CENTRAL OKLAHOMA RADIO AMATEURS
COLLECTOR AND EMITTER

VOLUME 15
MAY 1989
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50¢

SECOND CLASS MAIL
Postmaster, see page 2

SYDNEY'S STRAW RADIO CLUB

OIDAR OKLAHOMA INDEPENDENT AMATEUR RADIO

March 17, 1989 K5RLM James A. Stults became a silent key. James was born July 2, 1911 at Maryville Missouri. Jamie, as most of his friends called him, lived most of his life in Calumet. OK. Jamie and his wife Leona raised two daughters, Virginia Lee and Mary ruth. He worked several years as a parts man for El Reno Parts in El Reno.

In 1959 Jamie went to (Bus) Blum's school and studied amateur radio. Finishing school he passed and received his Technician Amateur License. He was a charter member and helped organize the Wheatstraw Amateur Radio Club in Calumet OK. Being the trustee he kept all the club motors, bus and power supply up in shape until he had a stroke. He served about 28 years.

After leaving the parts business Jamie ran an auto repair shop. Later while working at the lumber yard he had several trades, running a ditcher, laying water lines, sewer lines, mixing and hauling cement. Jamie also worked for a hardware in Geary.

Leona preceded Jamie in death, in later years with the stroke he had to spend his last years in a rest home in El Reno. Jamie was kind, helpful to all, living a life that every one who knew him loved him.

The club set the monthly meeting up one week so we could have it on the way to the GPARC Eyeball QSO at Mooreland, April 2. The caravan had 24 on the way up. Other members were there. There was not much business during the meeting. The next meeting will be held May 21,

CONTINUED NEXT PAGE

These notes are from the 11 April Meeting.

The 1989 election was held and the results are:

President:	Vernon Treiber, Jr. N5ANV
Vice Pres.:	Truman Steiner WB5MRE
Secretary:	Glenn Coker N5NFC
Treasurer:	Jim DelTorto KGFLL

The Novice classes which are a joint effort of this and the Kay County club have restarted. The report is that not everything was forgotten during the spring break. Keep up the good work, instructors and students alike!

In conjunction with this effort, a BYOF (food) picnic is planned for the 29th of April to honor the new Novices. Picnic Shelter 1 at Ponca Lake has been rented for this event . All the area HAMS are encouraged to attend this to welcome the new HAMs.

The dues were collected at this meeting. Jim DelTorto said that dues may be mailed to him at 239 Coolidge, P.C. 74601. The dues are $15.00 for full membership and $5.00 for associate membership.

There was some discussion about linking with MORI repeaters in OKC. Glenn Bishop, WN5J, told me that the 444.1 MHz, 224.1 MHz, and 146.94 MHz repeaters in OKC are continuously linked. Work in progress will link the American Airlines Club's repeater in Tulsa, one of the Enid repeaters, and a Chickasha repeater with the MORI repeaters on a more or less continuous basis. There is a possibility that a Lawton repeater and the OIDAR repeater will join the effort. It is probable that the users will be able to remotely turn the link on and off. A goal is for a user to be able to turn his local link on/off as well as a linked repeater beyond MORI. For instance: if I want to call my son in Lawton and the Ponca and Lawton links with MORI are off, I would be able to turn both links on with my handy talkie's touch tone pad. This sounds like a very powerful capability! Mike McLanihan, KA5TDA, of the MORI club will probably come to the next OIDAR meeting to discuss, and possibly demonstrate the proposed linking. Of course there will be some equipment to get together and some work to be done, but that's never slowed us down before!

Field Day '89 preparations have been started. Steve Huston, KB5DOR, is the primary organizer again this year. This will be a joint effort with the Kay County club again. Steve got the Kaw Dam Overlook again as the site. That's a really great Field Day site, high on a hill, where you can catch the breeze, if there is one at all. There's plenty of nice grass, and a GREAT view. I hear Steve will provide a funeral tent for shelter again. It was ideal last year! My family and I even pitched our tents there last year and made a nice week-end camp out of it! All hams are welcome to come out and work a few this year with us. Stay a few minutes or the whole time, as you wish!

The severe WX nets in this area will be conducted by the Kay County club, on the 146.97 repeater. If the linking gets completed, the NWS storm watch net may be echoed in this area on the 145.31 machine.

The 1989 Ponca City Grand Fri was discussed. Mike Morriss, N5JJR, is the contact for this effort. This will be another joint effort, with support primarily coming from the two area clubs. Last year we also had some great help from some out of town HAMS. Shirts were provided so the HAMS who helped with Spectator Safety last year could be easily identified as official race workers. Shifts were 1/2 day long and HAMS assisted with spectator safety in the pit area and spectator areas for both days of the races. I expect the

CONTINUED NEXT PAGE

HAM HOLIDAY & ARRL WEST GULF CONVENTION - JULY 28 - 29 - 30

QSL QSL QSL QSL QSL QSL

HELP YOUR QSL BUREAU

Some of the unsung heroes of hamdom are the ARRL QSL Bureau managers and assistants. These are the guys who pick up all your foreign QSL cards, sort and stuff them into your stamped envelopes and mail them to you once (and sometimes twice) a month. It is a labor of love and time with no pecuniary compensation.

I used to wonder who did this when the 5th District QSL Bureau was located in Sherman, TX. After I retired in '79, I got a phone call from Joe Schilling, WB5YKD, the current 5th District QSL Bureau manager. I was surprised to find that it is now in OKC and Joe is a nearby neighbor! Joe asked if I would like to assist with the "H" letter (all calls with "H" following the "5"). I agreed and have been running my QSL post office for several years now about once a month. It is fun and takes about one day a month of my time.

All foreign QSL's flow into ARRL Hq. in Newington, CT where they are sorted by call district and mailed to the QSL district mgrs. The managers again sort them by the letter following the district number and pass them on to the assistants assigned to the specific letters. At present, Joe has only 13 letters assigned to assistants (half the alphabet) and could use 13 more good hams to handle the rest. Three have recently become silent keys: Howard Baker, W5AS; Harold Bray, W5ZKJ and Jess Strawn, W5ZWX. Howard's widow Hortense is currently handling four letters! She is to be commended for such Herculean effort. Joe has also lost 2 assistants through moving, 2 through retirement and moving to sunnier climes and 3 through incapability of accurate and consistent performance.

OKC hams are preferred for convenience of delivery but out-of-towners can be used if they desire this good work. The cards would be mailed to them, e.g., Jess Strawn, W5ZWX, the silent key, was located in Tulsa.

If Joe does not get help soon, the district hq. may be moved to another town or state. This would be bad in that many cards are lost in the postal system when this happens. Sherman, TX is still receiving mail years after the QSL Bureau was changed to OKC.

When using the system and ordering envelopes (currently 5 for $2 with 25 cent stamps on them) you should always send mailing labels with your address to go on the envelopes. This saves Joe a lot of work preparing labels.

If you are willing to help this good service for your fellow hams, contact Joe Schilling by phone at 681-5884 or in person at 1409 SW 66 or you can call me, Charles Maupin, W5HQM, at 685-6768 or in person at 2124 SW 68. Your help would be truly appreciated by all hams served by our QSL bureau.

OIDAR FIELD DAY

organization will be similar this year.

Steve Scott, KA5SJK, and myself, along with our families attended the Sports Car Club of America meeting in OKC after the races last year and the Ponca area HAMS were given a round of applause and a lot of verbal praise for our work at the 1988 Grand Prix. Any HAM wishing to help this year can write to me at R.R. 1 Box 37, Ponca City, OK 74601. The race dates are July 1st and 2nd.

Last December, Vernon Treiber, Sr., N5ANV's father, had a medical emergency and was taken to Oklahoma City for emergency surgery. He had been a victim of the polio epidemic many years ago. As a result of complications, common to polio victims, Vernon was unable to be taken off the respirator after his surgery. Vernon's limbs had been of limited use since his bout with polio, and this, in conjunction with the respirator and other medical equipment, left Vernon with no way to speak or write. Vernon Sr. had expressed an intent to get his HAM license many times in the past, as he observed his son's HAM activities. For several days during December and January, the two men communicated by holding hands and squeezing code to each other. Vernon Sr. died on the 13th of January this year. I submit Vernon Treiber, Sr. as an Honorary Silent Key.

73
Mike Morriss
N5JJR

WHEATSTRAW GLEANINGS

due to the second Sunday being Mother's Day. W5MGZ volunteered to call the net for the next two weeks. I don't know what happened but N5MP David called the net for the first time. Dave did a good job with 32 check ins. The record check ins for the Wheatstraw is 33.

The next meeting will be held in the Red Rock Canyon. Nothing was said about when we eat dinner, but we have always eaten at 1:30. We have a covered dish dinner and bring your own settings.

K5GBN Johnny and WA5PFK Ralph volunteered to help call the net for the rest of the month. Every one seemed to have a good time at Mooreland. I didn't buy much. AB5Z carried out a new radio. I did get myself a 1989 call book, and if anyone needs an address, let me know.

Saturday the repeater had to be turned off since there was a signal keeping it keyed up all of the time. If any one wants to know what the signal was ask Joe WA5FLT, he can tell you.

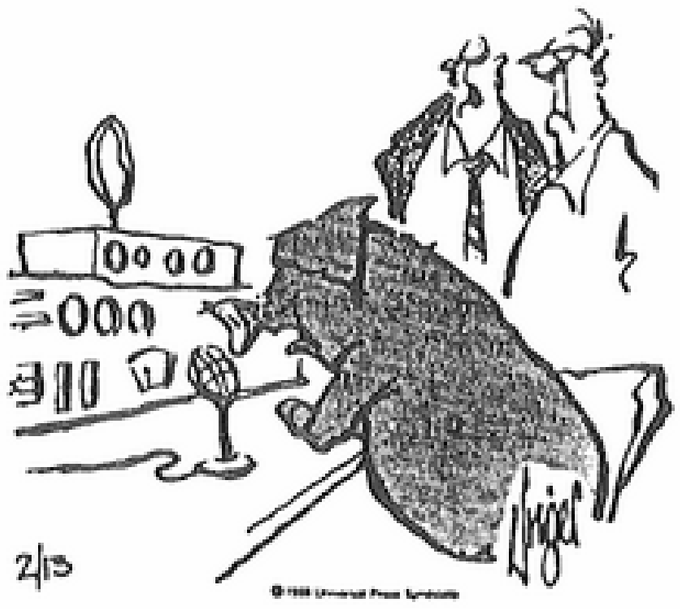
I was about to forget, congratulations to N5MPG for his grade Saturday April 1 at Mooreland.

73, Ralph

Impedance (resistance and reactance in parallel):

$$Z = \frac{RX}{\sqrt{R^2 + X^2}}$$

HERMAN By Unger



"You never seen a ham operator before?"

1 AERONAUTICAL CENTER ARC

MEETS: FIRST THURSDAY, FLIGHT STANDARDS BUILDING. FAA, SOUTH MACARTHUR 7:30 PM

PR	TED ANDERSON, NY5W	685-4016
SE	DOUG TEACHMAN, WD0XIA	392-5458
AsPR	HAROLD TODD, WA5VAG	685-3685
AsVP	CHARLIE GREENE, WA5JGU	943-5631
EDITOR:	BILL OLIVER & LUKE ELLIS	329-6333

2 CENTRAL OKLAHOMA VHF

MEETS: 11:00AM THIRD SATURDAY. THE BRICKS RESTAURANT, 3100 N PORTLAND, OKC

PR	JACK MUSE, WB5ZKZ	691-1152
VP	FRED BOARDMAN, N5NL	427-2505
SE	JOE BUSWELL, K5JB	732-0676
TR	ELLARD FOSTER, N5KE	789-6702
EDITOR:	JOE BUSWELL, K5JB	732-0676

18 GREAT PLAINS ARC

MEETS: 2:15 PM FIRST SUNDAY
WOODWARD PUBLIC WORKS BLDG.

PR	MINDLE HATCHETT, WA5PLM(FT SUPPLY)	766-3561
VP	BOB BAYLESS, WB0GAX	NONE
SE	ROD FORD, WB5OVT(6AGE)	923-7683
TR	FREIDA PATTERSON, N5EOX(WDWD)	256-2111
EDITOR:	LEON CARLISLE, KB5CZT	

4 OK CITY AUTOPATCH

MEETS: 7:30PM, THIRD TUESDAY
SALVATION ARMY. NW 50 & PENN

PR	ROBERT SHAW, WA5BQX	341-4763
VP	DENNIS PATTERSON, WD5CSM	495-0769
SE	LEONARD HANSTEIN, N5MEL	789-7201
TR	LARRY DAVIS, KF5JN	722-4564
EDITOR:	CHUCK WILHITE, K5NK	721-4926

5 OKLA UNIVERSITY ARC

MEETS: 7:30PM SECOND TUESDAY (SEP-MAY)
119 WILSON CENTER, 1334 S JENKINS

PR	FRANK DONALDSON, N5IQJ	329-4172
VP	JOHN MUSTENBERG, KE5N	325-2382
S/T	JIM GREENSHIELDS, WD5HPU	321-9981

6 ALTUS ASSOCIATION

MEETS: 7:30PM, SECOND THURSDAY, NORTH MAIN FIRE STSTION (CD) ALTUS

PR	FRANK FERITTA, AA5IT	482-1398
VP	NONE	
S/T	MIKE SCHENKEL, W5VIU	482-1797
EDITOR:	MIKE SCHENKEL, W5VIU	482-1797

7 BICENTENNIAL(76er) ARC

MEETS: 8:00PM SECOND TUESDAY
OKLA CITY COMMUNITY COLLEGE, ROOM 2N5

PR	DENNIS MUSSER, KA5GTM	524-4760
VP	BILL SKIPPER, KB5BS	392-4612
S/T	JERRY SPROUL, N5AUH	354-2061
EDITOR:	CHRIS EVERETT, KB5GGY	364-6794

9 WHEATSTRAW ARC

MEETS: 2:30PM SECOND SUNDAY. LOCATION VARIES. SEE CLUB SECTION FOR DETAILS.

PR	PERRY JONES, W5MGZ	(Wilford)	772-6063
VP	GEORGE MASCHINO, K5GGL	(OKARCHE)	263-7614
S/T	JOE GARLAND, WA5FLT	(CALUMET)	893-2660
EDITOR:	RALPH WILDER, WA5PFK(WATONGA)		623-5421

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19 OKLA INDEPENDENT ARC

MEETS: 7:00PM SECOND TUESDAY
SOUTHWESTERN BELL OFFICES PONCA CITY

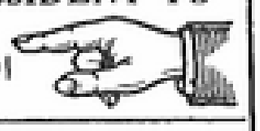
PR	VERNON TREIBER, Jr. N5ANV	767-6260
VP	TRUMAN STEINER, NB5MRE	
SE	GLENN COKER, N5NFC	
TR	JIM DEL TORTO, K5FLL	762-1221
EDITOR:	MIKE MORRISS, N5JJR	765-6260

11 EDMOND AR SOCIETY

MEETS: ODD MONTHS, 3RD SUNDAY, 2:00PM EDMOND EOC. DINNER, EVEN MONTHS, 3RD FRIDAY

PR	HAROLD WELLS, WA5IKX	623-5191
VP	MARTIN McGEE, N5LIG	947-4968
SE	DANN ROWELL, N5KMQ	
TR	GLORIA QUINN, KB5BGN	
EDITOR:		

IF THERE'S ANYTHING WRONG WITH YOUR CLUB LISTING, CONTACT YOUR PRESIDENT TO GET IT CORRECTED!



13 KAY COUNTY ARC

MEETS: 7:00 PM, THIRD THURSDAY, SEP-MAY, PIONEER VO-TECH, PONCA CITY OK

PR	MIKE MORGAN, N5LPZ	765-9539
VP	STEVE HUSTON, KB5DOR	762-4726
S/T	HARRY BEATIE, WD5DPR	765-3862
EDITOR:	DAVE LAAND, KD5FX	762-8616

14 CIMMARON ARS

MEETS: 7:39 PM SECOND TUESDAY
WX5Y PLAYHOUSE, 827 S 13, FAIRVIEW

PR	JACK KELLY, N5LBN	(405) 227-4515
VP	RAY BARNES, AB5Z	(405) 274-3334
SE	DENNIS PAINTON, WK5V	(405) 764-3599
TR	NADINE PAINTON, N5FMH	(405) 764-3599
EDITOR:	JACK DAY, NN5Z	(405) 227-3462

15 SOUTH CANADIAN ARS

MEETS: 9:30AM SECOND SATURDAY, RED CROSS BLDG NORTH OU CAMPUS. NORMAN

PR	ANDI WOLF, WU5N	799-5150
VP	DORINDA SKAGGS, N5IVA	799-5363
SE	KEN BROWN, N5KUK	
TR	MONTE BATEMAN, WB5RIX	329-7485
EDITOR:	KEN BROWN, N5KUK	NONE

16 EDMOND AR CLUB

MEETS: 7:00PM SECOND MONDAY. SEE CLUB SECTION FOR LOCATION AND TYPE

PR	MARK NORTHCUTT, WD5DYI	755-4672
VP	WENDELL COCHRAN, WB5ISO	943-4308
S/T	KAY NORTHCUTT, WD5DYJ	755-4672
TRUSTEE:	DENNIS ORCUT, WB5ISN	340-0034

CENTRAL OKLA RADIO AMATEURS

MEETS: 7:00PM FOURTH TUESDAY. RED CROSS BLDG. 10 & HUDSON OKLA CITY (BACK DOOR)

PR	FRANK IASSONE, AR5bi	341-4945
VP	DORINDA SKAGGS, N5IUA	799-5363
SE	MARSHALL MADDOX, WU5P	360-3205
TR	MARK KLEINE, N5HZR	329-4285

NOVICE ENHANCEMENT?????

nor assistance. We sat fat, dumb, and happy on two meters, now secure with the knowledge that droves of newcomers to our hobby would heavily populate little-used spectrum and save it for us from seizure by the FCC for other uses. Should we be surprised that novices would want to join the rest of amateur radio and enjoy all the neat stuff on the principal VHF band? I don't know of too many novices who want to talk to nobody but other novices. I do not wonder at all that the incentive to upgrade to a Technician Class license is so great. Couple this with the relative ease which was provided for upgrade. This is the reason so many novices have upgraded at the next available VE exam session after they got their licenses in the mail.

I would not even think of proposing we make the upgrade more difficult, but I would propose we do something about enhancing the Novice Enhancement ourselves. If we, the existing amateur community, really want the Novice Class license to attract new amateurs, we must make the privileges already granted more attractive by creating more 220 repeaters open for use and by establishing a significant network of BBSs, digipeaters and nodes on the 1.25 meter band. What can we do for 23 cm? I'm open to suggestions on that one, but a start is technical articles written at the novice level explaining how to enter the realm of upper UHF and microwave communications. Surely there must be some relatively simple gear that can be built for this band.

In conclusion, I submit that Novice Enhancement has not failed us. We have failed Novice Enhancement and we have failed it miserably.

73 - John, KD7XG @ KD7XG

Epilogue: To pre-empt those who might quickly cast a brick-bat in my direction, I do know that some open 220 machines exist in So Cal - perhaps more than on 450. I also know that several packet BBSs (mine included) have open user ports in the novice sub-band of 220 and that a working network of nodes exists. This is NOT the case with most of the rest of the country.

Via WB5FWE Gateway and K2GKK

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VHF Club
NEWS

WSLOW
The Elmer Geckler Memorial Station

April VHF Club Meeting

Meeting was called to order by President Jack, WB5ZKZ, at 12:11 p.m. at the Homestead Country Kitchen with 20 members and guests present. Treasurer Ellard, W5KE, and his sweetie Garnett, were away, celebrating their 50th wedding anniversary with a reception at Applewoods. Many congratulations from the members of the club, Ellard and Garnett!

Motion was passed that the club run a flea market table at Ham Holiday. It will be used to dispose of some of the club's surplus property and promote the club. Charlie, WA5JGU, and others will prepare video tapes of club activities and put together a video program for showing at Ham Holiday.

Mary, WB5WPB, reported that her husband, Sidney, K5MKW, had some serious health problems develop on Easter Sunday. She reported that he is recovering and would have a period of rehabilitation. The club members express their concern and hope Sid has a speedy recovery.

Meeting adjourned at 12:24 p.m. so Charlie, WA5JGU, could show a video tape of Bryce, Zion and North rim of the Grand Canyons and their National Parks. He claimed that he produced them, but we didn't believe that! Joe, K5JB, Sec'y

Piddling at the JB Shack

It is always darkest before the dawn, they say, and that is how I felt just before I started this column. Dayton Hamvention occurs at the end of April but before that happens I have to make it past the Federal Income Tax filing deadline. I can't start on the complicated stuff until about the first of April because I don't have all the papers (not that I would if I could). So, Since the first, I have been bogged down in my available time - what is left after traveling around the country, working to pay the dad-burned tax. I finally finished it last night but today, I was so tired that I couldn't hardly get started on this rag. I haven't had much time to scissor and paste any of the electronic information that has come my way but I'll look to see if Mac, K2GKK, has anything he recommends for the C&E.

I did some experimenting with an "automatic" automobile battery charger so I can write up a little dab on that.

I run most of my ham shack equipment on an automobile lead-acid battery. You might remember that I built a simple controller for the charger by using some of the features of the Signetics (and others) 555 timer chip. It lets the battery discharge to a low voltage setpoint, turns on the charger, then turns it off after the battery voltage climbs to a second, higher setpoint. Recently, I noticed that my battery was getting pretty warm and the charger was taking an awfully long time to cut off. The hydrometer told me that the battery was only about half charged, so I presumed that it was just getting old. I picked up a new battery and started planning a way to split the power between computers and radios to stop a ground loop induced hum that had plagued me on one of the rigs. With that background, I'll go right into the story.

Automatic Battery Charger

Several month's ago I picked up a battery charger out of curiosity, more than anything. It is a Schumacher, Model SE- 40MA, automobile battery charger rated at 10 Amperes (Never happens). It is described as being manual and automatic, with switched selections for various maintenance free (lead-calcium) as well as conventional (lead-antimony) batteries. I hooked it to a old-dog battery I had out in the garage and couldn't tell if there was anything automatic about it because it just charged full bore, no matter how I set the switches. I set it aside until I had more time to explore its innards. I didn't want to trust my radio equipment to a battery charger with a mind of its own that I didn't understand.

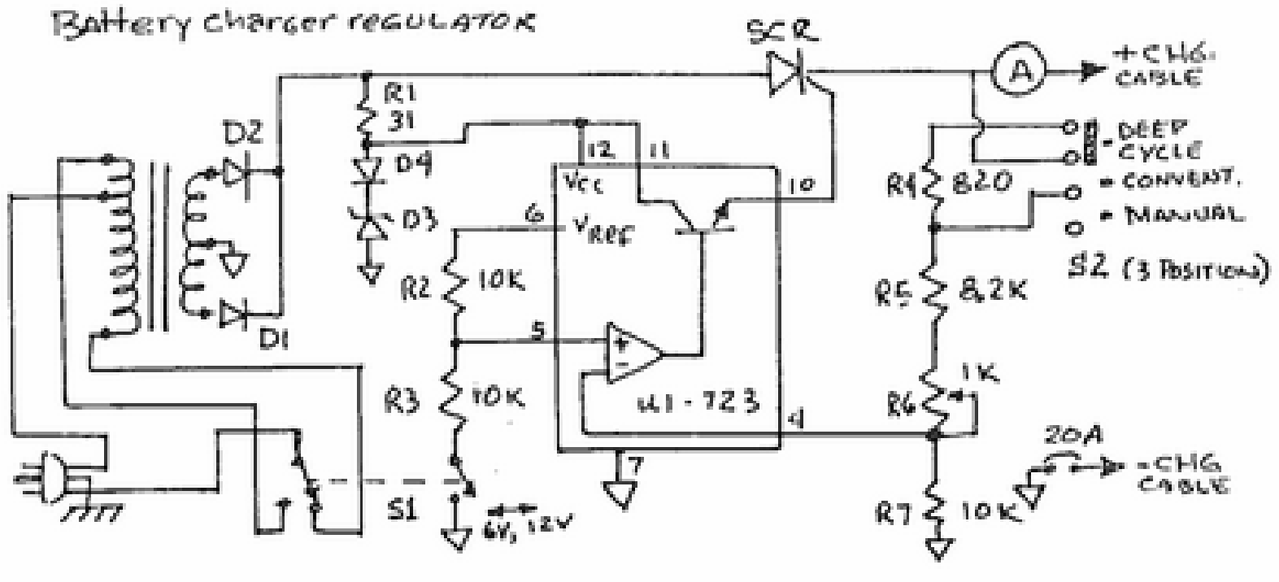
Finally, forced by the battery failure and planned re-arrangement of my 12V power bus, I took the thing apart and drew out the diagram of the charger control circuit. It looked like a reasonably good circuit that could be easily duplicated if someone was inclined to "roll their own". Also, I discovered something they don't tell you on the shipping carton. The internal adjustment makes it possible to tailor it's charging characteristics to the particular battery you are charging.

Lead acid batteries have some special operating conditions that they like to operate in. Since the charging process is somewhat like a plating process, batteries don't like to be fed a diet of smooth DC for at least a couple of reasons. If there is an unvarying current, there will also be an unvarying current density. Because of the "shape effect" there is non-uniform current density throughout the battery anyway and a to get a more uniform and dense "plating job", rectified, but unfiltered DC is highly desirable. Also, gas bubbles collect on the surfaces of the plates and grow if there isn't some agitation provided by the cyclic current variation.

This is why I rigged my home brew automatic charger to just turn off and on. I wanted to slug the battery with rough DC when it was charging and cut it off completely when finished. I presumed that would be better than making a regulator to tame the voltage being fed to the thing. My regulator design thinking was narrowed by my experience with DC regulators and i really didn't occur to me there were other ways to do things.

Refer to the figure to see how Schumacher did it. The key to its design is in the use of an SCR and a voltage regulator. The diagram looks complicated but only because there are provisions for switching between different kinds of batteries, including 6 and 12 Volt types.

Starting from the transformer, which is arranged to handle two voltage ranges



by switching primary windings, there are two diodes, D1 and D2 which are heat sinked. They form a full wave, center tapped circuit which provides pulsating DC. R1, D4 and D3, create a shunt regulator so the integrated circuit, U1 is not over cooked. I forgot to measure the value of the Zener, D3 but I suspect it is around 9 to 12 Volts. U1, is a 723 general purpose voltage regulator which can stand quite a bit of voltage. (It is rated at 40V continuous, pulses of 50V.) The 723 has an internal voltage reference of around 7 Volts which is available on pin 6. It has a comparator that controls an internal series pass transistor. The series pass transistor can source about 150 mA and is commonly connected to a big-hog transistor that handles the big Amps.

R2 and R3 control the reference voltage fed to the 723's comparator. When charging a 12 V battery, the comparator gets about 7 V. When charging a 6 Volter, it gets half that value. The resistors on the right side of the diagram form a divider network that supply voltage to the comparator also. When the voltage at the junction of R6 and R7 (727 pin 4) is higher than the voltage on pin 5, the 723 shuts down its output current. R4, R5, and R6 are arranged to provide some voltage tuning. R6 is not normally accessible from the outside, but I'll get back to how you can fix that.

Now we get to the SCR, the baby that is handling all the battery charging current. This is an excellent application for one. SCRs work pretty efficiently because they operate in either a fully switched on, or fully switched off state. When switched on, they have a very low voltage drop. Since power dissipation is a product of this voltage drop and the current, this is good. Of course, when switched off, there is very little current, thus very little power dissipation. The number on the SCR looked like a house number so I didn't bother to write it down.

To turn an SCR on, you put a voltage on the gate that is more positive than the cathode. The main circuit is between the anode and cathode. The more positive voltage is applied to the anode. To turn the SCR off you interrupt the main current through it while there is no current flowing in the gate-cathode circuit. In a half wave rectifier circuit, current stops twice per cycle. In this application, it is important that the current stop so there is NO capacitance between the rectifier and the SCR and no capacitance associated with the 723 regulator. (Well, all circuits have capacitance, but you know what I mean.)

Here is how it regulates. If the battery voltage is low, the 723 regulator supplies gate current early in each SCR cycle. If the battery voltage is high, the 723 supplies the turn-on pulse to the SCR late in the cycle. (In watching the thing work, I notice that it actually misses a lot of cycles, causing the built-in ammeter to flicker.)

The switch, S2 provides two voltage switching points for the SCR depending on the type of battery being charged. The Deep Cycle and "Maintenance Free" batteries (lead-calcium) need a little higher voltage than conventional, lead-antimony batteries to get a full charge.

Now, the useful tip about R6. If you happen to have one of these chargers, you will probably want to diddle stick it like everything else. I felt it was going for too high a voltage for the battery temperature, etc. so I made the adjustment accessible from outside the case. The little circuit board was riveted to an "L" bracket which was in turn riveted to the heat sink. It was oriented with the little rheostat facing downward. I simply twisted the little bracket on its rivet until the circuit board and the rheostat were facing the side of the case. With a trusty Whitney punch, I put a hole in the case in line with the adjustment and made it big enough to get an insulated tuning tool through with some room to spare.

After re-assembling things, I connected it to the new battery along with an accurate voltmeter. After the voltage had reached the desired point, I set the adjustment back until the regulator took over.

It seems to be working OK. When a transmitter keys, the regulator goes full bore and then drops back. I feel uncomfortable not letting the battery go through charge - discharge cycles so I may start a schedule of chopping charger power and letting the thing run down a bit once a month. The battery is a Sears Die Hard boat battery and it seems to be using no water while maintaining 14 V with the charger at room temperature.

These battery chargers aren't very expensive, so it probably isn't worth it; but, it wouldn't be too difficult to put one together with one of the boat anchor transformers found on flea market tables. Just remember to buy a lots of iron if you want to get 10 amps out of one of these babies! Joe, K5JB

DX PacketCluster

Joe, WA5ZNF, provided a page out of a recent Pikes Peak Club newsletter that described a PacketCluster operated in Southern California for the benefit of DX chasers. I have read of the software used on these things but couldn't put my hand on it at the moment. The following is from that article:

The Southern California DX PacketCluster system is growing rapidly in terms of available coverage and users. During the weekend of February 11-12 there were as many as 32 stations on the system during peak DX hours. During this period, more than 170 DX stations were announced. If you are not hearing this many reports, it's time to join us. We expect up to 50 PacketCluster users will be reporting DX in the upcoming contests.

The system presently incorporates 5 interconnected nodes. Each node can serve up to 26 users simultaneously. A DX announcement reported into any one of the nodes is automatically distributed to all of the users at all of the other nodes.

At the time of this writing, the Los Angeles nodes all share 144.76 MHz. The system operators are constructing a linking system that should allow the Northridge, Sherman Oaks and El Segundo nodes to move to 144.46 in time for the ARRL CW contest on Feb. 18-19. The new frequency is less congested and its use will reduce mutual interference.

The major advantage of the packet DX reporting system is that you do not have to be present to hear the announcements. When you return to your shack, simply ask for a current report, and all of the recent activity will be summarized on your terminal screen. You could ask for the last five reports, or the last 10 on 20 meters, or perhaps the last 10 reports from ZA (good luck).

The nodes are designed with low antennas to provide coverage of specific areas and allow the frequencies to be re-used by additional nodes.

The article continues with advice that you can get a user command summary by sending a SASE to W6PQS at the callbook address. Maybe he would also have information on where to get the software. Neat, eh? Joe, K5JB

THE BIG SIGNAL
OKLAHOMA CITY AUTOPATCH ASSOCIATION, INC.

WHAT'S NEW

Not much. Being the busy individual I am and with a lack of time for such foolishness as this, I recently asked our beloved Vice-President, the one and only Mr. Patterson, also known as WD5CSM, if he would be so kind as to write something for the C & E this month. That is his one and only duty for the club as our club by-laws and constitution state. The look I received would knock a horse down and not a word was said. Besides, I had just about done myself in on last month's article. So, being the good natured person that I am, I thought it best that I take a little time out of my busy schedule and at least show up with something this month.

I believe most members know the line of work that I am in, that being a farm and ranch appraiser and make long term mortgage loans. In this line of work, I meet all kinds of people and see all types of farms and ranches. Nothing is more enjoyable than spending a day out in the country and making a farm loan. Some you can make and some you can't and it is a difficult decision at times whether to make the loan. I was recently given the opportunity to make a couple of loans that I am still considering the possibilities.

One of these applications is coming from an individual by the name of Mr. Lee Allen of Newtcastle. It seems that Mr. Allen owns a 160 acre farm and is tired of growing wheat and cattle and would like to change his method of operation. He has learned that he can increase his cash flow on the farm many times by raising Newts. Up until this time, he has been very mute about his plans but figures if he can get the loan, he will make a lot of loot.

A Newt is a member of the salamander family and serves many uses in life. The skin of the Newt if properly tanned, will make a beaut of a boot. It is not a widely known fact, but the basic ingredient of Brut, that strong smelling stuff you put on your face after shaving, comes from the cute little Newt. Also, the Newt is the primary source of pewt which is used to make pewter. Some of the most beautiful baskets you can purchase are made out of Newt skins and jute.

Newts take a lot of special care. One must make certain that they are neutered at the right age. At the present time, Mr. Allen is serving as his own neutor and neutees the Newts. To properly neut a newt, the tail has to be snipped off at just the right place. Mr. Allen doesn't give a hoot about having to neut all his Newts and has been taking applications for a new Newt neutor.

Proper food for the Newt can be a real problem. The primary source of this food is from the shoot on the root of the Schroot fruit tree. Schroot fruit root only grows in Midwest City in the 5000 block of S.E. 49th street. They love to eat Pork and Beans, but this can be a real problem.

One of the most interesting sights I have seen in a long time was at the 89'er Centennial Parade. Mr. Allen had some of his Newts all decked out in their cute little zoot suits. They would scoot along and when he would blow his whistle, they would give a big toot on either a lute or flute through their cute little snoot.

If you are interested in applying to Mr. Allen for a position as a neutor of his Newts, you must be a big old coot to handle the little brutes. Pay is high.

CLUB NEWS

Field Day is just around the corner. It will be on June 24 and 25 and we will be hosted again this year by K5JL at his farm near Piedmont. This is a great site for such an outing, so be making plans now to come out and work. The club is in need of someone to head up all the activities of Field Day this year. Craig, KB5BOB, will not be able to handle these responsibilities this year and President B. R. is out looking for someone to take his place. It is my understanding that an all out effort will be made to obtain the services of WD5CSM. Everyone be kind to Dennis and urge him to take on this light load.

Another outing is temporarily planned for the club to be held on Sunday, June 11 at Arcadia Lake, near Edmond. This is a family outing with the club furnishing the goodies. As was done at the Christmas dinner, Leonard, W5MEL and Larry, KF5JN will do the cooking. The fee to get into the lake will be $4.00 per car, with no limit as to the number of occupants. We will need at least 50 folks to make it economical to furnish the food. If held, it will be at the Cherokee pavilion. More details about this next month.

Club members are requested to use the .81 - .21 repeater when making autopatch calls. Since the .22 machine is the primary QSO spot, it only makes good sense to use the .81 repeater which in times past was used almost exclusively for calls.

Frank, N5FH, will present the program at the May meeting. See you then.

K5NK

BICENTENNIAL AMATEUR RADIO CLUB

"To Promote Radio Communications"

The meeting was called to order by Bill Skipper, Vice Pres. KB5BS at 8:10 P.M. Tuesday April 11 at OKCCC, 7777 S. May, OKC.

Treasurer's report was not available for an update of current funds. Bank Balance indicates that the month's ending balance of March 31, 1989 was 522.46 Dollars.

CORA report was that several Volunteers are needed for the up coming HAM Holiday and if interested to contact a friend from CORA for details.

OLD NEWS: The vote on a amendment on the article of the By-Laws were tabled due to lack of a quorum. The matter will be brought up in next months agenda.

NOVICE TRAINING: Classes are going well. The group had another person fly the coup. Congratulations Michael Cox

REPEATER REPORT was given by Bill Skipper. The receiver sensitivity was adjusted and is in near suitable operation. The heliax connector has been located and will be assembled soon.

Field day was brought up and the general conclusion was to have it next year to enable its development.

The meeting was adjourn at 8:45 P.M.

The second part of Bill Skippers antenna program was given. The presentation was filled with lots of documents and demonstration presentations. In the upcoming months there shall be other activities such as upgrading Single-Sideband to 10 meters. Dates of the presentations will be announced.

"well, it will come in handy if you ever become a member of the armed services." but, no more. There's no requirements for it. All the forces have dropped it. They say everything new is digital, computers, and there is darned few things you can't do with a computer and equipment.

N6DUE: How would you propose that we get into the business of no code?

K7UGA: Well the business is fairly rather simple. You first would have to get the ARRL (the American Radio Relay League) behind it. You have to get these magazine editors, who I think are inclined that way. You have to remember one thing, you have more amateurs your gona sell more equipment. But, the easiest way is to convince the American Radio Relay League that, opposition or no opposition, if they want to increase the amateur ranks they have to do away with the number one objection, code. I know that a lot of people will be shocked to hear an old timer like me say that. We're not gona do away with code. I want to sit down here and wobble a key. I'll do that forever, but, it isn't gona be with some young kid that wants to become an amateur.

5DUE: Let's put that in practice. How would it really work?

K7UGA: Schools come up here. Young people come up here to watch radio communications and they are all thrilled. But, then you say, "now your gona have to learn morse code." They think it's impossible, and you know and I know that it is not. But, that's their attitudes and they don't want any part of morse code. Even if God stuck a pen in their heads and said, "YOU CAN NOW WORK MORSE!!!!" they wouldn't want it. They are enthralled by the new communications, i.e. Baudot, the high speed digital frequencies, all the different things we have today. I would hate, like the devil, to have to start all over again and have to learn.....I'd rather learn the Morse Code over again. We'll make more advancement with young people fiddling around with a soldering iron and a good book and a box full of junk, than by

teaching the morse code, when nobody much talks in morse code anymore.

N6DUE: Barry, would it be fair to say; "THE DAY OF THE MORSE OPERATOR IS GONE."?

K7UGA: Well I'll make a prophecy and I won't be alive to ever see it come true. If we continue to require a knowledge of code for a license, people are gone just plain die. I'm eighty. I'm not going to be around forever. So when I'm gone, that's one less guy that knows the code. So what the hells the difference. I don't wanta see amateur radio die out, because, as I've said, 98% of all the improvements made in radio has come out of an amateurs shack. I want to see that encouraged, and as I say. "I think we can swell our ranks by at least two hundred thousand, if, we just allow young amateurs or would be amateurs to come in as a licensed amateur without having gone through the, I don't call it painful, but, through the process of learning morse code."

N6DUE: We've been talking with K7UGA, Barry Goldwater, one of the true pioneers of amateur radio. His contributions to the services is legendary. Now, today in the 1980's, Barry Goldwater believes deeply that the time has come to eliminate one of the main staples of amateur radio licensing procedures, morse code. He pleads the case with fellow hams, that new blood, young hams, are needed to carry on the tradition and to carry the service into the future. And, Senator Goldwater, K7UGA, says unequivocally, that the time has come for the amateur fraternity to debate the issue of no code and then take action as they deem fit.

And now for Barry Goldwater, K7UGA. This is Roy Neal, N6DUE in Scottsdale, Arizona

- 73 -

The proceeding was taken from the taped dialogue of Barry Goldwater and Roy Neal and was aired in March 1989. Video is available from Fred Miya, WI5Y.

Bob-N5KUE

HAM HOLIDAY
OKLAHOMA

JULY 28 - 29 - 30

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Edmond Amateur Radio Society
Reaching out to Oklahoma and the World

REPEATER FREQUENCY

147.135/735

March 25th was the Weather Watch II held at the Norman Municipal Library. Again the National Weather Service personnel did a super job. The program was very informative and should be very useful when storm season finally arrives, if it does. Seems the severe weather is in the southeast part of the United States this spring. EARS members present were, Lee Vaughn - KA5WIS, Edith Vaughn - KA5YPX, Tom Guinn - KA5WAV, Steve Guinn- KB5HWH, Bob Long - N5KUE, and Marlin McGee - N5LZF.

4 foot square - 4 foot deep and about 25 large wheel barrows full of concrete (grade 3500), we finally got my Rohn HDBX 48 foot tower base in the ground and standing straight. I'm sure there were some sore legs, arms, and backs from this little work party. Thanks to those who helped, Bill Wilburn - N5NUK, Phil Wolfenbarger- N5HIP, Jason McGee - KB5EYE, Jacob, Lee Vaughn - KA5WIS, Chris, Gayle McGee - KB5HXO, Tom Guinn - KA5WAV, and Bob- N5KUE, Darlena - KG5HM were late getting off work, but came by to see the results.

Don't forget Ham Holiday - We still need volunteers for the registration desk and talk-in. If enough people help, we will have another successful Ham Holiday as in the past.

HAMP OUT ROUND UP

Well we did it again, invaded a state park and tried to saturate it with RF and all sort of ..merriment??.
Since I didn't get their till late, I will try to cover as much as possible. Several members went down Friday and started the festivities waiting for the rest of the "working people" to arrive Saturday morning. Well, we showed up about 8:00 a.m. and called on the assigned frequency. Par for the course, no one was around after calling for 10 minutes. We found them anyway hidden deep in the mountains at the Doris Campground. Phil and I went to the Hamfest in Lawton. Phil, being a pilot and all, finally decided to land his pick-up at the convention site. I still don't remember hearing the control tower telling us to circle Lawton several times but Phil said he heard it so.....

Lots of neat stuff there. Several members found a few bargains and a great time.

For those not familiar with the Wichita Mountains and in particular the Doris Campground, the drive there is really very beautiful in a stark and desolate way. The drive is about 12 miles into the refuge from the park entrance between the Mountains (hills) just to get to the park. The drive is broken up by the herds of buffalo and longhorn cattle who seem to hide most of the time.

Sitting around the campfire (bonfire) you could almost hear the Indians from the past gathering for the hunt of the bison who still roam the land. While I was out on an errand the rest of the group held the last campfire ceremony complete with flag salute and singing. After the ceremony was rag chewing and a brief demonstration of primitive marshmallow roast. Dennis and Phil gave the demonstration but I forget just how many times you have to play catch through the flames until it was good and toasted. With those two, I don't think they ever got one done. Something to do with the hand and mouth disease (what ever one catches the other does too). If you didn't get to attend the hampout you might sure want to get aboard for the next one.

- 73's
Marlin McGee N5LZF and
Tommie Guinn KA5WAV

NO CODE OPINION

The following is the transcript of the Barry Goldwater interview conducted at his home in Scottsdale, Arizona and broadcast on satellite.

The Barry Goldwater Interview

This is Roy Neal, N6DUE, in Scottsdale, Arizona at the home of Barry Goldwater. High atop a windy hill, a place of natural beauty and it's a dream location for ham radio, a life long passion of the former senator and Air Force General. K7UGA is his call and in the world of ham radio we call him "Barry".

N6DUE: If we don't go no code, do you think we can hold onto our present frequencies?

K7UGA: Can we hold onto it with the numbers we have? My answer would be "Very Doubtful". Can you hold on to it with a couple of hundred thousand young amateurs? "yes!"
Because, they all vote. They all communicate with the congress. They can tell them, "Look we don't want you taking these frequencies away from us." I'll tell you, as a former Chairman of the Communications Sub-Committee, I practically never heard from a ham.

N6DUE: Barry, what influence, if any, do you think the amateur fraternity can have on politicians?

K7UGA: You'll find among the 535 members of our congress, right now, not one amateur operator. Now there are some that are interested, because, they have friends and K7UGA constituents that are interested in saving a frequency and they had a lot of mail on it. But, they don't know what the hell they are talking about.

N6DUE: Barry, what is your position on no code?

K7UGA: I, ah, hate to say this to you...because, I am one of those, sorta, old fashion hams that really loves the code. But, we are not getting new amateurs. So we do away with the code requirement and we bring in a lot of new young men into the business of amateurs, and also into the business of bettering the new communication systems.

N6DUE: So your proposing a no code license?

K7UGA: I frankly would put more emphasis on the technical questions. Forget about the code, nobodies gonna use it. Now, there used to be a pretty good argument for learning the code, because, we would say,

CONTINUED ON ANOTHER PAGE

AERONAUTICAL CENTER AMATEUR RADIO CLUB, INC.

W5PAA

President Ted Anderson, NY5W, called the meeting to order at 19:30. There were 25 members and guest present including Joseph Lynch, N6CL, the ARRL Section Manager for Oklahoma and Carol King, K5CPZ, Assistant Section Manager. After a round of self introductions, Tom, K5LDI, gave the CORA report. Our Club is responsible for BINGO and Tom is looking for some good prizs. If any hams plan to stay at the Lincoln Plaza for HAM HOLIDAY, please tell the folks that you are with HAM HOLIDAY. If enough rooms are rented, it could reduce the rent for the building considerably. (Ed. That's $800.00) Doug, WODXA, gave the treasurers report, Many people have yet to pay their dues.

Jack, WB5SVN, has written several letters on the new club leterhead concerning the new 40 meter beam (to be installed). The new beam is being donated courtesy of Bob Stuckert, NOKA. Among other topics discussed were: Howard, W5WSW, saw a monster of an antenna farm up north of Boise City OK.

Bob, W5HXL, is looking for a worm gear to make an Armstrong rotor for the mobile shack.

Jack, WB5SVN, runs the swap and shop net every Saturday morning on the 82 repeater.

Hamcom in Arlington TX will be held on June 2, 3, and 4th.

Ted, NY5W, gave a very interesting program on static electricity. He had a portable instrument resembling a pistol with which he measured the static electric voltage on each one present. Most were in the range of 1000 volts, some were near 0 and others near 3000 volts.

Next month we hope to have the nations Science Fair winner give the program. He won it by using several instruments to measure gravity. Don't miss the meeting next month.

The meeting was adjourned for refreshments at 20:26.

Bill, K5KDR

CIMARRON

April 13th saw CARA gathered at Ruth's Playhouse, and the meeting was called to order by Jack N5LBNN, our president. We had a pair of Jacks for our openers, N5LBN and NN5Z. Vern KA5SZD was present and Ray AB5Z, Denny WK5V, our hostess Ruth WX5Y, Terry N5MLT, Betty KA5RTW, Nadine N5FMH, Steve KF5SW, and Reeta KA5SLY.

There was no report on the communications trailer. Hopefully something positive will come forth at our next meeting.

The report on the purchase of a teaching lab was somewhat negative as most of the equipment is not solid state.

There was a discussion about acquiring communications equipment for emergencies from the State Civil Defense. It was suggested that we approach Carl White, Northwest rep for the State Civil Defense concerning this.

N5LBN reported that the WX meeting was well attended and was informative to the novice WX scout.

Our 145.45 repeater is down. Denny WK5V reported that there is considerable work to be done. He needs a container for the COR and ID'r. NN5Z made a motion that the repeater dues of $12 a year be re-instated for the Major Co. Repeater Assn. and the motion passed. The repeater has done so well for so long that the Secretary was not sure exactly how the dues were handled so this will be investigated and reported at the next meeting.

After a short discussion of Field Day the last weekend in June, the motion was made to adjourn and the club session was ended. The next meeting will be held May 11th at Ruth's Playhouse, 827 S 13th St.,

Be there or be SQUARE!

73....NN5Z

WANTED: A large capacity trans-match. Call Steve Schoonmaker, KA5SW at (405) 886-3274.

GREAT PLAINS A.R.C.

W5HGH Repeater 146. 13/73

Another successful Eyeball QSO has come and gone. It was a lot of work but also a lot of fun for everyone. There were approximately 240 people registered at the two day event. Our thanks to the many dealers and exhibitors. VE testing on Saturday afternoon brougt fourteen people from the Woodward area and also people from Wichita and Enid. There were fourteen segments taken with seven successful upgrades. Speaking of success, the Baker family of Enid, has had a banner month. Eight year old Lowell Baker successfully tested for his Novice ticket at the QSO. Gerald Bowman, VE tester, said that Lowell is an outstanding young man and that giving him his code test was the highlight of his day. Lowell's father, Walter Baker, himself a ham, was just elected to the office of mayor of Enid. Congratulations to both of you and we'll be listening for you on the air, Lowell.

NET NEWS

Andy Taylor, who is the net manager of the Northwest Oklahoma Service Netwoork, reports that for the month of March, there were 14 sessions 146 check-ins, and 9 messages were handled.

SPOTTER TRAINING

On April 10 all people that were interested in becoming storm spotters, met at the Pioneer Room at the Woodward Civic Center. Meterologist Bill Bunting of the National Weather Service in Norman gave a first class presentation of lightning hazards, thunderstorm formation, and the importance of having not only radar but many qualified spotters. Bill showed a film on the dangers of flash flooding associated with severe weather, and it was enough to make you want to sleep in the bass boat at night. Approximately 75 hams, policemen, firemen, city managers, and other interested people attended. Bill Wyatt is to be commended for his generous outlay of time and effort in operating and maintaining the Woodward radar tower and in organizing the annual spotter training.

Leon

RS 232

Paul KD0SO

Editors Note: This article was published incompletely and without supporting diagrams in the Jan and Mar editions. To do justice to the author, the article is published here in its entirety and with supporting diagrams

As a Senior Field Engineer, I have over the years past, come across some unique situations. Many Contracts I have worked on, have almost always excluded cables, as part of the Maintenance agreement. On many occasions the situation of maintenance requirements comes to the point of; "Prove it's not the terminal equipment." Now that means you will find fault in the cable and then fix it, to show you were right.

How does this situation start anyway? (customer), "The cleaning person moved the equipment." "I don't know, it just doesn't work, when I send something to it."

It may not be as obvious as, the wires hanging out the back of the connector, Customers will often times pull the wires out, then stuff them back into the opening from which they came. This to preclude getting billed.

In this article I want to address the RS 232 "Serial Interface;" and how to put one back together. First of all don't be alarmed, when you come upon things like this. There are simple solutions and you will only need some 10 minutes or so to put the wires back to where they belong. Second of all, you will mostly be dealing with two types of connectors. A. The "DB" type. In some cases seven pin, or 15 pin, or the infamous, 25 pin connectors. B. The "Centronies" type connector. Here the wires are soldered to the back of the pins as opposed to the DB, style of connector where one can clamp on new pins and insert them into the connector holes, as required.

O.K. where does pin #6 go, and what does it do? What's a DCE and DTE? What does EIA standards call for? Before we go any further, Lets begin at the start.

First of all, we need to define some of the words (BUZZWORDS), we use so freely. "EIA"** Electronic Industry Association. They have set a standard in the industry by which all companies go, so as to get an acceptable norm, for various interfaces. "Interface"** A device or series of devices, (cables, connectors etc.), by which a piece of equipment, or peripheral), may be hooked to another device, ie; a computer RS 232 is a set of guide lines specified by the EIA, to permit communications devices, to be hooked up, in a computer environment. "DTE"** Data Terminal Equipment. A device or machine that originates and or receives digital data, such as a computer. "DCE"** Data Communications Equipment. A device or machine, that acts as a terminal, or terminates digital data signals, ie; Telephone modem, printer etc. Now that we have digested some of the Buzzwords, lets look at what the standards definitions are.

1. Mechanical characteristics of the interface
2. Electrical signals within the interface.
3. Functions of the signals themselves.
4. secondary Functions for special applications.

As most of you may have already suspected, Function 4, is not normally used. We will define them for you momentarily. It's nice to know but not required data.

O.K. EIA RS232C Mechanical standards specify:

1. Assignment of signals to connector pins.
2. Female pins in the DCE connector
3. Male Pins in the DTE connector
4. Maximum cable length is to be 50 feet. (you can cheat here with heavier wire for example. use #18 or #16) with #16 you can reach a 125 feet easily
5. Maximum cable capacitance of 2500 picofarads.

RS 232 C is usually referred to as a "SERIAL" port. Voltages on these ports can vary so be careful to use a little common sense here. The maximum levels are usually not more than 25 Volts DC. If you are using a normal 12 Volt DC System, as most systems do, you shouldn't have any problem. Computers use 12 Volt signaling and so does the garden variety of terminal equipment. So no sweat. You really should not have a problem. First, before you attempt to do an interface, With anything, be sure you check the DTE's manual, for a wiring diagram. If not available, this usually works, see fig. A

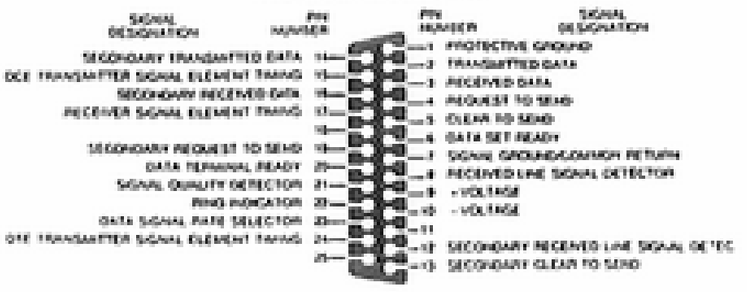
On the voltages, there is a thing called the transition region, that's where a signal is neither a mark or space. This usually occurs between zero and plus three and minus three volts. So if your signal falls into this region when it should be a high, say plus 12 volts, chances are you have a bad connection or a short has occurred. Worst case is an non-compatible situation, wherein the equipment has loaded down the line. But, look for the first two situations first. If all else fails read the instructions peculiar to your terminal equipment.

All right, lets make those connections, for that interface cable, to the connectors. Equipment ground is Pin 1 to Pin 1. (In most cases this is not done), But for safety sake. I mention it. We are going to be working with pins one through seven and pin 20, only. True enough you can do it with only four pins hooked up, and the rest on the terminal grounded, but I won't teach that to you in this article and most important of all do it right the first time and preclude voiding the manufacturers warranty. Ok, continuing on with pin 2 DTE "Transmit Data" to pin 3 DCE. Now, pin 3, DTE to pin 2 DCE. Next is pin 4 DTE to DCE pin specified. Then pin 5 DCE to DTE pin specified. Now pin 6 DTE goes to pin 20 DCE. Finally pin 7 to pin 7. In some cases DTR and DSR are jumpered together and are not physically connected to other equipment. Again, always refer to the manual for your wiring guide. The manufacture knows what the equipment needs. If you cross up the wires don't be to concerned. Your first indication will be, it don't work. Always check the interface cable by use of an ohm meter or a light test. A mistake will not cause the equipment to die, in most cases. Take your time, when wiring these cables and double check all your work first, the results will be, it works first shot out of the bag.

Now for those who never get it right. Most OEM's, will have interface cables of an infinite variety, so ask first, if you want to do it the easy way. Hope this helps to shed some light on the world of RS 232 C "SERIAL" port connections.

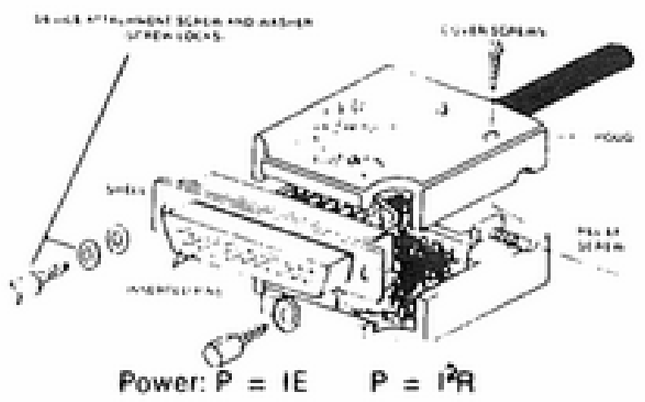
Paul KD0SO

RS-232 Interface



EIA RS-232/CCITT V.24

RS-232 Interface				Signal Type and Direction							
				GND	DATA		CONTROL		TIMING	
DB-25 PIN	EIA-RS-232C CIRCUIT	CCITT-V.24 CIRCUIT	RS-232 DESCRIPTION		From DCE	To DCE	From DCE	To DCE	From DCE	To DCE
1	AA	101	Protective Ground	X						
7	AB	102	Signal Ground/Common Return	X						
		102a	DTE Common	X						
		102b	DCE Common	X						
2	BA	103	Transmitted Data			X				
3	BB	104	Received Data		X					
4	CA	105	Request to Send					X		
5	CB	106	Clear to Send				X			
6	CC	107	Data Set Ready				X			
20	CD	108.2	Data Terminal Ready					X		
22	CE	125	Ring Indicator				X			
8	CF	109	Received Line Signal Detector				X			
21	CG	110	Signal Quality Detector				X			
23	CH	111	Data Signal Rate Selector (DTE)					X		
23	CI	112	Data Signal Rate Selector (DCE)				X			
24	DA	113	Transmitter Signal Element Timing (DTE)							X
15	DB	114	Transmitter Signal Element Timing (DCE)						X	
17	DD	115	Receiver Signal Element Timing (DCE)						X	
14	SBA	118	Secondary Transmitted Data			X				
16	SBB	119	Secondary Received Data		X					
19	SCA	120	Secondary Request to Send					X		
13	SCB	121	Secondary Clear to Send				X			
12	SCF	122	Secondary Received Line Signal Detector				X			
		141	Local Loopback					X		
		140	Remote Loopback					X		
		142	Test Indicator				X			
		116	Select Standby					X		
		117	Standby Indicator				X			
		126	Select Transmit Frequency				X			
								X		
								X		



Power: $P = IE \quad P = I^2R$

Resistors in series:

$R_{total} = R1 + R2 + R3 + etc.$

Two resistors in parallel:

$$R_{total} = \frac{R1 \times R2}{R1 + R2}$$

INDIVIDUAL IMPRESSIONS

Howard Baker, W5AS, was a very dedicated radio amateur. He passed on to silent key status June 6, 1988. Howard left behind his wife Hortense, 2 daughters, 1 son, 8 grandchildren and 5 great grandchildren.

I became acquainted with Howard when we both served as helpers in the 5th District ARRL QSL Bureau under Director Joe Schilling, WB5YKD. Howard was a traffic handler par excellence. Once I gave him a long list of calls with foreign QSL cards in my file but no mailing envelopes or postage. Howard broadcast the calls on the 80 meter traffic net and expedited passing the cards on to the intended recipients. Howard also hand-crafted me a silent key file with Rolodex cards.

Howard was active on the 2 meter "Night Owl" net where he relayed ARRL propagation forecasts each evening. He was an unforgettable individual and left an impression on many of us that we remember with a pleasant and thankful glow.

Charles E. Maupin, W5HQM

Ellard and Garnett Foster

Anniversaries

Congratulations to these anniversary celebrants:

Foster

Ellard and Garnett Foster, Warr Acres, will celebrate their 50th wedding anniversary with a reception for relatives at 11:30 a.m. Saturday at Applewoods Restaurant, 4301 SW 3.

The couple married April 15, 1939, in Omaha, Neb. Their children are Robert Foster, Oklahoma City, and Leonard Foster, Richardson, Texas. They have five grandchildren.

Mr. Foster is a retired Federal Aviation Association worker. Mrs. Foster is a housewife.

Emergency Communications Quiz

Here's a quickie quiz for you: What is the most common emergency communication performed by the Amateur Radio Service?

Answer: Communications from hams operating mobile, usually on VHF or UHF, and usually during peak traffic hours (i.e., while the ham is traveling to or from work). The overwhelming majority of these emergency or incident reports usually involve traffic accidents and reach the appropriate public safety dispatcher via telephone, usually relayed by another ham.

How did you do on the quiz? Pretty easy, wasn't it?

Now here's a harder question: If most of our 'emergency' communications deal with traffic accidents, reporting fires and so on, how come we're so BAD at it?

Try these for size:

Which is the "Number one lane" on a multi-lane highway?

Interstate freeways with even numbers have only
A. East/West designators
B. North/South designators

What are the 'Fundamental Five' data elements when reporting a brush fire?
In researching an article in support of ham radio I contacted a number of public safety dispatching supervisors here in Southern California, expecting to get some actual cases in which hams had saved the day. Instead, most of the dispatchers I spoke with couldn't single out any difference between reports filed by hams to those filed by the general public. "People are usually pretty excited; we have to coax the information out of them -- and hope we got it right."

Even hams? "I guess so. I can recall a few times when the people said they were hams but I don't believe their report was any more accurate or concise than usual." That opinion was expressed by the majority of the dispatchers I spoke with. "Truckers are pretty good," I was told, "and some of the Rescue Rickies... the CB'ers... have our procedures down pat."

Would it help if hams knew the right procedures? "Gee, that would be wonderful!" one dispatcher gushed (most of the ones I spoke to were women).

One-sided articles are not only dull they are dishonest as well. Besides talking to dispatchers I also spoke to ham radio groups supposedly dedicated to emergency communications, such as ARES and RACES. The RACES folks would usually point out that they're a Federal entity, organized for 'big picture' emergencies rather than traffic accidents, a response which sounded more like a cop- out than an answer. (Can't they do both?)

But ARES and the general ham radio community didn't fare much better when I asked about such mundane emergency communications. Indeed, the most honest reaction I've had so far was a somewhat embarrassed silence. Part of that might be due to the current flap over the code; when you mention emergency communications to an ARES guru it seems all they want to talk about is using Morse code to save the Titanic (which sank, by the way). No one seemed very interested in mobile incident reporting, ham radio's most common form of emergency communication.

I spoke to seven dispatchers or dispatching supervisors, either in person or by telephone. And while I got some wizard material about emergency reporting -- enough for several articles -- I didn't get a thing I could use to bolster ham radio's fading image. More surprising perhaps was the fact that until I contacted them, none of the people I spoke to had ever been contacted by someone from the Amateur Radio community.

That seems a bit odd, don't you think? I mean, hams and dispatchers are sort of in the same business when it comes to emergencies.

Some of the dispatching outfits even give tours, mostly to school kids and the like, but any organization can make such a request. (But just anyone?) "A lot of kids and old people; there was a REACT club once -- they're not hams, are they?" (She looked relieved when I shook my head.) "After all," one young lady pointed out, "they pay our salary."

It sounded corny but she was sincere, and a crackerjack dispatcher to boot; very professional. But what she said got me to thinking: Who pays ham radio's salary? Who gives up spectrum so we can play a little radio? Are we worth it? Could our spectrum be of more worth to the nation if it were assigned to someone else?

Judging by what happened to 220 and growing rumors of more losses to come, it's obvious that someone up there is convinced hams aren't pulling their weight; after talking to the dispatchers, I've got a few doubts myself. I mean, just how difficult would it be to print the basic incident- reporting data elements in 'QST' so we could cut it out, laminate it, and keep it in our wallet? And why isn't that information a basic part of ARES procedures?

(Maybe we could even get some of the big wheels in ARES to go so far as to REQUIRE their members to carry such a card. Let them set up a system of points and demerits, like they do with their uniforms and funny hats.)

But then again, ham radio is only a hobby, right? And hobbies don't carry obligations, right? Right? Bob Hoover, KA6HZF @ N6CQW
Via WA5BQX BBS and K2GKK

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$$\frac{n_p}{n_s} = \sqrt{\frac{Z_p}{Z_s}}$$

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QSL CARDS !

INDIVIDUAL IMPRESSIONS

I have known Thomas Wiley "Steve" Stevens, W5VCJ, for 46 years. I first met him when the radio shop was set up at Tinker Field during WW2. He was my Section Chief and really bore down on us when anything caused us to be late punching in on the time clock. One incident with Steve really "rattled my cage". I was selected to travel to Philadelphia under the Signal Corps aegis for General Airborne Radio training at Philco Training School. I had my bags all packed and checked in at the Union RR Station. I was about to say goodbye to my parents when Steve came rushing up and told me I had been scratched from the list! He said I had better get my bags before they left for Philly without me! He sounded so convincing that I almost followed his advice. Suddenly at the very last moment he said, "You better get on that train or it'll leave you behind!"

I recently visited with Steve and his charming wife Clara at their rural home northeast of Edmond. They have a daughter and 2 grandchildren. When I reminded Steve of the train incident, he had forgotten about it but he mentioned another of his practical joking gags he pulled on guys he had known back east in the Bell Telephone Labs who came down to work at Tinker during WW2. They were staying at the Biltmore Hotel and asked Steve about OKC night life. With a somber look, Steve told them never to cross "Blood River" (North Canadian) or they would be "dead meat"! He got them so scared they were afraid to leave the hotel at night.

Steve first got into radio at McAlester while he was in high school. He built a one tube receiver using a UV-199 from a magazine article. It required a big round oatmeal box for a coil form. Steve could only come up with a toilet paper roll which he dutifully wound with the requisite number of coil turns. He listened for several nights, hoping to get some BC DX like KDKA but heard nothing till one night he heard a station with the peculiar call W5BIE which puzzled him. It turned out that the inductance of his coil resonated in the 75 meter ham band! He later found that the operator of W5BIE was a classmate, Alan Laterman. This was Steve's first introduction to ham radio. After high school, Steve came to OKC and attended the Wallace Radio Institute at 13th and Broadway. He taught radio theory there a few months, then returned to McAlester and opened a radio repair shop. Three young chaps wanted to learn radio so Steve got permission to set up and teach a NYA radio school. He taught these 3 students about a year. One of them later passed his exam for a ham ticket. In 1938, Steve earned a 2nd Class Radiotelephone commercial license in order to maintain state highway patrol equipment. He later upgraded to 1st Class before passing his ham exam. His first attempt at building a transmitter was a 5 meter transceiver from a magazine article. Some others did the same but none could ever manage to work each other with it. Steve passed both novice and technician exams in 1952, WN5VCJ and W5VCJ. He never used the novice which expired after a year and after almost 5 years, his tech. was about to expire unless he got 2 hours of 2-way radio contact logged. He was working for GE two-way radio at the time and had access to a 3-watt FM transceiver that could tune the 6 meter ham band. Steve cranked down the mod swing to narrow band FM mode, bypassed the FM discriminator stage and connected the AM output of the 1st limiter through a capacitor to the 1st audio stage. He was then able to work other hams and so satisfy the 2-hour contact requirement for renewal.

In his two-way radio work, Steve became acquainted with Fred Link, a pioneer radio inventor who was president of the Radio Club of America. Fred held several patents, installed the first 2-way mobile in America proving its feasibility and worked with Major Edwin Armstrong in FM development at Dumont Labs. Fred invented FM phase modulation and was the first to utilize UHF transmission. Link recommended Steve for membership in R.C. of A. because of his development and installation of a statewide Highway Patrol 2-way network of repeaters on 960 MHz. Steve used topographic maps to determine paths and repeater sites for all but the western counties where he located bench marks and used an aircraft altimeter offset to read elevation above sea level rather than above ground as in an airplane. Steve was later elected a Fellow in R.C. of A., a signal honor.

While working at Wallace R.I., Steve would go into the code practice room and work on his sending. He got good at it but never developed his copying enough to delve into the CW mode. Steve visited a ham exam being administered by FCC Inspector Apple (whom he knew through his 2-way radio work) in 1958. Apple asked him to listen to the 13 WPM test and write it down for practice. When it was over, Apple looked at his copy and asked him to identify one character. Steve wasn't sure but called off a letter anyway. Apple then said, "You've passed! Now fill out your application for General". Steve had already passed the theory on the Technician exam. He says if he had officially taken the code test, he would have probably gotten the test jitters and flunked it! Steve is certainly an interesting individual and has left a distinct impression on the radio field.

Charles E. Maupin, W5HQM

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*ARE YOU TIRED ?

We have come across some absolutely irrefutable statistics that show exactly why you are tired. And brother, it's no wonder you're tired either. There aren't as many people working as you may have though, at least not according to the survey.

The population of this country is 200 million, 84 million over 60 years of age, which leaves 116 million to do the work. People over 20 years of age total 75 million, which leaves 41 million to do the work.

There are 22 million who are employed bythe government, which leaves 19 million to do the work. Four million are in the Armed Forces, which leaves 15 million to do the work. Deduct 14,800,000, the number of sate and city offices, leaving 200,000 to do the work. There are 18,000 in hospitals, insane asylums, etc., so that leaves 12,000 to do the work.

Now it may interest you to know that there are 11,998 people in jail, so that leaves just 2 people to carry the load. That's you and me - and brother I'm getting tired of doing everything myself.

Anonomous

Here is a list of principal U. S. Holidays, commemorative days, and Ham's happy days.

New Years Day: January 1st is hangover helper.

Valentines Day: Work all YL's and eyeball a few if possible

President's Birthday: Sleep in or work DX, whichever comes first.

St. Patricks Day: Drink green beer and work Ireland.

ZED HITS BACK

in recent months since the volcano supporting his towers went active, eating four monobanders and a 7-element tribander. He is presently forced to operate with no more than one commercial tower and a multi-band array at the modest height of 1,200 feet. Some of you will remember Hiram as the operator whose two-meter signal melted some of the rivets on the spacecraft carrying W5LFL a few years ago.

BILL BLAST continues to claim he is the greatest of them all, and he has a few supporters. Emcee of the famed Blast Off DX Net, Blast can be heard on 20 meters most mornings and evenings, working the world and helping a few lesser souls make an occasional contact. Blast last came through our area several years ago, at which time he got into a brief competition with the great Zedd. The signal from the antennas of A6A melted Blast's house trailer, leaving him momentarily a broken man.

HARLEY MINCEMEAT, from our neighboring state of Arkansas, may also attend the reunion. Harley, you will recall, operates the Momma's Lard factory outside of Hot Springs, and furnishes one of the basic ingredients for Q. R. Zedd RF Cream, the astounding commercial product that can make an ungrounded vertical outperform any 10-element Yagi. You just rub a little of that Q. R. Zedd RF Cream on there, and *all* the electrons fly out into space in search of your target station.

Others may attend. Zedd has issued open invitations on all bands, all frequencies. All you have to do, to be eligible for the DXers convention down there at Honor Roll, is meet the folowing minimum criteria:

* A minimum of 750 countries confirmed.
* Proven record of working a minimum of 400 DX stations a day, every day, for the last year.
* Amateur Extra Class license.
* Yodar Kritch or Chatanooga ChooChoo.

"Anyone who wants to make reservations," Zedd told us, "has to write to Box 73, Norman, Okla., 73070. Enclose your documentation and 500 greenstamps. You are all welcome, out there, if you are great enough to join us.

"Come on, guys," Zedd concluded, pitching another bundle of duplicate QSLs into the fireplace, "let's make this a great event! Bring your own sleeping bags and silverware! You may not be the greatest, since I am that, but don't hide your light under a bushel. Or your 3-500Zs, either!"

Special coverage of the great DX reunion is planned. Please stand by.

-- KU5B

Did Novice Enhancement Fail, or Did We Fail Novice Enhancement?

Not too long ago I read an "editorial" claiming that the rule changes known as Novice Enhancement had failed. Prima Facie, one might conclude that Novice Enhancement had indeed failed to achieve its primary goal: creation of more Novice Class license holders and amateur radio operators. There are some who expected Novice Enhancement to go further and provide salvation for little-used portions of our spectrum by encouraging these new novices to heavily populate these bands. I submit the thesis that Novice Enhancement did not fail.

We the amateur community already holding licenses, failed Novice Enhancement.

I readily concede that fewer Novices exist today than before the rules changes. The aggregate population of all license classes, though, has increased. Possibly it is less than desired or expected, nevertheless our population is bigger. One of the reasons we have fewer novices is actually part of the Novice Enhancement rules change. Along with the changes affecting novice privileges was a change not noticed by many except those giving license exams and those taking the Technician written exam. Known as Element 3, the 50-question written exam for Technician and General Class licenses was abolished and replaced with Element 3A and Element 3B. Both 3A and 3B are 25-question written exams. Technician Class applicants need only take 3A. Older Technician Class licensees who took all of Element 3 are "grand-fathered" and need not take a written exam to upgrade to General Class. Those who took 3A will have to take 3B for upgrade. The split of Element 3 into two exams of only 25 questions each makes upgrade from Novice to Technician relatively easy. As a VE, I have observed that the success rate on Part 3A is phenomenal. Most applicants for Technician licenses have only had their Novice license long enough to find the next VE exam session within driving distance to take Element 3A and instantly upgrade. Should we expect novices to remain novices when upgrade to Technician is so easy? This doesn't point to failure of Novice Enhancement, it points to the success of incentive licensing and the VE program.

Examine, now, why the incentive is so great to upgrade so soon.

What new privileges did we grant to Novice Class licensees under the Novice Enhancement program?

1. 222.10-223.91 MHz @ 25 Watts PEP
2. 1270-1295 MHz @ 5 Watts PEP
3. 28.1-28.5 MHz @ 200 Watts PEP CW, SSB, and digital

Number 3 is an expansion of the existing sub-band. Other than the expansion of 10 meter privileges, the VHF and UHF privileges are in portions of the spectrum that are in very little use in most areas of the country. Some of the reasoning was to encourage greater use of these bands. The rules change, though, prohibited novices from being licensees, control operators, or trustees of repeaters in the 220 sub-band, even if both input and output frequency fell into the novice sub-band (in most cases they don't). There is little activity on the 23 cm band for good reason. Very little commercial gear is available for this band at low cost. Only the truly hardy do-it- yourselfer build gear for this band. All sorts of exotic goodies are needed to operate on frequencies above our 450 and 900 MHz bands (even 900 Mhz pushes it some). It can be expensive to buy and building it requires great skill. The 220 privileges were geared for repeater and packet use. Other than the major metro areas on the East and West Coasts, how many repeaters are there on the 1.25 meter band? Not many! There aren't many packet BBSs, digipeaters, or nodes open for users either. Even in the major metro areas that have 220 crowding, many of the user systems are closed ones. Even if novices had been allowed by the rules to establish their own network facilities and repeaters, how many do you think would have spent that kind of money or committed themselves to the time demands of such activities? Could novices, many of whom haven't decided whether they will stay with amateur radio, be expected to make that kind of commitment? Could novices, most of whom are just beginning technically, be expected to know how to set up network facilities and repeaters effectively? Could we expect novices to use portions of our spectrum not in use by the main- stream of amateur activity? I think not.

We, the more knowledgeable amateurs, with higher classes of license and greater operating time have not provided our new novices with the kind of user services on 1.25 meters and 23 cm that are so prevalent on other bands. We gave them the barren territory, expected them to develop it themselves with all sorts of restrictions, and provided them with neither our presence

CONTINUED ON PAGE THREE

SUN	MON	TUE	WED	THU	FRI	SAT
APRIL S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23/30 24 25 26 27 28 29	1	2	3	4 AERONAUTICAL CENTER ARC	5 New Moon	6
7 GREAT PLAINS ARC	8 EDMOND CLUB	9 O U 76'ERS CIMMARON ARC OIDAR	10	11	12 First Quarter	13 SOUTH CANADIAN ARS
14 Mother's Day	15 VE EXAM 6 PM RED CROSS BLDG	16 OK CITY AUTOPATCH	17	18 ALTUS AREA A R A KAY COUNTY A R K	19	20 CENTRAL OKLAHOMA VHF CLUB Full Moon
21 EDMOND SOCIETY WHEATSTRAW ARC	22 Victoria Day Canada	23 CORA CORA CORA CORA CORA CORA	24	25	26 EDIT NIGHT FOR C & E	27
28 Last Quarter	29 Memorial Day	30 Traditional Memorial Day	31	MAY HAM HOLIDAY XVI THE LAST FULL WEEKEND IN JULY 28-29-30	JUNE S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	

Q. R. Zedd

SNOW JOKE: ZEDD TO HIT BACK

It's all well and good for you to scoff by the time you read this, because the snow is all melted now. But back in March -- at the time state colleges were starting spring break and it was time to paint the towers at Honor Roll Ranch, just a hoot and a holler south of town, Q. R. Zedd was feeling morose about the late blizzard and recent developments in the news.

The wind was blowing about 200 miles per hour that fine Sunday morning, which put the wind chill at 78 below zero. Down on Norman's Main Street, the hairless weirdos were selling frozen roses and Popsicles for handwarmers. And in the hamshack at Honor Roll, the world's greatest DXer had run out of dry firewood and had been forced to stoke the fireplace with duplicate QSL cards from routine DXCC countries like Vietnam, Ethiopia and North Korea.

Zedd, A5A, was not a happy man.

"I have decided," he told the assembled lesser radio amateurs, "that what we need right now, to boost our morale and prove we are still No. 1, is a reunion.

"OU's forty-nine team decided not to have their reunion as planned, and our community suffered another setback when KD5IT got too busy to write the club news for Collector & Emitter any more. I think we have had all the bad news we can absorb, so I have set up a reunion of some of this country's DX greats, and while it was not known to you guys, the thing was scheduled to start today.

"Unfortunately," Zedd went on, "this here blizzard going on outside right now has forced me to postpone the reunion one month, until right around April Fool's Day. But it is going to be a great event anyway, once we can get it going."

Then Zedd told us some of the operators who are going to attend his first annual reunion of the greats of the DX world. Here is a partial list:

LEGENDARY SURF, the great California DXer, has worked almost all stations. He operates The Surf Nerf DX net on 15 meters every day at noon local. This net includes all the really good stuff on a regular basis, and has list-takers on both U.S. coasts. Surf usually runs the net himself, putting out a good signal from his 17-mile rotatable rhombic.

DINGFOD ARMSTRONG, the best of the best from Texas' army of Gulf coast megawatters, works all DX at all times. In Houston, you can find your way to his QSL card storage building by locating the AstroDome and then walking east a few hundred yards to the lower warehouse building which has more floor space in it. You can usually find Dingfod near the DX station's transmit frequency. His most favored location is about ten down from the lower edge of the American phone band, from which vantage point he tells people when they are out of the band, calls them lids, etc.

BILL BUCKEYE of Ashtabula, Ohio, is still a force to be reckoned with despite the spirit that went out of him when Woody Hayes left Ohio State and later departed for that great endzone marker in the sky. Buckeye operates exclusively on CW and often works stations split -- one frequency with his lefthand paddle, one with his right, and a third with his specially designed nostril twitcher.

HIRAM TIKITOKI is Hawaii's best. He has been relatively inactive

CONTINUED ON PRECEDING PAGE