of rules (using different frequencies and lower transmitter power levels), but amateurs are not limited in their choice of equipment as long as they stick to these rules.

Special events

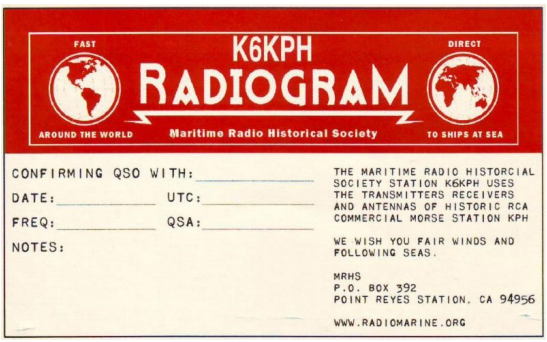
July 12–13, 2009: Tenth annual **Night of Nights**: Historic coast stations, ships and radio amateurs on the air commemorating the anniversary of the "end of Morse code in America". KPH, KSM and amateur station K6KPH were due to be on air at the KPH site. Coast stations scheduled to be on air included KFS in Half Moon Bay, WLO in Alabama and KLB in Seattle, WA.

Ship stations in regular contact with KPH and KSM

SS American Victory: a Second World War Victory ship which has been preserved as a museum ship in Tampa, Florida.

SS Jeremiah O'Brien: a Second World War Liberty ship preserved as a museum ship in San Francisco, Ca.

SS Lane Victory: a Second World War Victory ship preserved as a museum ship in San Pedro, California.



K6KPH:

K6KPH on-the-air operations use only the original transmitters, receivers and antennas of KPH. No amateur equipment is employed. At this writing K6KPH operating frequencies are 3550, 7050, 14050 18097.5 and 21050kc. The transmitters for most of these frequencies are Henry HF-5000D commercial transmitters. But for special occasions the 1950s vintage RCA commercial units known as "K" and "L" sets are used. The transmitting antennas are double extended Zepps for frequencies below 12Mc and H over 2 for 12Mc and above. All antennas are fed with open wire line. K6KPH usually guards 7050.0, 14050.0, 18097.5 and 21050kc when KPH is on the air. Give a call! The best bet is to use commercial calling procedure since the amateur frequencies are scanned along with the ship calling frequencies. Call "K6KPH" repeatedly (within the bounds of identification requirements of course). When the K6KPH operator hears you he will send "DE" after which you can send your call and list your traffic. We usually have multiple operators on duty. K6KPH is also activated for special occasions such as International Marconi Day in April and for Straight Key Night on New Year's Eve. Don't let anyone tell you that radio operators don't know how to party!

We Need You!: Are you a competent Morse operator? Then we need you! We are always looking for operators to help staff KPH and K6KPH. A commercial radiotelegraph ticket is required sit the circuit at KPH - but we give the exam for that license. If you would like to take the test please contact us at the email address below. No license is required for K6KPH operations, just a competency in Morse. Full training in station operations is provided.

Visits: You are welcome to join us any Saturday. There are actually two sites involved. The transmit site is open from 0900 to 1700 Pacific time. The receive site is open from 1200 to 1700 Pacific time. We start our day at the transmitter site in Bolinas (451 Mesa Road) at 0900 for Services of the Church of the Continuous Wave where pastry and coffee are served. I suspect that the Transmitter Department would insist on putting on one of their famous Shock & Awe vintage transmitter demonstrations in your honor. Press broadcasts begin at 1000. The members of the Operations Department usually depart at about 1100 to activate KSM and K6KPH at the receiving station at Point Reyes (17400 Sir Francis Drake Blvd) but the transmitting staff remains at Bolinas.

You would be welcome to join us at either or both locations.