

SECOND CLASS MAIL
Postmaster, see page 2

Volume 17
APRIL 1991
Number 194

OK - DX Furnishes Rare QSOs

ON THE BANDS...

Everything has been up and down in the past 30 days on the DX bands. Some of the good things included receipt of the 708AA QSLs in time for submission to the DXCC desk; appearance of ET2A on a regular basis; news that 9K2CS is safe and has returned to Kuwait. The 701AA logs were safe and have been shipped to Gabby, DL2BCH for QSLing as necessary! All of the attention in 1990 over the two 70 Dxpedititions leads us to our featured QSLs this month. Please refer to the QSLs which were loaned to us by Oklahoma DX Association member WE5I (ex-WN5RWU & WA5VPZ). These cards show real history as we see the old Aden, "Federation of South Arabia," VS9APW, evolve into Yemen, 4WOPA, and ultimately into the present country which is known as "The Republic of Yemen." Note that both the VS9 and the 708 QSLs refer to Aden as the QTH...Only the country changed names to protect the "innocent".... Here is a DX trivia quiz: WHICH of the three cards- VS9, 4W0 or 708 - did NOT count for DXCC credit...and WHY? Send your answer to W3AZD, callbook address.

A QSL bonus this month are two Afghanistan cards from WE5I and K5GL (ex-W5TKS). Just as folks are scrambling for the QSLs from the recent YAORR expedition by Romeo Stepanenko, here are two DXers who bagged this one when both were still winding their own coils... The W5TKS card is dated 1957 while

WE5I's prize carries a 1967 date.

If you are an OK DX member and you have an interesting, rare or unique QSL, send AD1S a clear photocopy with a few comments and we will try to publish some of the best in future articles.

ADEN FEDERATION OF SOUTH ARABIA

VS9APW

To RADIO WN5RWU Confirming our QSO on 3.3 MAY 91
 at 0155 GMT. Your 400 CW 5 Sigs were RST 599
 on 71.175 Mc/s. RX-HRO (mx) TX-APACHE 150 watt. Ant 3 El. Mosley
 Remarks T.J. Crow
 PSE QSL Direct 1K5915 71a PAT WEST
 Print-A.B. Loop

4 W O P A

ZONE 21



708AA

ADEN, REPUBLIC OF YEMEN

USGCM Number 146, 11/73

He would appreciate it if some of us Oklahomans would contact him, no frequency specified, and surely one from Mississippi would follow and complete his list. Go Get Him!

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1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 2680, 26

1. AERONAUTICAL CENTER ARC Meets: First Thursday, Flight Standards Building, FAA, South MacArthur 7:30 pm. PR Doug Teachman, W0DXA 392-5458 S/T Ted Anderson, NY5W 685-4016 AsVP Harold Todd, WA5VAQ 685-3885 Asvp Charlie Greene, WA5JGU 943-5631 Editor: Jack WB5SUN	11. EDMOND AR SOCIETY Meets: Odd Months, 3rd Sunday, 2:00 pm, Edmond EOC; Dinner, Even Months, 3rd Friday PR Tommie Guinn, KA5WAV 341-3886 VP Mike Delaney, KB5HXT 341-7847 SE Jim Richardson, N5OHL 524-0456 TR Aldon Sage, KB5LIC 341-8978 Editor: Mike Delaney, KB5HXT 341-7847
2. CENTRAL OKLAHOMA VHF Meets: 11:00 am, 3rd Sat., Favorite's Cafe, 3701 S. Western, OKC PR Jack Muse, WB5ZKZ 691-1152 VP Fred Boardman, W5NL 427-2505 SE Joe Buswell, K5JB 732-0676 TR Ellard Foster, W5KE 789-6702 Editor: Joe Buswell, K5JB 732-0676	13. KAY COUNTY ARC Meets: 7:00 pm, Third Thursday, Sep-May, Pioneer Vo-Tech, Ponca City, OK PR John Spoon, WB5YSX VP Marsh Pronneke, WA5UB S/T Gary Robison, WB5WMD 765-9727 Editor: Dave Land, KD5FX 762-8616
3. MID-OKLAHOMA REPEATER, INC. Meets: First Tuesday, 7:30 pm, at Favorite Cafe, 3701 Western, OKC PR Steve Comman, KB5CDF VP Jim Buswell, N5BEQ S/T Linda Moore, KA5NAV 799-1765 Editor:	14. CIMMARON ARS Meets: 7:30 pm, second Thurs., WX5Y Playhouse 827 S. 13, Fairview PR Curt Briggs, N5RHO (405) 227-4641 VP Terry McCall, N5MLT (405) 227-3672 SE Dennis Painton, WK5V (405) 764-3599 TR Nadine Painton, N5FMH (405) 764-3599 Editor: Jack Day, NN5Z (405) 227-3462
4. OK CITY AUTOPATCH Meets: 7:30 pm, third Tuesday, Salvation Army, N.W. 50th & Penn. PR Jim Bartlett, KA5PSF 359-1299 VP Baron Bieber, N5PQK 557-1664 SE Ken Goddard, WA5DTL 946-4973 TR Mac Macdonald, K2GKK 672-4947 Editor: Baron Bieber, N5PQKU 557-1664	15. SOUTH CANADIAN ARS Meets: 9:30 am, Second Saturday, Red Cross Bldg., North OU Campus, Norman PR Dorinda Skaggs, N5IUA 799-5363 VP Steve Wolfe, N18W 329-0203 TR Charles McCown, WB5UUX SE Ken Brown, N5KJK Editor: Ken Brown, N5KJK
5. OKLA UNIVERSITY ARC Meets: 7:30 pm, Second Tuesday (Sep-May) 119 Wilson Center, 1334 S. Jenkins PR Frank Donaldson, N5IQJ 329-4172 VP John Wustenberg, KE5N 325-2382 S/T Jim Greenshields, WD5HPU 321-9981 Editor:	16. EDMOND AR CLUB Meets: 7:00 pm, Second Monday, Various locations. PR Mark Northcutt, WD5DYI 755-4672 VP Wendell Cochran, WB5ISO 943-4308 S/T Kay Northcutt, WD5DYJ 755-4672 Trustee: Dennis Orcut, WB5ISN 340-0034
6. ALTUS ASSOCIATION Meets: 7:30 pm, Second Thursday, North Main Fire Station, (CD) Altus PR Loren Simms, WA5CBF VP None S/T Mike Schenkel, W5VXU 482-1797 Editor: Mike Schenkel, W5VXU 482-1797	18. GREAT PLAINS ARC Meets: 2:15 pm, First Sunday, Home of N5LRR, 2914 Osage Drive, Woodward PR Bob Bayles, WB0GAX, Woodward 254-3561 VP Andy Taylor, N5LRR, Woodward 256-4017 SE Rod Ford, WB5OVT, Gage 923-7683 TR Freida Patterson, N5EOX, Woodward 256-2111 Editor: Phillip Perry, N5QCN 938-2453
7. BICENTENNIAL (76er) ARC Meets: 7:30 pm Second Tues., 1801 N. Lincoln Blvd., Parking in Rear PR Hank Stokes, KB5XM 376-1067 VP Chad Drewery, N5QIQ TR Bill Skipper, KB5BS 392-4612 SE Jack Conley, AA5VU Editor: Not Filled	20. CENTRAL OK COMPUTER ORG. Meets: Second Saturday, 12 Noon, Oscar Rose College, Midwest City PR Don Fox 733-8480 VP Patrick Roberts, KA5ZYM 681-5220 S/T Martin Schiel Editor:
9. WHEATSTRAW ARC Meets: 2:30 pm Second Sunday, Location Varies, see Club Section for Details PR Edgar Engbrecht, WO5B, Okarche 263-4411 VP Neal Kappus, N5KCO, El Reno 262-1551 S/T Joe Garland, WA5FLT, Calumet 893-2660 Editor: Ralph Wilder, WZ5PFF, Watonga 623-5421	CENTRAL OKLA RADIO AMATEURS Meets: 7:30 pm, Fourth Tuesday, Salvation Army, Penn & NW Highway, OKC, (Back Door) PR Frank Tassone, AA5GI 341-1124 VP Dorinda Skaggs, N5IUA 799-5363 SE Jim Buswell, N5BEQ TR Tom Mangham, K5LDI 677-5291 Editor:
10. Oklahoma DX Association Meets: Quarterly - Hamfests, DX Net Saturdays - 1730 UTC-7.195 MHZ, Box 88, Wellston, 74881 PR George W. Adkins, AD1S VP Darrell Reed, KF5DA SE Paul Harrop, WB5NDN TR Paul Wardell, N5PYD Editor: George W. Adkins, AD1S 356-4101	

PLEASE help us keep your information up to date. What time, where, when, who are your officers, editors, and their phone #. Check **YOUR** entry, it can be changed.

If there appears to be a mistake - check with your club official. We can't do anything about it. Below is a sample label.

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MCCLOUD OK 74851		

The "4" means Autopatch Club, 90/01 means he is overdue. The "2" is for postal rates.

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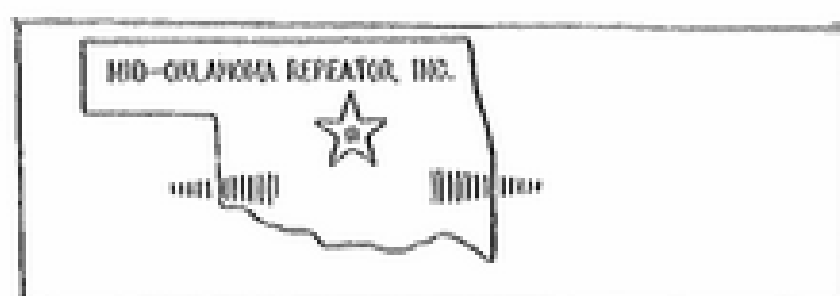
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The Persian Gulf is half a world away, but the events there since last August have affected so many American families

Of course, old Saddam still has his problems with civil unrest throughout his country. And because of that, many American soldiers must remain in the region as peace keepers. On the other hand, maybe something will come of Secretary Baker's visits to Israel and the Arab nations, and the need for American forces in that part of the world will end.

Ham radio continues to play an important role for the troops in the Gulf region--their health and morale messages are being routed through the MARS network and the National Traffic System to their families back home. Hopefully the cloud of war has a silver reflector, and exposure to amateur radio will encourage some of the troops to study for their licenses when they get home.

I mention the war in way of apology. My Air Force duties have kept me from participating as much as I'd like in club activities, and from not writing this column for several months.

So, what else is new? Well, the FCC broke tradition in February and, for the first time ever we have a no-code amateur radio license. In the coming months we should be hearing a lot more N5-prefixes on our area repeaters as the new Technicians take the plunge and explore the new waters. The FCC, ARRL

and QCWA all feel that the new class of amateurs will revitalize our hobby, stimulate our youth to pursue scientific interests, and strengthen our nation's technological base.

Steve, our president, views the issue with optimism. He encourages the MORI membership to welcome the new Technicians and help guide them in the ways and procedures of good amateur operations. MORI welcomes any licensed amateur to join the club and use its repeaters.

Just as the FCC decided to amend its rules, some in MORI think it's time to review our Constitution and By-Laws. Steve will head a committee consisting of Robert (KB5LZB), Toy (N5QOK), and Jim (N5OHL) to review these documents. Most of the recommendations so far have been cosmetic, although one proposal is to increase family membership to \$5.00 per year. Things seem to be moving right along, and a vote on the By-Laws might come as early as the next meeting. If you have any recommendations for the committee, now's the time to contact one of its members.

By now you are aware of the furor the FCC's Norfolk Field Office created concerning packet operations. You'll recall that the FCC cited several packet operators for allowing business to be conducted through their stations. It seems now that AMSAT is worried that something similar might happen to their satellite operations, and clubs around the country are concerned about their future.

What happened was that a packet message encouraged people to call a pay-per-call "900" telephone number, and several of the stations passed the message received citations or "Notice of Apparent Liability." What con-

cerns repeater operators is that something similar could happen, making them liable for illegal messages passed through their systems.

Control operators are responsible for keeping repeater operations strictly legal, and doing so is pretty much a full time job. Quite often repeaters are shut down, and rightfully so, when there are no control operators available to monitor things. Now that the FCC has set the precedent with the packet incident, we can expect even tighter control over our local repeater stations.

It would behoove us all to review Part 97 of the Rules and Regulations. It should be safe to say that if anything remotely sounds like business operations, then it would be best to keep it off of the ham bands.

We should also be aware of our responsibilities while using the autopatch. It's probably a good bet that if you are having some difficulty bringing up a patch, then you might experience difficulty resetting it as well. Usually the problem is with power or range, so know your limitations. Also tell the party you are, calling that your conversation is over amateur radio. And always terminate a patch if the party you call puts you on "musical hold."

Finally, now is the time to get ready for the Spring Storm Season. Is the battery in your handi due a charge? Is it due replacement? How about the home QTH--got flashlight and radio batteries, water, & food? Most importantly, do you have a plan and is your family familiar with it? Hopefully this will be a relatively safe year, but it never hurts to be prepared for the worst.

de KD5DL

CENTRAL OKLAHOMA RADIO AMATEURS PRESENT HAM HOLIDAY 1991 ARRL CONVENTION HOBBIES, ARTS & CRAFTS BUILDING OKLAHOMA STATE FAIR PARK JULY 27TH & 28TH, 1991

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VHF Club
NEWS

W5LOW
*The Elmer Goshler Memorial
Station*

March Meeting Minutes

Meeting was called to order by President Jack, WB5ZKZ, at 12:02 p.m. with 21 members and guests present. Two visitors introduced themselves, Bill, W5QMP, and Lee, KA5NJW. (I think Jack wheedled dues out of both of them later.) Minutes were accepted as published in the C&E, and Treasurer Ellard, W5KE's report was accepted.

The passing of two of our members, Woody, W5FMX and Fred, K5HFN, was sadly announced (see below).

Meeting adjourned at 12:14 p.m. and the group listened to a number of the members recount vacation experiences. Bob, W5HXL, started by describing his Amateur Radio social life in the Florida panhandle. Ellard, W5KE, related his recent Las Vegas NV trip. This started an avalanche of Las Vegas stories. Most notable were those from Steve, W5VCJ, who visited there in the '50s; and, Charlie, WA5JGU, (who has been everywhere, anyway.) The only ones who claimed not to have been to Las Vegas were Jerry, KD5IS, and Pat, heh! Joe, K5JB, Sec'y

Silent Keys

We regret to report the passing of Thomas Van Woody, W5FMX. "Woody" was very proud of his Amateur Radio affiliation and of his U.S. Navy career. We offer our condolence.

Fred Wright, K5HFN, a charter member of the VHF Club passed way March 9, 1991. We extend our condolence. Jack, WB5ZKZ, President

Ham Bones

Jim Williams, K5VRL, and his wife, Helen, celebrated their 50th wedding anniversary on March 16, 1991. After graduation from Central High School in Oklahoma City, Jim served in the U.S. Army and was in the European theater during World War II, serving five years. Jim retired from Sears in 1977, after a 20 year career. Jim's other hobby is restoring Model A Ford automobiles and he belongs to the Sooner Model A Club. He has served as president of that organization as well as President of the VHF Club. You may see Jim and

Helen in a parade here in central Oklahoma.

Following surgery, Fred Boardman, W5NL, and his wife, Maggie, vacationed on Padre Island and have recently returned. Fred is still recuperating -- you might give him a call. Fred is the guy who maintains the "Club" roster and acts as a one-man calling committee.

Welcome to the Club! A recent new member is Gary Norman, N5RDF, who works for the Salvation Army, repairing radios and sundry electronic gear for the thrift shop. Glad to have you Gary! Jack, WB5ZKZ, Pres.

Contributors Welcome!

Jack, WB5ZKZ, gave me the previous two items at the club meeting and asked if "...I would mind running them in the C&E?" Would I mind! Hell, I had given up long ago begging for some things from the members. I only started writing all my drivel because nobody ever gave me anything. (That is not really true -- One guy, Steve, W5VCJ, has dropped some really interesting tidbits on me -- Thanks Steve!)

I would really like to have some of your snippets. It doesn't have to be formatted any which way, doesn't even have to be typed. I get paid to do that part, heh!

Enough begging -- now it is up to you. Joe, K5JB

Choctaw Club Meeting

I had the pleasure of visiting the Choctaw Club meeting this month. It is normally held in the Eastern Oklahoma County Vo-Tech, but because of spring break this month was moved at the last minute to the home of George, NX5F. Here is a bunch of guys doing some neat things. You who live in Eastern Oklahoma County ought to listen up and check them out. They run a good meeting and wrap it up in time to catch Brahms before it closes. Recommended! Joe, K5JB

April Fool

Sigh, I guess my creative juices have gone dry. I mulled over some ideas for an April Fool article, but after flipping through the last couple of issues of CQ magazine, decided I couldn't compete with the professionals (I got a booby prize subscription when Ham Radio Magazine folded.) They print better

fiction than I would have ever dreamed up, and they leave no hints, like the APR-1, or whatever it was, repeater controller of years ago.

Behind the shield of "April Fool", I'll pass along a technical tip. If you do what I am about to describe, and if it goes bad and you get hurt or mess something up, my defense will be that it was in an article headed "April Fool" and you did it "Foolishly". This technical tip has to do with lithium batteries.

Since much of our amateur radio gear now has digital electronics in it, it is common to find that some of the operating data is preserved in memory by keeping a voltage on it with a lithium battery. Lithium batteries last a long time, but not forever. In the electronics world, a long time is a LONG TIME. The little battery that Sonybushi stuck into that radio may have been readily available when the radio was manufactured, but it may be kind of hard to find now.

Lithium batteries come in pretty much standard voltages, like 3.26V per cell (it has something to do with chemistry). It may be hard to find a cell or battery that is the exact same physical size as the one you want to replace, but it is easy to find one has the same voltage. What I am going to suggest is how to graft the one you found into the radio where it was not designed to fit. With the proliferation of computers, it is easy to find lithium cells for those things.

If you read closely on lithium battery packaging you will see a warning about not disposing in a fire because it will explode. It might also advise that explosion of a lithium battery puts out noxious fumes. Believe these notices. Now, if you proceed, proceed carefully.

I have mentioned this soldering technique before, on stainless steel nickel-cadmium cell cases. If you use a hot iron (like a 350 Watt Weller soldering gun) and some acid flux, you can quickly tin a spot on a battery case with solder. Put some acid soldering flux, like you would use on plumbing, on a Q-Tip. Hold the Q-Tip against the hot iron and the battery case, then follow it with a spot of solder. Now cool the cell (and clean off the acid) with a damp cloth. (Also clean off that soldering iron tip so you don't contaminate the next electrical soldering job you do.)

Now, with a hot pencil type iron (35W) and conventional electronic solder you

can tin wires and sweat them to the prepared battery surfaces. Done one joint at a time and cool the battery with the wet cloth as soon as the solder sets. Wrap this cell with some insulation, and stick it somewhere close to where it belongs in the radio gear. Solder the other ends of the wires to where the old battery was removed.

If it is not terribly important to you that the replacement battery last as long as the original, and if it is no big shake that the battery might run down, you could simply replace a 3V lithium with a couple of 1.5 V carbon zinc primary cells. If you have plenty of room, you could just add a holder instead of soldering to the cells.

I have only done this soldering trick to one lithium cell and we will have to wait almost 10 years to see if it lasts, but I have done lots of house calls in walkie talkie Ni-Cd batteries and have yet to damage a cell with this process. Joe, K5JB

Dayton Hamvention - Soon Now!

Ah, spring has sprung, dandelions are healthy as ever, and it is time to start getting anxious for Dayton. Air fares are paid, hotel is booked, and phone calls are starting to come in from the faithful who have been making the trek for the last several years. I got a packet message from Keith, WA8ZWJ, who has written confirmation of his flea market space. It is our "watering hole" where we can stash our stashes, and refill our bellies.

A number of my friends who don't see each other throughout the year meet at Dayton, particularly at WA8ZWJ's house, where we have a heck of a party. I sent Keith the video that Joe, WA5FLT, and I took last year so he could share with all.

About all the preparation I am going to make is to toughen the skin in the Oklahoma sun (while dealing with those dandelions) and charge up the camcorder batteries. By popular demand, I will try harder to take more "outtakes" than I did last year, heh! Joe, K5JB

Digital Signal Processing

I think that digital signal processing (DSP) is going to be one of the most significant "gee whiz" things coming to amateur radio. Some Tucson Amateur Packet Radio (TAPR) members have been some things done with Motorola and Texas Instruments DSP circuits in

the last couple of years. DSP circuits are little computers, designed to work fast, and do one thing well: manipulate audio signals. What follows is the introduction to notes taken by Paul Williamson, KB5MU, during the March 2-3, 1991 annual TAPR meeting in Tucson. After that is the portion I extracted that Lyle Johnson, WA7GXD presented on DSP.

The following is based on the notes I took during the TAPR annual meeting. Any mistakes are mine. On no account should you assume that this account represents the official position of TAPR or anybody else. But I hope you find it interesting. 73, Paul Williamson, KB5MU

Lyle Johnson, WA7GXD - TAPR/AMSAT DSP Project

TAPR and AMSAT undertook a joint project, spearheaded by N4HY and W3IWI. The idea was to handle the proliferation of different modems for use on HF, Microsats, RUDAK, and so on. By digitizing the analog signals, a high-speed processor can be used to simulate filter, PLLs, and other modem components. When the next new modem is needed, all that's required is a new program for the DSP board - it's only bits.

The original efforts used the Dalanco-Spry Modem 10, a PC plug-in board based on the TMS32010 first-generation DSP processor from Texas Instruments. In 1988, the DSP project proposed a standalone box with a TMS32015 (a slightly improved TMS32010), 4k words of 70ns memory, 8-bit analog I/O, provisions for a second DSP board in case extra horsepower is required, power supply, and V40-based controller board, all plugged into a back panel interface board. Boards were laid out, and some prototypes were built. Then the Microsat project got under way, and key project personnel were suddenly very busy.

In January 1989, after the Microsat launch, the hardware team was freed up. The DSP project was revived at the 1990 TAPR meeting. After a few months, a new design evolved: a PC plug-in board, based on a newer TMS320C25 processor. By using a PC plug-in, the project can take advantage of cheap IBM PC development platforms, at least for the initial version. This is great except for Japan, where the popular PCs don't have the IBM PC bus. The TMS320C25 is much more capable than the TMS32010 or TMS32015. It was too expensive when

the project started, but now there is a version in the high \$20's range.

The radio interface is still 8 bits wide. This gives about 40dB useful dynamic range. This is thought to be enough; the beta test will tell. Miscellaneous I/O like up/down tuning buttons are provided for. A sample clock phase-shifting circuit makes it possible to use lower sample rates. A watchdog timer is included. The DSP board has no ROM; it is booted from the PC. It takes up just 16 addresses from the PC's I/O space, and no memory addresses at all. The PC can access DSP memory without disturbing the DSP processor, by inserting just 1 wait state per access. An 8530 serial communications chip is included on the DSP board so it can handle the TNC functions easily. It should be especially easy to interface to the KA9Q TCP/IP software, since that software already supports the 8530.

A 6-layer beta test board was displayed. It's fully functional, with just a few white wires. The 4th of a planned 10 beta test boards is currently under construction. The beta test goal is to get some applications running to verify the applicability of the hardware. Then the production phase will begin.

There was a discussion in the TAPR Board meeting about whether the DSP board should be sold as a kit or fully assembled, or something in between. Construction of the DSP board requires 10 to 20 hours of careful work with a suitable temperature-controlled soldering iron. Beta test results will indicate if a kit is practical. A quick poll of the audience indicated that many people would be interested in a kit. Most of those liked the idea of having the soldering done for them, even if the soldered boards were untested. It has been claimed that assembled and tested boards would only cost \$35 to \$50 more. A poll showed that nobody would be interested in building the kit if the A&T version only cost \$50 more.

Question: When can I buy one?

Answer: Depends on how the beta test goes. Definitely not by Dayton this year, but very confidently before Dayton 92.

Question: What software will be included?

Answer: We intend to provide a monitor/debugger, assembler, and applications, hopefully including source code. The intention is to provide the tools required for code hackers, AND

at least a minimal set of modems and packet applications for operators. One member of the software team is into images, so expect an SSTV application. Another member proposes to create a spectrum analyzer.

Question: How much compatibility will there be between this board and the other platforms announced by vendors?

Answer: Not much. There are significant differences, such as a different DSP processor. The algorithms will be the same, but the code will have to be rewritten. There is a European group that has a small board based on the DSP56001 used by the other vendors; they have implemented a bit-banging HDLC driver on the DSP chip.

Question: I want to plug in my scanner and receive 9600 bps broadcasts. How do I get this done by a certain date?

Answer: mumble mumble.

Question: What baud rates will the DSP board be able to support?

Answer: It should be able to handle FSK up to 9600 bps with no problem. Nobody's quite sure if it'll handle something fancy like a V.29 modem at 9600 bps.

Comment: Telebit Trailblazers use this processor, and they do V.29.

Question: Can the board be sped up?

Answer: Yes. It's designed to go 40 MHz. You just need to plug in faster parts. The limit will probably be the PALs, which need to be 7ns parts to go 40MHz.

N3EUA: With faster DSP you may be able to get a 2X speedup, but you'll never get another order of magnitude speedup. You have to choose a performance class and build the best solution for that class.

Question: What range of sampling rates can it handle?

Answer: Up to about 400 kHz. A fast sample rate like this is useful for non-modem applications, like spectrum analyzers. That was one reason for choosing 8-bit I/O instead of more precise, slower converters.

Question: How much power does it require?

Answer: No measurements have been made yet, but only two chips on the board get noticeably warm. Guess: less than 5 watts.

Question: Other than DSP software gurus, are volunteers needed to help with the DSP project.

Answer: No.

That is the extract. The complete set of notes can be found on Compuserve's Hamnet. Joe, K5JB

CAPRA Packet Information

Here is something you may find useful if you are wanting to learn more about packet radio. I found it in a message posted to Hamnet by Jim Chesner, N9GBH, March 22, 1991:

CAPRA - the Chicago Area Packet Radio Association has compiled information about packet radio operations into an INFO Pack. The INFO Pack includes operating tips, user guides for such things as Net/Rom, KA Node, DX, Packet Cluster, and the like; it also has material about operating modes such as AMTOR, HF Packet, and so forth. An excellent packet radio operating tutorial is provided. There are local listings of resources such as digipeaters, Net/Rom nodes, packet BBS systems; and, we have maps for the networks here in Metropolitan Chicago, District 9, and the West Coast of the U.S.

The INFO Pack has almost 200 pages of information. The cost for this CAPRA INFO Pack is \$7.50. If you need further information send an SASE to the CAPRA Post Office Box listed below.

CAPRA has built and supports the backbone packet network in and around Metropolitan Chicago, including operations from 1200 to 56,000 baud; we have an excellent high speed link into the Los Angeles area from which you can reach out via packet into Arizona, Nevada, Utah, and most points in California which are south of the San Francisco Bay area. Links between Chicago and Wisconsin, Indiana, and southwestern Michigan, and central Illinois are also operated in conjunction with sister packet organizations and amateurs.

For further information call CAPRA's Hot Line number, (708) 420-0405 in Naperville, Illinois, or write to, CAPRA, Post Office Box 8251, Rolling Meadows, Illinois 60008. 73 de Jim N9GBH @ KB9DIP.IL.USA.NA

From WB5RZX

Monte, WB5RZX, makes sure I enjoy browsing the morning mail on my BBS. He keeps me fed with Unix and C programming notes he finds on Usenet. Here are a couple of stories I liked,

followed by an interesting message about a smart mailer.

From: Ed Ahrenhoerster
Newsgroups: rec.humor.funny
Subject: Software Technical Support

"fflSanta Cruz Operation's" tech support line recently got a call from a U.S. Army M1 tank driver rolling across the Saudi desert. Apparently, SCO Unix runs on one of the computers in the tank, and the guy was calling for a bug fix, which they downloaded to him."

From: John Mckeown
Newsgroups: rec.humor.funny
Subject: three men and a car

A computer engineer, a systems analyst, and a programmer were driving down a mountain when the brakes gave out. They screamed down the mountain, gaining speed, and finally managed to grind to a halt, more by luck than anything else, just inches from a thousand foot drop to jagged rocks. They all got out of the car.

The computer engineer said, "I think I can fix it."

The systems analyst said, "No, I think we should take it into town and have a specialist look at it."

The programmer said, "ok, but first I think we should get back in and see if it does it again."

From: howardl@wb3ffv.ampr.org (WB3FFV)
Subject: The N2GTE Packet Mail Switch

Hello All,

As I promised about two weeks ago, here is a little more detail on the N2GTE Packet Mail Switch. I would have written back sooner, but getting the flu caused my bed to take priority over Email :-)

Many of you on here have talked about the problems with the TCP/IP section of the MSYS package, but here is a BBS (if you want to run a BBS) that won't have the problems listed since it actually uses NET (from Phil - KA9Q) so everything should work.

The BBS is a multi-user/multi-tasking system that runs inside of DESQview 2.3x and uses DESQview like I have seen no other packaged do. To achieve very good efficiency it uses multiple windows to accomplish it's tasks, and will open and close user and forwarding windows as needed.

Also one unique feature of the BBS is it's ability to learn new routes to other BBS systems. GTEPMS if not sure how to resolve a message, will send a request to other GTEPMS systems in the area and ask them if they know how to resolve the mail, and if so it will learn the path and add it to it's own tables.

I won't go into a big thing here on just what all the BBS will do, but will leave info below on how you can download the docs if you desire.

Where I really like this BBS program is in it's ability to exchange mail between the BBS and NET. If a message arrives on the BBS and it is destined for an IP address (.AMPR, .AMPR.ORG, or whatever you specify), or the user is listed in the forward file. The BBS will place the message in the SPOOL\QUEUE directory and setup the job for SMTP transfer. Also if a job arrives via SMTP and the next host can't be found in the HOSTS table (this assumes you have it set to place the unresolved jobs in RQUEUE), and the job gets placed in SPOOL\RQUEUE. The GTEPMS system will scan the RQUEUE directory and attempt to resolve the message. So if the unresolved message was for say W3XYZ @ WB3FFV.MD.USA.NA, it will accept that message and place it in the BBS for forwarding in the BBS network.

As you can see this provides a complete gateway between the BBS and TCP/IP worlds, and avoids many of the problem IP implementations in other BBS systems by actually using NET. I personally wanted to receive the local BBS bulletins (and used the IP mbox, but it had many problems), but wasn't willing to stop running NET/NOS to do this. This BBS package (GTEPMS) has allowed me to do both, and since becoming a beta tester for Doug's code I have very much enjoyed the package.

One thing that should NOT be overlooked, this is a BIG system and requires the minimum configuration listed below:

80286 based system (The faster the better, 386 if at all possible), DESQview 2.3x (QEMM-386 5.x if using a 386), 2Meg of DRAM (4Meg if also using NET), G8BPQ PC-Node Software (Version 3.57 to 3.59), and GTEPMS Version 1.2 (of course).

I personally use an 80386sx-20 with 4MB of RAM to run the system, but with this configuration I can also use TC++ at the same time!

OK, so you want to know where you can get the software. The code can be downloaded from my telephone BBS, and I will once again post in a separate message the information on how to reach my BBS. I will also try and post the files on thumper and tomcat over the next couple days when I have time to upload them, but for now it is only on the BBS.

Hopefully this will answer the questions some of you have on the BBS, and if you decided to try it I would really like to hear what you think of it as well. Howard, WB3FFV.MD.USA.NA

Editor's note. This package is available on the packet data library on Compuserve's Hamnet. It was uploaded by one of the other beta testers and consists of six files having over 777 kilobytes total. You have to use an older version of the BPQ code because later ones are not compatible with this suite. More notes follow.

Thanks to Monte for bringing this to my attention. Joe, K5JB

More on Homebrew Software

I had a brief encounter with the BPQ code some time ago and it didn't suite me. With having the source code for both the packet BBS I run (CBBS) and the plain vanilla TCP/IP (net.exe) I am able to achieve automatic shuffling of mail between the two environments using DESQview. I can't praise DESQview highly enough. That particular 80286 AT computer has been running about 2 1/2 years continuously without a problem. With DESQview, I can go in and diddle with files without disturbing the BBS or the IP programs. Last November I bought an 80386 machine to replace it, but never did. The '386 was just too good at doing Turbo C compiling to drag it into the ham shack.

Speaking of compiling -- I bought the latest upgrade from Borland. This one dropped the Turbo name and is called Borland C++. They claimed that they wanted to shake the hobbyist connotation of the word "Turbo", but I think the truth is that this compiler is so carboned up the "Turbo" couldn't come up to speed. The thing took up 15 Megabytes of disk space and the little sample programs that put dots on the screen took FOREVER to compile. Not Recommended, unless you want to do Windows.

I have to admit that I am curious about Windows 3.0, having seen it run on some of the computers at work. I am having a difficult time deciding if I want to take the plunge at home though. It means I would have to (gaspl) buy a color monitor and a (yikel) mouse. I just can't bring myself to that yet but I guess that the graphical user interface is the coming thing. I read that in the two general classes of computer owners, users and hackers, the former need to keep up with the state of the art, or be left without programs to run. The latter couldn't care less if the computer is obsolete if it still works and does the job. I am clearly a hacker. I even get a lot of good out of my Apple around here. I even re-wrote an operating system shell to make it work more like I wanted. The only problem is that NOBODY has any use for the things I develop, 'cause you can't "point and shoot" to make them work. Oh well, at least they work for me! Joe, K5JB

TAPR ROM Update

The latest code for TAPR TNC-2, and those derived from the TAPR license has also been posted on Compuserve's Hamnet. It is version 1.1.7b. It seems that 1.1.7 and 1.1.7a had a problem with data carrier detect when running KISS protocol. This was supposedly fixed in the current version. It is offered free to owners of TAPR TNC-2s and ones built under TAPR's license (MFJ, etc.). I have a copy of it if you want it and have no way to download it from Compuserve.

I burned an EPROM with the code and (blush) couldn't use it. My two TAPR TNCs have never been upgraded to 32k of RAM. One is still at 8k and I modified the other one to 16k when it became necessary to upgrade to version 1.1.3. This is one of the earliest TNC-2's, the one with four instead of five LEDs on the front panel. For a long time I used it solely with KISS, using an EPROM that contained only that code. Guess I will have to bring a RAM chip home from Dayton. The other TNCs are PacComm and they all have the latest code from that company. I never missed the extra memory in the TAPR TNCs because one only ran KISS and the other runs the Apple BBS. Lack of huge memory is an asset on a TNC that is connected to a BBS. If it loses a connection, it doesn't have all that much stuff to dump from memory. (Later versions of the TNC code have a command that prevents that from happening, so I guess that is a wash.) Joe, K5JB



OKlahoma DX Association

OKlahoma DX Association NEWS...

We are pleased to have two new members this month, both of who are well known DXers. I know you will welcome Honor Roll member Gil Wood, W5NUT and Bill Hahn, W5CKT into the ranks. Membership is now over 70 members and growing every month. If you know a DXer who is not yet joined up, won't you invite him/her to join the OKlahoma DX Association today? Remember, we are not replacing your membership in local repeater or ham clubs...OK DX is a statewide organization designed to expand knowledge and participation in DXing, Contesting and International Goodwill via Amateur Radio. We are new members of C.O.R.A. and will be exploring ARRL affiliation in the coming months. Through ARRL affiliation we could offer the new DXCC field checking service when that is approved by the League. OK DX will continue to be on the cutting edge of DX activity in Oklahoma. You may write to the Association President for information and an application. Write to AD1S, Box 88, Wellston, OK 74881.

WHAT THE NET HAS TO SAY...

The OKlahoma DX Association sponsors an informal DX net every Saturday morning at 1730 UTC (that's 11:30 local time for folks in Rio Linda) on 7.195 Mhz. You do NOT have to be a member to check in, and we would like to hear from you and find out what has happened in your DXing pursuits. Please join us this Saturday.

DX PacketCluster NEWS...

The DX PacketCluster is alive and very well in spite of squirrely winds, power outages, flaky equipment and the other usual stuff. N5OK in Claremore had a Cluster Muster in March and spiffed up the antenna system. The user frequencies for N5OK are now 145.770 and 145.010 Mhz. N5JKN in Poteau/Ft. Smith operates on 144.91 Mhz and serves as a link to our DX

comrades in Arkansas and Texas. AD1S node sustained some wind damage in last month's blow, but all appears to be operating at this time. The DX digi in Anadarko was completed on 23

March and is providing a link to DXers in Lawton and SW Oklahoma. you will find this digi on 145.09 with the alias DXLK. (DX Link....get it?) The folks in Lawton and SW Oklahoma can tune to 145.09 Mhz and connect to PacketCluster by typing C AD1S V DXLK,MSTNG. That will get you the PacketCluster prompt and into the system with very fast turnaround. We are still fine-tuning this path but hope to establish a reliable route for DX spots from SW Oklahoma up to the AD1S PacketCluster Node. As a bonus, this path will also be available for weather services during periods of severe weather. We share the 145.09 frequency with the National WX Service and other WX interests and we will be good neighbors, suspending PacketCluster activity when a Tornado warning is issued.

In addition to the MSTNG and DXLK digis, NetRom Node OKDX serves PacketCluster users through that system. Digi SAMS is still perking over on 144.95 in the Oklahoma City metro area. Version 5.0 of PacketCluster software is about due. It is much improved and will make life easier for the sysop and the user. We plan to obtain the new version as soon as finances permit. New PacketCluster manuals will be available soon after the software is implemented.

OKlahoma DX Association - UPCOMING EVENTS

We know that many members will attend the Lawton Hamfest on April 13, 1991. Many of the Association officers will be there, and if you would like to

join OK DX, I know that N5PYD will be happy to take your money. The Association is sponsoring DX luncheons at the Green Country Hamfest in Tulsa, Ham Holiday in Oklahoma City and Texhoma Hamfest. These luncheons are being planned at this time and will be held in conjunction with DX seminars, sessions, etc. Watch for more information as we get closer to hamfest time.

We hope to see you at the ham gatherings scheduled for 1991. These conventions will be our "live" meetings every quarter to allow members to become acquainted, tell DX fibs and find out who really yelled "WRONG VFO, DUMMY!"

Have a good DX month and if the ZA calls for YL's only, get your wife in the shack immediately!! 73, de AD1S.

WHERE IS MRS. SMITH'S FAVORITE SON, JIM?

Hopefully, by the time you read this, the answer to that question will no longer be a mystery. Jim Smith, VK9NS was scheduled to arrive in Bangladesh on March 10 to begin a two week stint as S21JS. However, the governmental stability in S2 turned to JELLO, so the trip was postponed. As I sit here typing this, the DX PacketCluster sits silent, with 21 nodes and 38 anxious users poised by their radios...but alas, no sign of our intrepid DXpeditioner...

ZS8MI has returned to South Africa. Hope you got him while he was there. I have heard nothing regarding a replacement ham radio operator on this weather station outpost. Sad news that WB2WOW, QSL manager for ET2A and ST0DX became a silent key in March. QSLs sent to him will be forwarded, so please do not re-QSL.

The DXAC is poring over maps to decide if Penguin Island/Seal Island really qualify as separate countries for DXCC purposes. Stay tuned. OH2BH usually knows of what he speaks and would not spend BIG BUCKS to go to an island that is just another ZS6 or ZS9. But wait! What ever happened to Jarvis Island's new country status? Hmmm...

Kudos to the OKlahoma Comm Center who are contributing some new equipment for the Mount Athos and Albania operations. What did I say? Be still, my heart! Two of the rarest countries in the universe and our own OKlahoma Ham store is right in the thick of things. Credit also to the INDEXA association for tirelessly working behind the scenes to support the folks trying to activate these countries.



Many things have happened with the EDMOND AMATEUR RADIO SOCIETY lately and lots more is planned. SPRING IS HERE! EXPLORER POST: With the help of Bob N5KUE and Frank AA5GI the post is getting active again. Six youths and adults had a meeting on 16 March. Scott KB5EBT would like to invite you to the next meeting on Saturday 30 March at the Red Cross on 6th and Lincoln at 2PM.

SEVERE WEATHER: Mike KB5BIX has been getting a team of spotters ready for the spring season (The Ada Tornado is on the ground as I am writing). Many attended the storm spotters meeting in Edmond on 5 March. Mike needs a ham to help out during weather nets at the EOC.

PARADE: Many thanks to the 18 hams that worked the St. Patrick's Day Parade. It was lots of fun even if it did rain. Hats off to Lee KA5WIS our parade committee chairman. DUES: Current membership is now 125. Our dues are due at the end of March. Contact Alton KB5LIC to get on the list.

CLASSES: A new class started on 17 March. We are teaching the novice and technician written plus 5 WPM morse code. The class is each Sunday at 2PM at St. John's Catholic Church on 9th and Littler in Edmond. They will continue for several weeks, so if you missed one or two, it is not too late to join.

INFORMATION NET: Find out what is happening with the club and amateur radio on the net each Monday at 8PM on the 147.135 repeater.

CALLBOOKS: Need an address for that QSL Card? The club has purchased a complete set of 1991 Callbooks (N.Am. and Int.) They are now available at the Edmond Public Library in the reference section.

CLUB STATION: Bob N5KUE has the packet rig going again. At the club station we also have an HF rig and 2 meter rig that is available for members. Contact Bob N5KUE or Mike KB5BIX if you would like to operate the club station.

SCHOLARSHIP: We appreciate the work that Donna KA5YSF has done for the last three years. Our new scholarship chairman is Kay KB5LDO.

RADIO SCHOOL: Kathleen KB5KIJ has been teaching amateur radio to a special class at the Bethany Middle School. She now has nine youths that have novice class with four others that will pass soon. The school will be having a Spring Fair on 6 April at 1-4PM. She will have an HF rig set up at the fair so drop by to help out.

HAMPOUT: The Spring Hampout will again be at the Wichita Wildlife Park for the Lawton Ham Fest on 13 April.

CQ FIELD DAY, CQ FIELD DAY! Yes before you know it that big day will be here. This year the field day activities will be organized by Larry N5IXV Lee KA5WIS, and Jim N5OHL. Our Logan Co. rep Mike KB5HXT says that we will be able to use the Oak Cliff Fire Station again.

PATCHES: Iron-on patches of the EARS logo are now here. Cost is \$3 for small and \$5 for the LARGE. Contact Alton KB5LIC for your patch.

UPGRADES: We have had many members upgrade lately.

Technician:

Wally Allison	KB5OFR
Pat Gray	N5SGV
Bob Hebert	N5SAG
Terry Reed	N5SPM

Kathleen Stearns	KB5KIJ
Richard Vinson	N5QIT

Advanced:

Toy Graham	N5QOK
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Extra:

Clara Granger	KG5UG
Brad Kiespert	KG5UK

CW NET: Carol K5CPZ would like to hear more hams check into the OLZ (Oklahoma Liaison Net). This net meets each evening at 7 PM on 3.6825 Mhz. With the band change, the net is now in the novice portion.

Our next meeting will be a dinner meeting at Gary Dale's BBQ on 20 April starting at 6:30 PM. All are welcome.

DITDAHDIDAH
73, JIM N5OHL

What's gray and wears a mask?
The lone elephant.

Not found in Webster's
Writer's cramp: authoritis.

NOT FOUND IN WEBSTER'S
Grandfather clock: an old timer.

The South Canadian Amateur Radio Society

The monthly meeting of SCARS was held on the 16th of March at the Norman Red Cross. The treasurer reported that about \$1497 was in the account. Dues are past due for anyone who has not presented the treasurer with a check. Members who are past due will stop receiving the C&E "real soon now". President Dorinda, N5IUA announced that the next regular meeting will be held on April 6th. After that meeting we will resume the schedule of meeting on the second Saturday of the month as we have done in the past.

Storm Watch 3 will be held at the Norman library starting at 1 PM on Saturday the 23rd of March. Help will be needed starting at about 11:30 to set up chairs. Coffee and supplies will be brought by KB5ABS and N5KUK will provide talk in. Thanks to N5IUB for stuffing envelopes and mailing the flyers.

W5MCJ has been in contact with the local Red Cross officials and learned that there is a plan for expansion of the building. He brought drawings that show some of the initial plans for the expansion, including a new radio room.

The exhibit day at Sooner Fashion Mall will be on the 27th and 28th of April. A sign up form was passed around to schedule members to work in the booth.

The results of the survey that Steve was passing around during the past few meetings are still being compiled but early returns indicate that doughnut eating was leading coffee drinking by a small margin and these two categories were ahead of everything else by a large margin.

W5MCJ asked that the person who has the negatives for the SCARS article in the Japanese CQ magazine please bring them in so a copy could be made for the new director of the Red Cross office.

The annual 89er Stage Race bicycle race will be held in April but your reporter didn't write down the date... Anyway, the format will be about the same as in the past but this year the race will be around lake Draper. Probably the same number of people will be required as in the past to assist in communications around the race course. Please see Andi or Steve if you can help out again this year.

There being no further business, the meeting adjourned at about 10:15.
de Ken, N5KUK

If there were three elephants in the kitchen,
which one would be the cowboy?
The one on the range.

ALTUS VE TEST SESSIONS

A News Note: Altus VE Test Sessions, now beginning our third year, are conducted on the SECOND SATURDAY of EACH QUARTER, at the North Main Fire Station, downstairs: 12:30 noon.

This will permit persons, male/female, from a reasonable area to participate in these sessions, and still get home at a reasonable hour of the day.

73 Joe W5CCV

kay

AMATEUR RADIO
KLUB

The WHEELS AND HEELS BIKE RACE went quite well, we had a GREAT turn out this time. A big THANKS to all those that helped.

The March meeting at the EOC was very well attended. I counted 24 there counting our two guests from the Ponca City CD office and a group visiting from the OIAR club. We talked about finishing the work on our emergency communications trailer. We also talked about looking for a different trailer, one that would be easier to tow. Keep your eyes open for one.

Mike N5LPZ went over our stormwatch procedures and we talked with Norman Coffelt about the callout procedure. Mike reports that 22 hams have signed up in ARES. We are going to have a practice stormwatch one of these Monday nights keep your radio on and ready.

There was also a demonstration of the packet link to the National Weather Service. Also, everyone got a look at the new CD radios located in the EOC. We now have HF and VHF capabilities there.

The 97 repeater was acting up again for the Wheels and Heels race. KS4W went out there that afternoon and put some magic GE dust on the receiver which he guarantees will fix it! Seriously, it should be fixed now. Let me or Mark (KS4W) know if it acts up again. A group of us also went out to the PONCA digipeater after that and got it fixed too. We had to replace a 50 foot piece of hardline. It seems to be working much better now.

Congrats to Jannine (WB0QIR's XYL to be) on passing her no-code Tech. She's the first one in our area. Now comes that endless wait for the ticket from the FCC to arrive in the mail.

There was quite a HAM turnout for the Kay County storm spotters training session this month. Looks like we're all

getting ready for this storm season. I hope we don't have to use any of our training!

Here's a word from N5OGP- The Joint Cowley Co. ARC/ Kay Co. ARC fox hunt and covered dish lunch has been rescheduled to a SATURDAY! It will convene in Arkansas City on Saturday, April 20. I will have the time and exact location later. But it will be a lunch time affair. Plan on supporting this if at all possible. We kinda moaned and groaned around to get it changed to a Saturday so more of our crew could attend. After all, you might actually have FUN!!! Let N5OGP know if you are planning to attend. And remember, you don't have to have sophisticated equipment to fox hunt. I am going to use my rubber duckie antenna. There was an article in QST abt 1 year ago that described the technique! See me for details... tnx. <<<< 73 de N5OGP >>>>

Well, we sure had a busy month! See you at our next meeting back at the Vo-Tech on April 18th, 7 PM. Be There! 73, Dave KD5FX

Central Oklahoma Radio Amateurs

MINUTES

The meeting was called to order at 7:45 pm with President Frank AA5GI in the chair and the following Directors representing 5 of the 16 member clubs present;

ACARC - Tom Mangham, 76ers - Jerry Sproul & Jim Buswell, OCAPA - Baron Bieber, EARS - Jim Richardson, SCARS - Donald Schader and C&E Managing Editor - Joe Harding.

The minutes of the January meeting and the report of the Treasurer were accepted as distributed.

Joe read a letter he received from the Oklahoma DX Association President George Adkins AD1S requesting full Supporting Membership in CORA. On motion by Tom and seconded by Jim it was unanimously voted to accept them.

VE - No reports available.

HAM HOLIDAY #18 (1991)

Publicity, Facilities, Dealers/Awards, and Pre-registration - chairmen met as a "committee-of-the-whole" for discussion purposes beginning as Baron circulated samples of possible letterhead and logo designs for this and future years, specific to Ham Holiday(s).

Registrations and Talk-in-no report(er)s, Frank announced he would make direct contact with Mark WD5DYI this year.

Programs - we will ADVERTISE for a chairperson as well as content.

Non-Technical Programs - Linda N5OJP relayed through Jim that we have confirmed programs offered from The American Red Cross on Disaster Relief and the National Weather Service on Severe Storms but are able to line up a lingerie show as no local outlets are continuing the practice.

Bingo - Tom reported everything under control.

Banquet and Security -no report(er)s.

Flea Market - Donald was pleasantly surprised to learn the lack of labor that will be required of him compared to previous years.

Scholarship - CORA needs a chairperson for this committee effort on a continuing basis to ensure funding in the future. We will raffle an ICOM IC-2AT again.

Breakfast - "OPEN", no committees, no chairperson, no plan, no report.

NEW BUSINESS - CORA will query the National ARRL Office for its Convention Liability Insurance rates as well as local sources. PUBLICITY - will have the logo at the next meeting. CORA is still penciled in at the Lincoln Plaza. ORSI (The Oklahoma Repeater Society, Inc.) requests a scheduled time and site for its Summer Meeting in conjunction with Ham Holiday.

The next meeting is scheduled for 26 March 1991, same place, usual time.

This meeting was adjourned at 9:30 pm.

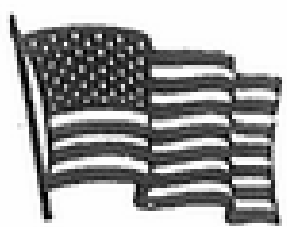



Secretary, Jim N5BEQ

MOORELAND EYEBALL QSO APRIL 6 & 7

The mailman must have slipped up. I haven't received the usual flyer for the Mooreland (Great Plains ARC) Eyeball QSO to be held on Saturday and Sunday April 6 & 7. It is a growing hamfest and you are all invited to attend this one - you will be back next year. It starts Saturday at Noon. VE Exams will be held that afternoon. There is a whole string of things to do. Of course it is held at Mooreland Oklahoma. See you there!

NITE OWL NET - 146.67

Welcome to the Nite Owl Net - 146.67 - 10:30 pm. We have club news - Chit Chat - Swap Shop - Traffic Passed and a good chance to get acquainted. Please check in on this MORI repeater. New on the Net: We will have a Swap Shop on Tuesday & Thursday. Troy, N5QOK

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2 M O R I	3	4 AERONAUTICAL CENTER ARC	5	6 SCARS
7 GREAT PLAINS WHEAT STRAW	8 EDMOND CLUB	9 OKLAHOMA UNIV. AARC BICENTENNIAL (76ers)ARC	10	11 CIMMARON ARS ALTUS ASSOCIATION	12	13 CENTRAL OKLA COMPUTER
14	15 VE TESTS 6:00 PM SALVATION ARMY 50 & PENN	16 AUTO PATCH	17 	18 KAY COUNTY	19 E A R S	20 VHF
21	22	23 C O R A 7:00 PM SALVATION ARMY 50 & PENN	24  Edit C & E	25	26	27
28	29	30	31	 APRIL		

Okla. Liaison Net (OLZ)

0100 Daily	3.6825
Minn. Slow Speed Net	
0100 Daily	3.710
Texas Traffic Net	
0030 Daily	3.873
Okla. Traffic & Wx	
2345 Daily	3.900
3905 Century Club (WAS)	
0200 Daily	3.903
SW Traffic Net	
0300 Daily	3.935
Okla. DX Net	
1730 Saturday	7.190
3905 Century Club (WAS)	
0000 Daily	7.2335
OMISS (WAS)	
1700 Sat. & Sun.	21.360
"2300" Net	
2300 Daily	28.390
OMISS (WAS)	
1800 Sat. & Sun.	28.665

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Customer: Waiter, there's no turtle in this turtle soup.

Waiter: Well, that's not surprising. After all, you wouldn't expect to find horse in horse-radish, would you?

Hotel manager: Could you be a little more quiet, sir? The gentleman in the next room says he can't read.

Guest: Well, he should be ashamed of himself. I could read by the time I was five.

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