



MARCH/APRIL Volume 32, Numbers 3&4

April Meeting

April 26, 2002 - 7 PM socializing, meeting starts at 7:30.

The April speaker is Andreas Junge, N6NU, who will talk about aircraft avionics and aeronautical radio communications.

The Field Day T shirts have arrived.

Computer Cat Door Project

I know this looks like an April Fool joke, but it isn't.

http://www.quantumpicture.com/Flo_Control/flo_control.htm

DW

Field Day Manual

There is a very complete "how to" manual on Field Day at <http://www.qsl.net/ta1dx/afet/fieldnedir.htm>. It is aimed at organizers and new hams. I printed a copy to study.

- Steve, K6OIK

Secretary's Report

The FARS board held its monthly meeting on the evening of April 2, 2002. Members present were Mikel, KN6QI, Frank, K6FCW, David, KD6WRG, Howard, KE6PWH, Omri, AA6TA, Dave, KE6PFF, Charlie, KF6CUU, Mark, KG6GRR, Steve, K6OIK, Dick, N6ATD, and Martin, KD6WJW. Among the topics and issues under discussion were the following: Shel, N6RD, resigned his positions as treasurer and Relay editor. Frank, K6FCW, agreed to replace him as treasurer; David, KD6WRG, would remain as interim Relay editor. Coordinators are needed for the flea market and Field Day. The training officer position is still open. New badges, through the efforts of Dick, N6ATD, are now being offered for \$5.75.

- Martin, KD6WJW

Please let us know if you change your address, email, phone number, etc.

President's Corner

I must report with great regret that Sheldon Edelman, N6RD, has resigned from his position as the FARS club Treasurer. Sheldon has served in the very important position of club Treasurer for over 10 years making sure that club funds were handled properly. Sheldon also has participated in numerous other club functions, most notably as the organizer for our annual flea market. This event has been an essential source of income needed to sustain club activities and Sheldon's efforts have been invaluable. On behalf of the entire FARS club I want to thank Sheldon for all his efforts for the club and wish him the best. We will certainly miss him.

With Sheldon's departure, we have two open positions on the Board of Directors. I'm happy to report that we already filled the Treasurer's position. Frank Weiss, K6FCW, has volunteered to serve as club Treasurer and the board has confirmed him at our last Board meeting. Frank will serve as Treasurer until the club holds new elections in November. I want to thank Frank for volunteering for this important position.

We also need a replacement for **RELAY** editor. David Wilkes has been publishing the club newsletter for several years, but needs to step down. He has agreed to publish the newsletter for the next couple of months until we can find a replacement. If anyone has experience with writing or publishing a newsletter, please consider volunteering for this important position. The newsletter is an important benefit of membership and helps inform the membership of club activities and other news in amateur radio. Contact me if you are interested.

Field day is fast approaching this year and we already planning for this important club activity. We currently planning to operate in the 2A category, which means two primary stations operating on HF. We may have a separate VHF station if there is sufficient interest. Richard Baldwin, N6ATD, has graciously volunteered to organize field day this year, but he needs help from the club members. To start with we need captains to organize the CW/Digital station, and the SSB station. We will also need volunteers to help with setup and takedown of the Field Day site. Please contact Richard if you help with Field Day setup or operations.

We also have a flea market to run in June this year. Sheldon has been the coordinator for this event for the last several years. We need a new coordinator for this event. Sheldon has offered to provide help in the form of advice to whoever takes on this project. Sheldon assures me that this is not a difficult event to organize, mainly involves making sure that supplies are brought to the flea market for the concession stand. Contact me if you are interested.

de mikel, kn6qi

We also need a Training Officer. Have you ever wanted to be a teacher?
DW

CLUB INFORMATION

President: Mikel Lechner, KN6QI
Vice President: Steve Stearns, K6OIK
Treasurer: Frank Weiss, K6FCW
Secretary: Martin Liberman, KD6WJW
Radio Officer: Omri Serlin, AA6TA
Training Officer: (open)
Relay Editor: David Wilkes KD6WRG
Board Members: Jack Eddy WA6YJR, Dick Baldwinson N6ATD, David Cooper KE6PFF, Frank Weiss K6FCW, Herb Davidson KF6BKL, Howard Calif KE6PWH, Mark Hardy KG6GRR.
Station Trustee: Stan Kuhl, K6MA
FARS Web Page: <http://www.fars.k6ya.org>

FARS announcement mailing list is moderated, so you cannot reply directly to the list: fars-announce@svpal.org

Also, note you can contact the FARS board of directors at
fars-board@svpal.org

To subscribe/unsubscribe, send a message to:

majordomo@svpal.org

In the e-mail message (in plain text) put one of:

unsubscribe fars-announce YOUR-EMAIL-ADDRESS
subscribe fars-announce YOUR-EMAIL-ADDRESS

(eg. Subscribe fars-announce dwilkes@svpal.org)

The FARS *Relay* is the official monthly newsletter of the Foothills Amateur Radio Society Meetings are held at 7 PM on the fourth Friday of each month except January (Winter Banquet); and sometimes there are changes for June, Nov. & Dec. Annual membership \$20; family \$25. Visitors are always welcome! Directions on the back page. Talk-in: N6NFI (145.23-, 100Hz) or W6ASH repeater (145.27 or 224.36). Contributions to the newsletter from members, family, and guests are earnestly solicited! Contributions subject to editing and/or compression. ASCII files via packet, Internet or diskettes preferred; but all readable forms welcome. Here is how to reach the editor, David Wilkes Mail: 1093 Kelly Drive San Jose CA 95129 Voice: 408-996-1613 (Before 9 PM, unless very important) Fax: 408-725-1036 Davewilkes@aol.com
At FARS meetings.

DW: Only Steve could get away with this one:

For the communicator who has everything, here finally is an antenna accessory that will help you send a message to those around you.

<http://www.coolballs.com>

Steve K6OIK

Mount Hamilton Challenge and Ascent Tour Bike Event - Communicators Needed!

From: Grant Willner <willner7@attbi.com>

Hello Fellow Hams,

I wish to announce that Lockheed Martin's Amateur Radio Club, is in need of radio communicators for the Mount Hamilton Challenge and Ascent Tour bicycle event on Saturday, April 27th. If you have never worked a 'controlled net' for a public service operation for a couple of hours, well now's your chance. You will not be required to work the entire event if you have other obligations that day, if you could help out for a couple of hours, that would be most appreciated.

You will need either a 2-meter/440 mobile or 2-meter mobile if you intend to drive your own vehicle, or if you have just a 2-m/440 hand-held that is okay, I can use the help on the top at Lick Observatory for a couple of hours.

Please note, IF YOU ARE A MINOR, you must access the this file and open up the section 'Download the 2002 application'. Within this Acrobat file is a form for a medical release, your parent or guardian is required to sign it and YOU SHALL BE REQUIRED TO BRING IT WITH YOU, if in the event you need any kind of medical assistance, you can receive it without delay. Without this form in your possession, you cannot WORK THIS EVENT, PERIOD, the bike club's liability insurance will not allow it.

You will obligated to provide your own eatables and drinkables for this event. There are at a minimum, four (4) sites that the bike club has asked to be manned, with an additional three (3) sites if enough communicators are found, otherwise most of the communicators on site may have to do double duty, that is when all bike traffic has passed their location, move up to the next open location.

If you have any questions, you can e-mail me at: willner7@attbi.com or phone me at 510-440-9426. Please email if you would like sign up and 'work this event'.
Grant Willner (AD6RE)

Lockheed Martin & West Valley Amateur Radio Club(s)

[OK you new hams. This is a way to learn how to do it. In case you haven't been there, the view from Mount Hamilton is wonderful. DW]

Field Day is a good place to learn how (and how not to) assemble and put up antennas and towers, work with emergency generators, and see equipment in operation.

Some Thoughts on Antenna VSWR with a Primer on Power Amplifiers

by Steve Stearns, K6OIK

So what's the big deal surrounding VSWR and impedance matching? We'll explore the answer to this question in this two-part article. This month, the focus is on reception; next month transmission.

You can generally receive with an antenna even if it has a high VSWR. The high VSWR merely tells you that not all of the available signal power that is picked up by the antenna is being delivered to the receiver. The net effect is that the receiver is not as sensitive. If you know the VSWR, then you can compute the signal loss in decibels. It is

$$Loss(dB) \approx 10 \log_{10} \frac{(VSWR - 1)^2}{4VSWR}$$

The loss can be converted from decibels to S-units by dividing by 6.

$$Loss(S \text{ units}) \approx 1.67 \log_{10} \frac{(VSWR - 1)^2}{4VSWR}$$

Before you rush out and pay good money for a new ATU, let's look at the rationale behind impedance matching. A good place to start is by examining Figure 1, a graph of mismatch loss versus VSWR

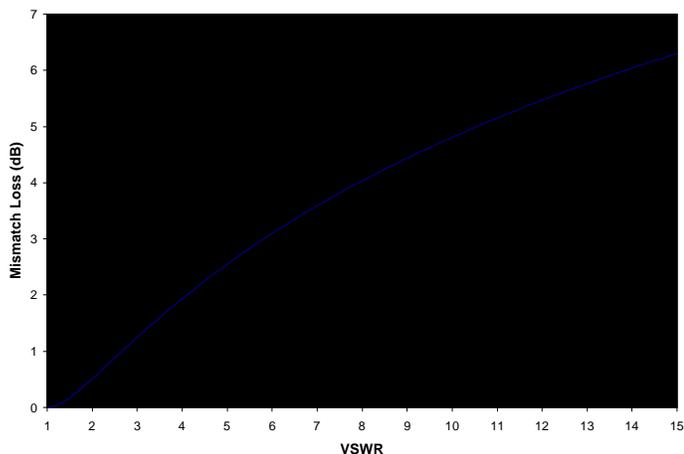


Figure 1. Mismatch Loss versus VSWR.

Mismatch loss has less effect on receiver sensitivity than most Amateurs realize. It takes a VSWR of 14 to desensitize your receiver by a single S-unit!

Here is a question to ponder. Assume that your antenna has a measured VSWR of 2:1, and you have an ATU with 1 dB of insertion loss. Are you better off using or not using the ATU? If the objective is to obtain maximum power delivery from antenna to receiver, then it is clear that using the ATU does more harm than good because it adds 1 dB of insertion loss in order to eliminate 0.5 dB of mismatch loss. Not a very good trade when you consider the price of most ATU's!

We'll continue with Part 2 of our VSWR story next month. So stay tuned. The author will return to this space with a

regular column if reader feedback is good. Send all comments and questions to k6oik@arrl.net; but no e-tomatoes please.

More of Steve's Stuff

The verdict finally came in on the crossed-field antenna or CFA. Antenna engineering was vindicated, and the antenna "theory" of inventor M. Hatley, GM3HAT, proved incorrect.

V. Trainotti, LU1ACM, made extensive measurements and reported the results in a paper in the IEEE Transactions on Broadcasting. Trainotti's measurements show that with respect to field strength, directivity, and gain, the CFA performs only slightly worse than a top-loaded short vertical monopole of the same height. Given this, the monopole is preferable because of its simpler tuning arrangement. The elevation pattern is a simple cosine of the elevation angle, which isn't particularly well suited to either broadcasting or amateur DX because of the large amount of high-angle radiation.

Ref.: V. Trainotti, "Short Medium Frequency AM Antennas," IEEE Transactions on Broadcasting, vol. 47, no. 3, pp. 263-284, September 2001.

- Steve, K6OIK

DX Convention

On behalf of the Willamette Valley DX Club, I'd like to invite you and all members of the Foothills Amateur Radio Society to the Northwest's premier DX Convention which will be held August 2 - 4, 2002, near Portland, Oregon. Following are the details that we have confirmed so far.

Dates: August 2 - 4, 2002

Place: Monarch Hotel
12566 SE 93rd Ave.
Clackamas, OR 97015
(800) 492-8700

Online reservations can be made at
<http://monarchhotel.citysearch.com>

Make your reservation early as the DX Convention rate is only available until July 12th.

Full details and a registration form will be on our website (<http://www.wvdx.org/convention.htm>) shortly.

Any questions can be addressed either to me or to the Convention Chairman, Al Rovner, K7AR, k7ar@arrl.net or (360) 256-7437.

We hope to see you in August.

73 Lisa Zeug, K7UQT
2002 Pacific Northwest DX Convention Publicity Chairman

Amateur Radio Newslines

ENFORCEMENT: FCC TO UTILITIES - DON'T INTERFERE WITH HAMS The FCC has issued letters to five power utility companies to request that they contact and work with Amateur Radio operators in the area to resolve power line interference problems. According to FCC Special Counsel for Amateur Radio Enforcement Riley Hollingsworth, the utility companies are: -- Hollingsworth: "Anderson Indiana City Utility, the Dominion Power Company in Richmond Virginia, Northeast Utilities in Berlin Connecticut, Southern California Edison in Rosemont California and the Socorro Electric Co-Op in Socorro New Mexico." -- Hollingsworth says that the companies were instructed to report back in 90 days to outline the progress made in clearing these interference complaints. (FCC, RAIN) **

HAM RADIO IN THE MOVIES: IMAX ISS MOVIE PREMIERES And finally this week, ham radio is not only at a film premiere. It is actually an important part of the movie. This as the new 3-D motion picture about the International Space Station gets to the giant screen in a press preview on April 16th. Amateur Radio Newslines Bill Pasternak, WA6ITF, has more: -- The movie we are talking about is the new IMAX film called Space Station. Amateur Radio on the International Space Station is a part of it. According to ARISS Program Manager Frank Bauer, KA3HDO, the film simply breathtaking: -- KA3HDO: "It was the closest way that an individual could experience space without going to it themselves. It was spectacular from the perspective that you really felt like you were there. That you were part of the team that was making Space Station happen. It just was phenomenal. Breathtaking views of the Earth, of Space Station and inside the cabin of the space station." -- Bauer says that it was pretty awesome to see Astronaut Bill Shepherd talk to the Texas students with using ham radio equipment. Also, ARISS appears in the movie's credits. According to Bauer, there were 21 members of the ARISS volunteer team attending and supporting the sneak preview. Visitors included Astronauts Bill Shepherd and Yuri Usachev. Also attending were the film's producer Toni Meyers and National Air and Space Museum Curator Jack Dailey. The comments were all glowing and Bauer says that this is a must see movie. For the Amateur Radio Newslines, I'm Bill Pasternak, WA6ITF. -- Consult local listings to find out when Space Station will be shown at an IMAX or OMNIMAX theater near you. (KA3HDO, ARNewsline™) **

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There is no truth to the rumor that the FARS club has divine intervention on Field Day just because we operate on the grounds of a seminary

Saturday is International Marconi Day

International Marconi Day, organised by the Cornish Radio Amateur Club, takes place on Saturday, the 27th of April. It is a 24-hour event held annually on the Saturday closest to Marconi's birthday, the 25th of April 1874. At least 30 'Participating Stations', located at Marconi's original sites or nearby, will be on the air especially for Marconi Day. A special award can be obtained and full details are on the Internet.



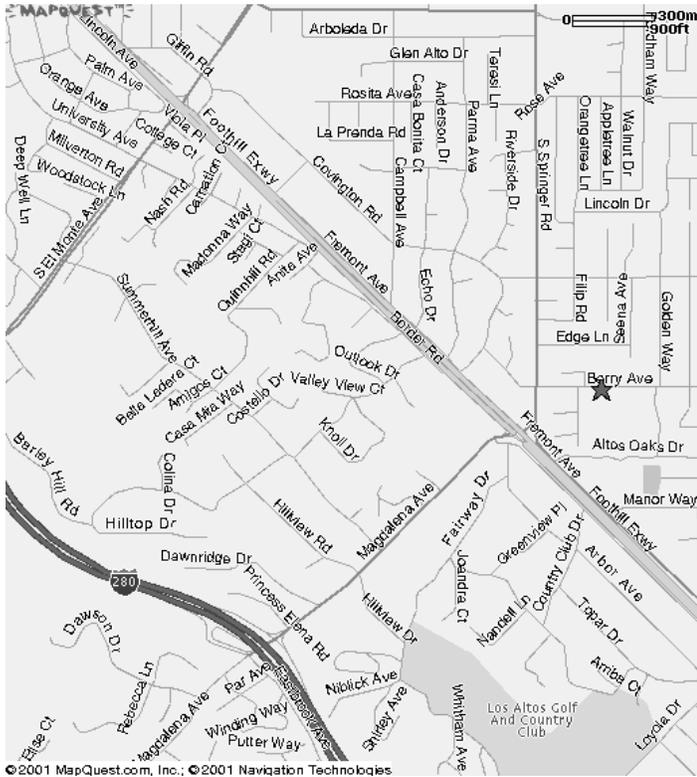
One of the stations will be operating from RSGB headquarters. Look for GB2MT on all bands from 80 to 2 metres.

The Chelmsford Amateur Radio Society will be running two HF stations from the Chelmsford Science and Industrial Museum at Sandford Mill for Marconi Day. One of these stations will be set up in the original 2MT hut at the museum. Visitors will be most welcome and the museum is open to the public from 10.00am until 5.00pm. Morse Assessments will be available at the museum between 10.00am and 3.00pm. For further information contact David, M0BQC, on 01 245 602 838, or e-mail cars@g0mwt.org.uk

The Austrian international broadcaster, Radio Austria International, will operate the special callsign OE1M for the full 24 hours of International Marconi Day, the 27th of April. This operation aims to allow radio amateurs and broadcast listeners to learn more about each other. The OE1M QSL card will be issued for 'cross-mode' OE1M contacts or reception reports, and reception reports of 'Intermedia', Radio Austria International's weekly communications magazine programme broadcast on shortwave, cable, satellite, and the Internet. The current working frequencies of OE1M will be announced on the website, and if you enter your callsign in the 'QRZ' section, OE1M will immediately call you on the band

Radio Society of Great Britain

Has anyone heard of a good amateur radio April Fool prank? Since I haven't heard of any, I am wondering about the sense of humor of participants in the hobby. DW



How to get to meetings: (Visitors always welcome)

Our meetings usually will be held at the Loyola School gym room (directions below) on the fourth Friday at 7 PM for the code practice/socializing and 7:30 PM for the regular meeting. There may be changes in the meeting dates for June, November, and December.

DIRECTIONS:

Loyola School is at 770 Berry Avenue in Los Altos, between Springer Rd. and Miramonte Ave.

FROM FOOTHILL EXPWY take the Rancho shopping center exit and go east (toward El Camino Real) on Springer one short block; turn right onto Berry; watch for the school parking lot on your right. Walk past the office and turn right. The gym is the first building on your right.

FROM I-280 take the Magdalena Av. exit and go east (towards Foothill Expwy). Cross Foothill Expwy onto Springer; then follow directions as above.

Reno Spring Hamswap

Just an invite to make the trip to Reno for our 3rd annual spring ham swap. It has been a great event with everyone enjoying the swap and Reno. Please extend the invitation to your group. I hope to see you in Reno May 11.

73, Gary K7VY

Nevada (Reno)-May 11, 7:00 AM to 1:00 PM.
The Reno Area Metro Simplex ARC is sponsoring the Reno Spring Ham Swap at KNPB Channel 5 Television Station, 1670 N. Virginia St. (on the campus of the University of Nevada, Reno); from I 80. Take the Virginia St. exit and head north one mile.

Free admission to all. Vendors bring your own tables. Large indoor/outdoor swap. Plenty of parking. Raffle, coffee, doughnuts, tours of the High Definition TV Station, VE Session contact Don Freeman W7FD free1@worldnet.att.net, 775-851-1176.

Talk In: 147.060 +123 Glen Haggard, KK7IH 775-673-6401; kk7ih@nvrams.org;