LODI AMATEUR RADIO CLUB
N6SJV

NEWSLETTER

August 2022

NOW HEAR THIS!

PRESIDENT'S CORNER

K6AAN, Mike Dugger

Greetings to All,

Pursuant to our post event discussions at the general meeting, I am following up on some equipment needs. The club only owns two HF antennas at this time. We currently own five HF radios that can be used for any purpose we choose. My goal is to get additional antennas built so each radio will have its own multi band antenna, jumper cables and any other mandatory equipment ready to go. The funds generated from the recent raffle events, along with components donated by members will get this done in the very near future. A list of equipment needed has been compiled and the board will work on getting a few more items that will make our club events more comfortable, as well as having the right equipment for the task.

There was a decision made at the last board of director's meeting to obtain a post office box for the club. Our treasurer will be taking care of the details for the new post office box and an email will be sent to the entire membership with the new address, etc. Please be sure you make the appropriate changes in your personal records so any mail you send to the club goes to the new address. Changes to the club website, membership forms, bank records etc. will be happening soon. We are still looking for someone to step up and take the task of providing weekly contest information updates for the net. If you have an interest in helping out, please send an email to LodiHams@gmail.com.

Our next general meeting is scheduled for Casa Flores Restaurant, August 4, at 1830 hrs. There is a presentation scheduled on *"HF Propagation and The Solar Cycle"*, by N6TCE Bob Officer. This training will provide a basic understanding to a very complicated subject. Many thanks to Dave Voit WB6TOU for undertaking the weekly net updates on propagation and space weather. Finally, there has been a change regarding the monthly club newsletter. Our Vice President KK6ES Erich is going to take over the editor duties from N6GKJ Ron, starting with this issue. I want to express my sincere thanks to Ron Simpson for all the work he has put into keeping the newsletter going. Job well done! Many thanks to Erich for taking over the editor position in addition to his duties as Vice President. Hope to

see many of you at the upcoming meeting. As always, there will be a nice raffle going on with tickets available for the big end of the year drawing too!

73!
Mike

QST, QST!

New Club Address
1030 S. Hutchins St., Ste. 4-127
Lodi, CA 95240-5251

FROM THE VICE PRESIDENT

KK6ES, Erich Sullivan

Greetings! Some of you may have heard announced on the last couple nets that we have a new item for sale! Previously mentioned during the last club meeting, one of those are new club name badges, available in a dark and light color theme. The newest item at the helm, are club coffee mugs! The coffee mugs are 15 oz. sporting our new club logo, with the option to have your call sign and/or name printed on the opposite side.

You can order these directly, by going to www.paws4designs.com or by clicking the link in this newsletter. All orders placed will be brought to the next club meeting for pick up.

Keep an eye out; There may be new and different items available in the future!

Looking forward to seeing everyone at the next club meeting! Take care and stay cool during these hot summer months!

73,
Erich

FROM THE TECHNICAL DIRECTOR

N6GKJ, Ron Simpson

Changes to the WB6ASU Repeater System:

As some of you have noticed, the repeater system although working is not quite up to par. There are still some issues yet to be resolved. We have developed an issue with the time clock giving the wrong time. It could be as simple as a power spike glitching the clock board. The next trip to the repeater site will be to look into this and implement a fix. We still have more work to do up there.

There is a new antenna to be installed and duplexer alignments for VHF and UHF. I am still putting together the 900 MHz repeater for Bear Mountain. There is a slot in the cabinet already set aside for it. We appreciate your patience with our issues!

Technical update to our Packet Radio Network

As some of might be aware, the LODI03 Packet Node has failed after many years of operation. Since BEAR03 is working very well, Tom WA6OSX has decided to pull that gear and replace it with something more useful. We will be installing an APRS UIDIGI in its place on 144.39 MHz. This new node will operate using the WIDE1-1 mode. This will be a full digipeater.

I have the node gear in my possession now and it will go online shortly. Those of who play with APRS should appreciate this fill-in node. Tom Daley, WA6OSX is also continuing to test the packet node on Bear Mtn. We have determined that the 2M repeater TX is causing an issue with RX performance in the packet transceiver. We will be installing a filter to help mitigate this issue.

As of **Sunday, March 27, 2022** the packet radio transceiver at Bear Mtn. was replaced and a battery backup system was installed. All is working great and back to normal.

As of **Saturday, February 12, 2022** we now have 145.03 MHz operational on Bear Mtn. This node is labeled as BEAR03.

As of **Friday Nov, 26 2021** the packet node frequency on Gopher Ridge has been changed to 145.07 MHz, the reason for the change is in keeping with the statewide plan to keep emergency communications on 145.07 MHz. Secondarily this frequency is not as busy as 145.03 MHz.

Sites and Frequencies for the N6SJV Packet Network

- **Lodi** - 144.39 MHz - n6sjv-1 - APRS Digi
- **Gopher Ridge** - 145.07 MHz - GOPHER (Statewide Emergency)
- **Bear Mtn** - 145.03 MHz - BEAR03

There will be a WinLink2000 Server tied to 145.03 MHz for San Joaquin County. The location of this server is still TBD.

FROM THE NET DIRECTOR

N6TCE, Bob Officer

Hello all. I want to thank everyone for checking into the Lodi ARC nets. The Simplex Net, continues to teach us how to use our radios in non-repeater mode.

Last summer we suffered multiple Public Safety Shutdowns and lost the use of the repeater. Other area repeaters were threatened by fire. We are prepared for shutdowns no matter what the cause. No repeater? Keep listening on the repeater output frequency. Most users know if there is a repeater outage, to transmit on the output frequency. Someone will hear you.

The Wednesday evening repeater net saw the return of a solar weather report. Thanks to Dave, WB6TOU, for stepping up and filling that need. Confused about what those numbers mean? Don't worry, there will be a presentation on Solar Weather at the August meeting. Those numbers do effect VHF.

I am still looking for a person to give a short contest/DXpedition round-up on the Net. It doesn't have to be long. It adds interest to the net. Remember these are your nets. Tell us what makes them interesting and fun. Feedback is welcome.

Below are the Net Controls for this month. Substitutions are possible:

August 2022	8/3 KK6ES	8/10 KN6STN	8/17 K6ZZD	8/24 K6AAN	8/31 KK6ES

Bob Officer, N6TCE
Net Director

SAN JOAQUIN COUNTY ARES

N6TCE, Bob Officer

This month is gone, several events took place this last month. Most notable is the San Joaquin County Health Care Coalition Hospital Drill. Normally this drill takes place during odd numbered months, usually on the third or fourth Thursday.

So how does this effect the SJCARES group? We check-in as amateurs. Phil Cook from San Joaquin County listens to our opinions. Most of these Amateurs only operate during drills. We can learn what they do and how they handle messages.

Disaster response requires more than a person showing up with a radio. ARES' goal is to provide the training to the standard which the served agency will need.

Emergency Responders speak a common language, today. That is the language of the National Incident Management System. Amateurs need to know how to operate inside the management system to be useful.

The latest need it appears, is field situation reports. To fill that need, is a tool developed years ago called Winlink, an Email over RF digital packet system. Added to this older application is a set of forms. The only information that is sent is what you fill in the blanks on the forms. The entire message is recreated on the receiving end. Doing this saves time and removes errors in traffic handling.

September will hopefully see a return of *Packet Saturday*. Packet is fun and it is useful once you understand how to make it work, needed for emergency communications.

Bob Officer
ARRL's Emergency Coordinator for San Joaquin County

Why I Became a Ham

Share your story! If you are interested, write a few paragraphs about why you became a ham radio operator and what you would like to achieve. We would be happy to hear from you!

Please submit your story to LodiHams@gmail.com no later than the 25th of the month!

SAT-OPS!

INTRODUCTION TO SAT-OPS – PART II

K6ZZD, Barry Marson

Let's get down to business. Last month I explained how to locate the FM satellites as they pass. I gave suggestions for computer and phone apps that you might use. I also suggested a website for new operators. So, you have done your homework and you are ready to make a contact.

Of course, you will need some **equipment**. First, a radio. You have several options.

1. You can use a 5-watt handheld in split mode. Using SO-50 as an example, program the TX frequency on VFOa, 145.850. The receive frequency will be on VFOb 436.795+/-. For some satellites TX is UHF and RX is VHF.

SO-50

Channel #	Alpha	TX Freq	TX Tone	RX Freq	RX Tone
501	50 +2	145.850	67.0	436.805	None
502	50 +1	145.850	67.0	436.800	None
503	50 74	145.850	74.4	436.795	None
504	**SO-50**	**145.850**	**67.0**	**436.795**	**None**
505	50 -1	145.850	67.0	436.790	None
506	50 -2	145.850	67.0	436.785	None

***HINT#1**: In this case, the receive frequency changes as the satellite passes. Remember low earth orbit satellites, or LEO's, travel at around 17,000 mph. SO-50 transmits at 436.795 but the radio waves are compressed as the satellite moves toward you, increasing the frequency. As the satellite moves away from you the radio waves stretch and become longer, decreasing the frequency. This effect, the Doppler Effect, is important for the 70 cm band but is insignificant for the 2 meter band. In the example above taken from the Work-Sat website (https://www.work-sat.com/ewExternalFiles/EASY-SATS-12192021.pdf) several memory channels are preprogrammed. You only need to move from one channel to another as the satellite passes. Channel 503 above is only important if you are the first station to activate this satellite, not likely to be an issue. I don't program that into my radios.*

2. You can use a 5-watt handheld (or any other radio) with dual receive. Everything in the above hint still applies, but you won't need to operate split. Options 1 and 2 are referred to as semiduplex. You cannot receive when you are transmitting. So, you cannot "hear yourself" to make sure you are hitting the satellite.

3. You can use 2 radios, one to transmit and one to receive. I have had the best luck with this method. Two handhelds will work. I am currently using two FT-817 radios for portable operation. This method is referred to as full duplex. You can transmit and receive at the same time. I often use headphones on the receive radio to avoid feedback.

4. I am aware of one handheld that operates full duplex, Kenwood TH-D72. I own this radio and it is a winner. Unfortunately, it is out of production. It may be available used.

5. You can invest in a very expensive radio that has satellite capability, an ICOM IC-9700 for example. (Go for it. It's only money. Who says you need to eat every day.)

You will also need an **antenna**. Again, you have some options.

1. You can use the after-market antenna that you probably already have on your handheld. Hold it perpendicular to the satellite's position. It's easy to listen, but it can be more difficult to make a contact.

2. You can buy a 2 meter/70cm yagi that can be handheld. I use an Arrow model. (https://www.arrowantennas.com/arrowii/146-437.html) This antenna has one 70cm connection and one 2m connection allowing you to use two radios. They also offer a duplexer that fits in the handle if you want to use a single radio. Elk makes a very good log periodic for 2m and 70cm, but there is only a single antenna feed point. (https://elkantennas.com/product/dual-band-2m440l5-log-periodic-antenna).

I use both antennas for different situations. For me the Arrow was a good starting point. Opinions differ.

3. You can use your base station antenna. It will be most effective when the satellite is lower on the horizon.

4. On the web you will find several plans to build a homebrew yagi.

Your decision will depend upon your budget and your level of interest.

***HINT#2**: Satellite activity can be fast and furious. You are using a repeater that can only accommodate one transmission at a time. The exchange is simple, call sign and grid square given phonetically (kilo six zulu zulu delta, charley mike niner eight), but when I have my hands full of radios and antennas, I cannot write anything down. I need to depend upon my memory, which is not as good as it used to be. I have started using a small recorder strapped to the receive radio. After the satellite pass, I sit down and listen to the recording and get all the information I need. If you are working at your home station, it will be easier.*

***HINT#3**: We assume satellite antennas are vertically polarized. However, satellites tumble in space so the polarity of their antennas can change at any given time. If you are listening and the satellite goes silent, its because it has moved to horizontal polarization. A handheld yagi will allow you to rotate from vertical to horizontal during the pass if necessary.*

***HINT#4**. You do not need a lot of power, just patience. 5 watts should do the job. The SO-50 satellite is transmitting only 250mW. Ideally, there should be nothing between you and the satellite but sky.*

Please contact me if you have any questions. You can reach me via email, at dbmarson@comcast.net.

NETS & MEETINGS

WEDNESDAY NIGHT NETS

We have two nets, weekly on Wednesday nights:

- 6:30 PM – **Simplex Net**, 147.090 (No offset, No PL)
- 7:00 PM – **Weekly Club Net**, 147.090 (+600 kHz offset, PL is 114.8 Hz)

CLUB MEETINGS

Our club meetings are held the first Thursday of each month starting at 6:30 PM, located at **Casa Flores Restaurant, 400 E Kettleman Ln, Lodi CA**.

The meeting starts promptly at 6:30. If you plan to eat dinner then arrive early as usual. We do plan to have a raffle so bring your piggy banks!!

Next Club Meeting – August 4th!

CONTACT US

Lodi Amateur Radio Club
1030 S. Hutchins St., Ste. 4-127
Lodi, CA 95240-5251

LodiHams@gmail.com
lodiarc.org

EVENT CALENDAR

AUGUST 2022 EVENTS

- **7th & 8th** - 222MHz & up Distance Contest
- **21st & 22nd** – 10 GHZ & up Round 1 (Contest)
- **22nd** - Rookie Roundup – RTTY

SEPTEMBER 2022 EVENTS

- **11th thru 13th** – September VHF Sweepstakes
- **18th & 19th** – 10 GHz &up Round 2 (Contest)

FOR SALE!

VIRTUAL SWAP MEET

The following two items are from the Estate of Jim Seiferling. These items are for sale. All interested parties will have to make contact via the listed email address only. **DO NOT CONTACT** Emilia directly please. She has asked to not be involved in this process.

- **Elecraft KX3 - $1500**
  Used Elecraft KX3 in excellent condition. Bought from Elecraft fully assembled. **Includes:** KXFL3 Roofing Dual Bandwidth Filter for SSB/CW/DATA, KXAT3 Internal Wide-Range 20-W Automatic Antenna Tuner, KXBC3 NiMH Charger (w/ fairly new Panasonic eneloop BK-3MCCA 1900 mAh rechargeable batteries), KX3-2M Internal 2-Meter Module, MH3 Microphone, KXUSB-a cable, 12V power cable and Operating Manual. **Extra Items Included:** Low Rider stand by SOTA beams, KX3 Nifty Mini-Manual, Book: The Elecraft KX3- Portable by Fred Cady KE7X.

  Contact Ron Simpson, N6GKJ n6gkj1@gmail.com for information.

- **Bioenno Based Battery Box - $575 OBO**
  with N8XJK Super Booster. This batter[illegible] kit was used by Jim very successfully without fail or disappointment. To build this same system would cost $750 or more. Includes brand new battery charger. This is a good value!

  SOLD!

  Contact Ron Simpson, n6gkj1@gmail.com for information.

- **Ameritron, AL1200 – Make reasonable offer**
  High Power HF Amplifier, covers 160-15M, with an easy convert to 10M. Factory wire for 220-240V. Runs a very cool 1200 watts output, 1/2 hour 1500 Watts. Driving power approx 100w for FULL output. Weighs 77 lbs, 18 1/2X 17 X 10. Date of purchase 8-12-91. Was used approx from purchase date until approx. 2005, approx 3 hours a week during that time. Has been sitting idle in shack since. I no longer need high power. New AL-1200's from MFJ (Ameritron) are approx $5,999.95! I also have the QSK-5 (new) but haven't installed it.

  If anyone is interested they will have to make an offer, until I can find what used ones are going for.

  Contact Mike Zane, n6zw@comcast.net

Interested in posting something for sale here? Please send your request to LodiHams@gmail.com to be considered for the next newsletter!