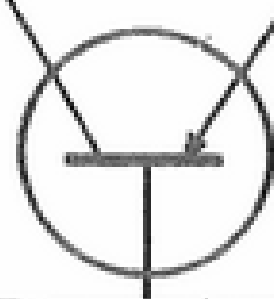


# CENTRAL OKLAHOMA RADIO AMATEURS COLLECTOR AND EMITTER



50¢

Volume 7 JANUARY 1982 Number 84

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# DX-PEDITION WAS FANTASTIC

## Q.R. ZEDD COMPLETES HISTORIC DX-PEDITION

As the DX world now knows, Oklahoma's great Q.R. Zedd held his incredible Mt. Williams expedition on Norman's North Campus between November 8 and November 12. Zedd, operating alone on the heights of the cow pasture promontory except for the help of his nubile, blonde, 19-year-old QSL secretary, Tondelayo Schwartz, was on the air for 101 hours, SSB and CW. During that time, Zedd made slightly in excess of 26,000 contacts, 17,000 on CW and 9,000 on SSB.

By the bands it went like this:

- 160 meters -- 927 contacts including WAS, WAC and DXCC.
- 80 meters -- 2,500 contacts, WAS, WAC, WAZ, and 178 DXCC countries.
- 40 meters -- 7,200 contacts, WAS, WAC, WAZ, Island's of the World Award, talked to Wayne Green, and contacted 213 DXCC countries.
- 20 meters -- 10,221 con tacts, WA Everything, 314 DXCC countries worked.
- 15 meters -- 4,000 contacts, WAS, WAC, WAZ, WAJ, 311 DXCC countries worked, and heard WSMCN.
- 10 meters -- 1,200 contacts, WAS, WAZ, DXCC (198) and picked up oak leaf clusters for the coveted Yodar Kritch, Chatanooga ChooChoo, New England Nutmeg, and City of Roses certificates.

A few contacts were made on 6 and 2 meters, as well as 70 cm and down. Zedd also spoke to Carl Sagan's spaceship somewhere billyuns and billyuns of miles out there in the cosmos, and Carl promised an autographed QSL card from Andromeda. Zedd yoked that he hoped it would not be too much of a strain.

"All in all we had a real nice time," Zedd told assembled reporters when he climbed down from the pile of dirt. "We got a little handicapped for the Charles Whiskey when I fell down on the first trip up and busted all the fangers of my right or CW Sending Machine hand, but it worked out real nice and I was glad to get in the practice sending left-handed and with my toes.

"Other than that we didn't have no real problems.

Some of the worthy who clustered about the snow-swept lower elevations of the famous Mt. Williams during Zedd's incredible expedition were quick to point out that the great man, as usual, was being overly modest. It was known, for example, that many other events imperiled the intrepid Zedd and the voluptuous Tondelayo.

Only a few hours into the expedition, for example, Zedd and Tondelayo were distracted and put off their regular QSO pace by the unexpected arrival of a local university president, Bill something-or-other, who nailed a CONDEMNED sign on the front of the No. 1 Alpha linear and tent, saying he needed the space for parking for some kind of energy center.

Scarcely had this strange apparition vanished into the frosty night when Zedd's remote campsite was again terrorized, this time by a Cessna 182, flying backwards and inverted. The pilot, wearing a baseball cap with the strange legend N5MS emblazoned across the bill, later told authorities that this was his normal mode of flight when operating simultaneous two-meter HT and QRP CW, and so was subsequently released on his own recognizance, whatever that means....

Before the expedition was finished, furthermore, Zedd also had to cope with:

A strange looking person in bib overalls and a blue-green Ford truck, who kept muttering about junk;

An erstwhile OO from Moore, KB5EK, who put up thirteen sloper antennas, trying to prove some kind of point to the great man, before Zedd was finally forced to confiscate his wire cutters and copy of the 73 Long Wire Antenna Book;

A rotund individual carrying his own 12-foot dish, insisting he wanted to show Zedd that satellite TV was better than DX anyway, and

Two representatives of the Japanese legation in Dallas, complaining that Zedd's booming signal into their homeland was creating DX pileup riots in both Tokyo and Osaka.

Zedd says all QSLs will be answered within sixty days.

"What this here little trip proved," the great man concluded, "was that you can have a little fun with modest equipment and antennas. At no time did we ever run more than one Signal One and one Alpha 77, and because we was near the airport, we only put up hundred-foot towers and never more than eight elements on any of our monbanders. You don't got to spend a lot of money or throw in the big stuff when you've got real operating skill."

CBS-TV, PBS, Reuters, and the Mickey Mouse Club of Peoria, Ill., all shot news film of the event. Nosebleeds because of the altitude of Mt. Williams prevented an in-depth, live interview with Lesley Stahl -- which, considering Tondelayo's expression when first told about the plan, was probably just as well.

Zedd was resting at press time, but earlier promised new sensational announcements before spring. The world holds its breath.

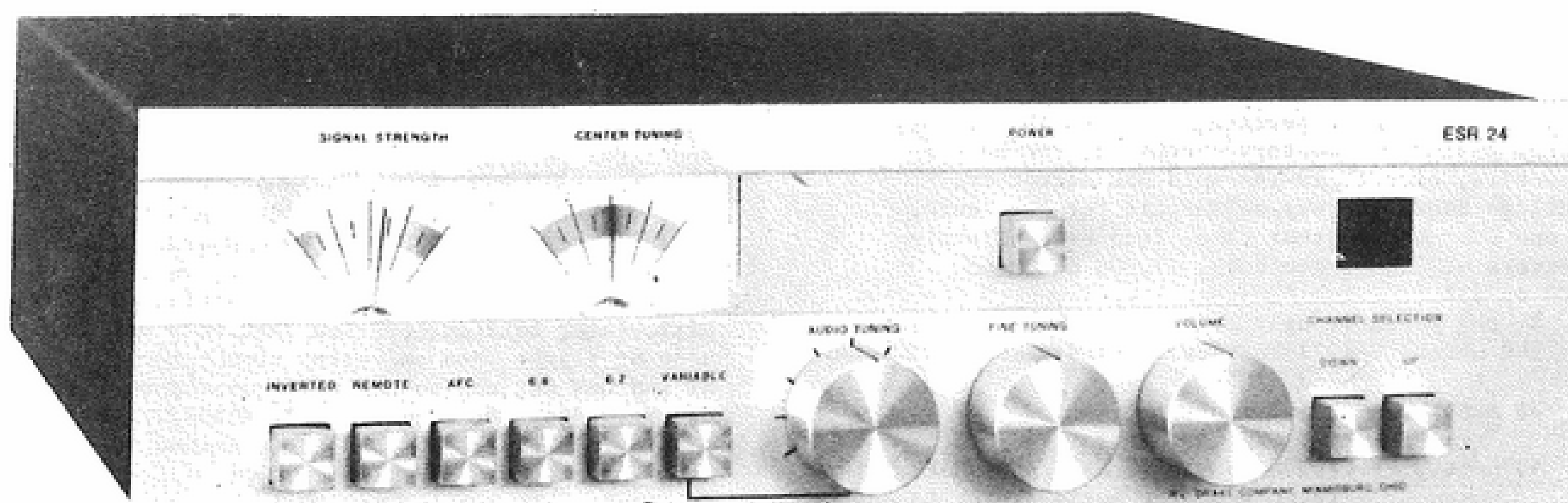
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# CENTRAL OKLAHOMA RADIO AMATEURS, INC.

MEETS: 7:30 pm Fourth Tuesday (Except Dec.) Red Cross, Oklahoma City.  
PR AD1S George Adkins 722-6195  
VP WD5JNT Ted Van Laningham 262-1675  
Se N5CIJ Frank Yohe 324-0772  
Tr K5GGL George Maschino 263-7614

## 1 AERONAUTICAL CENTER ARC

MEETS: 8:00 pm First Friday at Flight Standards Bldg., FAA Aeronautical Center  
PR WA5CJG Bob Pace 376-3569  
VP K5KDR Bill Oliver 329-6333  
Se WB5NSV Bob Graham 766-8685  
Tr WB5AAY Larry Bugg 789-4180  
EDITOR: Bob Graham, WB5NSV 677-8685

## 2 OKLAHOMA CENTRAL VHF CLUB

MEETS: 8:00 pm Third Friday, Red Cross Bldg., 10th & Hudson, Okla City  
PR WD5IRB Ralph Bartow 521-8330  
VP WA5FWD Bill Noland 354-5018  
Se K5JB Joe Buswell 732-0676  
Tr W5KE Ellard Foster 789-6702  
EDITOR: Joe Buswell, K5JB 732-0676

## 3 MID-OKLAHOMA REPEATER, INC.

MEETS: 8:00 pm First Tuesday, Okla City EOC, 4600 N Eastern  
PR KC5HD John Clement 943-2467  
VP W5HPR Don McDown 732-6749  
Se KA5ERZ Connie Boland 348-0123  
Tr W5K0Z Sid Gerber 737-1050  
EDITOR:

## 4 OKLAHOMA CITY AUTOPATCH ASSOCIATION

MEETS: 7:30 pm Third Tuesday, Okla City Fire Dept Training Center, N. Portland  
PR N5IH Henry Israel 722-3848  
VP AD1S George Adkins 722-6195  
Se KA5BJS Judy Macdonald 672-4947  
Tr K5GL Guy Liebmann 787-9545  
EDITOR: Henry Israel, N5IH 722-3848

## 5 OKLAHOMA UNIVERSITY AMATEUR RADIO CLUB

MEETS: 8:00 pm (Sep-May) Second Tuesday Carson Engineering Center  
PR WB5RQB Lee Hardy 325-4545  
VP KA5COI Peter Richeson 329-3217  
Se  
Tr  
EDITOR:

## 6 ALTUS AREA AMATEUR RADIO ASSOCIATION

MEETS: 7:30 pm Second Thursday North Main Fire Station (CD)  
PR WB5MJS Charles Smith 477-1098  
VP  
S/T KB5FW Dennis Bonewitz 477-0194  
EDITOR: Dennis Bonewitz, KB5FW 477-0194

## 7 BICENTENNIAL ARC

MEETS: Second Tuesday, Air National Guard Will Rogers Airport.  
PR KH6JTE John Galway 670-5472  
VP N5BEQ Jim Buswell 236-0368  
Se N5AUH Jerry Sproul 354-2061  
Tr WA5RAQ Bill Rogers 632-4375  
EDITOR: Bruce Goff, KC5CR 751-6276

## 9 WHEATSTRAW AMATEUR RADIO CLUB

MEETS: 2:30 pm Second Sunday. Location varies. See club section for location.  
PR AB5Z Ray Barnes 274-3334  
VP WB5GLD Dick Ruhl 735-4843  
S/T WA5PFK Ralph Wilder 623-5421  
EDITOR: Ted Van Laningham, WD5JNT 364-1675

## 12 SHAWNEE AMATEUR RADIO CLUB

MEETS: 8:00 pm Second & Fourth Tuesday Shawnee City Hall (EOC)  
PR K5LFZ Bob Almand 598-5148  
VP KA5FIT Walter Fultz 598-3984  
S/T KA5FBC Jim Sullivan 273-3843  
EDITOR: Jay Tingler, WD5BUQ 273-3843

## 13 KAY COUNTY AMATEUR RADIO CLUB

MEETS: 7:30 pm Third Tuesday Security Bank Basement, Ponca City  
PR WA5UBO Marsh Pronneke 363-2526  
VP WB5NQT Pat Burnham 765-7229  
S/T Delbert Foiles  
EDITOR: Marsh Pronneke, WA5UBO 363-2526

## 15 SOUTH CANADIAN AMATEUR RADIO SOCIETY

MEETS: 9:30 am Second Saturday, Red Cross Bldg., North Campus, Norman  
PR KU5B Jack Bickham 329-1311  
VP K5KDR Bill Oliver 329-6333  
Se AF5X Jess McKinzie 329-1543  
Tr WB5UUX Charles McCown 321-1061  
EDITOR: Sam Barrett, KA5Rpp 321-2601

## 16 EDMOND AMATEUR RADIO CLUB

MEETS: 7:45 pm First Monday. See club section for location.  
PR WB5UIY Stan Van Nort N/L  
VP WB5ISO Wendall Cochran 943-4308  
S/T WA5BQX Bob Shaw 341-4874  
EDITOR: Stan Van Nort, WB5UIY N/L

## 17 TRI-CITY AMATEUR RADIO CLUB

MEETS: 7:00 pm First Tuesday. Location varies. See club section.  
PR WB5UBB John Warriner 379-3149  
VP WB5VLT J. B. Bills 379-3992  
S/T KA5FDA Nancy Haydon 379-6448  
EDITOR: Yvonne Warriner, WB5TYW 379-6448

## 18 GREAT PLAINS AMATEUR RADIO CLUB

MEETS: 7:30 pm First Tuesday, Basement Woodward court house  
PR N5CCV Gerald Bowman 994-5381  
VP WB0PGD Ron Tice 994-2138  
Se WB0QGW Carla Tice 994-2138  
Tr KA5KAG Geery Ford 256-5342  
EDITOR: Carla Tice, WB0QGW 994-2138

## 19 SOUTHEAST OKLA AMATEUR RADIO ASSN.

MEETS: ? ? ?  
PR WB5TTV Ron Henson 326-5418  
VP WB5ULI George Weldon 326-6572  
S/T WD5FUE Orville Kaley 326-3650  
EDITOR: ? ?

Not everyone is as happy with the new format of C&E as I am. In the November CORA meeting I was asked to explore ways of making the C&E more "legible". Keeping in mind that our monthly income is \$287.75 the following is presented that you may look it over and advise your CORA Director what you want done, in time for the January 26 CORA meeting. Due to the number of drawings, schematics and formulas used by K5JB and N5MS and the difficulty in re-arranging and proofreading I expect to use the material as it is now presented.

The new size and method has reduced my personal time spent by up to 15 hours a month, not to mention the anxiety caused by wondering if any volunteers would show up to collate, fold, staple and mail. For my part I can not return to the old size.

Joe, WA5ZNF.

---

WR5AVM remains alive, well, and still completely "open" for use by one-and-all licensed amateur radio operators. The station identifier remains valid for WR5AVM until early 1983. The FCC declined to renew the license in accordance with current rules. When we change the identifier, it will become W5PAA/R.

Reprinted from last month -  
SAME SIZE (Reduced to 64% of  
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printed full size. Increases  
number of pages from 24 to 40  
PRINT \$330, Postage \$34=\$364

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WR5AVM remains alive, well, and still completely "open" for use by one-and-all licensed amateur radio operators. The station identifier remains valid for WR5AVM until early 1983. The FCC declined to renew the license in accordance with current rules. When we change the identifier, it will become W5PAA/R.

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Printed full size. Increases  
number of pages from 24 to 48  
PRINT \$410, Postage \$36=\$446

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WR5AVM remains alive, well, and still completely "open" for use by one-and-all licensed amateur radio operators. The station identifier remains valid for WR5AVM until early 1983. The FCC declined to renew the license in accordance with current rules. When we change the identifier, it will become W5PAA/R.

Type set by a printer. This  
size would increase number of  
pages from 24 to 32.  
PRINT \$280, Postage \$32=\$312  
PLUS \$15 a page (X 12 pages)  
for setting type. Total \$492

Well, Oklahoma did it. Despite warnings of dire consequences and threats of federal supremacy, the state legislature passed a bill limiting radar "jammers" last session. There were some initial complaints about the bill as it was introduced, but apparently after amendments, a compromise solution was reached. The first reports of the bill indicated that the sponsors intended to outlaw so-called "fuzzbuster" receivers as well as out and out radar jammers. After some opposition in the house and senate, the reference to fuzzbuster type receivers was dropped leaving only radar jammers in the hot seat. Some deference may have been shown to amateur radio operators and others with a not so specific exception. I reproduce Section of the law as follows:

*Be it enacted by the People of the State of Oklahoma:*

**SECTION 1. Radar interference devices—Advertising, sale, manufacture or distribution prohibited—Exemption—Penalties**

A. It shall be unlawful for any person to operate a motor vehicle upon any public road, street, highway or turnpike of this state when such vehicle is equipped with any device designed for the purpose of, or capable of:

1. Jamming or distorting signals emitted by radar; or
2. Transmitting a signal capable of being received by radar.

B. It shall be unlawful to manufacture, advertise for sale, sell or otherwise distribute any such device in this state.

C. A license issued by the Federal Communications Commission for the use of such device shall exempt operation of such device from the provisions of this act.

D. Any person convicted of violating subsection A or B of this section shall be punished by a fine of not more than Two Hundred Dollars (\$200.00).

This Act (now law) is codified under Title 47 which is the Motor Vehicles Title of the Oklahoma Statutes rather than under Title 21 which is Crimes and Punishment.

The language of the law is quite interesting in that it prohibits the possession of a particular device in an automobile when that device is designed for the purpose of, or capable of jamming or distorting signals emitted by radar or transmitting a signal capable of being received by radar. Nothing here specifies that you have to be using the device. If it was designed for the purpose of jamming radar or is capable of transmitting a signal that can be picked up by radar then it is illegal regardless of whether or not it is in use.

Consider this. You could be held liable for owning a device that is capable of transmitting a signal that can be received by a radar when you do not know what the receiver characteristics of the radar are and could not be expected to know. You are at the mercy of receiver data that is unknown to you. Or consider that the radar device can be interfered with by mounting an audio amplifier and speaker on the car and transmitting a loud audio signal. I know that there are many of you who thought my article in the April 1980 issue of C & E was an April Fool's joke and in part, it was, but that doesn't mean that the principal wouldn't work. Anything that generates an audio signal would be theoretically capable of interfering with the radar signal. Would this be a "device" capable of interfering or transmitting a signal capable of being received? Actually any signal transmitter including audio would be capable of being received by the radar set. A police officer actually calibrates the radar before setting out on patrol with an audio tuning fork. This audio signal modulates the 10 Ghz signal which is then processed by the speed determining computer to read out a speed equal to  $V = F/31.4$  where  $F$  is the frequency of the tuning fork. Now tell me, is a regular garden variety auto horn capable of being received by a radar? You bet it is and it could be culpable under the law.

Now any transmitter would be capable of being received by the radar unit, whether or not that transmitter information is used. Most radar receivers consist of a waveguide, a horn antenna and a crystal diode capable of receiving a microwave signal. There is

very little in the way what would be called frequency selective devices. These things are capable of receiving just about anything. I suppose that you could cram any number of different signals down the radar's throat.

Now we have established that mere possession of such a device in your automobile is illegal. It doesn't even have to be in use. If you have a device capable of jamming or being received, it is illegal. If you have a device that was designed for the purpose of jamming or transmitting, that is illegal also. This means that possession of a device designed for the purpose of transmitting a signal capable of being received by radar is illegal. Sounds a little broad to me in that a person can be penalized for merely possessing a device that is capable of transmitting a signal capable of being received by radar. Tsk! Tsk!

You have a real question of intent when trying to determine if a device was designed for the purpose of jamming or designed for the purpose of transmitting a signal capable of being received. What does the District Attorney do when trying to make this type of proof. And what kind of notice is given to the average citizen who is trying to determine if his conduct is illegal. He must guess the intent of the designer.

Now what does it take to equip an automobile with such a device? Is it equipped if it is merely sitting on the dashboard? Does equipped mean that it is permanently attached to the car? Is a car equipped if the device is sitting on the seat in the car even if it is not being used? Could be? Actually, you really couldn't say. I would suggest that the average citizen might have trouble determining if such a device in such a situation were an illegal act.

What if you are not operating the vehicle and it is equipped with such a device? Well, under section A it might appear that this would not be illegal. So a person could legally possess such a device if it was not in his vehicle or if it was in his vehicle and the vehicle was not being operated upon any public road, street, highway or turnpike. These could be legal acts, you just couldn't take it on the road. If you had such a device and was operating it from your house, I guess that would be legal also.

Subsection B prevents anybody from manufacturing, advertising for sale, sell or distribute any such devices. This is for those enterprising businessmen in the crowd for whom the idea of a radar jammer is older than the idea of a profit motive, but only by a few minutes. Sigh, another blow against free enterprise. Are you listening Mr. President? Actually, if we have trouble determining just what type of a device we are talking about, then we certainly have trouble determining whether or not someone is manufacturing such a device especially when that device is "capable of transmitting a signal capable of being received by radar." Which could include auto horns and PA systems. Nothing prevents you from possessing such a device only. If it was manufactured outside of the state, and brought in by hand (or foot), then you could legally possess it. I have such a device and leave it in my house. That is legal. If I transport it in a car, that could be illegal. If I sell or lend it to someone else, that is a clearly illegal act assuming that it was capable of transmitting a signal capable of being received by radar. Now, this could be an unexpected benefit. I would submit that any two meter, 450 Mhz or even low band amateur transmitter would be capable of transmitting a signal that a radar would be capable of receiving. Now if you own one of these devices (an amateur transmitter) you would be in violation of the law unless you had a license for the use of that device issued by the FCC (See Subsection C). This means that it might be illegal to possess an amateur

transmitter in your car if you are not licensed for it. Could a technician class licensee carry an HF transceiver in his car? Maybe not. Could an amateur radio dealer sell a radio to an unlicensed person if that person was going to transport that device in his car back home? Might be. Now I know that this thinking might be a flight of fancy, but you see under the law, a criminal law must specifically designate the act or conduct that is prohibited. If some act which might normally be considered legal (for example under Federal law) could be prohibited under the radar law, then that law is in a problem. That law must also reasonably appraise the average citizen of the conduct or act that it intends to prohibit. As such, if it fails to do so, then it is considered vague and unenforceable. For example, the law does not define radar, nor does it even say whose radar it is intended to protect. What about other radars that are completely unrelated to police traffic radar? Sounds like to me that they are not excluded and thus anyone who transports a device that is capable of transmitting a signal capable of being received by a police radar, then it would be illegal. They failed to designate the type of radar. I think that the law is vague on this point because it does not specifically delineate the type of radar. Or what about the person who has a mobile home that has a radar microwave oven equipped in it? Sounds like to me that we would be dealing with a device which is capable of transmitting a signal that a radar would be capable of receiving.

I guess the efforts of the legislators were directed at writing a law that would prohibit radar jammers but not run afoul of complaints that they were attempting to step into an area that has already been preempted by the Federal Communications Commission representing the federal government. But they have not achieved that in their simple (in fact, overly simplified) and poorly drafted bill. The Federal Government has legislated in this area. One of the local state representatives indicated to me that she doubted the constitutionality of the bill. The Federal Communications Commission has assumed jurisdiction over radar jammers in a News Release dated July 7, 1980. They warned that the use of "jammers" could lead to penalties such as revocation of FCC licenses, payment of fines, and potential criminal prosecution. In any case, the Commission has considered this to be a matter for their jurisdiction. So what is the state doing with its nose under the tent flap? Well, one of the news articles that came out said that the Commissioner of Public Safety testified that the law was needed because trooper morale was low. Sure sounds like reason enough to me.

Why did the legislators include a prohibition against devices capable of transmitting a signal capable of being received by radar? Well, some enterprising souls are marketing a doppler radar speedometer which sits up on the dash and transmits a signal and measures the doppler shift on return and gives a very accurate speed measurement. The speedometer has a X-Band transmitter and receiver and also a calibrate position. When the switch is accidentally left in the calibrate position while tooling down the road, it is capable of jamming police radar although it may not have been "designed for the purpose of jamming or distorting signals emitted by radar." So they throw in a catchall which happened to gather in a large number of fish.

Now the real catchall comes under Subsection C which exempts all license holders. This, of course, would cover amateur radio operators as well as other licensees. Now, I never had a chance to see the original bill as proposed. I do know that it intended to outlaw not only radar jammers, but also "Fuzzbuster" receivers. This, the legislature was not quite ready to do especially since I am sure that a majority of them have the receivers sitting on their dashboards. So the "Fuzzbuster" ban was lifted out of the bill. When I first

got wind of the bill, I wrote several of the local legislators expressing my concern not only for the "Fuzzbuster" ban, but especially at the possibility that such a law could be used to ban certain types of amateur transceivers in cars. I was a little irritated by the arguments for limitations on receivers since I consider them a tool by many in the trooper/citizen war. I am not convinced of the infallibility of radar, I am convinced that the Doppler principle is sound and scientific. I am not convinced that current equipment and operator proficiency is adequate. It is possible to get nabbed improperly. I am not sure whether or not the Commission licensing requirement came as a result of my conversations and letters. Heh, Heh. Now, I would construe this to mean that an amateur radio operator operating on one of the adjacent amateur bands in the 10 Ghz range would be exempt from the act no matter what he was doing. I am not sure what the Commission would say about it, but I would assume that if one is using one of the X-band amateur allocations, that the Commission might not be able to say anything. This provision may also have been added to prevent any controversy over the supremacy of the Federal Government over the State's attempt to legislate in what might normally be a federal question and interest.

So if you are not an amateur and don't get caught, what do you face? Well, a maximum fine of \$200.00. Probably just about what a jammer costs to make. There is no jail time.

There are a couple of other exceptions and this is the second section of the law:

#### SECTION 2. Exemptions

The provisions of this act shall not apply to:

1. Any receiver of radio waves of any frequency lawfully licensed by any state or federal agency;
2. Any such device owned or operated by the federal or state government or any political subdivision used by employees thereof in their official duties, or the sale of any such device to law enforcement agencies for use in their official duties; or
3. Any citizens band radio.

Now this section is codified as Section 11-809 of Title 47. (The previous section that I mentioned is codified as Section 11-808 of Title 47). I am not sure what subsection 1 means since Section 11-808 just discusses what might appear to be transmitters only. Subsection 1 contemplates receivers and we have had no mention of receivers in 11-808. I suspect that this section was left over from the attempt to ban "Fuzzbusters" and there was nobody smart enough to figure out that receivers have nothing to do with the transmitters contemplated in 11-808. Somebody neglected to remove it from the bill at the appropriate time.

Now Subsection 2 under 11-809 makes a little bit more of sense since it is a specific exemption for any police officer who uses a radar which might be capable of transmitting a signal capable of being received by radar. But most police radar units are licensed, so they would have been entitled to protection anyway. I am also not sure why they are also exempting persons who might be exempt anyway.

Now Subsection 3 is a different story. I can't figure out why they would exempt CB radios. If they are properly licensed to the owner, then there would be nothing to worry about. I also think that this might bolster the argument earlier made that radio transmitters capable of transmitting on virtually any frequency might be capable of being received by the police radar. So they must have contemplated that a CB radio might be included unless they determined to exempt it from the provisions of the act. So why would not it be covered under the license provisions? Who knows? I am sure that there was some legislator who didn't have a CB radio license and determined that they would need to have a specific exemption for the illegally operated CB radios. So the boys were just taking care of themselves.



I don't think that it was a very well drafted law. Subsection 2 under 11-809 shows what happens when you are not paying attention. You leave a provision in the bill about radars that has nothing to radar receivers, yet nobody determined that it should be moved. The law became effective on October 1, 1981, so I am not sure whether there have been any arrests and charges under the present bill.

Just what exactly is the jammer type device that they are contemplating? It is quite simply a pulsed Gunn Source (amplitude modulation) pulsed at just the right speed to fool the radar into thinking that that actually is your speed. Most of the Gunn sources are nothing more than simple 10 milliwatt transmitters that are pulsed on and off at the appropriate audio rate. They can be quite effective since the inverse square law only applies the first trip from the car to the car with the radar unit and the inverse square law applies to both the trip from the police car and the return trip. Some police Gunn sources are as high as 100 Milliwatt. This might affect the jammer device since 100 Mw might capture another device because it is such a hefty device. 10 Milliwatts, however, can be quite effective.

A Gunn modulator can be simple or quite effective. See Figure 1. In this circuit a Gunn Source is driven by a 2N6386 transistor switch to voltages pulses of 7.9 Volts which was determined to be the optimum Gunn Voltage. Gunn microwave sources are notoriously nonlinear. That is, the power output is not proportional to the applied voltage. This is one of the reasons that the Gunnplexer utilizes FM modulation since a amplitude modulated Gunn source would be quite tricky to design. In this instance, since you are only pulsing the device off and on at an audio rate, it is only necessary to build a device that switches the Gunn on and off. The modulating voltage is supplied by a 2N2222 which is driven by a NE555 oscillator. The switching arrangement is set to produce several different frequency settings and the pots are adjusted for particular values. The 7805 monolithic regulator is adjusted above its normal 5 Volt output by putting a resistor in the ground lead as has been discussed in previous C & E articles. R9, the 5K pot is adjusted to produce 7.9 volts at the emitter of Q2. The Bypass capacitors C2, C3, and C4 are designed to prevent the 7805 from oscillating and producing a jagged output. This in turn would produce a variety of frequencies, definitely a no no. The zener diodes at the base of Q2 are an alternate method of producing the proper output voltage to the Gunn Source, however, they are really not needed since the voltage must be adjusted to the

optimum output of the Gunn Source and zener diodes, unless 1 % or so just can't cut it. A X-band detector is really necessary to set the output.

The NE555 (IC1) is set in an astable configuration and is nothing more than a simple square wave oscillator (not exactly true since the output is slightly asymmetrical, but close enough). The SPDT switch switches between high and low ranges. The DPDT switch can be set to either short out R4 and R3 or keep them in the circuit for a Friend or Foe switch. Let's say that the SPDT switch is in the high position and the DPDT switch is set to a center off position (DPDT switch must have a center off position) in this instance R4 is in series with R6 and lowers the frequency of the transmitted pulses. If the DPDT switch is set down to short out R4, then this Foe Position would mean that the frequency of the transmitted pulses would increase and show a higher speed on the radar device. If R6 were adjusted to read 1570 Hz (which corresponds to approximately 50 mph) moving the DPDT switch to the down or Foe would raise the speed to approximately 70 mph for the value of R4 given. Similarly, if R5 were adjusted to approximately 628 Hz (which would correspond to a speed of 20 mph), then moving the switch to the down or Foe would raise the speed indicated to approximately 30 mph for the value of R3 given.

Why a "Friend" and "Foe" switch? I dunno, probably out of boredom and to seek revenge for the person who zips past you at an outrageous speed. If he sees a Trooper and slows down, the foe position of the switch might insure that he gets treatment from the gendarme that might have been reserved for you. If the DPDT switch is moved from the center off position to the up position, the voltage to the Gunn source is continuous and the output is not pulsed. This can be used for tuning up the device for optimum output and for setting off Fuzz Busters up and down the road, which I suppose could be great sport. In fact, there was a proposal made to Commission to allow dummy low power X-Band transmitters on the highway to set off Fuzzbusters and keep people driving slow even when there were no trooper around. The Commission turned em down flat. Too much RF pollution and interference potential.

For the circuit shown, the power output remains relatively constant over the range of 10.5 volts to 17 volts. It drops off below that. The LED on the output of Q2 can be used to determine whether or

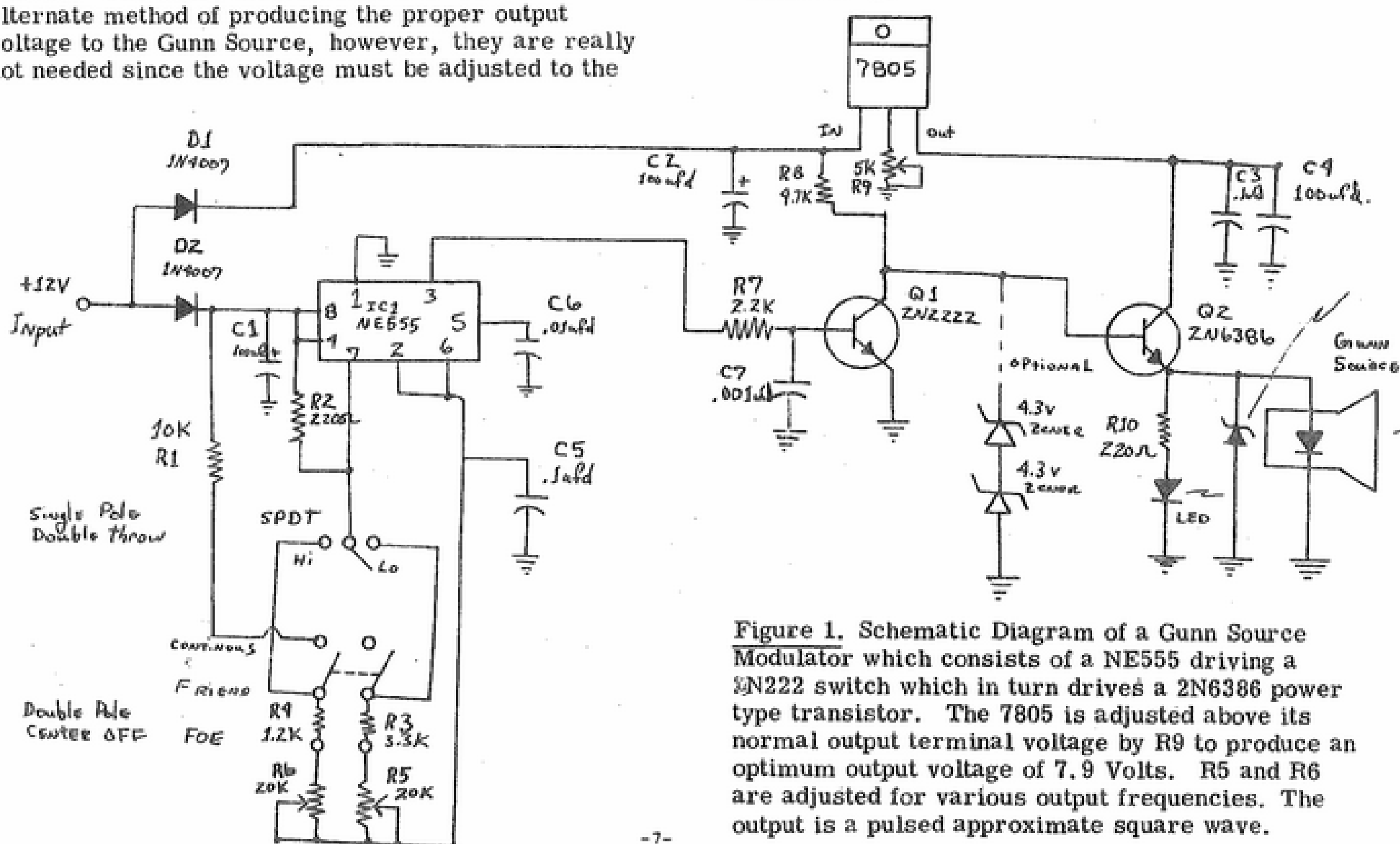


Figure 1. Schematic Diagram of a Gunn Source Modulator which consists of a NE555 driving a 2N222 switch which in turn drives a 2N6386 power type transistor. The 7805 is adjusted above its normal output terminal voltage by R9 to produce an optimum output voltage of 7.9 Volts. R5 and R6 are adjusted for various output frequencies. The output is a pulsed approximate square wave.

not the oscillator is working. If you use a point source type LED, you can actually see the LED get visibly brighter in the continuous output mode. Quite attractive, I suppose, especially at night.

Gunn sources are available. I have seen them advertised in Ham Radio magazine and occasionally in the higher quality flea markets. Some of them are tuned who knows where. If you play with one, it might not be a bad idea to find someone with a microwave counter and make sure that it is tweaked for the amateur band before continuing with your experimentation. Several companies (legitimate) have produced a variety of accessories for the Gunn sources including a doppler mixer which allows you to construct a radar speed determining device yourself. A bit of the outgoing signal is used as a local oscillator for the receiver and the returning signal is mixed with it producing an audio voltage which can be counted and converted to miles per hour. Or you can use a simple frequency to voltage converter and then calibrate a meter to read out speed. Some of these devices are quite neat.

Now, having shown you the schematic of an actual device that would be capable of jamming what should you do? Should you build it? I would have to say No. The potential for mischief is too great. Although the possession of an amateur license might exempt you from the Oklahoma State law, the Commission might consider the device to be capable of interference and give you some grief. I know that this means that you may never be able to operate A2 X-Band mobile, but this is just one of the breaks. Besides, there are probably better circuits to experiment with. Lord knows that such a device is a defensive weapon on the road. I have recently had an opportunity to read a substantial quantity of material that summarized much of the evidence presented at the Florida case involving radar. The potential for error on the part of the operator is great and the training of the officer for most part is lacking. In fact, it is not uncommon for the local radar jockey to have no more training than having been demonstrated the operation of the unit and then going up and down the road for a couple of hours with another officer who might have a little more experience. Oklahoma City runs a radar course in their police academy which utilizes some materials that are relatively good. It at least explains some of the basic errors that can crop up such as "batching", "Cosine error", "Billboard Effect" and others. If there is any interest out there, maybe some of these can be explained.

The gist of the Florida Dade County case was that radar devices were designed for the purpose making money and a lot of money was to be had in the late 1960's and early 1970's when money was available from the Federal Government through the Law Enforcement Assistance Administration for the purchase of radars. Units might start out at \$2000 in quantity one pricing, then drop to about \$450 or so if you bought a bunch, which just shows how cheaply these devices can be made and the potential for profit. A lot of this money is drying up since the demise of the LEAA and a lot of these cheap units are still in service. The National Bureau of Standards was requested by the Highway Safety Standards Department to investigate various radars now on the market. They found that some of them were susceptible to interference from both within and without of the police car. And this interference could in turn produce erroneous readings. In March of this year, the National Highway Traffic Safety Administration (NHTSA) filed a Notice of Proposed Rulemaking which, if adopted, would set strict technical guidelines for police radar units. The NHTSA intended to set up a Qualified Products List (QPL) which would incorporate standards that resulted from the three year joint study with the National Bureau of Standards.

There

There are no present standards of this type. The proposed standards provide installation and operation requirements, manufacturing design and performance criteria, and rigid test procedures to ensure a devices initial and continued compliance with the NHTSA rules.

The new rules could force the police out of the X-band radar business since some of the standards could not be met using current X-Band design criteria. This means that most new police radars would be built in the K-band (24.05 to 24.25 Ghz). X-Band gunn diodes generally operate on 10 volts. Under the new proposed rules, each radar device must be able to operate at a minimum voltage of 10.8 volts. Most of the radar manufacturers feel that 10.8 volts is just too low for X-band power supplies to provide adequate regulation. K Band Gunn sources operate on 5 volts which minimizes the power supply regulation problems in a 12 volt automotive system.

The frequency bands in which the two systems operate also favor K Band since it is less susceptible to interference because there are no coallocated services in the K band at this time. X-Band is also used by radar systems for weather and of course, the amateurs are also very close to the frequency allocation at 10.525 Ghz.

The proposed standards would require that each radar device be free of interference potential from CB radio, police radios, automotive noise, alternators, windshield wipers, air conditioners, heater fans and other outside sources.

One of the biggest changes would be rules which require transmission frequency stability--one of the biggest sources of radar inaccuracies. The new rules would propose that the radar device be crystallized controlled as to its calibration frequency. The suggested regulations would also require the device to maintain its assigned frequency limits despite power supply variations of plus or minus 20 %.

The various police departments would be required to maintain various test equipment to keep the devices maintained including an audio frequency synthesizer capable of 300 to 10,000 Hz, environmental chambers, anechoic chamber (to exclude outside interference and minimize microwave reflections), frequency counter, field intensity meters, isotropic probe containing three orthogonal dipole antennas.

One significant statement was made by an Highway Safety Administration spokesman who said that few of the more than 100,000 radar units now in service in the U.S. could meet all of the proposed standards.

Oh, by the way, the Oklahoma Law took effect in October of this year. So be careful. I suppose that it will stay on the books until somebody gets caught who can afford to make a difference. But don't build a jammer, especially if you are an amateur radio operator if you intend to take it on the road. The law extends a matter of grace to federally licensed operators by exempting from its terms. It may be illegal for the State of Oklahoma to try to legislate in a field preempted by the FCC, but then again, jamming is also illegal.

Micheal Salem N5MS

FOR SALE: Nice Walkum Talkum Radio . The Kenwood TR2400 synthesized goodie with Deluxe leather case, wall charger, and a nifty rapid mobile charger. The mobile charger is just the device for turning dead batteries into action. The whole thing works great and the package can be yours for a mere \$250.00. It would be cheap. Check with Jim Shideler WB5YWO at (405) 377-0498 evenings (Stillwater runs deep).





Club  
NEWS

VHF  
The Oklahoma VHF Club

## MINUTES OF NOVEMBER MEETING

Meeting was called to order at 8:05 PM by President Ralph, WD5IRB, with 15 members and guests present.

Ellard, W5KE, gave Treasurer's report and continued with CORA meeting report. Two items were brought to the club for opinion: mailing or prizes, and a "visitor" class of registration. Motion was passed that the club express the opinions that pre-registration prize be mailed, if necessary (previous practice), and for all other prizes, ticket must be present to win. Additionally, it is the club's opinion that there be only one class of registration (also past practice).

Charlie, WA5JGU, announced that he had received notice of reactivation of ARRL affiliation. This was done as a result of Charlie's and Ralph's efforts. The files have been inactive since 1972.

The Christmas meeting will be a refreshment meeting. Gifts brought will be distributed to needy children by Ken, WB5KHU, and Phylliss. Gifts will be wrapped and identified by intended age and sex.

Charlie, WA5JGU, Ellard, W5KE, and Carl, W5JJ, were appointed as nominating committee for next year's officers.

Jim, N5BEQ, requested assistance in siren testing on first and third Saturdays of each month.

Steve, W5VCJ, reported on his efforts to locate lost members. He has identified about 300 people who will be able to attend the twenty fifth anniversary of club formation. He has identified 53 silent keys. List of people still missing is contained in the article following these minutes. Carl, W5JJ, is going to contact major amateur radio publications regarding the reunion.

Bob, W5HXL, described a letter received from the State Civil Defense regarding assistance from amateurs during problems caused by flooding.

Proposed amendment to the By-Laws was presented to the club. It was proposed that the club dues be changed from \$3.00 to \$6.00 per year. The prorotation for new members of \$.25 per month would be changed to \$.50 per month. The proposal will be voted at the January meeting. THE MEMBERSHIP IS SO NOTIFIED, IN ACCORDANCE WITH ARTICLE VII OF THE BY-LAWS.

Meeting was adjourned at 9:10 PM. Joe, K5JB, Secy

## SILVER ANNIVERSARY

In July 1982, the VHF Club will hold a reunion to celebrate it's 25th anniversary. Originally it was known as Oklahoma Central 6 Meter Net, and was changed to Oklahoma Central VHF Club, and later, to the present Oklahoma Central VHF Amateur Radio Club.

The planning Committee has made no definite decisions on place, time, etc, but is now attempting to determine just how many of the members and ex-members would attend. Steve Stevens, W5VCJ, Reunion Chairman, has compiled a list of over 500 and is trying to locate some who have moved, dropped their calls, or changed calls. A list of the "missing" is printed here and if you can help locate any, please contact T. W. Stevens, P. O. Box 976, Edmond OK 73083, or phone 341-8486.

## NEED ADDRESS FOR THESE

(not in 1981 Callbook)

K5AJV Gary McCoy  
K5BBC Paul Copenbarger  
WA5BPK Wm. S. Nicholson  
WA5BXZ Mark Wiltshire  
WA5BYL Marcella Allen  
W5BYS George Beyers III  
WN5DKI Al  
W5DKZ C. W. (Bud) Williams  
K5DLG  
WA5DOA Charlie Farris  
K5DRM Victor Johnson  
K5DUI Robert Powell  
WB5DXP James D. Crisp, Jr.  
W4EGO Bill Persky  
K5ERA Mike Lynch  
WA5EVN Jim Allen  
W5EXW Bob Church  
WA5FKL Randall G. West  
WA5FQP Victor Pollare  
WA5FVT Jimmy Gilbert  
K5GAF Paul Makey  
K5GAK Sam Billings  
W5GOW K. Byrn Whatley  
K5GVM Jim Normand  
W5GZE John Winder  
K5HCF Waldon Mayfield  
W5HCX Russell Miller  
K5IFO Bill Hamlin  
W5IQS Evan A. Roberts  
K5ITW Jerry Smith  
W5IWC Frank Beckham  
WN5JDZ Bernard (Mac) McCarty  
K5JKX Jim Kyle  
K5JPK Russ Krebs  
K5KFS Ed Burns  
K5KPJ Don Ayres  
K5KQR Mike Guin  
K5LDF Luther (Luke) Lott  
WA5LTS Carl Sarvela  
K5LXX Wailon Garner  
WA5MGR Chas. Lucas, Jr.  
K5MNX Melvin Ruth  
WA5NBM Lee Parker  
K5OFT Bill Daugherty  
K5OHV George Staton  
K5OKB Howard Newcomb  
K5OLD Jerry Hayward  
K5PIF Joe Moore  
K5PRN Tat Smith  
K5QGO Joanna Kyle  
K5QIY J. V. (Doc) Shell  
K5QXB Bill Hibbard  
K5RJN John Bednar  
WA5R00 John Williams  
K5RYP Pat Cross  
K5TBR Chuck Davies  
K5TVW Jim Wade  
WA5TWM Miles Head  
K5URF June Bowman  
K5URK Leroy Kearby  
WA5VCQ David Caster  
WA5VYH Curtis Price  
W5WAD Howard Vale  
W5WIU Gayle Pendleton  
K5WLL John Thomasson  
K5YMY David Rollow  
K5ZII Joe Thrasher  
K5ZPB Chester Lewis  
WA5ZRK Ivan L. Newell  
WA5ZVI Jim Labo  
K5ZVM Andy Loesch  
K5ZYU Wade Reed  
K5ZYY Burley Clark  
K5ZZO Jinx Greer

(The Following are in Callbook but letter was returned)

WA5BEN Larry Randall, Jr.  
K5HYA George L. Beyers (W6NTH)  
K7DLP Art Owens  
K7KLO Jerri Owens  
K5MKW Sidney Witt, Jr.  
WA5MZS Calvin Humble  
K5PGC Bob Parsons

thx, Steve, W5VCJ

## STARSET® MODIFICATION FOR ICOM IC-2AT

In case you haven't noticed, the October issue of ham radio contained an article that explained the inner workings of a Pacific Plantronics Starset model headset. The particular model explained was the telephone model which for some reason is the model which usually turns up in flea markets. The central theme of the article was a method for providing current to run this type and other carbon microphone replacements on radio gear.

Since the Icom IC-2 family of radios have a novel microphone circuit (current source is available at the hot mike lead and drawing current keys the rig) adapting Starset type head sets is very simple. Also, describing the modification doesn't take long and I'm short on time this month!

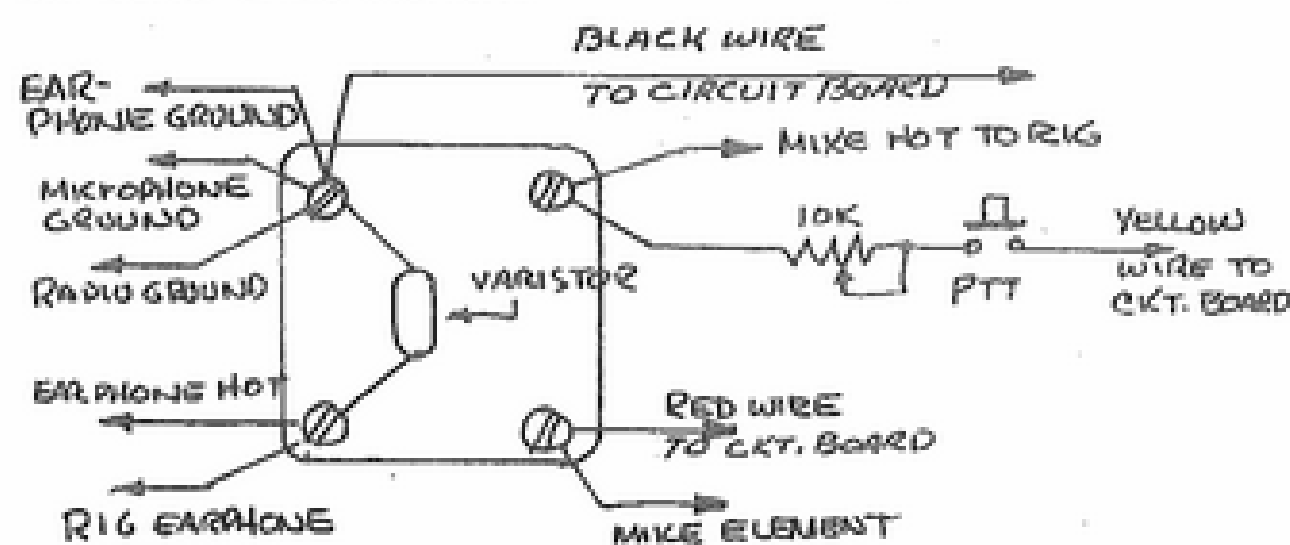


Figure 1 Terminal block

First order of business is to open the little box containing the two phone plugs. Disconnect the wires and remove these plugs. They can be stashed in the junk box for another project. Remove all the rest of the wires going to the terminal block. The terminal block will be used to reconnect the wires in the new configuration. For convenience of explanation, I assigned wires to the terminals as shown in Figure 1. Some wires will have to be lengthened and rearranging terminal assignments may reduce the problem but it is hardly worth the bother.

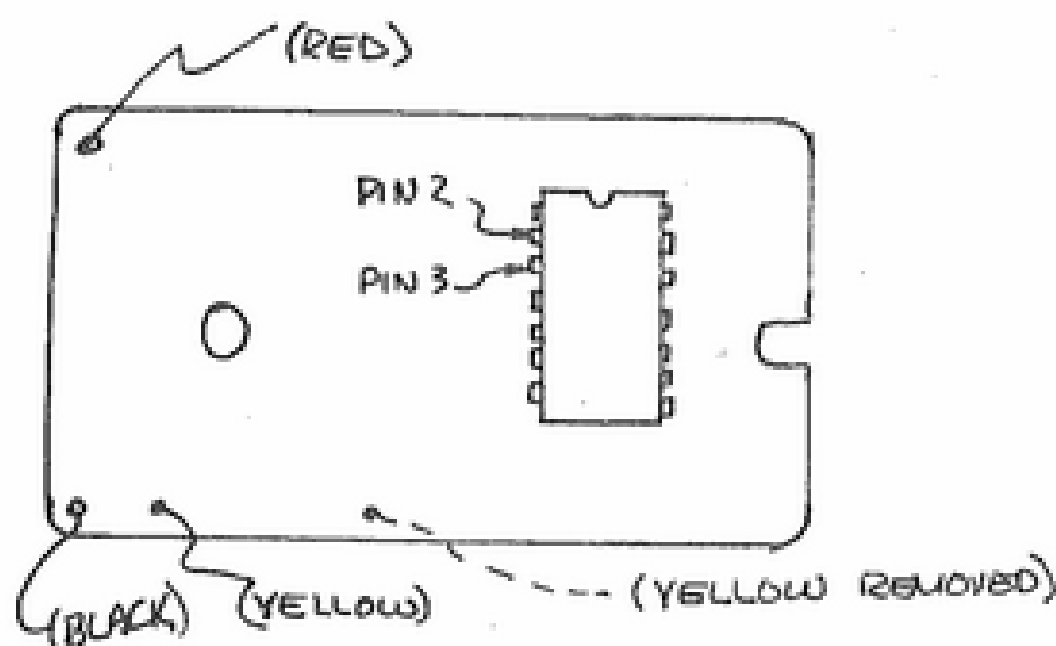


Figure 2 Circuit Board

Notice how the little sleeves are used on the screws holding the box together. Be sure and reinstall these sleeves the same way to prevent shorts. Figure 2 shows the configuration of the circuit board. In the ham radio article three of the diodes are removed but this is unnecessary. Besides it takes longer to describe. Notice the four wires attached to the circuit board, two yellow ones, a red one, and a black one. Now two yellow ones would sure be confusing so remove the one along the edge of the board, as indicated in Figure 2. Find pin 2 of the IC. On the foil side of the board solder a jumper from pin 2 to pin 3. This will ground one side of the balanced output.

The function of each of the three remaining wires is now:

Red wire is audio input.

Black wire is ground.

Yellow wire is audio output and + power.

The box can now be prepared for a momentary contact, normally open, push button switch (PTT) that will be wired as shown in Figure 1. I

found it convenient to locate the PTT switch in one of the holes left by the phone plugs. A washer was placed under the nut to permit the switch to be tightened to the case half of the box. The lid secures the installation. In my model, I ran the cable to the headset through the other hole left by the phone plug. A grommet was selected to make a snug fit to the cable and with some lacing cord, I made it even "snugger". Anchoring these cables is very important because they will get jostled about and result in nothing but misery if short or open circuits appear when you are demonstrating your "toy".

It will be necessary to find a suitable length of cable to make the reach from the box to the rig. I found a very flexible piece of coiled cord that had shielded wire for the microphone audio. One end was fed into the hole vacated by the headset wire and was treated with the snug grommet trick. The other end was connected to a couple of phone plugs, a miniature one for the earphone jack and a subminiature one for the mike jack. This cable should be long enough that the rig is not too close to the electronics or rf pick-up could be a problem. I have not found it a problem with the IC-2 but I didn't make a practice of "goosing" the thing with the antenna while transmitting. On some equipment, I had to shield the interior of the box, but that's another story.

The 10k pot, wired as a rheostat, shown in figure 1, could be replaced with a fixed resistor if one knew what the value should be. I placed a ten-turn pot behind the PTT switch and held it in place with the wire connecting to the switch. After everything was wired, I adjusted the thing to get proper level of audio on the transmitter.

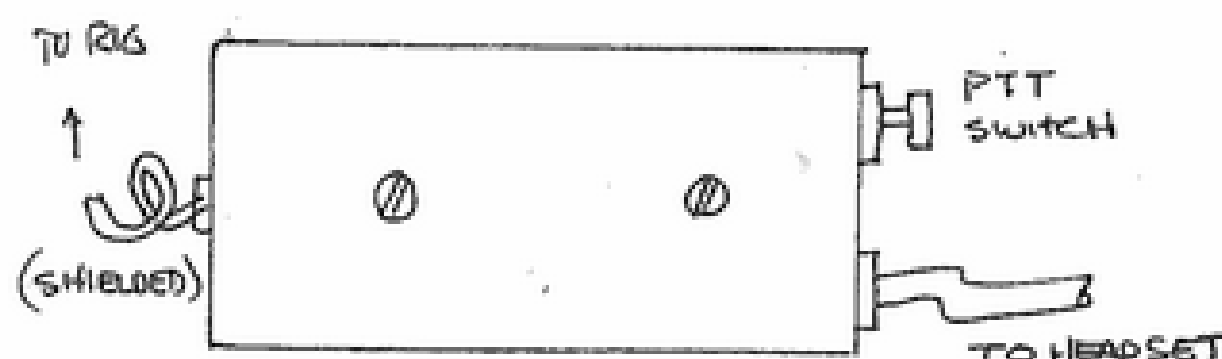


Figure 3 Cable Layout

When the lid is reinstalled, the box looks like figure 3. There is no reason yours has to look like mine though so feel free to be creative. An alligator clip can be glued to one side of the box so it can be attached to a belt or belt loop. The box should be hooked on the opposite side of the body from the radio for RF isolation reasons. I found a nifty way to operate was to lay the radio on the dash of the car and clip the box to a crease in my trousers. This put the PTT switch within easy reach. I used hot glue to attach the clip to the box.

When this particular model of Plantronics headset is used a peculiar effect will be noticed by listeners and the reports one gets are sometimes disconcerting, or at least, interesting. When sound pressure level to the headset microphone is below a certain level, 12 dB attenuation is inserted by the IC in the box. Eight milliseconds after sound level rises, the 12 dB attenuation is 63% switched out. This is pretty fast attack time. The decay however, takes 275 ms after speech stops. This has the effect of cutting background noise by 12 dB after a speech pause. Have someone try to explain that to you sometime on the air!

If someone wants to connect one of these things to another type of rig he might give me a call. There are so many variables it is difficult to cover many of them here. If there is sufficient mike gain in the rig, it may be possible to eliminate the amplifier altogether. If not, it is necessary to supply a current source to the amplifier to simulate the telephone line for which it was designed. Have fun! Joe, K5JB



The annual Christmas dinner-party was held at the Oklahoma City Fire Department Training Center on December 15th. About 50 members, their families and friends attended. The food was outstanding and I believe that everyone had a good time and a fitting prelude to the Christmas and holiday season.

Elsewhere in this issue are the traditional Autopatch letters to Santa. We hope everyone enjoys this year's edition.

We are conducting a membership drive which includes mailing solicitation letters to many area amateur operators. We have a very active organization with much to offer so we hope to attract new members for 1982. If you are reading this column and have not decided about your present or future club affiliation, give OCAPA a try. Our next meeting will be held on January 19th (third Tuesday) at 7:30 in the Oklahoma City Fire Department Training Center on N. Portland (between Reno & 10th St). Everyone is invited to attend. If you have any questions about membership, please contact any of the OCAPA officers listed on page 3 of this publication.

Coming events for OCAPA include the annual "Weather Net" meeting which is held at the studios of Channel 9. You can expect an excellent presentation on severe weather and meteorology at this meeting! Also look for some exciting programs from our program director, Art WIGOM.

We wish everyone a safe, happy and healthy holiday season. See you in 1982!  
73 De ADLS

FOR SALE: Tempo 2001 Linear Amplifier. Desktop amp runs 2 Kw. 2-8874 ceramic tubes. Excellent condition. Call Henry, N5IH 722-3848 \$540

FOR SALE: Icom IC-22S 2 meter FM. Includes synthesized "VIP" switch unit and Drake encoding mike. \$185 Henry, N5IH 722-3848

FOR SALE: Henry 3KA amp with extra set of new 3-500B tubes. This is the "BIG" signal amp. Hypesil XFMR. Excellent condition \$1600 Henry, N5IH 722-3848

Dear Santa: Would you please bring me a little rubber duckie for me to play with when I bathe. Burlie, DUQ.

Dear Santa: Would you fill my stocking with a stupid mike that would filter out all the stupid things I say especially when I call someone stupid. Mikey, ANG.

Dear Santa: I would like a new tummy, for I'm getting tired of pushing this one around. Wendy, EBA.

Dear Santie: Please, please bring me my own repeater so I can give it the golden screwdriver test anytime I want to. Reuby, FKF.

Dear Santa: I would sure like one of those new electronic games where you control those little cars that you try to manipulate your way through Chuck Hole City for I need all the practice I can get. Lola, GKK.

Dear Santa: Would you please bring me a new helmet for my motorcycle riding with a windshield wiper built on the visor. Little Paul, HTL.

Dear Klaus: You old ~~##~~ I don't really believe in you, but I would sure appreciate it if you would bring my ~~##~~ neighbors a new stereo so I can get back on 15 meters. Little Hank, IH.

Dear Santa: I am getting a little hard of hearing, so I would really like a new hearing aid so I can get a lot more good out of the religious programs at night on my radio. Billy, JYT.

Dear Santa: I have looked everywhere for a lock that will keep certain folks out of the repeaters. I would appreciate you bringing me one. Larrie, NYX.

Dear Santa: I would like a new pair of cowboy boots for Christmas, cause I went out and got some stuff on my old ones that I can't kick off. Georgie, S.

Dear Santa: Would you please bring me a study guide so I can pass the test the next time. Larry, NZS.

Dear Santa: Would you please bring us some .82 crystals. Ferrie, URJ and Scottie, PTQ.

Dear Santa Claus: Hi old buddy. I want some elevator shoes, for I get tired of being so short I have to look at other folk's belly buttons. Johnnie, YGM.

Dear Santa: My tower seems to be a little short and I think I need another element on my 40 meter beam. I don't think my neighbors would mind. Chuckie, SW.

Dear Santa: Would you bring me my own personal roster of club members with just my call in it. Kath NDO.

Dear Santa: By golly, you're a pretty nice fellow, by golly. I have a vertical J antenna, but I would like a vertical L one now. Thanks, by golly. Davey, SXJ.

Dear Santa: My back pockets have met on my pants now that I have lost so much weight. Could you please see to it that I get a new pair. Jackie, PKE.

Dear Santa: I like my wife's new car so much that I am asking that you bring her another one so she can drive it. Johnnie, DBH.

Dear Santa: Some mean old man took my guns away from me and I really miss them. Could you please bring me some new ones. Stevie, CTS.

Dear Santa: Thank you so much for my early present of my 280Z. I can't think of much more that I want, but I was wondering if you could secretly bring Georgie a steering wheel for the right side of the van. I get tired of doing all the driving. Miss Vicki, DLM.

Dear Santa: I lost my pipewrench and need a new one. Also, I have been thinking of hanging someone, and I need enough rope to stretch across my street. It needs to be good and strong. Say, how about you and me swapping places some year? Little Reginald NWX.

Dear Santa: I hope you got my other letter. I forgot some things I meant to ask for, so hope you don't mind getting two letters from me. I would like some good country & western albums such as Earnest Tubb, Little Jimmie Dickens, Roy Acuff and any others you think I might like. Chuckie, SW.

Dear Santa: I built a new home out in the country and it is getting expensive buying gas to drive back and forth to work. I need something a little more economical to run, so I would like one of those fancy motorcycles with a side car so Karen and I can drive it to work. Please bring me some goggles too. Don't you think I would look good speeding down Broadway Extension going 70 m.p.h.? Ronnie, M.

Dear Santa: I have just about everything I need so I won't ask for anything for me. I just know my dear OM has been wanting a camel for sometime. We have a lot of room to keep him. 88. Sweet Judith, BJS.

Dear Santa: You know I have every kind of radio that I need, but, boy my XYL needs something to listen to when she takes a shower. Help. Bobbie, CZN.

Dear Santa: I have been such a nice kid. I am very considerate of my friend. I don't need anything, but did want you to know how great a kid I have been and will always be a kid. Eddie, AQY.

Dear Santa: I would like for you to bring me a whole hawg, so I can eat all the ribs I want. Good luck Santa on your trip. Lieby GL.

Dear Santa: I am a closet SSB operator and need a microphone that looks like a keyboard. Also I need a book to show me how to talk into my TR-7. Love and kisses, Chuckie NK

Dear Santa: I really like making announcements on the repeater very much. May I have a repeater that I don't have to share with Buddy? Love, Jenna DAU K5NK

There was no CORA meeting in December due to the busy holiday season. I hope that all members and friends have happy joyous holidays and we can work together to make 1982 the best year yet in our history.

We have heard from several clubs expressing interest in joining CORA. They have received some information from the C & E Editor and myself and we will follow up with these prospective participants in January.

Unfortunately, some of our participating organizations have not been active in CORA in recent months. Because of this inactivity, we will make some adjustments in our roster to reflect true participating clubs. It is only fair to recognize and work with clubs who willingly share in reaching CORA's goals.

Plans for Ham Holiday are progressing well. We should be 80% complete by January and hopefully all basic plans will be complete in time for our February meeting. All participating clubs should make an effort to have your voting representatives at the January and February meetings.

The ARRL National Convention will conflict with the July 25, 26 and 27 dates of Ham Holiday, but we believe that our attendance and success will not be adversely impacted by the "National."

The Choctaw and Edmond Amateur Radio Society have decided to withdraw from CORA. We hope that interested members of these clubs will continue to participate in the association in coming years.

The next CORA meeting will be January 26, 1982, 7:30 p.m. at the Red Cross building in Oklahoma City. Everyone is welcome.

The following was considered, adopted or otherwise disposed of at the November CORA meeting. Christmas and all of its activities dictated that the December CORA meeting be cancelled.

Sentence 4 of ARTICLE 4 was changed to read, "They shall be elected by a majority vote and shall hold office, beginning on the first day of October, for a period of one year."

The following club committees for Ham Holiday were approved:

ARRL BOOTH	Okla Central VHF
PRIZES & DEALERS	Okla City Autopatch
FACILITIES	Aeronautical Center ARC
LADIES	Mid-Oklahoma Repeater
PRE-REGISTRATION	Bicentennial ARC
DOOR REGISTRATION	Altus Area ARA
PROGRAMS	Still open
PUBLICITY	Edmond Radio CLUB
INFORMATION	Still open

The ARRL West Gulf Director has approved and recommended that HH '82 be a STATE ARRL Convention. It conflicts with the National ARRL Convention but they are considering it.

Now about prizes. The Pre-Registration prize will be delivered to the winner if he/she is not there, as usual. The Grand Prize as well as all others: Winner OR his "ticket" must be present. No shipping of prizes.

TICKETS: One price for all, except for children under 12 accompanied by an adult. This includes the ladies programs, flea market, etc. In other words everything and everyone.

FRIDAY NIGHT: One area will be open for commercial dealers and flea market people to set up. Security police will be on hand. The Registration desk will be open. Eyeballing and programs which can be held in the registration area are planned.

BADGES: Badges with a serial number and a business card size duplicate number will be used instead of "tickets". A badge will be required for all activities and then be →

The GPARC had a great time at our annual Christmas party on December 12 at K-Bob's in Woodward. We had 55 members and guests present with 33 being Amateurs.

There was an hour of visiting before dinner. It was exciting to get to meet people we have been visiting with on the radio! Dinner started at 7:30 followed by the business meeting. The minutes of the November were read and approved. The treasurer's report was given and accepted. Everyone then introduced themselves.

A lovely Streaker and Tracker Award and an Emergency Kit for the next transmitter hunt was presented to N5CCV Gerald by KØCIO Larry. It was designed and constructed by KAØKEK Nolan with a beautiful roasted ear of corn heart attached to a hand engraved plaque and attached by brass rod and plate. N5CCV being the good sport he is took the kidding in good spirit and said it would certainly be a conversation piece for years to come!

Bill Wyatt reported on FCC problems in regard to not being available for testing. If you are going to test call before you go.

Officers were elected as follows: Pres. Gerald N5CCV, V. Pres. Ron WBØPGD, Sec./C.O.R.A. Officer Carla WBØQGW, Treas. Gerry KA5KAG, Activities Manager Larry KØCIO. Bill Wyatt was nominated and elected the official club photographer with camera expenses to be paid by the club.

It has been called to my attention that our new activities manager is already trying to control the activities!!?

K50J Quido brought up the need for the club history to be compiled. WA5OUV C.C. said that WA5PSN Leonard Holler sent his regrets.

Last years officers were given a hardy round of applause for their hard work.

73's WBØQGW

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deposited in a hopper for the drawings, then to be used again next year.

C & E: In the October CORA meeting a requirement for each club to sell or buy a \$30 ad per year was instituted. After much heated discussion that requirement was deleted. That \$30 requirement and a stated disapproval of the legibility of C&E (I don't have the letter available as I type this.) resulted in the Choctaw Club submitting their resignation from CORA. Regret was expressed by everyone for the misunderstanding that resulted in their action and best wishes for their future success and improvement was extended.

Everyone, Directors and interested persons, are reminded that CORA meets the fourth Tuesday of each month. It is noted on the calendar on the back page.

The problem of legibility in the C&E is addressed in full on another page.

If there was anything else it happened when I made my necessary trip down the hall.

Joe, WA5ZNF

# The South Canadian Amateur Radio Society

## SCARS BUSINESS.....

There was just slightly more SCARS Business this month than last month. A special meeting was called on Dec. 5th for election of 1982 club officers. The slate elected was:

President, Jack KU5B  
V-P, Bill K5KDR  
Sec, Jess AF5X  
Treas, Charlie WB5UUX

Reporter, yours truly WA5RPP was elected to continue in this job.  
FOR SALE: TS-820S, VFO-820, SP-820, mint condition. Factory cartons, and manuals. only \$500 !  
KU5B 329-1311

## SCARS 1982.....

Important announcement follows: The next regular meeting of SCARS will be Saturday, Jan. 9, 1982. According to the new president, Jack, KU5B, there will be a brief business meeting followed by what promises to be an excellent program on Amateur Television. Amateur Television or ATV as it is called is a real frontier which is open to amateurs of any class from Technician on up. Some room for real experimentation is available for those of us who may be tired of the "buy it, take it home, plug it in, & talk" syndrome that prevails in the hobby. We have a very knowledgeable speaker who has promised to come down from Oklahoma City to give us a program on the entry level basics of the ATV activities of our hobby.

In a brief chat with the new president, he has promised that we will have a program at every meeting this year. Also, as previously mentioned, KU5B said that the business meetings will be kept short this year, and I think that we will all appreciate that. In addition, Jack also said that the January meeting, while short (the business portion) will be very important because several decisions for plans for 1982 will be discussed. So, BE THERE!!!!

Just one more short announcement....those persons who have not paid their dues for this year are reminded to get them to WB5UUX as soon as possible. Dues for the year are due annually on Jan. 1st and are \$6.00 club dues and \$15.00 for a total of \$21.00. Also, remember that this total includes a subscription to C & E, and a new postal form for C&E needs to be filled out at the time the dues are paid. THAT IS ALL.....

## CHRISTMAS PARTY.....

Well, the long awaited, social event of the season was held Friday nite, Dec 11th in the elegant President's Dining Room at the OCCE in Norman. Despite the failure, at the last minute, of the guest speaker to appear, a good time was had by all.

As the pre-dinner socializing began, we were treated to a simulated cold snap (courtesy of the marvelous heat/air system with which the facility is equipped) that brought to mind scenes of a barren polar ice cap. Then, just as some of us were vividly imagining the wonders of a DXpedition to Antarctica's frozen wastes, one of the versatile, combination waiter/refrigeration engineers on the staff of the Commons Restaurant reversed the process and within minutes we were all magically transported to DX operations from a tent on the vast expanse of the arid Sahara. After we had had time to savor mind pictures of a romantic Old Testament camel caravan and our minds were just beginning to conjure up visions of a desert sandstorm, the entire room was instantaneously returned to somewhere

within the temperature range in which human beings (and most mammals) are believed to thrive. Pretty good thing for me that I had remembered to use my Ban roll-on.

After the conversational ice (not to be confused with polar ice cap type ice) had been broken by the group, we sat down to a very good meal. Not being a gourmet, I have no idea how the Chicken Kiev rated with respect to that which is available on the world-wide dinner circuit, but I do know that the entree that we were served had never seen the inside of a TV dinner carton. While on the subject, a large word of thanks goes to W5UZD and K5KDR for taking care of all of the arrangements.

After dinner, the speculation that most of us had spoken with hushed voices during dinner was confirmed. Our long-awaited after dinner speaker, the very unique and highly gifted Mr. Q.R. Zedd had failed to show. Pandemonium was beginning to break out within the dining room when KU5B, who seems to be on very close terms with the venerated guru of DXers, stood to make the sad announcement. With all of our prior planning, we had somehow overlooked the fact that our Christmas festivities coincided with the opening hours of the 10 Meter contest. So that was it. A spark of understanding began to show on some of the faces in the room. The announcement had certainly cleared up some of the mystery surrounding the converted Greyhound bus that we saw parked beside the door as we had entered the building. Some of us began to remember remarking to each other concerning the mysterious appearance of the vehicle sporting a 300 foot portable tower with stacked 32 element 10 Meter beams on top. So that was the reason that the lights blinked off & on as if modulated by SSB voice peaks. It was becoming clear to all of those in attendance. The unusually modest and totally unselfish Mr. Q.R. Zedd had sacrificed a pleasant evening and a chance to impart words of DX wisdom to his devoted disciples. After all we reasoned, isn't it just like the famed one to give his all in our behalf? Without Mr. Q.R. Zedd in the contest, the 1st place spot would be up for grabs and all of us underlings would be burdened with the task of worrying and sweating out the months until the contest results are announced, but with The Great One in the contest, there can be no doubt that when the results are announced the name of the Magnificent Q.R. Zedd will be in the #1 spot in both the SSB and CW portion of the contest. I ask you, isn't that just like him?

When we were sufficiently recovered from the revelation of The Most Revered One's selfless act, we moved, somewhat misty-eyed, to the drawing for the ladies' door prize. Mrs Anita Townsend, wife of H.O. Townsend, WA5MLT, was the winner of a pen and pencil set. This seemed rather appropriate (although not planned) since H.O. was at that moment sacrificing by staying home to work the 10 Meter event.

After a few further prizes were awarded, KC5SX, Henry got up to say his farewells as he and his wife will soon be moving to VK5 land. We will miss Henry & Elizabeth here in the Norman Ham Community.

As the evening came to a close, we began to say our good-byes as the announcement was made that while the contest was slightly less than 3 hours old, Mr. Q.R. Zedd had just passed the 3.7 Million Megapoint mark. He's an inspiration to us all.

WA5RPP



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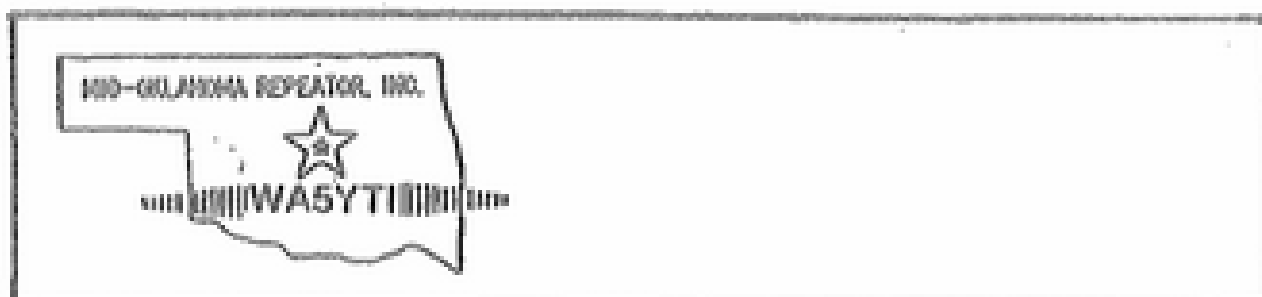
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The annual Christmas party for MORI was a huge success. Approximately 60 members and guests attended the festivities and dinner at Dotson's Cafeteria. Dotson's has excellent facilities and their service was terrific.

What an opportunity! How many opportunities will I get in my life to say anything I like and have it published? Not many, I would guess. This could be fun!

My nomination and election as president of MOTI came as quite a surprise, considering the short time I have been a ham and member of MORI. However, I am delighted and intend to follow the mandates of the members and board of directors to the best of my ability. I have just one problem. The Board of Directors seem to be avoiding me everytime I mention my salary. Don't corporate presidents earn over \$100,000.???

Another poing... As I understand it, MORI is dedicated to Public Service. Isn't that what our utilities companys do? Are we required to deal with Jan Cartwright regarding membership dues and expenditures?

This issue of C & #E should be delivered around the end of December as I understand it. The Officers & Directors of MORI wish you and yours a Merry Christmas, Happy New Year and or Happy Holidays, whichever the case may be.

John Clement  
1982 MORI President  
KC5HD CL

Oh, I also want to thank Fred Taylor, KA5CXW and Susie Atkinson, KA5FED for their fine work they have done for MORI as President and Secretary. They have also been a tremendous help in getting me oriented.

Hi Everyone,

It is me once again for another year or if I get replaced sooner as your Editor. John has asked if I would take on the job once again, and I agreed, but I don't want to be selfish about it -- if anyone wants the job, please let one of us know, preferably me, and I will turn my pen (not my typewriter) over to you.

Anyway, I don't have that much to say this time, but I hope that in 1982 we all work together, and really make some good publications. Same as before, my phone number at home is 842-0077 or address is 3113 Wilshire Terrace, Oklahoma City, Okla. 73116  
Personal Note: I am now working at the Red Cross as Secretary for Safety Services, and on the night of publication of C&E, I stay late, so call me after 4:30 (on the direct line to my office - 232-7124) if I can help anyway.

Happy Holidays everyone! Hope you have a real good year in 1982. Thanks for 1981, you are really great bunch of people.


73'

Susie KA5FED

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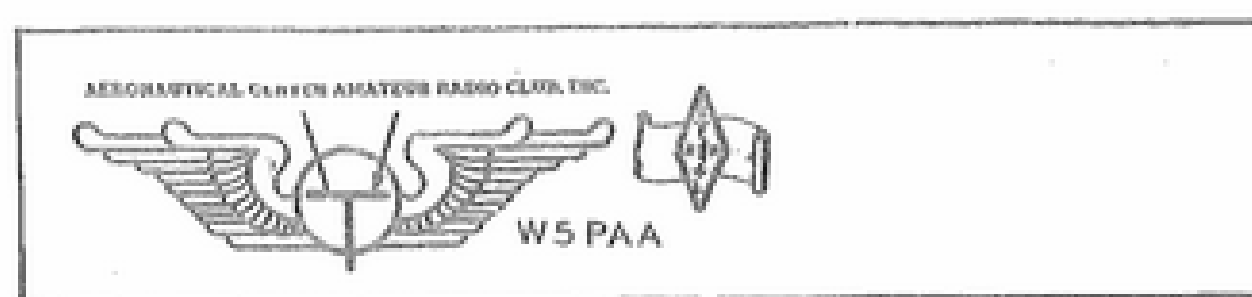


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#### RANDOM WORDS FROM THE PRESIDENT:

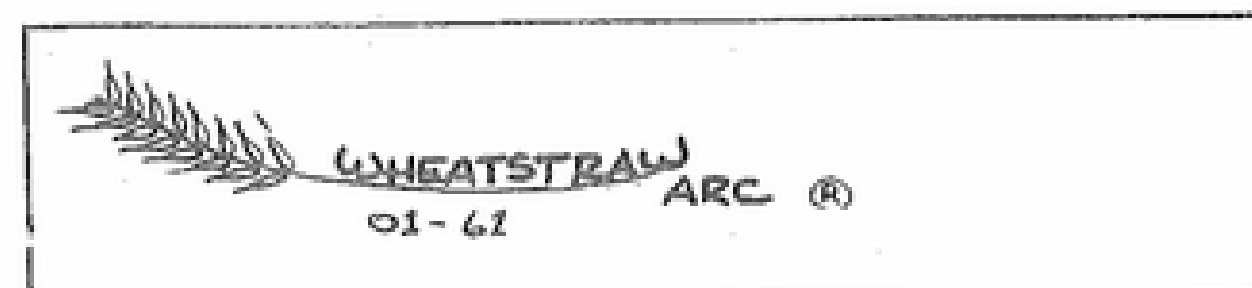
ACARC HAD THEIR CHRISTMAS DINNER ON DECEMBER THE FOURTH, AND THEIR WERE 61 MEMBERS AND GUEST PRESENT WITH SIX HARMONICS THERE TOO. IT WAS A GREAT DINNER AND THE SOCIALIZING WAS SUPER.. I WOULD LIKE TO THANK EVERYONE FOR COMING OUT AND MAKING OUR DINNER A GREAT SUCESS.

NEXT MONTHS MEETING WILL BE ON JANUARY THE 8 TH BACK AT THE AERONAUTICAL CENTER. THIS IS A VERY IMPORTANT MEETING SO BE SURE YOU ARE THERE, SO YOU DON'T MISS OUT..

I WOULD LIKE TO THANK ALL OF THE OFFICERS OF ACARC FOR THEIR HELP THIS PAST YEAR.

I WOULD LIKE TO WISH ALL OF YOU A VERY \*\*\*\*\* MERRY CHRISTMAS \*\*\*\*\* AND \*\* HAPPY NEW YEAR.

73, BOB, WA5CJG



We didn't all jump in our cars and head for Watonga after church for our annual Christmas dinner this year, but thanks to Jim K5VRL I think we found a good substitute. We have appreciated Ralph WA5PFK and the Country Kitchen in Watonga the past few years, but they changed their style of operation, and I think Jim did an excellent job in finding WYATT S Cafeteria for this year.

There were a few absent faces, but there were many more that were present, 38 members and guests to be exact. I hate to mention our visitors because I might leave someone out that I didn't see. But I did see Ralph Wilder's brother and his wife and Bill Riddles brought his mother. We were real pleased to have them. Of course having our dinner in OKC we will have to put up with some of the big City Riff Raff. We thank Charlie Green WA5JGU Bob Ashby W5HXL and their wives for attending and hope they had an enjoyable afternoon with us.

After a short business meeting that also included one very good and concise report of the previous CORA meeting by Ted WD5JNT we got down to the real business at hand, electing a new crew of gallant leaders for the new year.

President Dick Ruhl WA5GLD Kingfisher  
Vice President Tom Johnson KA5FUU El Reno  
Sec/treas Ralph Wilder WA5PFK Watonga  
Editor Ted Vanlaningham WD5JNT El Reno

The best of the Christmas Season was saved for last. We collected our annual donation from our members to be given to the Crippled Childrens Hospital in Oklahoma City.

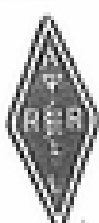
This has been an annual thing for us the past 4 or 5 years. I think it would be nice for the other clubs to do the same thing for some worthy group like this one. Out of a membership of 40 people we donated \$87.00. I would like to challenge the other CORA Clubs to match this for next year.

Don't forget our first meeting of the new year January 10 in El Reno. The exact time will be announced on the Wednesday evening NET controlled by the great K5LLX Ray of Kingfisher

With the exciting New Year upon us, let's not forget the old one. It was not so bad. We gained a grandson, 2 new cars, and 1 new retiree.

TED WD5JNT





LEONARD HOLLAR, WA5FSN  
SECTION COMMUNICATIONS MANAGER

Belated Seasons Greetings to all of you from my wife and myself.

Several months ago, the O.A.N. (Slow Speed Net) that met at 6:30 P.M. local on 3705 Khz died from a lack of participation. I am told that several operators have been meeting on that frequency and passing traffic destined to be relayed on O.L.Z. at 7:00 P.M. This is being done on an informal basis at this time.

With the advent of quite a few new novices from the classes in Enid, Oklahoma City and elsewhere. There should be some one willing to reorganize the O.A.N. and get it going again. Surely, somewhere here in Okla. We can find someone to pick up this project and carry on with it. It is a well known fact that the best operators on the air are the trained operators. and the place for these new Novices to get that training is on an organized net.

There many novices out there who need an 'Elmer'. Helping with this net project would be a good way to do that.

#### Oklahoma Nets for November 1981

Net	Sessions	QNI	QTC	WX
O.P.E.N.	5	269	9	
O.P.O.N.	20	287	57	
S.T.N.	25	344	98	
O.T.N.	25	427	318	287
O.L.Z.	30	199	65	
Q.C.W.A.	5	188	8	
N.W.O.S.N.	13	98	5	

The Net reports look a lot better, with O.P.O.N. looking the best, in the way of improvements.

FLASH:: KA5KPJ just called me and reported that he would kick off O.A.N. Monday night Dec. 14th. So, now it is up to you to help now.

*Leonard Hollar WA5FSN, Sec. M. OKIA.*

There was no OK-DX Association meeting in December, but we will resume our foolishness on January 11, 1982. The "meeting" gets started anytime after 6:00 p.m. at the Hofbrau Waterhole Restaurant, 3333 N.W. Expressway. I have explained previously that OK-DX is not a club. There are no dues, no officers, no minutes and best of all - no "fights" at the meetings. We just get together - compare notes on what we've heard and worked - and tell lots of lies! (We've invited Q.R. Zedd, but unfortunately Q. R. was in Albania.....or was it Spratley? No, I'm sure it was Albania!)

Anyway, we hope to see you at the Waterhole on January 11.

Heard on the bands...

YILAS (Iraq) has been showing on 28.760 with his QSL manager DK2OC. They take several lists between 1200-1400 UTC. Propagation is best after 1330 UTC.

X85A and X89A will not be accepted for DXCC credit - ever. Cards are returned "unauthorized operation."

G3JKI/5A (Libya) still has not been accepted for DXCC credit apparently due to incomplete documentation. There is still a possibility but things look bleak.


BY1A (China) Look for the dam to open on Chinese operation in 1982. Within a year, BY should be as easy as working Tokyo on 15 meters!

BV2A (Taiwan) can now operate on 15 meters on fixed frequencies which makes the "hunting" easier. Listen on 21.030, 21.100 and 21.310 for Tim Chen.

VK0AN (Macquarie Isl) has been heard on the 14.220 net - late, late at night folks, and no guarantee you'll get on the list. Also listen around 1200-1400 UTC on 14.331 for VK6YL and VK6HD, two YL's who run a DX "warm-up" session for the International YL SSB System which starts up on this frequency at 1400 UTC. When propagation is good, stateside can easily work VK0AN, VK9XW, H44SH, KX6OR, KC6RM and others. This is particularly helpful - if you cannot operate below 14.275.

We wish you all a happy holiday season and see you in '82. Yes, Elizabeth, there is life after DX! 73 De ADLS.

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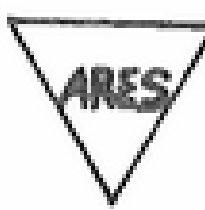




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10 	11 	12 	13	14 	15 	16
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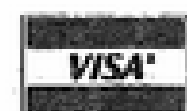
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