



Four States Amateur Radio Club Newsletter

Number 13

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Activities

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Transmitter Hunts- Bill, WD5HJF

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Instructional Classes

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Newsletter

Travis Bailey, K5AVH

Digital

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Skywarn

Al Parsons, KA5LPJ

VE Testing

Wes Bolin, WV5I

Emergency Co-Ordinator

Wimpy Johnson, KG5XF

Flea Market

Wimpy Johnson, KG5XF

R.H. "Cap" Caplinger, KG5ZJ

Nets

.62 Net Dave Woisard, N5MTQ

Swap Net Cap Caplinger, KG5ZJ

Digital Hal Clark, KF5YO

Display Booth

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Membership Chairman

Jack Goodson, KA5IQB

From The President

Pat, KG5SC

1990 can be a great year of the Four States Amateur Radio Club if we all work together. There are a number of activities planned for each month. The list of activities is outlined in a separate section of the onths newsletter. Many of you will be asked to serve on committees. I urge you to help when asked. That is the only way we can have a successful program. Don't forget to pay your dues. See you Saturday.

DX-ing

Pat, KG5SC

Do you want to have some fun?

If the answer is yes then you should be chasing DX with some of the other members of the club. We meet on 146.55 simplex most every afternoon to exchange DX information. It works very simply, you pass along the frequency and call sign of the DX stations that you hear and then try to help the others stations work them. It helps make the looking a whole lot easier and a lot more fun doing it with other friends. Believe me, with the bands being as active as they have been lately, it helps to have as many ears as possible. Without help you would miss more then you got.

Now to whet your appetitel have listed below some of the DX that has been worked by some of the club members.

Worked on 10 meters, 3Y5X (Bouvet), VU2WAP (India), XW8KVP (Laos), Iceland, and Tanzania: on 20 meters, LU1ZA (S.Orkney), 9K2CS (Kuwait), and HV3SJ (Vatican).

Many thanks to Wes, Travis and Don for a peek at their logs.

Now just to prove that you don't need an amp and a beam, the following was worked on a 100 watts and a dipole. YK5ALB (Australia), LA4TG (Norway), YO2BEH (Romania), TR8JLD (Gabon,Africa),C53FW (Gabon),3D2XV (Rotuma).

So long for now, see you on 55.

How Important is SWR?

Wes, WV5I

True or False?

1. Reflected power does not represent lost power except for an increase in line attenuation over the matched-line attenuation.
2. Reflected power does not flow back into the transmitter or amplifier and cause dissipation and other damage.
3. Any effort to reduce an SWR of 2:1 on any coaxial line will be completely wasted from the standpoint of increasing power transfer significantly.
4. The radiator of an antenna system need not be of self-resonant length for maximum resonant current flow, the feed line need not be of any particular length, and a substantial mismatch at the line-antenna junction will not prevent the radiator from absorbing all real power available at the junction.

If you answered true to these questions, you can go to the rest of this newsletter and not miss anything here.

If you answered false, you are either losing lots of sleep for no good reason (your line is not 1.005:1) or you are spending lots of work for questionable results (I'll prune that antenna one more time, I've almost got 1.005:1 SWR).

Now, if you make antenna tuners (transmatches), or if your rig doesn't have a pi-network, then you will spout the merits of low SWR. But, if your rig can match the load, or doesn't fold back in power output with SWR, then go ahead and operate because you will get out as well as if you had real, real, real low SWR. But remember, this is based on HF frequencies because line loss is almost negligible below 30 MHz. It becomes verrrry important on 440 MHz and up. The reason for this is simple to say, but more complicated to prove. Power that is reflected from the load back to the generator(transmitter) is in turn reflected again by the output circuitry of the transmitter to the antenna, where it is reflected again, etc. etc. etc. The only power lost is due to the loss(attenuation) of the transmission line. This amounts to 1 dB per 100 feet of line on 30 MHz, and about .3 dB per 100 feet on 3.5 MHz for RG-8/U or equivalent, for perfectly matched load. But since SWR means reflected power, the higher the SWR the higher the loss

through the cable. So, at 30 MHz with no SWR we have 1.0 dB loss, if we have an SWR of 3:1 (heaven forbid), the additional loss 0.5 dB.

If we were running 100 watts output from our rig, into the perfectly matched load at the end of our RG-8/U on 30 MHz, we would have 79.43 watts reaching the load(antenna). But since we have all this SWR, we actually have 70.79 watts reaching the load. I don't believe anybody in the world could tell this difference. This is a worst case HF example: the losses are much less on any lower frequency ham band. Is having about 9 more watts worth the bother? Where did the power (9 watts) go? It was dissipated as heat in the resistive losses in the cable. This heat dissipated over a 100 foot length will not make your transmission line warm. What about transmission lines? Which one is best? What if I want a transmatch? Which one is best?

These are topics for another time. If you want further information on SWR, see the ARRL antenna book and QST starting April 73.

I hope that this article will cause you less worry or heartache if your SWR is not perfect. Mine sure isn't on my 10 meter beam, and its not important.

Net Control

Dave, NSMT0

So far, so good.

Hal (KF5Y0) is doing a super job as net control this month on the Tuesday night net. This starts the rotation for net controllers doing the net. Schedule so far is.. JAN - HAL KF5Y0 FEB - WES WV5I MARCH - DICK W5NEU APRIL - DAVE NSMT0

The net is on Tuesday nights at 8 PM on 146.62, for those of you who may not know.

My thanks to Hal, Wes and Dick who have volunteered for a month to take the NET. My Schedule at work has me working swing shift 3 weeks out of 5. That is the reason for the rotating net controllers. If you would like to volunteer for a month (May - December is open), you can reach me at 792-7482. Your help would be greatly appreciated.

Till next time - don't forget to check into the Tuesday night net.

Business Meeting

The Four States Amateur Radio Club held its January Business Meeting Saturday January 13 in the Wadley Cafeteria. There were 26 members and 2 visitors present.

Pat,KG5SC, called the meeting to order and the minutes of the December meeting were approved as printed in the December newsletter.

Bill handed out the treasurers report for December and also a year end statement for 1989. The year end report showed a balance on hand at the end of December of \$266.29. He said that 31 members had paid their dues as of January 13 and that the balance in the bank as of this date is \$502.29.

Committee reports were as follows:

Al, KASLPJ read a roster for 1990 for those who were willing to serve at the BJC during emergency conditions. He said the new radio is now installed and there will be a training session in February for those who will be involved in the Sky warn program this year.

Hal, KF5YO reported that the Mena digi has been improved now and is doing a good job. He also announced that there is a new digi here in Texarkana on 145.07 for local QSO's, and that the Packet Net is having a good number of checkin's weekly.

Wes announced the next VE test session which is set for February 24th with 4 more tests set during the rest of the year.

Dave, N5MTO, said the .62 net has about 16 to 20 checkin's weekly. He also ask that anyone who could act as net control in February, March or April to contact him.

Bill, WD5HJF, said the first transmitter hunt of this year is scheduled for March 18.

Jack, KASIQB reported that Al, W5ENA is out of intensive care at Wadley.

After some discussion, April 7 was decided on as a date for our 1st annual Flea Market. The site for this has not been finalized at this time.

Pat KG5SC, gave a rundown of the planned activities which are scheduled for this year.

There being no other business the meeting was adjourned at 9:35.

THANKS!!!

Thanks to the Ham Radio Club for all their help in disposing of Marvin(Dick's) radio equipment after his death and a special thanks to Hubert Alvis for the many hours he spent helping to move the equipment. Marvin(Dick) loved the radio club. It was a big part of his life for many years. Your kindness and consideration was greatly appreciated.

Charline Dickenson

Digital Talk

Hal, KF5YO

The Mena digi is back up to 100%. With the help of several contributors from the Texarkana and Shreveport area, a high gain antenna was purchased for the Mena digi and installed facing south by the Fort Smith group. We now have a solid path into north Arkansas, which gives us the capability of connecting with Little Rock as well.

A second digipeater has been installed at Wadley Hospital on a frequency of 145.07. This will be used as a local QSO frequency and will keep a lot of clutter off the screens. It will I.D. with N5MTO-1 and will have a myalias of TXK. You will not have to change your unproto commands when going from the .01 to the .07 machine.

The Murfreesboro (MURF) digi is back on line again. This also gives us a solid path into central Arkansas. MURF hears Little Rock (LIT01), Hot Springs (SPA), and MENA direct. Shreveport has added a chat mode to there SHV digipeater. It is called SHVCHT and works by connecting with N5JH-1 then connecting to SHVCHT. Then hit return to be accepted. After you are on line you can type /WHO to see who is on and on what channel. You then select the channel number by typing /C "channel #". Example /C 7 will put you on channel 7. It is also best to turn your MCON and or MON to 0. To exit and log off type /BYE. Try SHVCHT. I

believe you will like it.

The packet net on Thursday nights has been very successful. We have been getting 15 to 20 check-ins each time and it has proven to be very informative

I would like to invite all those who haven't participated to tune in and check in with us next Thursday night.

For Sale: Kenwood TH-25AT 2M handheld radio with battery charger and speaker mic. \$230.00
Also PK-88 TNC Packet Controller with power supply. \$110.00 or both items together for \$310.00. Dave, N5MTO 792-7482

Calendar

FSARC 2m Net (146.62)

Lunch

Digital Net (145.01 Packet)

DX Net (146.55 Simplex)

Dining Out

Troubleshooting Class

Skywarn Seminar

VE Testing

Each Tuesday 8pm (Swap Net Follows)

Each Wednesday 12 noon Mr. Gatti's State Line

Each Thursday Night 8:30pm

Daily 7-8am and 5:30 pm until

Friday Feb. 2 (time & place to be announced)

Saturday February 17th 9am Wadley Cafeteria

Tuesday Feb. 20 First Methodist Church , Naples, Tx

Saturday February 24 9am Wadley Hospital

Skywarn

January

February

Wimpy, KG5XF

Bill, WD5HJF

Al, KA5LPJ

Jack, KA5IQB

Four States Amateur Radio Club
18 Highland Hills
Texarkana, Ar. 75502

First Class Mail