



The AARCOVER

Bulletin of the Austin Amateur Radio Club
August 1990

MEETING

August 14, 1990, 8:00 P.M.

Luby's Cafeteria on North Loop, about a block west of Burnet Road, in the back room.

There will be two topics: "Field Day" and "Quads, Loops and Antenna Matching"



First, we will have a videotape from Field Day 1990 that was presented on Channel 24 News along with our report on FD activity by Activities Mgr. Darrell Dawson, WD5CDY.

Next, one of the easiest gain antennas for all bands is the loop. With this topic and antenna matching, Stuart Rohre, K5KVH, will continue our series on antenna issues.

NO SMOKING PLEASE during the Club Meeting / Program. The Austin Amateur Radio Club has a no-smoking policy during meetings and programs.



HELPING THE FEDS D.F.

In early June the FCC Field Operations Bureau needed some known "targets" to test new direction finding gear. The ARRL was called upon for help. The ARRL then provided a list of Amateurs living near selected major cities.

The FCC was able to pinpoint target stations quite accurately. Assisting were W5OVH (El Paso), W4MI (Memphis), KA0CDN and W0LJR (Denver), K0PCK (St. Louis) and K0GA (Minneapolis).

The tests were run on June 13, using state-of-the-art gear by Zeta, using correlative interferometry techniques. The equipment, which is transportable, is able, with options, to DF anywhere between 1.5 and 1000 MHz.

A bearing taken by just one unit can give an indication of location. Previous direction finding apparatus usually required at least two cross bearings.

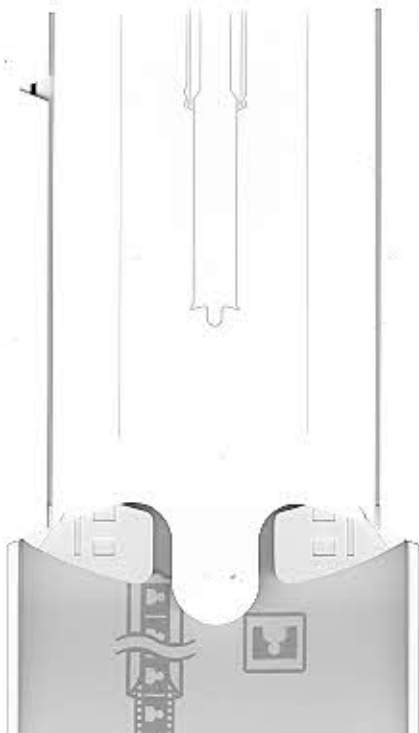
de The ARRL Letter

QSL CARD IDEA

Joe Fisher wants to take an "original" W5KA QSL card from the 1930's and duplicate its design for the club's card for the '90's. Sounds like a good idea whose time has come. We'll be needing QSL cards for events the club will be operating in over the next few years.

CQ / HAM RADIO MAGAZINE

Are there other amateurs out there who have had their subscriptions to ham radio Magazine transferred to CQ Magazine? What do you think about the new magazine? Write down your thoughts and give them to the Editor at the next meeting or at Summerfest and they'll be aired here in the next issue (if they are printable!).



EXTRATERRESTRIAL SWL'ING

A location on the far side of the moon has been proposed for monitoring radio waves from space. Writing in a recent issue of Scientific American, four astronomers explain that Earth-based telescopes can easily "see" radiation at visible, infrared, and microwave lengths. Satellites extend this range to X-rays and gamma waves. But weak HF radio waves from space cannot be received very well on the Earth. Part of the problem is that frequencies below 30 MHz are reflected off the top of the ionosphere. (This same bouncing of radio waves is what lets us talk to DX stations.) The ionosphere problem, combined with the tremendous amount of QRM and QRN on Earth, makes it almost impossible to hear anything from space. The situation is better up in orbit, but not ideal.

Now scientists have proposed a 20 km diameter radio observatory on the far side of the moon. Since the far side never faces the Earth, there can't be any interference from Earth. This concept for a Very Low Frequency Array was first proposed by James Douglas and Harlan Smith of the University of Texas at Austin. It might consist of 200 dipoles, each about a meter in length, laid out on the moon's surface by autonomous robot vehicles. The dipoles will all connect to a central receiver with fiber optic or VHF links. The scientists anticipate that the array would be sensitive to radio waves from 50 kHz to 30 MHz.

What do the astronomers hope to hear? Primarily, the interactions of electrons in magnetic fields, including electrons approaching planets, supernovas, and pulsars. They think they will learn to predict when solar flares are going to happen. And very low

frequency emissions will let them study low-energy processes in the universe.

This site does not seem to hold much hope for DX'ers, however. No matter how big our linears and antennas, they will never hear us!

de N5KOB.

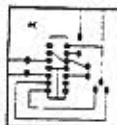


WRITE!

To paraphrase Ham Radio magazine, If you have something important to say, and the spouse is getting tired of hearing it - tell us! We always lend an ear, plus we'll tell 400 people who want to hear what you have to say!

VOLUNTEERS NEEDED

The club activities chairman, Darrell Dawson, WDSCDY, needs volunteers to repair some club-owned tube and solid-state HF gear. Contact him at the meeting, at home at 258-1433, or at work at 250-6858.



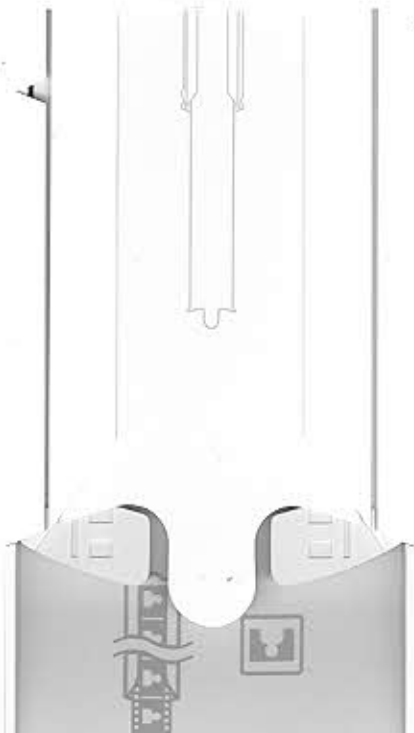
HAM RADIO HISTORY

4 Billion B.C.E.: Earth is a swirling ball of flaming gases. Propagation is extremely poor!

1 Billion B.C.E.: First dry land appears. It is divided up into squares. County Hunters Club formed.

500 Million B.C.E.: Second patch of dry land appears. First DXpedition. Credit disallowed because of questionable licensing agreement.

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MINUTES

Meeting of the Austin Amateur Radio Club for July 10, 1990.

In the absence of our president (who escaped the hot weather by going to Estes Park, Colorado), Vice-President Stuart Rohre, K5KVH, called the meeting to order at 8:00 PM.

OFFICER'S REPORTS: The minutes of the June 12th meeting were accepted as printed in the AARCOVER. The AARC Treasurer, Amado, N5PCP, presented the 1990 club budget with apologies for being late.

After Amado explained how the various budget items and values were determined, the budget was approved as presented. Vice-President Rohre noted that Amado has set up a new computerized accounting system incorporating the various categories of income and expenses seen in the proposed budget. The Technical Committee Chairman, Ed, K3AHS, reported that some intermodulation interference to the 146.780 repeater still occurs. The source is known but no pattern and/or mode of interference has been determined. Darrell, WD5CDY, the Activities Manager reported briefly on the Field Day effort. W5KA operated as a single transmitter station with bonus points for using only emergency power and low power, also for a solar powered contact, and for publicity (we were on Channel 24 news, in the paper, and were on an amateur television link to Discovery Hall, the downtown children's museum). The total score has been estimated as 3658 points. Special thanks to Bob, WA5MUM for his special "vapor lock preventer" which kept the generator running.

VISITORS: These include Dwayne, KB2HV; Cal, KB5IEX; Greg, KB5GTI; Roy; Jerry, N5NWY; Dan, N5PBE; and David, WD5AER with apologies to the names and calls that I could not hear or understand.

NEW MEMBERS: Two new members were elected: Robert, KB5MYT and Skip, W5GAI.

ANNOUNCEMENTS: There will be two VEC exam sessions on Saturday, August 4th at Summerfest. Joe, W5EBJ, gave a brief summary of the upcoming Summerfest on August 3, 4, and 5th at the Red Lion Inn. Summerfest includes the ARRL West Gulf Division Convention and the Summer Meeting of the Texas VHF Society. Other events include a swapfest and sessions on amateur television, packet radio, VEC exams, and drawings for door prizes.

PROGRAM: Vice-President Stuart Rohre, K5KVH, presented a program on antennas you can build yourself with easily obtained materials. Ideas included using common plastic materials for insulators, calculating the length of a wire antenna, various kinds of wire that can be used, and ways to support the antenna. Stu urges us to find antenna parts at hardware stores, grocery stores, etc. by using our imagination as we shop. Several examples were shown including a 10 meter dipole element using old coax as the wire supported inside a plastic water pipe and a homemade dual-band VHF/UHF vertical.

Respectfully submitted by: Joe Canfield
N5HPC, AARC Secretary.

AARCOVER SUPPORTERS

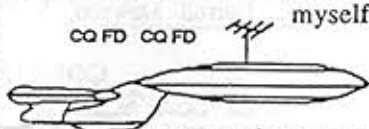
Broadcast Technical Services (quality VHF & UHF antennas) 800-874-2880.
Stationery Sales & Services (printing, copying, rubber stamps) 453-5471.

I thought to myself, "This must be some very special contact...."

A FIELD DAY OBSERVATION

On Field Day I drove down to Doss Elementary to take my husband Darrell and my son Danny something to eat for supper. It was about 6:45 pm when I arrived, and I was certain they would be starving.

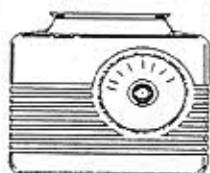
As I approached the tent where "the rig" was set up, I noticed that all of the hams were clustered around one of the picnic tables. I thought to some very special contact to have all of the thrilled with it." When I got close enough to what was going on, I had to chuckle to myself the most important amateur radio day of the year and every one of the operators was clustered around that picnic table watching the season finale of "Star Trek: The Next Generation" on a little tiny five inch television!



de Marsha Dawson

HAITIAN RADIO STATION STOLEN

An entire commercial broadcast station was stolen on March 10, 1990 in the capital city of Haiti. Within a 3 hour period, unknown individuals removed two transmitters, a 160 foot mast, and the entire buried ground mat of Radio Liberte AM from its downtown site in Port-au-Prince. Last year soldiers loyal to General Avril machine-gunned the station's transmitters, causing \$10,000 damage. Replacement of the station will cost an estimated \$100,000.



de Radio World magazine

HAM ADS

WANTED - Hand-held 2m rig in good working order, complete with charger and battery. N5ORG, Louis Pecenka, 452-3522

Ham History continued

400 Million B.C.E.: Flowering plants and grasses evolve. Telrex invents first beam antenna but sales are slow because of lack of suitable structures.

300 Million B.C.E.: First tree appears. It is immediately cut down, stripped of branches, placed in a concrete base and named a telephone pole. Telrex sells first beam.

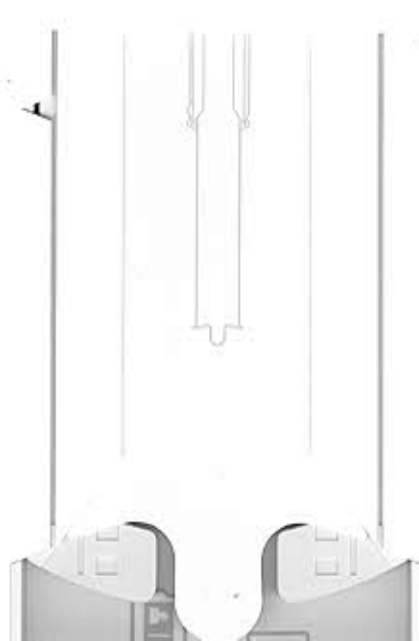
200 Million B.C.E.: Second beam sold by Telrex. Installer falls from top of pole. First safety belt sold.

100 Million B.C.E.: First mountain appears. Repeater invented.

50 Million B.C.E.: It is decided by WARC that "seek you" is too cumbersome to send in CW, so abbreviation "CQ" is adopted.

4 Million B.C.E.: Humans replace swine as the

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OFFICERS, COMMITTEES, BULLETIN

OFFICERS

President	Mike Kellam, AA5JP	836-8223	919
Vice President	Stuart Rohre, K5KVH	255-3932	918
Treasurer	Amado Ramirez, N5PCP	280-1879	916
Secretary	Joe Canfield, N5HPC	258-4761	917
Activity Manager	Darrell Dawson, WD5CDY	258-1433	915

COMMITTEES

Technical	Ed Golla, K3AHS	255-4818	111
Emergency Coord.	Joe Fisher, K5EJL	926-4689	
W5KA Trustee	Joe Fisher, K5EJL	926-4689	
Editor	Rick Herndon, K5FNI	454-1670	914
Labels & Roster	Pete Jordahl, K5GM	454-7889	913

(Numbers after the call signs are: phone # and autodial #.)

BULLETIN

Contributions of articles, cartoons, etc. should be addressed to 1809 W. Saint Johns Ave., Austin, TX 78757-2238. Phone numbers for editor: home 454-1670 / work 465-6338.

The deadline for articles is twelve days before the FIRST TUESDAY of each month. Material received after that will be saved for the following month. Permission is granted to reprint articles appearing in the AARCOVER, provided credit is given to AARCOVER and to the author. We would appreciate receiving a copy of your publication, too.

Commercial ads are cheerfully accepted, at only \$10 for a full page, \$6 for a half page. Members may advertise ham-related For Sale or Wanted ads free if space is available.

Ham History continued

dominant species. The name "Ham Operator" hangs on, however.

3 Million B.C.E.: Dugout canoe invented. Maritime Mobile net formed on 14.313 MHz.

2 Million B.C.E.: Nothing much happens for a long time.

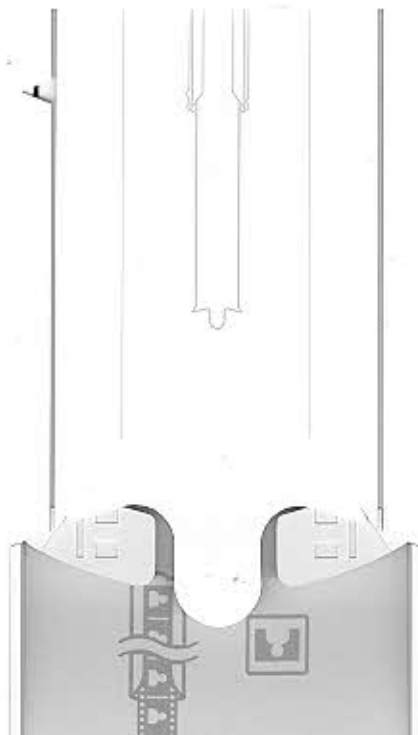
900 C.E.: Chinese invent gunpowder. BY1AA is first "Big Gun" DXer.

1790 C.E.: Ben Franklin invents long wire receiving antenna. Ground switch invented.

1961 C.E.: Second repeater erected. First repeater group refuses to change frequency. First repeater coordinator appointed.

1990 C.E.: Amateur radio humor sinks to new low.

de Tom, K4FHK, "Ole Virginia Times"; Bonnie Frick, N4QPB, editor, via ARNS.



DAB TESTS IN CANADA

Wide-spectrum digital audio broadcasting (DAB) has been undergoing tests in Canada this summer. First reports indicate sound quality far surpassing standard FM stereo. Expert observers in a specially-equipped minibus reported superb audio with no multi-path distortion, even when travelling in downtown "canyons" and over steel bridges.



Some of the passengers even suspected trickery, believing that there was a CD player hidden aboard the minibus. The transmitter for the first round of tests was a 1 kW unit, modified to operate on UHF TV channels 68 and 69. Many observers expect DAB to eventually replace both AM and FM broadcast stations in Canada, and perhaps the world.

Canadian broadcasters are looking for American support at the 1992 WARC for a proposed digital radio band. The desired spectrum would be somewhere between 100 MHz and 1.5 GHz. It seems like everyone in the world is out to get more megahertz at WARC 92. Particularly worrisome to the ham community are those technologies, like DAB and High Density TV, whose wideband signals require very big blocks of the spectrum. Whether we can hold on to what we've got remains to be seen.

de Radio World and N5KOB

HAM AD

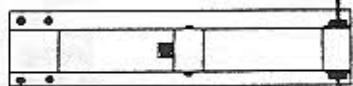
WANTED: Any old Hallicrafter or Echophone gear, parts, manuals, etc. DEAD OR ALIVE!

Chuck Dachis - WD5EOG - The Hallicrafter Collector - 512-443-5027

AA1A SIDEKICK ANTENNAS

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- Stainless Elements and Hardware
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- Excellent Gain and Quality
- Easily Stacked
- Broadband - Tunable
- SO-239 Feed
- New Design and High Efficiency

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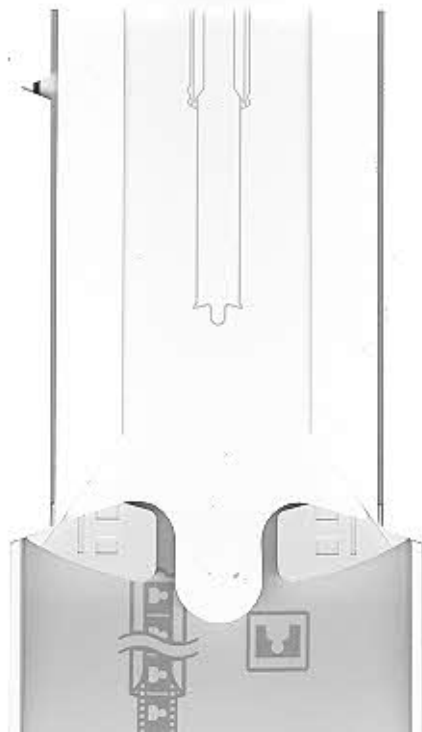
- With 'N' Connector and Silver Plated Feed Probe

\$89.95

Broadcast Tech. Services
11 Walnut St.
Marshfield, Mass. 02050

617-837-2880
800-874-2880 Order

No Extra Charge for VISA-MC
Shipping Handling add \$4.00
Mass. Residents add 5%



PROPOSED 1990 BUDGET

Accounts	Budget	Amount	Amount
ASSETS BROUGHT FORWARD -1989			\$2,100
INCOME			
Membership Fees	\$2,400		
Interest Earned	\$153		
ManchacaFest Income	\$250		
Summer Fest Income	\$0		
Ad Sales	\$0		
Misc. Income	\$0		
Total Projected Income >			\$2,803
TOTAL BUDGETED CASH >			\$4,903
EXPENSES			
President			
Pres Discretionary Fund	\$200		
Total President >		\$200	
Vice-President	\$0		
Total Vice-President >		\$0	
Secretary			
Mailing Permit	\$60		
P.O. Box Rent	\$39		
Roster	\$300		
Sec Discretionary Fund	\$50		
Total Secretary >		\$449	
Treasurer			
Check Charges	\$0		
Tre Discretionary Fund	\$50		
Total Treasurer >		\$50	
Technical			
Telephone - Repeater	\$210		
Red Cross	\$50		
Repeater Repairs	\$750		
Total Technical >		\$1,010	
Editor			
Newsletter			
Newsletter Postage	\$655		
Newsletter Printing	\$1,145		
Total Editor >		\$1,800	
Activity Chairman			
Field Day	\$100		
Banquet	\$100		
ManchacaFest Expenses	\$200		
Monthly Program	\$75		
Summer Fest Expenses	\$0		
Westlink - Ron Johnson	\$50		
Total Activity Chairman >		\$525	
Misc. Expenses	\$0		
TOTAL PROJECTED EXPENSES >			\$4,034
<u>BUDGETED SURPLUS ></u>			\$869

DEFINITION

TWEAKER: twee ker n. 1: Most dangerous weapon in the arsenal of man. 2: Screwdriver with a 3/32-inch blade size and a green handle frequently found in motion without any evidence of an intelligent controlling force and providing sufficient evidence to support a defense of justifiable homicide in a court of law. 3: Controlling force behind same, with or without evidence of intelligence. 4: Job security for qualified technicians.

TWEAKER n. One who tweaks.

de N6VV

\$25,000 CHALLENGE

IQ, Inc., the maker of a new anti-fraud telephone calling card named TymCard, is offering \$25,000 to anyone who can crack their security system. To collect the cash, the successful hacker must demonstrate that he / she can gain access to IQ's system at will. You also have to tell IQ how you did it, and help them correct the flaw. If you are interested, call 818-592-0423 for more information. [I suppose you get extra credit if you can make the call for free.]

ad in September Radio Electronics