

The Anchorage Amateur Radio Club News Bulletin

July 1997

Editor - Harvey E. Rookus NL7DK

Vol 26 No 7

Notice

There will be NO

General Meeting

In July due to the School being closed

for The 4th of July Holiday!

See you on August 1st!

Have a Safe 4th of July!!

New AARC Website

<http://nl7nc.akconnect.com/aarc.htm>

What's Up?

General Meeting First Friday of Month - Carr-Gottstein Bldg APU Campus 7 pm
Second Bldg on the left. Room 102

Board Meeting - Second Wednesday 7 pm - Grant Hall APU Room 150

VEC Testing - 1st Wed 6:30 pm, Carr-Gottstein Bldg.; 2nd Saturday, 2 pm Hope
Cottage - 530 W. International Airport Rd. Enter Rear of Bldg.

3rd Wednesday, VFW Hall - Eagle River 7 pm

No appointment needed. Bring copies of previous testing. Bring Photo ID.

Second Friday SCRC general meeting 7 PM Room 220 Bus Ed Bldg UAA

THE ANCHORAGE AMATEUR RADIO CLUB'S 26TH ANNUAL

HAMFEST 1997

ALASKA'S LARGEST ELECTRONIC HAMFEST-

TRANSMITTERS, RECEIVERS, COMPUTERS, ANTENNAS AND OTHER ELECTRONIC
AND RADIO EQUIPMENT

VEC TESTING, FCC COMMERCIAL LICENSE EXAMS, AK QSL BUREAU,
MARS, CAP, ARES, COUNTRY STORE, ARRL INFORMATION AND
REPRESENTATIVES, BANQUET (SAT EVE.), FOOD BOOTH, GOOD TIMES
AND FRIENDSHIP

GUEST SPEAKERS: **GORDON WEST WB6NOA** AND
RICK PALM K1CE (ARRL FIELD
SERVICES DIRECTOR)

DATE: SATURDAY AND SUNDAY, SEPTEMBER 20TH AND 21ST.

TIMES: SATURDAY 10AM TO 5PM.

SUNDAY 8AM TO 4PM

LOCATION: KINCAID PARK OUTDOOR CENTER AND SPORTS CHALET

DIRECTIONS: FROM FOUR CORNERS (JEWEL LAKE AND RASPBERRY ROAD) TURN
WEST ON RASPBERRY ROAD AND GO ALL THE WAY TO THE END UNTIL IT MEETS
THE SEA. TALK-IN ON 146.34/94 (PL 141.3 OR 100)

For tables, contact Rob Wilson AL7KK at 907-248-0976. Ham table fees have been
reduced to the 1990 rates, \$10.00 per table + 10% of sales. Commercial tables are
a flat rate of \$35.00. Admission: 3.00 for adults; 2.00 for ages 13 to 17; 12 and
under free. Country store items will be charged 20% of sale price.

Gordon West WB6NOA is Coming!!

Gordon West WB6NOA, who will be the main guest speaker and demo-giver at the Anchorage Amateur Radio Club's 26th annual Hamfest, is more than qualified for the job. Gordon has been a ham for over 35 years and holds an amateur Extra class license. Gordon also holds the highest FCC commercial radio license with ship radar endorsement.

Gordon is the son of Jack and Carolyn West, both of whom are avid sailors who passed on their love of sailing to their son. He was raised on the water on a 72-foot powerboat. He has a very strong background in marine electronics. He worked as a sales and service manager for a marine electronics dealer and as a sales manager for two national electronics manufacturers.

Gordon taught evening amateur radio classes for many years at both Coastline College and Orange College in Southern California, near the vacation beach front communities (Oh, what a life! To have lived and worked near where his sailboat is moored!) On a scheduled basis, he teaches intense amateur radio and commercial radio license weekend seminars, a technique which he developed, throughout Southern California and the continental United States. My husband Rick and I have both had the good fortune to audit one of Gordon's weekend seminars. (More on that in the next newsletter.) We learned many of his teaching tricks and techniques which we have applied in our own amateur radio classes and we know from firsthand experience that he is an outstanding instructor. He adds warmth and humor to his lectures and his lively demonstrations make electronic and electric principals more interesting to learn and easier to understand. Thirty years ago, Gordon formed his own school, the Gordon West Radio School. Through his school's books and tapes, he has helped as much as eighty per cent of all new hams obtain their licenses. He also has helped many other hams, including yours truly, to upgrade their

s. If it were not for Gordon, I might never have obtained my advanced and extra class licenses.

achievements in amateur radio education have brought him the Instructor of the Year award from the American Radio Relay League.

If you ever drive by Gordon's ranch-style home in Costa Mesa, California, you will know immediately that you are in the right place by all the varied and unusual antennas in his yard. His one-time master bedroom has been converted into a very organized ham shack with a wide spectrum of radios. He enjoys experimenting with his amateur radio equipment to obtain the best possible signal and make the best use of existing propagation.

Gordon also maintains an active interest in mobile radio operation. He is in the process of putting together an amateur radio van with numerous antennas, and matching radios from voice to light, which allow him to operate on various bands while on the road.

Gordon has lived in Costa Mesa for several years with his wife Sue and their cats which they dote on very much. Sue N6GLF is an active supporter in Gordon's amateur radio work. Gordon continues to be an amateur radio instructor and still authors and updates amateur radio license manuals and tapes for all license class levels. He also contributes many articles for Radio Fun, NMEA News, Boating Industry, Worldradio News, Popular Communications, Trailer Boats, Lakeland Boating, CQ Magazine, 73 Magazine, Radio! 911 Magazine, and Sail Magazine. He has maintained an avid and active interest in both sailing and amateur radio and still loves to combine the two activities whenever he can.

Come and take this rare opportunity to see and hear Gordon for yourselves. You will find yourselves fascinated, highly entertained, and will learn a lot in the process.

Scanners N3OCW

At last month's meeting a question was raised about the use of scanners by licensed ham radio operators in vehicles. I put together a brief overview of applicable state and federal laws related to scanners. I have only included in the state list those states that have laws regulating scanner use. This was done mostly for brevity - I didn't want to have a whole bunch of states with the note "No Laws" next to them. The state list is for state laws only, and doesn't preclude local laws being on the books. Included also is an overview of federal scanner laws, including the one that covers ham radio operators. I hope this proves helpful to some of you.

State Listings:

California - Use illegal in furtherance of a crime.

District of Columbia - Use illegal in furtherance of a crime.

Florida - Illegal mounted in vehicles unless you are either a licensed alarm system contractor, member of Press ON ASSIGNMENT ("note" that), licensed amateur radio operator, or citizen with written permission from Chief of Police or Sheriff of your community.

Indiana - (mirrors Florida law)

Kentucky - Illegal while mobile unless licensed by the FCC. Seizure by officers authorized for infraction, and may be destroyed. Exempted: retailers/wholesalers selling capable radios (go figure); commercial, educational, or TV stations used at place of business; individual at his place of residence; commercial towing trucks; newspaper reporters/photographers on duty; emergency services personnel with written permission by state director of emergency services; person holding valid amateur radio license issued by FCC; peace officers authorized in writing by their agency head; Commonwealth and county attorneys and their assistants. Shall not be used to facilitate crime, or to avoid apprehension.

Michigan - Police receiver radios in vehicles illegal unless an amateur radio operator with Technician-class license or above and with written permission.

Minnesota - Mobile scanners illegal except for police and FCC-licensed amateur radio operators and with permission from Superintendent of Bureau of Criminal Apprehension. Use in furtherance of felony illegal.

New York - Possession illegal without permit. FCC-licensed amateur radio operators exempt.

Section 397 of the Vehicle and Traffic Law makes it unlawful to equip a motor vehicle with a radio receiving set capable of receiving signals on the frequencies allocated for police use unless one is a Peace Officer or a licensed amateur radio operator. This section provides for obtaining a mobile monitoring permit from the police.

There has been a ruling in the Appellate Court of New York State with respect to Section 397. In *People v McGee* (1978) 97 Misc 2d 360, 411 NYS2d 514, the Court ruled that Section 397 was not preempted by Congress because it only restricted vehicular use of a particular kind of radio (police receiver) and did not affect licensed amateur radio operators. The Court held that the law's purpose was to prevent criminals from monitoring the police from their getaway cars.

It is not widely known that New York case law makes it unlawful even to transport a scanner in your vehicle, whether you are using it to monitor police calls or not. *People v Verdino* (1974) 78 Misc 2d 719, 357 NYS2d 769 established that a scanner is of receiving police signals even if it is unplugged and turned off, therefore making it illegal to carry in a car. If your scanner is confiscated by the police when you are charged with a violation of Section 397, it must be returned to you in its original condition according to the State Attorney General's official opinion recorded in 1996, Op Atty Gen (Inf) 255.

Use of a scanner in the furtherance of crime illegal: New Jersey, Maryland, Oklahoma, Vermont, Virginia.

Applicable Federal Laws Related to Scanners:

The earliest and possibly the best known of these laws is contained in the Communications Act of 1934 and is now called Section 705, or popularly the Privacy Act. Section 705 47 USCA 605 states that it is unlawful to disclose the content of radio transmissions overheard unless they are amateur radio traffic, broadcasts to the public or distress calls. It is unlawful under this section to use traffic monitored for personal gain i.e. a tow truck operator going to accident calls heard over a scanner if a response has not been requested.

The Electronic Communications Privacy Act (ECPA) of 1986 Title 18 of the United States Code, Sections 2510 through 2520. It is an amendment to the Omnibus Crime Control and Safe Streets Act of 1968 and became Public Law 99-508, 100 Stat. 1848 on October 20, 1986. This law made it illegal to monitor cellular phone communications. In 1991, a provision was attached to the FCC Reauthorization Act that would require the FCC to deny Part 15 certification to any receiver that was capable of receiving signals in the cellular phone frequency bands, or one able to be easily modified to do so. This provision made it illegal to buy, sell or import such receivers. Most interestingly, it would applied retroactively to existing receiver models that were already on the market.

On October 8, 1992 Congress passed the Telecommunications Disclosure Dispute Resolution Act with the above anti-cellular-receiver provisions attached, creating Public Law 102-556. It amends Section 302 of the Communications Act of 1934 to deny certification to cellular-capable scanners, and to ban the importation and manufacture of such scanners. The FCC released its Report and Order number 93-201 in April, 1993. This rulemaking carried out the Congressional mandate by amending Sections 2 and 15 of the Communications Act.

After April, 1994 existing scanners with cellular capability may be sold or offered for sale, but no new cellular-capable scanners may be manufactured or imported. The same law applies to external frequency converters designed to be used with scanners.

Public Law 103-414, known as the Digital Telephony Bill, was enacted in November, 1994. One of the amendments to this bill adds cordless telephones to the list of prohibited listening targets already in the ECPA.

Scanners Aboard Aircraft:

The Federal Aviation Regulations leaves the decision up to the operator of the aircraft. Aboard a privately owned plane, the operator of the aircraft is the pilot. The operator of a commercial aircraft is legally the airline, not the pilot. Some airlines do allow scanner use during the cruise portion of the flight. Check with the Captain of the plane that you are flying on before use. In all cases, the scanner must be turned off and stowed during takeoff and landing for safety reasons.

73, Frank, N3OCW

ALASKA PACIFIC UNIVERSITY

June 9, 1997

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Mr. Robert Wilson, President
Anchorage Amateur Radio Club
PO Box 101987
Anchorage, Alaska 99510-1987

Dear Bob:

Thank you very much for your generous gift of \$10,000 to Alaska Pacific University. Your gift helps students pursue their goal in becoming productive, creative, ethical leaders in our ever-changing society. With your support, leaders will be prepared for the new millennium.

The Anchorage Amateur Radio Club has long been a friend of the university. We are honored by the confidence you have placed in us and pledge to you our commitment to continue to be vigilant stewards of your trust.

Please convey our deepest appreciation to all the members of your radio club who made this very generous gift possible.

Your surprise presentation at the Denali Society Dinner added some much to the evening. Thank you again for your very generous gift.

With very warm regards,



Mona C. Maehara
Director of University Relations

Note: The Internal Revenue Service requires us to inform you that no goods or services were exchanged for your gift.



The Radio Amateur Satellite Corporation

"AMSAT recently announced that the launch of the phase-3 satellite is scheduled for this fall, possibly in September, 1997. You may be aware that the launch was delayed due to the failure of the launch vehicle, the Ariane 5, late last year. In anticipation of this I have provided a series of Amsat articles to Harvey Rookus for the AARC newsletter. I hope that they will interest you in thinking about getting on the satellite. It promises to offer a whole new area for hamming that is in reach of everyone.

AMSAT has named Chris Wiley-WL7CMC and myself, Ed Cole-AL7EB, as an area coordinators for Alaska. Please feel free to contact me if you have questions about Amsat or satellite operation. You may want check out Amsat's web page at www.amsat.org, also. I monitor the 147.90/30 machine some of the time, or call me at 776-5829 (Nikiski). Also you may e-mail me at al7eb@amsat.org."



P3D - What's In It For Me?

by Andrew A. Skattebo KA0SNL

A New Satellite

Several articles have been published on the next generation amateur satellite. For those of you new to ham radio and amateur satellites in particular, Phase 3D is a ham satellite now under construction in Orlando, FL. Currently scheduled for launch in the fall of 1997, it will be the fourth in a series of high altitude, globe spanning amateur communications satellites. The first, Phase 3A, was lost in a launch failure. The second, AO-10 while providing useful communication, is uncontrollable and is usable only when its solar cells are providing power to its battery. The third, AO-13 due to an unforeseen problem with its orbit re-entered the atmosphere and burned up late last year. This leaves the amateur satellite community with the task of finishing and launching a replacement for the other "birds". P3D is that replacement.

The main design goal for this new satellite was to make satellite operation less complex and less expensive for the operator on the ground, thereby increasing the number of satellite enthusiasts in the amateur ranks. In this article we'll look at the implications of this design goal and what it means for hams in a practical sense.

This is not a technical article. The focus rather is on what to expect from operating through the new satellite, what equipment will be required and why you should get involved now.

What's In It For You?



P3D
Photos

Many hams have read the technical specs on the new satellite. This gives the nuts and bolts information but not a lot of insight for the newcomer into how that translates into real world operation. Why should you be interested in this high-tech satellite stuff? What's in it for you? Good question, lets see what's in store.

With the launch and commissioning of P3D, it will be possible to put together a satellite ground station for real time, worldwide communication with less effort and expense (and real estate!) than most high performance HF stations require. Imagine a compact station, that gives you reliable long-distance communications capability for many hours a day. Just think about antennas that are small enough to mount on an apartment balcony or maybe even on your car, and about transmitter power requirements under 40 watts. No huge antenna arrays, no kilowatt amplifiers and **NO LICENSE ABOVE TECHNICIAN REQUIRED!** The range of frequencies being launched on P3D are nearly equal to the space we have in all our HF spectrum allocations so there'll be room for everyone. For today's city dwelling, antenna restricted ham this is a dream come true and P3D should make it all possible!



P3D
Footprint

For an idea of the potential of communicating with distant stations take a look at the accompanying screen shot of P3D's intended orbit. You can see that a large part of the earth will be in view of the satellite at any one time, leading to great DX possibilities. Also, even though the new satellite will NOT be geostationary and will still require tracking software and movable antennas, its orbit will repeat on a two-day cycle. This will make keeping 'skeds' with friends and loved ones much easier and allow for the holding of regular nets on the satellite.

In addition to the standard transponders for SSB and CW there will be a digital package called Rudak that will satisfy those interested in high-speed packet. This has the potential to expand the packet radio network and increase its usefulness by linking widely separated local networks together. Also, a Japanese camera experiment called SCOPE will send back high quality digitized photos from the satellite. We'll have an amateur "eye in the sky"!

Overall, this satellite should meet the operating requirements of today's ham and provide exciting communications capabilities well into the next century.

Think Microwaves

Let's get one thing straight from the start. When we're talking about operating through P3D we're mainly talking about using UHF and microwave frequencies. These frequencies provide reliable communications for our long-distance phone conversations and bring us crystal clear digital satellite television so why shouldn't we be using them to provide high-quality communications for hams? The benefits of using microwaves include compact antennas, almost no background noise and justification for our valuable spectrum allocations.

On the chart, you will see the new "bird" will have a 2m downlink but it has a smaller passband than the higher frequencies and is planned mainly as an interim band for existing operators to use while upgrading their stations. If you're a new satellite operator you won't have existing gear and can plan from the start to take advantage of the higher UHF and microwave bands and the advantages they offer.

Don't let this progression toward microwaves scare you off. Microwave technology is no longer the exotic realm it used to be. It simply requires a new outlook and a willingness to accept new ideas. Most microwave equipment is available off the shelf or in kit form ready to assemble. The most common way of getting active in microwaves is to use transverters. These magic boxes convert your 2 meter or 10 meter radio into a microwave station easily and are relatively inexpensive.

There are many books available with information on building and using transverters and the Premier issue of CQVHF has an article by Gordon Beattie on just this subject. Spend some time becoming familiar with this concept and you'll be well on your way to setting up your own station.

Frequency Chart

To get a better idea of what frequencies and bands we are talking about using on P3D, take a look at the chart. This gives you the full range of frequencies and the band's associated letter designations. As an example 23cm (1260MHz) is "L" band, 13cm (2.4GHz) is "S" band, etc. If you combine the satellite's uplink (the frequency you transmit on) and the satellite's downlink (the frequencies you listen on) you get an operating mode or configuration for the satellite. For instance, if satellite's operating mode has you transmitting on 1269MHz (L band) and listening on 2.4GHz (S band) then you are operating in "configuration L/S". Power permitting, it will even be possible to run multiple uplink and downlink pairs at the same time such as UL/VS. Since P3D will have many combinations of uplink and downlink frequencies available, (Any transmitter can be linked to any receiver as long as the two are on different bands) a flexible approach to your station design will keep you from getting locked into a specific operating configuration.

Get Started Now

OK, your interest is piqued and the satellite launch is still months away. What do you do in the meantime? Here are some helpful hints to get you started on your road to satellite (and maybe other weak signal) operation.

My first suggestion for anyone interested in satellite operation is to become a member of AMSAT, the Radio Amateur Satellite Corporation. AMSAT is a non-profit organization formed to encourage participation in space research and communication. Membership dues and donations help fund satellite development and construction. Satellites such as P3D would not be possible without the support of AMSAT members and volunteers. In addition to helping fund satellite activities your membership dues provide you with a subscription to the AMSAT Journal which carries informative articles of interest to satellite enthusiasts and the latest news in the field of amateur satellites.

Second, you might start looking into your equipment options. I'm not suggesting you shell out good money on a full set of equipment when the new satellite has yet to be launched and checked out. Rather I would suggest taking a look at the building blocks and focusing your energy and money there. You see, a 2m or HF all-mode radio can become the heart of a satellite (or weak signal) station. If you're in the market for a new or used 2m radio **consider purchase of an all-mode versus an FM only model**. The price new might be a couple hundred dollars more for the all-mode but its versatility opens up many exciting opportunities! Also, I've seen many multi-mode radios available used for the same price as a new FM rig so that would be another option to help a tight budget.

Sorry some of the side items don't print well at all so;

Go for : <http://www.amsat.org>

You'll find much, much more.

Next month we'll try to have some more AMSAT Information.

Thanks to Ed Cole AL7EB for prodding me to add this interesting phase of Ham Radio. Editor.

AARC Balance Sheet
As of 6/ 9/97

Account	6/ 9/97 Balance

ASSETS	
CURRENT ASSETS	
AARC Gaming-	30,083.83
AARC Holding-	945.19
Bond Account-	5,191.65
Business Acct-	3,777.07
Life Membership-	23,006.70

TOTAL CURRENT ASSETS	63,004.44

TOTAL ASSETS	63,004.44
	=====
 TOTAL LIABILITIES	 0.00
EQUITY	
EQUITY ACCOUNTS	
Open Bal Equity-Opening Bal Equity	65,817.11

TOTAL EQUITY ACCOUNTS	65,817.11
 CURRENT EARNINGS	 -2,812.67

TOTAL EQUITY	63,004.44

TOTAL LIABILITIES AND EQUITY	63,004.44
	=====

Anchorage Amateur Radio Club, Inc.

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THANKS

We wish to give a big
THANK YOU to
J.J. (Jonesy) Jones
NL7A for his fine
donations to the
Club
'Hamfest/Fleamarket'

VOLUNTEERS

For whatever reason we seem to have problems getting Hams to volunteer for the intermediate events like: Triathlons, Mayor's Marathon's etc. If you newer Hams haven't tried one of these it's a great way to get lots of practice on the air and have fun at the same time. Go with another Ham for the first try, then 'go it on your own'. Paul WL7BF is always looking for Volunteers to help with various events. Give him your name and phone number so he can call you about the next event. The Mayor's Marathon could have used about four more Hams, but we made do. Lots of fun watching all these people out helping to raise funds for various organizations. There were 2400 runners from 'Outside' for the Marathon and Alaska certainly gave them the weather picture. So next time Paul asks for Volunteers, put up your Hand or give him a shout at 563-0024 Home or 273-3185 Work. He'll be glad to hear from you and you'll have a 'Ball'.

NL7DK - Editor