

Calendar for April 2000

April 5th, at 7:30 P.M. in the evening, the Sonoma County Radio Amateurs Club will be having their monthly membership meeting, at Aglient Technologies (formerly Hewlett Packard), which is located at 1400 Fountain Grove Parkway in Santa Rosa. This is the annual Homebrew night.

April 9th, from 8:30am until 1:00pm, the SCRA's 2 meter repeater will be in Net Mode for the use of the SCRA Public Service Team which will be staffing the MS Walkathon. We apologize in advance for any inconvenience caused.

April 12th, at 6:00 o'clock P.M. in the afternoon, The Sonoma County Radio Amateurs Club will be having their Monthly Board of Directors meeting at Masterstouch Mortgage located at 8979 Conde Lane in Windsor. All SCRA members are welcome to attend.

April 15th, at 9:00 o'clock A.M. in the morning, the Sonoma County Radio Amateurs Club will be hosting a VE test session at Agilent Technologies in Santa Rosa. The test will be held in building number one. Directions: Coming from 101 south, take Bicentennial off-ramp, go east until it joins Fountain Grove Parkway. Enter the visitors (second) gate. Coming from the north, take the Hopper Ave. off-ramp, turn left, go to first traffic light, turn left (freeway overpass). After crossing freeway, go straight onto Fountain Grove Parkway, enter visitors (second) gate. The new licensing procedures will be in effect for this VE session.

April 19th, at 6:15 P.M. in the afternoon, The Redwood Empire DX Association will be having their monthly membership dinner meeting at Carrows in Petaluma. Cocktails are at 6:15pm, in the bar, and the dinner starts at 7:00pm. The program that evening will feature Jim Maxwell, W6CF, the newly-elected ARRL Pacific Division Director.

April 29th, starting at 8:00am in the morning, The Valley of the Moon Amateur Radio Club will be having their annual swap meet. There will be a VE test session at the swap meet, from 9:00am until 12:00 Noon. Directions: From the south take Hwy. 12 into Sonoma, Drive to the Plaza, Turn left, then right onto First Street West to #126. From the North, drive into Sonoma. As you reach the Plaza, turn left onto First Street West and go to #126.

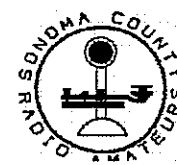
Compiled by Jeff Basham W2JAB

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Volume 25 Number IV

Short Skip

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Repeater Station
W6SON

March 2000

APRIL

DUES ARE DUE!

Dues for the 2000-2001 fiscal year are due. Please check the "Expires" date on the mailing label to see if we have received your dues for the new year. If not, this could be your last issue! Please send your payment today! Thanks!

Upcoming VE test sessions.....

VE sessions all over the country have been swamped with test takers. According to an ARRL staff member, the paperwork from all the sessions is backed up a bit. New licensees and those who have taken upgrade exams may wait up to four weeks for the information to show up in the FCC database.

Locally, VE Coordinators are preparing for the expected crowds on and before April 15th. There will be TWO test sessions running on April 15th. SCRA will be hosting its usual session at Agilent Technologies, 1400 Fountaingrove Parkway, Santa Rosa, from 9 AM until about Noon. Exams and "paperwork" upgrades will be provided. An Express Line for the paper-only processing will be available.

Also, the Sonoma Mountain Repeater Society will be offering a paper-work only VE session the same day in Petaluma from 9 AM until Noon. The session will be held at the Petaluma Community Center (Lucchesi Park), 320 North McDowell Blvd., Petaluma.

The fee for tests and paper-upgrades remains \$6.65. Please remember to bring the required IDs, and, the original and copies of any current license and CSCEs.

ARRL San Francisco Section Manager Len Gwinn WA6KLK Makes New Appointments

SF Section Manager Len Gwinn WA6KLK has appointed Bill Hillendahl KH6GJV as the new Assistant Section Manager. Among Bill's new duties will be the coordination of Official Observers and Public Information Officers in the section. Len also appointed Lee Dibble KE6EAQ as the Section Emergency Coordinator. As such, Lee is responsible for administration of ARRL's Amateur Radio Emergency Service, the District Emergency Coordinators and local Emergency Coordinators. The San Francisco section covers from San Francisco north to the Oregon border.

SCRA Visits Marin Amateur Radio Club

On Friday, March 3rd, a group from SCRA attended the Marin club. Those making the trip were Randy Black KE6VMZ, Jim Cardillo-Lee KE6VGV, Bill Hillendahl KH6GJV, John Mullan KD2LQ and his XYL Sue. The Marin members welcomed the visitors in their clubhouse, a converted firehouse. The Marin group had an interesting program on the Marin Hams' relationship with the Marin Office of Emergency Services, a division of the Marin Sheriff's Office. The two organizations enjoy a mutually beneficial relationship with enthusiastic support from the Sheriff's staff. The Marin OES has added a request for \$10,000 from the county coffers to aid in the upgrade of the amateur repeaters owned by the Ham organizations. The OES staff is also assisting in the preparation of a grant request for additional funds from other sources. The SCRA members were pleased to witness the positive and cooperative relationship between the Marin OES and the amateur radio community.

The Marin group has promised to make a reciprocal visit to SCRA in the near future.

SHORT SKIP STAFF

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History

American, as his credentials might have us believe, or possibly British, in that the article appeared in the premier issue of subject magazine. In all likelihood, these and similar questions may remain unanswered. But does it really matter? It is rather like trying to prove who was the first stamp collector, or who was the first model airplane builder. The simple fact is that, as early as 1898, construction articles began appearing in various magazines, and during the period from near the turn of the century until about 1908 or 1909, more and more experimentally inclined individuals began to take an interest in wireless communications, either for scientific and profit-motive reasons, or for purely personal reasons.

It was also during the decade from 1901- 1910 that J.A. Fleming, who was incidentally working for Marconi at the time, invented the 2 element vacuum tube (the diode, 1904), and Dr. Lee De Forest developed the 3 element vacuum tube (the triode, 1906, patented 18 February, 1908 under U.S. Patent No. 879,532).

These two events, in and of themselves, were seminal in the development of modern radio, and would ultimately pave the way for its rapid growth. The diode "valve", as vacuum tubes were then called (and are often still called by the British), provided the means of rectifying alternating current into pulsating direct current, which could then be filtered to provide a ready source of power. However, it was very inefficient in controlling current flow through the tube when a signal was applied to the cathode. By inserting a "control grid" between the valve's cathode and anode, and by applying a proper value of "biasing" voltage, De Forest discovered that a small audio signal First Audion Valve – circa 1907 applied to this control grid would produce a large current flow change through the valve from cathode to anode, thereby amplifying the original signal. The first triode valves, dubbed "Audions", had an amplification factor of about 10. It wasn't until later that Edwin Armstrong discovered these same "Audions" would, under the proper conditions, oscillate at a reasonably constant frequency, heralding the inception of continuous wave, or CW, transmissions.

By 1911 it has been estimated that there were as many as 10,000 amateurs in this country alone. Given that all radio transmitters were sparkgap and occupied virtually all of the radio spectrum, and that communications, be it commercial or amateur, was totally unregulated, it is easy to understand the horrible interference and confusion which was prevalent on the air. Cooperation between transmitting stations was required, yet sadly such cooperation did not occur and, indeed, oftentimes deliberate jamming was carried out, particularly Dr. Lee De Forest - 1907 between rival commercial wireless stations. Obviously something needed to be done about this sorry state of affairs. Prodded by the U.S. Navy, whose equipment was among the oldest and most outdated, the United States Congress began taking a serious look at the situation in the Spring of 1912. As is often the case, it was too little and too late. If not for a disaster of monumental proportions, legislation to control radio emanations might have dragged on in the halls of Congress for years.

On the night of April 14, 1912 the HMS Titanic struck an iceberg on its maiden voyage from Liverpool to New York. Documentation

of that now famous incident would most likely fill a library. Condensed down, the historical importance of that terrible night for us present day amateur radio operators is that the first true SOS signals were sent, 713 lives were saved, and the world, for the first time in history, knew about a disaster far at sea long before the rescue ships reached port in New York a day later. Speculation abounds that more lives, perhaps nearly all, could have been saved, had it not been for the interference, the fake messages being sent by unknowns, and the total lack of radio discipline. But of this we are certain; the world had been given a wakeup call to the importance of radio, and to the urgent need for "on air" discipline and control of the spectrum. The impact of that solitary event was to profoundly change radio and its development, both for commercial and amateur interests, forever. In Part II, we'll take a look at the aftermath of the Titanic disaster and the resultant Radio Act of 1912, continuous wave (CW), the formation of the ARRL, and events leading up to World War I.

FCC LEVIES HEFTY FINE ON FORMER AMATEUR

The FCC has told a former Houston, Texas, amateur that he's liable for a \$17,000 fine for unlicensed operation and for failing to allow the FCC to inspect his radio equipment. A Notice of Apparent Liability for Forfeiture--an NAL--was sent March 3 to Leonard D. Martin, formerly KC5WHN, by the FCC's Houston Office.

Martin has bumped heads with the FCC on several occasions. The FCC said it received a written complaint in May 1998 alleging that a station identifying as KC5WHN was operating on frequencies not authorized by his Technician ticket. FCC Special Counsel for Amateur Radio Enforcement Riley Hollingsworth sent Martin a Warning Notice in November 1998 outlining the complaints. The Commission said Martin "generally denied the unauthorized operation."

After tracking transmissions on various 27 MHz frequencies to Martin's residence on at least two occasions in early 1999, an FCC agent was twice rebuffed in his efforts to inspect Martin's radio equipment. The FCC's Houston Office issued Martin an Official Notice of Violation last April. Martin acknowledged the complaint and promised that "no further action by the Commission" would be necessary. In July, he turned in his Amateur Radio license for cancellation.

Martin's troubles didn't end there, however. Last October, following up on complaints of RF interference to a telephone in Martin's neighborhood, the FCC again tracked 27 MHz transmissions to Martin's residence. Martin reportedly again refused to let the FCC inspect his equipment.

The FCC NAL said that, based on the evidence, Martin "repeatedly and willfully" violated Section 301 of the Communications Act by operating without an FCC license and by refusing to allow an FCC inspection of his radio station. Martin has 30 days to pay or to request reduction or cancellation of the proposed forfeiture.

The ARRL Letter Vol. 19, No. 11 March 17, 2000

Sonoma County Radio Amateurs, Inc.
Membership Meeting 3-1-2000

MINUTES

1. Call to Order, Verification of Quorum - The meeting was called to order by President Rick Reiner K6ZWB at 7:36 PM at the Santa Rosa Agilent Technologies facility. There were 41 people present.
 - a. Introductions
 - i. Officers & Directors - The club officers and directors introduced themselves.
 - ii. Guest Speaker - Steve Carniglia KV6A on DSL and wireless Internet
 - iii. Visitors - Scott Sheppard from Windsor
 - iv. New Calls & Upgrades - Ted DeCroff KB6PTA to General
2. Approval of Minutes - Henry Tate KE6ORF moved that the minutes of the February 2, 2000, be approved as printed in Shortskip. The motion passed.
3. Officer & Director Reports
 - a. Treasurer - Jim Cardillo-Lee KE6VGV reported on the current balances in the club accounts. Jim said that the club's fiscal year began today. He advised that he had mismarked some of the dues receipts as for a calendar year when they should be for the club's fiscal year.
 - b. Officers - Secretary Bill Hillendahl KH6GJV invited the members to review the binder of newsletters received from other clubs. Bill pointed out the member badges that need to be picked up. Bill said that he would be visiting the Marin Amateur Radio Club at its meeting on Friday. He invited members to join him.
 - c. Directors - None.
4. Committee Reports
 - a. Activities Committee - Jeff Basham W2JAB, having a bit of laryngitis, provided printed copies of upcoming activities and the items listed in Hank's Swap Shop.
 - b. Newsletter Editor - Henry Tate KE6ORF - Henry invited members to submit articles of interest to him to put in Shortskip.
 - c. Public Service - John Mullan KD2LQ said that the first public service event would be the MS Walkathon on April 9th, Sunday, from 9 AM until about 1 PM. announced the start of the public service season. Contact John for more information and to volunteer. Coming events are the Wine Country Century and the Terrible Two. John asked the members to watch Shortskip for details.
 - d. Repeater Committee - Greg Gordon AC6VJ invited anyone interested in learning to become a control operator to contact him. He also advised that the club had received a letter from the county Department of Emergency Services severely restricting access to Sonoma Mountain to maintain the repeaters. Per the letter,

there would not be any "emergency" access to the site unless a county emergency existed, even if the radios failed to operate.

5. Unfinished Business
 - a. An updated roster was included in the last Shortskip. Members were asked to provide any corrections and e-mail addresses to the club Secretary.
6. New Business
 - a. Authorization to sell Drake 4-line equipment - Bill McCall W6WDM moved that the Board of Directors be authorized to sell the two Drake 4-line twins and that any proceeds be earmarked to purchase newer equipment when needed. The motion passed.
 - b. Lee Dibble KE6EAQ advised the membership that a bill had been introduced in the California Senate marked SB1714. The bill would incorporate similar language to the FCC's PRB-1 in state law. Lee suggested that letters be sent to state legislators to support the bill. John Mullan KD2LQ suggested that members should send a QSL card with their letter.
7. Show & Tell - John Mullan KD2LQ demonstrated the PSK-31 RTTY software. Cortland Richmond KA5S showed a fax system.
8. Recess - The meeting went into recess at 8:15 PM and resumed at 8:33 PM.
9. Program - Steve Carniglia KV6A made a presentation on DSL and Wireless Internet Service.
10. Raffle
 - a. Regular - The 50/50 raffle was won by Cortland Richmond KA5S who split \$31 with the club.
11. Announcements
 - a. Next Program - Annual Homebrew Contest
 - b. Board Meeting next Wednesday at Master's Touch Mortgage, 8979 Conde Lane, Windsor, at 6:30PM.
 - c. Dayton Hamvention - May 19 - 21, 2000; see Bill KH6GJV for details.
 - d. Red Oak Victory ARC Meeting on Saturday, 10 AM on the ship in Richmond.
 - e. CPR Saturday on March 11, at the Rohnert Park Agilent facility.
12. Adjournment - The meeting was adjourned at 9:32 PM.

Sonoma County Radio Amateurs, Inc.
Board of Directors Meeting 3-8-2000

MINUTES

Board Members Present: Rick Reiner K6ZWB,
Greg Gordon AC6VJ,
Bill Hillendahl KH6GJV,
Jim Cardillo-Lee KE6VGV,
Rich Freitas KF6SZA,
Bill McCall W6WDM,
John Mullan KD2LQ, and
Jeff Basham W2JAB.

Board Members Absent: Larry Gustafson KD6VUM

Guests Present: Randy Black KE6VMZ, Brian Torr N6IYY and Sue Mullan.

1. Call to Order, Verification of Quorum, Introductions - The meeting was called to order by club President Rick Reiner K6ZWB at 6:57 PM. The meeting was held at the offices of Master's Touch Mortgage, 8979 Conde Lane, Windsor. A quorum was present in that eight of the nine voting board members were present.
2. Approval of Minutes - Bill W6WDM moved that the minutes of the Board meeting of February 9, 2000, be approved as printed in Shortskip. Discussion ensued over the detail of the minutes. The motion passed.
3. Officer & Director Reports
 - a. Treasurer
 - i. Current Financial - Jim KE6VGV reported that as of the last bank statement, Exchange Bank had started to charge the club a \$6 account fee. Also, Jim had to mail in deposits since there were no Exchange branches near his home. The BoD authorized Jim to explore the possibility of moving the accounts to Bank of America if the accounts could be serviced for free.
 - ii. Review & Acceptance of Audit Report - There being no objections, this item was deferred to the next meeting.
 - iii. NARCC Dues - Bill KH6GJV mentioned that the annual dues needed to be paid. John KD2LQ moved that the \$20 annual dues be paid. The motion passed.
 - iv. Superfast Copy Bill - Bill KH6GJV moved that checks totalling \$398.99 be issued to pay the outstanding bill for Shortskip printing. The motion passed.
 - v. Secretary's Expenses - Bill KH6GJV requested reimbursement for costs of producing the BoD member binders and copies totalling \$65.01. Bill presented a written breakdown of the costs. Jeff W2JAB moved that the Secretary be reimbursed the \$65.01. The motion passed.
 - b. Officers

- i. Secretary Mail & Communications - Bill KH6GJV distributed the mail to the appropriate officers and presented the newsletters that the club had received. Bill passed to President Rick a flyer from the ARRL on equipment insurance. Generator Title - Bill advised the BoD that he had attempted to obtain a replacement title for the generator. When he presented the old registration slip to AAA, it was found in the records that a tree service company had title to the trailer listed on the paperwork. AAA suggested that Bill see if DMV could straighten the records out. Bill went to DMV to check on the records and found the same information. DMV suggested that the trailer be brought to DMV to verify the plate and VIN number on the trailer. Bill reported that he thought that there may have been a different trailer owned by the club back in the early 80s. He confirmed that information with Al Bloom N1AL. It is possible that the paperwork that Bill has is for a trailer sold by the club in the early 80s and that there is other paperwork not in possession on the generator. Greg AC6VJ will assist Bill by towing the trailer to DMV to attempt to straighten out the records and get a new title.
 - c. Directors
 - i. Removal of Display Case at the county EOC - John KD2LQ, Greg AC6VJ and Bill KH6GJV removed the display case from the EOC before the deadline. The display case is being stored at Greg's home and the contents of the case are now with Bill in the Secretary's records.
4. Committee Reports
 - a. Activities Committee - Jeff Basham W2JAB
 - i. Field Day - Jeff moved that a check in the amount of \$110 be issued to the City of Santa Rosa Parks & Recreation Department for the deposit and use fee for Youth Park for Field Day. The motion passed. There was discussion on whether the club should be a 4A or 3A station this year. Members volunteered for positions: Food - John KD2LQ; Tables & Chairs - Rich KF6SZA; Power/Generator - Bill KH6GJV; Antennas - Brian N6IYY; PIO - Bill W6WDM; Station Captains - Greg AC6VJ & Rich KF6SZA. Open Positions: Safety Officer and Station Captains.
 - ii. Swap Meet - Jim KE6VGV and Rick K6ZWB will check on potential site availability.
 - b. Newsletter - Henry Tate KE6ORF was not present to make a report. Bill KH6GJV reported that the new system for labeling and mailing the newsletter went very well.
 - c. Public Service Committee - John KD2LQ reported that there were four events in the schedule at this time. 4/9 - MS Walkathon; 5/6 Wine Country Century; 6/17 Terrible

A Little Radio History

by Mike (aka Billy) Graham-K7CTW. This appeared in the August 1999 (electronic) edition of "The Monitor", the newsletter of the Twin States ARC, Mike Maynard-WB1GRR Editor

Part I - 1895 to 1912 - Most of us are already familiar with the landmark work of Guglielmo Marconi. In the early 1890's he was taught by Professor Vincenzo Rosa at the University of Bologna, who was highly knowledgeable in the mathematics of Maxwell and the electromagnetic experiments of Heinrich Hertz and other contemporary scientists of the day. By 1895, young Marconi was putting this knowledge to practical use, and began improving upon the inventions of Faraday (induction coil), Hertz (wave emitter), Rhigi (spark gap), Branly (coherer) and Morse (telegraph key) to make a device with which he could communicate over a short distance without the use of wires. Eventually he relocated his equipment outdoors in order to work over greater distances. He soon learned that by connecting the output of his device to an "antenna" and that, by grounding both transmitter and receiver, he could dramatically increase the distance over which he communicated. By the close of 1895 he was communicating with his brother Alphonso over a distance greater than one mile. Practical wireless communications had been born.

What may be less obvious is the fact that there was a major body of scientific work, dating back nearly 300 years, from which Marconi was able to extract his ideas. In 1600 William Gilbert suggested that there may be a link between the phenomena of static electricity and magnetism. In 1831 Michael Faraday first demonstrated the principle of electromagnetic induction; in 1942 Joseph Henry discovers and publishes papers on oscillatory discharges from a Leyden Jar condenser; Samuel Morse sends his now-famous "What hath God wrought!" message over the first long-distance land telegraph system in 1844; in 1864 James Clerk Maxwell formulates his "Maxwell's Equations", which account for actions of electromagnetic waves, and Mahlon Loomis makes a sketch of a keyed vertical capacitively-loaded aerial device and an inductor, all in series. He later applies for, and receives (1872), a patent for a form of wireless communications; in 1875 Werner Siemens shows that electricity travels along a wire at nearly the velocity of light; Heinrich Hertz, in 1887, proves Maxwell's theory that electricity can travel through space, and that these waves share the same physical properties as light; finally, in 1894, Marconi reads about Heinrich Hertz's discovery of electromagnetic waves, and begins his own experiments. Which leads us up to where we left off. Guglielmo Marconi Unable to obtain funding from the Italian government to continue work, in 1896 Marconi traveled to England, and formed the Marconi Wireless Telegraph Company.

Throughout the remainder of the 1890s, Marconi continued to improve upon his equipment, installed the first commercial wireless station on an island off the coast of Ireland, installed his equipment in British warships, and reported on the America's Cup races using wireless to get information to shore. But being a realist, he knew

that, in order to gain true acceptance, he would have to demonstrate the long-haul capability of wireless to the skeptical scientific community, who said that communications over anything greater than line-of-site was impossible, and to the military, who would have the greatest need.

In his now-famous experiments between Cornwall, England and Newfoundland, Marconi stunned the world on December 16, 1901, when he announced that he had succeeded in bridging the Atlantic with his radio signals. Given this incredible news, one would think that wireless would "take off" and be available everywhere. Sadly, such was not the case. Marconi's company continued to languish in some obscurity and, by 1912, there were only about 400 commercial vessels utilizing wireless. However, both here in the United States and abroad in the UK, individual experimenters were starting to dabble in radio, and by 1909 the first radio clubs began forming. Most radio historians place the beginnings of "amateur" radio at around 1908-1909. In that year a new magazine called "Modern Electrics" began publication and over the next two years its circulation increased from 2,000 to more than 30,000. It was also at this time that the first how-to book for "amateurs" appeared, "Wireless Telegraph Construction for Amateurs".

In the first of a 30-part weekly series of articles on the history of amateur radio (appearing in "The Hudson Loop", the weekly newsletter of the ARRL Hudson Division), Bill Continelli, W2XOY, states that "It is difficult to know exactly how many amateur stations were on the air in this completely unregulated, laissez-fair era, but reliable estimates put the number of major' stations (i.e. capable of communication over 10 miles) at 600, while minor' stations with a one or two mile range probably numbered 3000 or more. Thus, if a year had to be arbitrarily chosen as the start of amateur radio, it would probably be 1908." Mr. Continelli goes on to assert "As for the first' amateur, that's a harder one. Without licensing, regulations, or a written record, there will never be a definitive answer to this question. However, The Wayback Machine' has come up with the name W.E.D. Stokes, Jr. He was a founding member and the first President of the first amateur radio club "the Junior Wireless Club, Limited", of New York City. This organization was formed on January 2, 1909. The "Junior Wireless Club" was the precursor to the Radio Club of America. Other founding members who might lay claim to the title first amateur' were George Eltz, Frank King, and Fred Seymour." Not everyone agrees with this particular series of assessments.

While researching various websites for historical reference material, I stumbled onto a fascinating, but rather lengthy, paper by Berj N. Ensanian, KI3U. The paper attempts to prove the assertion that a Mr. Leslie Miller, A.I.E.E., is perhaps the first true "radio amateur", due primarily to the fact that in January, 1898 he published an article in the British hobby magazine "The Model Engineer and Amateur Electrician" titled "The New Wireless Telegraphy. Some Interesting Experiments for Amateurs." Little, if anything, is known about this Mr. Miller, and his title of "A.I.E.E." is assumed to mean "American Institute of Electrical Engineers", the precursor to the IEEE Neither is it asserted or known if Mr. Miller was, indeed, an
See History Next page

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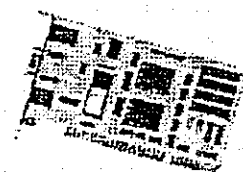
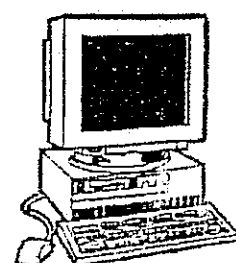
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B.O.D.
CONT.

Two, 9/23-24 Wave to Wine. John has signups already for the MS Walkathon. He will have more details as the events get closer.

- d. Repeater Committee - Greg Gordon AC6VJ
 - i. Status of Repeaters - Greg said that he had found the manufacturer for the S-Comm controller. He was able to get the controller working again. He also has the new firmware chips for Sonoma Mountain.
 - ii. Net Control Operators for the Weekly Net - 3-14 ZWB, 3-21 RMW, 3-28 JAB, 4-4 VJ, 4-11 WDM, 4-18 RMW, 4-25 JAB.
 - iii. County DES letter of 2-17-2000 - There being no objection, this matter to be deferred to the end of the agenda.

5. Unfinished Business

- a. Meeting Programs - Apr - Homebrew Night; May - EME by Al and Bob; Jun - Field Day; July - PG&E Electric & Gas Safety. Future program ideas - Cell Phone Technology, Surface Mount Devices, CATV Systems, ARRL Pacific Division Director and/or Section Manager, Force 12
- b. Club Calendar - No changes
- c. Storage of Club Property - A work party is needed to build shelves at Lee Dibble KE6EAQ's for the club property. Greg AC6VJ will work with Lee on the issue.
- d. Roster Distribution to Members - Bill KH6GJV reported that a roster had been published with the last Shortskip. He is taking updates and corrections from the membership. Bill suggested that another roster be published later in the year.
- e. Review and Acceptance of Inventory - Greg AC6VJ said that he had reviewed all of the listed club property with the exception of the equipment on Sonoma Mountain. He will report on the final inventory after he has gained access to Sonoma Mountain to verify the equipment.
- f. 2000 Budget - There being no objection, the review of a draft budget was deferred to the next meeting.

6. New Business

- a. Brian N6IHY said that he had built a G5RV dipole, but that he still had to test and tune it.

7. Announcements - Bill KH6GJV advised that the SAREX Workgroup at the SRJC will be opening the station to all Hams in the area for the CQ magazine FM Activity Weekend contest March 17 through 19. Persons interested should contact him.

8. Executive Session - The Board went in to executive session at 8:49 PM to discuss the county Department of Emergency Services letter of 2-17-2000. They returned to regular session at 10:00 PM.

9. Adjournment - The meeting was adjourned at 10:01 PM

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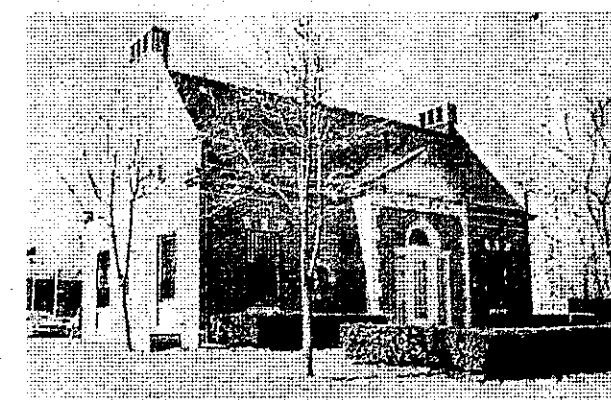
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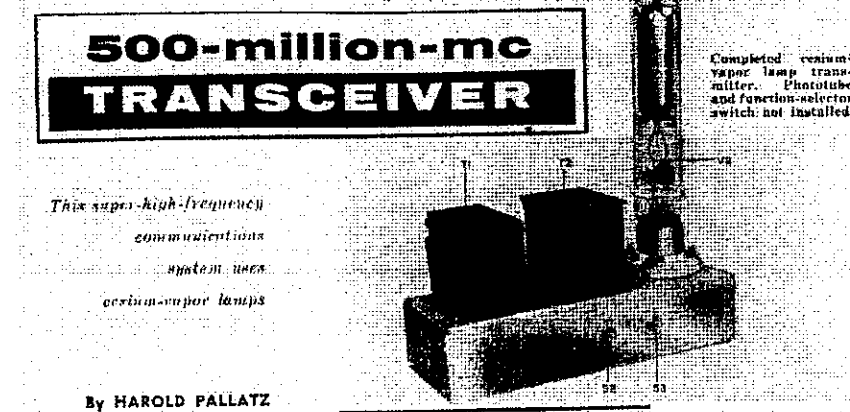
PHASE 3D SHIPPING COSTS APPROACH \$25,000

Citing information provided by Richard Limebear, G3RWL, on the RSGB News Service on behalf of AMSAT-UK, AMSAT News Service reports the cost of transporting the Phase 3D satellite to its launch site approached \$25,000. The Phase-3D spacecraft has a tentative launch opportunity aboard Ariane 507, now set for late July. The satellite is in its packing case in a clean room at the European Spaceport in Kourou, French Guiana, awaiting the start of the launch campaign.

The AMSAT-UK Phase 3D fund paid \$23,739 to cover costs of shipping Phase 3D from Atlanta to Kourou. The \$1000 cost of trucking the satellite from the Orlando Integration Lab to the Atlanta airport was met by AMSAT-ZL. "It is assistance such as this, from these AMSAT organizations, that really makes Phase 3D a truly international effort, not only in technical aspects but also providing a financial partnership," AMSAT-NA Executive Vice President Robin Haighton, VE3FRH, told ANS.

Last year, the AMSAT-UK Phase-3D fund also presented AMSAT-NA President Keith Baker, KB1SF, with a check for \$13,340 to purchase thermal blankets for the spacecraft. AMSAT News Service
The ARRL Letter Vol. 19, No. 11 March 17, 2000

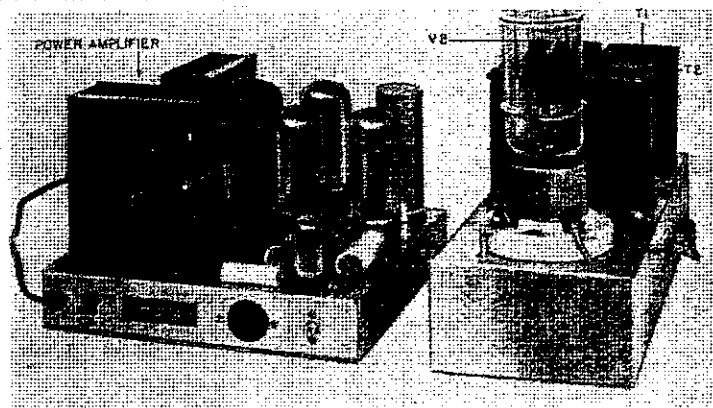




RADIO

lamp. The reflector concentrates the waves in a small highly directional beam and directs waves that would be lost as stray radiation. For night work where no light should show at all, the faint pink glow may be eliminated with an infrared filter.

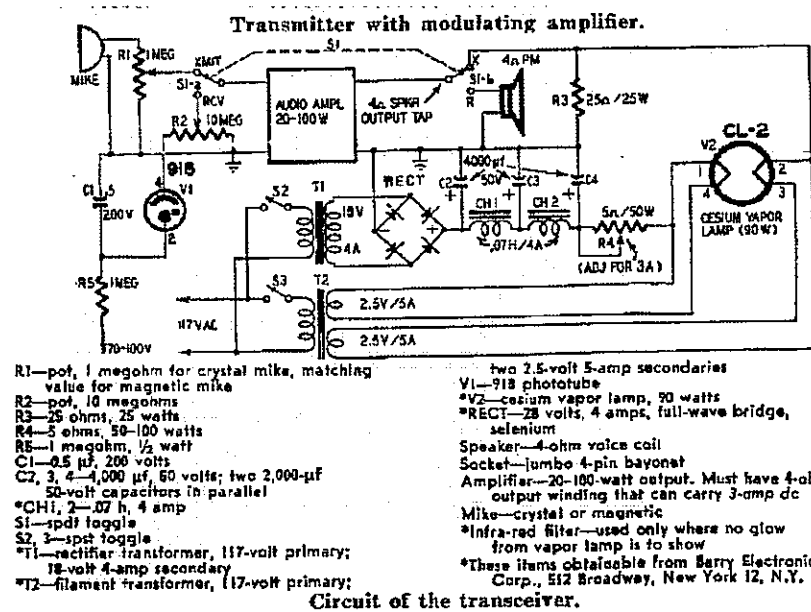
The receiver station consists of the same amplifier with a speaker replacing the lamp in the output and a photo tube replacing the microphone at the input. A dpdt toggle switch changes from "transmit" to "receive" and the entire system may be used as a transceiver. (the components of my receiver are simply soldered to the photocell socket terminals and receiver and mike are alternately plugged into the amplifier.)



No license of any kind is required for this two-way communications system. The waves transmitted by the cesium vapor lamps are only some 40 millionths of an inch long (about 500 million megacycles per second). These frequencies act more like light waves than radio waves and in fact are only slightly removed from the visible spectrum. The waves travel in straight lines and distance is only limited only by the power of your equipment or the curvature of the earth, whichever comes first.

Circuit hookup is very simple and is actually easier than for regular transmitters (see diagram). All you need is an audio amplifier, dc power supply (18 volts at 3 amperes) and a cesium vapor lamp. The lamp is modulated by the audio amplifier output. For greater distance a parabolic reflector can be placed behind the

Voice transmission will be virtually distortion free as the lamp response is from dc to 10,000 cycles. Clarity will depend mainly upon your audio system. Static and other transmission noises in regular radio-wave transmitters will be almost nonexistent. About the only noise you are likely to run into is possible pickup from street light or other bulb operating on ac. This is minimized by the directivity of the units. Normal daylight does not have a rapidly changing light level. About the only thing daylight will do is put a bias on the photo tube (never point a photo tube directly at the sun), which in some cases will require a readjustment of the input gain control. Daylight transmission may also require more shielding of the photo tube, particularly on long-distance transmissions, to prevent the weaker signals from becoming completely masked out.



Dc power supply

It is very important to have a hum free power supply, just as it is in a transmitter intended for speech. The diagram shows a circuit of a typical unit. A 18 or 24 volt aircraft battery (lead storage type) that will stand 3 amperes of constant drain can also be used.

This will give you hum-free results but has the inconvenience of requiring constant attention for recharging and refilling. Since cesium vapor lamps have negative resistance See Boat anchor next page

Boat anchor continued

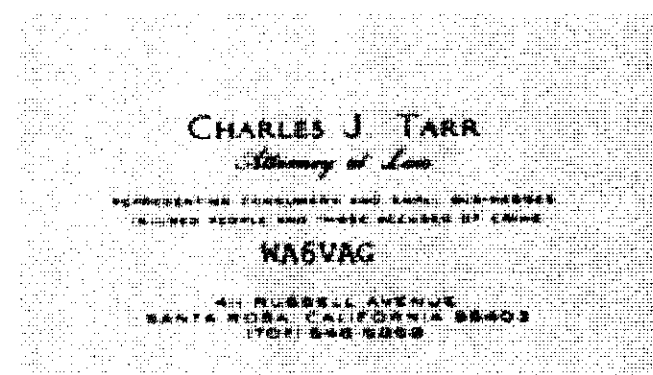
characteristic, some means of limiting the maximum current must be used. For this we use a slide type wire wound resistor.

In use, the two filaments of the lamp are lit for about a minute (up to about 15 minutes for breaking in the tube the first time). *Do not turn on the B supply until the filaments have been on for a minimum of 30 seconds.* An arc is struck by tapping on the microphone (this causes a high voltage peak across the lamp which ignites the arc). The slider is moved on the resistor until approximately 3 amperes are flowing through the lamp. The filaments can then be turned off and the plate current should be about the same. If you have difficulty starting the lamp, you can tilt it slowly until it starts.

Since the penetration of infrared waves is slightly different from light waves, you will still be able to communicate even under conditions of poor visibility due to fog. The size of the water-vapor molecule is the restricting agent. Water-vapor particles smaller than the wavelength of out transmitter are relatively transparent. Large vapor particles will in some cases completely stop the rays.

For code enthusiasts, the microphone may be replaced with an oscillator and a telegraph key. Communication will be the same as with low-frequency radio waves but will have the advantage of simpler construction and no code speed requirements. When your code speed does pick up from these practice sessions it will be easier to obtain higher grade licenses. **END**

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Rick K6ZWB Rick's Ramblings.

Well here we are smack into April. Hard to believe that 25% of the year 2000 is behind us. April will be a busy month for SCRA. Our program for the April meeting is the always popular homebrew / show-and-tell presentation. This is a great opportunity for our own gadgeteers, inventors and crafts persons to show of their discoveries and innovations. Of course the biggie this month will be the April 15th VE session at The Agilent facility on fountain Grove Parkway in Santa Rosa. With all the CSCE's that will be exchanged for upgrades and

all the new exams that will be administered April 15th should be a busy day indeed.

It been noticed that the attendance of our monthly get together has been down a bit, I realize that these things go in cycles with peoples life styles changing and changing of interests and priorities. Well let me tell you things are changing in the world of Amateur Radio as well. For the DX'er such as myself there are new countries for the DX'ers being released. There are new modes of operation being discovered such as PSK31 which is a type of teletype mode. At last months meeting, John, KD2LQ gave us a short show and tell demo. Perhaps we can have a full blown presentation at a future meeting. Its has been announced that in all probabilities Phase 3D will finally get off the ground this coming July. This will be the most sophisticated satellite to date. I'm sure we can have a presentation on that for a later date. Up coming programs include, 50 MHZ Moonbounce, an excellent safety presentation by PG&E, field day, A visit from our ARRL Pacific Division Director, Jim Maxwell W6CF and others to be sure. Of course there will be our annual fund raiser the SCRA Swap Meet that draws from all over Northern California.

So the point of this diatribe is of course , COME ON DOWN, COME ON BACK, TELL A FRIEND. SCRA IS ALIVE AND WELL AND THINGS ARE HAPPENING.

We are under new management, but we need your participation to keep the ball rolling. This is your club and without the support of the Hams of Sonoma County there is no SCRA.

Lets get the membership and monthly attendance up again. Lets get those dues paid and lets see some more faces at the monthly get together. The more members we have the more fun we have, its a proportional thing!

See you all soon. "73"

Rick, K6ZWB
Pres. SCRA

At the last meeting.....

Steve Carniglia KV6A presented a very interesting program on Digital Subscriber Lines (DSL) and wireless internet service. Steve's company, CDS Enterprises, provides these ways to gain high speed internet service. Steve talked about the benefits and limitations of the DSL, wireless and cable TV access methods. If you have questions on the different services, give Steve a call at 707 573-3500.