



Loveland Repeater Association Newsletter

The official organ of the Loveland Repeater Association--a non-profit organization supporting all aspects of Amateur Radio in the Loveland area.

LRA Officers	
President.....	Dennis "Duff" Dyer, N9KKH, 593-9984, ddyer@lvld.hp.com
Vice-President.....	Ted Cline, N0RQV, 593-9303, ted_cline@hp.com
Secretary/Treasurer.....	Rick Kile, WB7THT, 962-9179,wb7tth@aol.com
Editor.....	Rick Kile, WB7THT, 962-9179,wb7tth@aol.com
FM Repeaters	
2 Meters.....	147.795/147.195 MHz (100 Hz Sub tone; 1* on, 0* off)
440.....	449.575/444.575 MHz (100 Hz Subtone; 1* on, 0* off)
Packet Node W0KKT/W6PQS.....	144.91 MHz
Interference Coordinator.....	Ted Cline, N0RQV, ted_cline@hp.com593-9303
General Repeater Maintenance.....	Dennis "Duff" Dyer, N9KKH 593-9984, ddyer@lvld.hp.com

President's Corner

From Dennis "Duff" Dyer, N9KKH

This month's meetings program is going to be a new item that all of you asked for back in January at our organization meeting. You asked for some programs on our members, their jobs, and what they do. So I asked our own Bob Schmidt WA9FBO to come give us a talk about his commercial side of SCOM. We all know about the amateur side but Bob's got a whole business in the commercial industry supplying controllers, autopatches and the like to railroads, government, and the commercial users. Next month I hope to have the Loveland Emergency Management Coordinator come talk to us about ham radio in an emergency. Maybe we can even talk him into telling us some stories about the earthquakes in CA when he was there.

I've also completed the club brochure to be used in our membership mailings, field day, July 4th, and any other PR activities. Quantities will also be given to places like Radio Shack, Red Cross and the Chamber of Commerce. These brochures will also be available for you to give friends, coworkers or anyone interested in ham radio. Going along these same lines we are developing packets of information about amateur radio, club membership packets and new member packets. We're hoping to have the first batch of club mailings to non-members in the mail by the middle of March. At the meeting I will have samples of the brochure, packets, and the mailer letter for your approval.

I've talked to the Loveland Parks Department about the July 4th display at the fireworks in the park. From our

discussion I learned that they are more than happy to accommodate non-profit clubs like ours for the day. Dennis Agosta KB0RFA has volunteered to chair this event. He is going to need some help though. At this time we don't know what exactly our location in the park will be but a priority is some easy antenna supports. This is the weekend following field day but should be a good time. Bring the family to the park and give a few hours to the club talking about your favorite hobby. We'll have plenty of PR materials available.

It's time to start planning FIELD DAY and we need a chairman for the event. This person needs to make sure everything is in order. Finding band coordinators, ordering a porta-potty, appointing a food chairman, getting the generator and so on. It's not really hard when everyone pitches in and the band coordinators are responsible for their radios and operators.

It's MARCH and that time of the year marks our deadline for membership dues. This is your last newsletter and by the end of the month your macros will be removed from the repeater. We don't like this time of year as we always lose some friends, make sure we don't lose you. RENEW NOW!!!!

**February 98 Meeting Report
From Rick Kile, WB7THT**

The meeting was called to order by President Dennis "Duff" Dyer, N9KKH. Following introductions, the treasurer's report was given by Rick Kile, WB7THT. Duff gave a short repeater report, noting the primary antenna for the 2 meter repeater has failed and is beyond repair. The repeater is operating on the backup 2 meter antenna. After a short discussion on the merits of amateur vs. commercial grade antennas, it was decided to order a new Hustler G7144 antenna as a replacement. Ted Kline, N0RQV, provided a short video which highlighted the LRA repeater site. Randy Long, WB6AVV gave a short ARES report. The Poudre snow pack is above normal, and he cautioned ARES members to be prepared. Dennis Agosta, KB0RFA, gave a report on the status of the current licensing classes and thanked the team of instructors for their efforts. The graduates of the most recent class donated \$60 to the LRA. The next class was scheduled to begin on 13 February. Dennis is also looking into a General class upgrade session. Ted, N0RQV showed an additional video which detailed the Loveland Star, located at the repeater site. Duff led a discussion outlining options for LRA support of the Loveland Star in the future.

Our hosts at the Wayside Inn requested an increase in the price of our monthly buffet to ensure they covered their costs. Members present agreed to raise the price to \$6.00 effective with the March 98 meeting.

**From our Secretary/Treasurer for February 1998
From Rick Kile, WB7THT**

Our bank balance was \$2,041.58 on 27 February 98. This includes \$201.00 which has been donated to the Repeater Fund, and \$1,400.00 in membership renewals for 1998. Details of account activity through 27 February 98 are shown in the following table:

Beginning Balance as of 1/29/98	\$2,049.94
Credits	
Dues	\$320.00
Repeater Fund	\$0.00
Ham Class	\$60.00
50/50 Drawing	\$15.00
Debits	
Newsletter	(\$50.40)
Public Service	(\$15.94)
US West	(\$22.62)
ARRL Insurance	(\$85.50)
Postmaster	(\$58.00)
Antenna	(\$169.90)
Bank Charges	(\$1.00)
New Balance as of 2/27/98	\$2,041.58

**Membership Renewal
From Rick Kile, WB7THT**

March is the final month of the annual membership drive. I have included the membership renewal form at the end of the newsletter. Our membership in 1997 was 113, including 26 family members, and 87 paid up members. Membership renewals through 27 February total 70 paid memberships and 18 family members, for a total of 88. As you can see, we still have quite a few membership renewals to go. Please take a few minutes to fill out your membership renewal form and send it in, or bring it to the next club meeting. Members who do not renew in March will be dropped from the mailing list.

**Mir Resumes School Contacts
From the ARRL Letter**

It's been a long, dry spell for schools that have been waiting for a chance to have their students talk to Mir. But that drought has ended. Amateur Radio contacts between the Russian Mir space station and schools--on hold since a series of problems plagued Mir last year--resumed this week. Aboard Mir, US astronaut Andy Thomas, KD5CHF, spoke with youngsters at schools in California, Colorado, and South Carolina. Another Mir contact with a school in Wyoming is set for March 3, and additional Mir-school contacts are in the works, possibly for later in March.

On February 23, Thomas spoke with youngsters at Shell Beach Elementary School in Pismo Beach, California. The pupils got to ask Thomas 10 questions during the 10-minute contact--made possible through a telebridge connection via W5RRR at Johnson Space Center in Texas. AMSAT Technical Mentor Bill Hillendahl, KH6GJV, said the children practiced their on-the-air performance several times during the previous week until they had it just right. "After the session with Andy, the kids were very excited"; he said. More than 125 other pupils and adults were on hand at the school during the contact, which was covered by local news media.

The following day, February 24, ten equally excited kids at Prairie Hills Elementary School in Colorado Springs, Colorado, got their chance to speak with Thomas via WA0VTU, the club station of the Pikes Peak Radio Amateur Association. As an audience of around 350--including TV and newspaper reporters--looked on and listened in, Thomas described his activities on Mir and answered six questions. A local repeater retransmitted both sides of the contact. Signals were reported generally good but with some static.

On February 26, pupils at Buist Academy in Charleston, South Carolina, fired off a dozen questions. Thomas--using his Australian-issued VK5MIR call sign for the telebridge contact via VK5AGR--managed to answer 11 of them during the 10-minute contact. In one answer, Thomas spoke of the importance for those in space to have radio contact with Earth to keep in touch with friends and family (he expressed similar sentiments during a NASA press conference where he extolled ham radio as immensely helpful in combating the loneliness of space flight). In answering another question about the value of international cooperation in space exploration, Thomas declared, "Space doesn't belong to any one country. We have to share it". An audience of approximately 50 people, including news media, was on hand for the contact.

Some of the schools on the latest schedule originally had been scheduled to talk with US astronaut Jerry Linenger, KC5HBR, who was aboard Mir for the last school-Mir

contacts a year ago. Arranging the latest contact schedule took several months and was complicated by equipment malfunctions aboard Mir and--more recently--by the change in crews.

AMSAT Vice President for Manned Space Programs Frank Bauer, KA3HDO, said this week he's pleased that the school contacts logjam was finally starting to clear. "It was exciting to hear the students' reactions to the contacts and rewarding to know that we have provided an experience to these communities they will never forget", he said.

The school contacts--carried out on 70 cm--were a new experience for the pupils on Earth and for Thomas aboard Mir. In the first few weeks of his stay, Thomas had logged very little time on the spacecraft's Amateur Radio equipment because of the crew's busy schedule. But he did make some contacts earlier this month on 70 cm using the R0MIR call sign. The 46-year-old Australian native will work aboard Mir until June.

Pikes Peak Hams Contact MIR!

From Rob Roller, N7LV

What a thrill! About 300-400 kids in the gym, all three networks with a video crew there, 10 excited kids waiting to ask their questions, and a great crew of radio operators and video camera operators. All of this came together at slightly after 9:07 this morning when we finally made the contact with Andy Thomas on Mir.

All the people in the gym watched closely as the overhead display showed Mir on its track to Colorado Springs while they listened to the static over the gym's PA speakers. When Andy Thomas' voice broke through, I'm sure I could hear plenty of suppressed "Yea!" expressions. Andy talked for several seconds, describing what he's doing on the Mir. Then the kids asked their questions and Andy answered all that he could hear. By the seventh question, Mir was dropping rapidly toward the horizon and we were losing the signal quickly. Unfortunately only six questions were answered by Andy, but the rest were answered by our two speakers.

Following the contact, two speakers answered yet more questions for about another half an hour from excited kids. Maj Mike Caylor from the USAFA and Eric Joern, with about 10 years experience training the astronauts, answered many more questions for the next 30 or 40 minutes.

If you were listening to the 146.97 Pikes Peak FM Assn repeater, you'd have heard a retransmission of both sides of the contact. I personally didn't hear it, but I heard second-hand that it was quite clear.

Gotta say "Thanks!" to all that helped out. This really couldn't have been done by just one or two people. It really was a team effort, from the people that loaned the equipment, to the people that helped with the installation of the antennas, the publicity to get the word out, to those that came this morning and to the staff at Prairie Hills Elementary.

We'll probably put together an edited video and get it documented in other ways. I'll add a bit more detail shortly. Thanks very much to all that helped! Rob, N7LV

Next Meeting

The next LRA meeting is scheduled for Saturday, 7 March 1998, at the Wayside Inn in Berthoud, CO. A buffet breakfast is served at 8:00AM and includes scrambled eggs, bacon, potatoes, biscuits and sausage gravy, french toast, juice, and coffee for \$6.00. The business meeting starts at 9:00 AM.

Repeater Update

From Dennis "Duff" Dyer, N9KKH

As you know from last meeting the repeater is on a backup antenna system. We have acquired the replacement antenna and am just waiting for some decent weather before climbing the tower and replacing it. Until then, realize that our coverage is a little limited and the backup antenna gets quite noisy whenever the wind gets strong.

I have removed the 440MHz system from the hill to begin repairs on it. Just as soon as it is repaired we will re-install it up on the hill.

In the past the club president has been the one involved with the programming of the repeater controllers. I'm looking for someone to perform that task so that we all get involved, not just one person. It involves some knowledge about basic repeater operation and about 1 hour of work each month doing macro maintenance. If your interested please let me know. The club has the manuals and the programming software, you need a computer and a modem

New ARRL Book - RF Exposure and You Now Available From the ARRL Letter

If you're worried about how to comply with the FCC's new RF exposure requirements, then you'll want a copy of the new ARRL book RF Exposure and You by ARRL Lab Supervisor Ed Hare, W1RFI. RF Exposure and You became available just this week.

As ARRL Executive Vice President Dave Sumner, K1ZZ, put it: "The new RF exposure rules are now a part of the regulatory landscape and are likely to remain so." RF Exposure and You is the best way available to ease the transition", Sumner said.

This book communicates one simple message: For the vast majority of Amateur Radio operators, the RF exposure rules are not difficult to understand and follow. At 320 pages, RF Exposure and You contains all the background information, suggestions and worksheets you'll need to help you comply with the new RF exposure rules and to operate your station legally and safely.

Hare said that preparing the book was "a real challenge and a real collective effort." "The result is a book that's probably the first of its kind. I have never seen this information pulled together in one place before," he said. ARRL Headquarters staff and volunteers (including the ARRL RF Safety Committee) participated fully with the FCC as the Commission determined the best advice to give amateurs on how to meet the new requirements. The League was able to persuade the FCC to reconsider its rules, and to rewrite them so that amateurs would be less affected. Hare says it took a lot of teamwork between Headquarters staff and outside volunteers to have the book printed and available in just three months.

A. J. Kruger, K7CMM, of Arizona, placed the first advance order for RF Exposure and You early this year. This week, Hare personally autographed the first copy out of the box-- indicating it was the first copy purchased from ARRL Headquarters. The order went out this week.

RF Exposure and You is \$15 (plus shipping and handling). Order Item #6621. To order your copy, visit your local Amateur Radio retailer or the ARRLWeb, <http://www.arrl.org/catalog/6621> or call toll-free 888-277-5289.

Upcoming Swapfest Information

May 2, 1998: Pikes Peak RAA, Colorado Springs, CO
Contact: Ron Deutsch, NK0P

4305 Ridgeland Dr., Colorado Springs, CO 80918
May 30, 1998: Northern Colorado ARC, Loveland, CO

Contact: Michael Robinson, N7MR
2236 Silver Trails Dr., Fort Collins, CO 80526
970-282-1167

March Contest Information

March 7-8: ARRL International DX Contest, phone

March 14: QCWA QSO Party

March 28-29: CQ WW WPX Contest, phone

Solar Update

From the ARRL Letter

Solar savant Tad Cook, K7VVV Seattle, Washington, reports: Solar activity retreated again last week, with average sunspot numbers down 20 points and average solar flux down about five. Geomagnetic conditions were relatively quiet. Quiet conditions are expected to continue over the next few days, with the solar flux February 27 through March 1 predicted to be 93, 92 and 90. Stable geomagnetic conditions should be good for the Worldwide 160 Meter DX Contest this weekend. Currently the most active solar region is number 8164, with 18 sunspots.

Over the next week look for solar flux to drift below 90, then rise above 90 after March 8, above 100 around March 12, and below 100 by March 18. Over the next month the hours of daylight will increase in the northern hemisphere, and we can look forward to typical spring conditions with more daylight openings on the higher bands. A chart on the web at <http://www.dxc.com/solar/cyclcomp.html> compares the current solar cycle, now 21 months old, with the two previous cycles, dating back to June 1976. This is part of the DX Listener's Club of Norway Web site mentioned in a previous report. The monthly smoothed sunspot number is obviously lagging for this cycle, and the month-by-month graphic comparison makes this very clear.

K7EEC wrote to ask: "If flux numbers are high, does this mean that propagation is probably better?" He also asked what the flux numbers measure.

High solar flux is good for HF propagation, especially if A and K indices are low. During the peak of the sunspot cycle the solar flux is higher. Solar flux is a measurement of radio energy emitted by the sun at 10.7 cm--or 2800 MHz. This seems to correlate with ionization of the ionosphere. The

denser the ionization, the higher the frequencies that it can reflect. More information can be found in chapter 21 of the 1998 edition of The ARRL Handbook for Radio Amateurs and in The New Shortwave Propagation Handbook, by Jacobs, Rose and Cohen, published by CQ magazine.

Your questions and comments are welcome via e-mail to tad@ssc.com.

Sunspot numbers for February 19 through 25 were 57, 29, 28, 38, 59, 78, and 69 with a mean of 51.1. The 10.7-cm flux was 98, 95.7, 94.8, 95.5, 99.4, 98.6, and 94.7, with a mean of 96.7, and estimated planetary A indices were 7, 7, 4, 6, 11, 3, and 4, with a mean of 6.

Interesting Ham Related Web Sites

The Boneyard Bluebook is back (well kinda!) Are you curious about the value of your boatanchors? Not sure what you should pay for a KWM-2 this year? Try consulting the BONEYARD BLUEBOOK available online at:

<http://www.mnsinc.com/ham/boeyard.htm>

It's just getting started! I am going to add a lot more soon. If you see any BA brands that I missed out, please let me know!

73 de AF4K - Bry

Here is a great site of photos of ham equipment (an encyclopaedia)... located at:

<http://www.aade.com/hampedia/hampedia.htm>

73 de WORW

Phase 3D Status Update

From the ARRL Letter

The Phase 3D Amateur Radio satellite is approximately 90% complete, and work continues at the Integration Lab in Orlando, Florida, to get the package ready for launch later this year. AMSAT officials remain optimistic that the Phase 3D payload can hitch a ride aboard the European Space Agency's next Ariane test flight, AR-503. It's expected that AR-503 will lift off in late spring or early summer from Kourou, French Guiana.

QST Managing Editor and satellite columnist Steve Ford, WB8IMY, recently visited the Integration Lab. He says he was impressed by the way the AMSAT Phase 3D team has managed to keep down costs by manufacturing many expensive-to-buy items themselves. "In the best ham tradition," Ford says, "they also 'shopped smart,' getting donated gear and components whenever possible or procuring components at bargain prices".

Ford and other presenters attracted nearly three dozen satellite enthusiasts to a workshop during the Orlando Hamcation the weekend of February 13 and 14. Ford says the workshop attempted to bust the myths that satellites are hard to work and that setting up a satellite station is expensive. Other presenters in the five-hour session included Barry Baines, WD4ASW, Steve Bible, N7HPR, Dick Jansson, WD4FAB, and Keith Pugh, W5IU.

US To Participate In CEPT Guest License Arrangement From the ARRL Letter

US amateurs soon will not need to apply for reciprocal licenses in order to operate during short visits to most European countries. While an official announcement still may be a few weeks away, it's been learned the US request to participate in the European guest license arrangement has been approved. Similarly, most European hams visiting the US no longer will have to submit FCC Form 610A.

Last September, the US State Department applied for US participation in the European Conference of Postal and Telecommunications Administrations (CEPT) Amateur Radio licensing system. A holders of a CEPT license can operate in CEPT-participating countries without having to apply for a reciprocal license.

Approval of the US request came in late January at a meeting of the CEPT Radio Regulatory Working Group (WGRR), in Groningen, The Netherlands. The European Radiocommunications Office (ERO) has been instructed to officially notify the FCC of the decision approving US participation.

The State Department's action came at the urging of the ARRL that the US take advantage of the CEPT

Recommendation T/R 61-01 arrangements and issue a license that would be recognized by CEPT-participating administrations and would be valid for brief visits.

Also last fall, the FCC proposed amending the Amateur Radio rules to make it easier for hams holding a CEPT license or an International Amateur Radio Permit (IARP) to operate during short visits to the US.

Under the soon-to-be-implemented arrangement, a US Technician license would be recognized as a CEPT Class 2 (VHF-only) license, with full privileges above 30 MHz. Holders of Tech Plus through Extra tickets would be given a CEPT Class 1 license, with full privileges on HF and VHF. Novice licensees would not be eligible for a CEPT equivalent license since most CEPT countries don't offer a license of this type.

Once the ERO formally advises the FCC of the decision, the FCC must complete the steps to implement the participation before CEPT licensing can become effective. "We've been urging the Commission to do this since 1991," said ARRL Executive Vice President David Sumner, K1ZZ. "Now that CEPT has given the green light, we hope the FCC will step on the gas."

**LOVELAND REPEATER ASSOCIATION
MEMBERSHIP APPLICATION**

NAME		CALL	
ADDRESS			
CITY		STATE	ZIP
PHONE	LICENSE CLASS	UNDER 18 Y N	ARRL MEMBER Y N
PACKET ADDRESS		E-MAIL ADDRESS	

DUES: Family Membership \$20.00 *NEW FAMILY MEMBERS ARE*
 Under 18 \$ 5.00 *PRO-RATED AT \$1.75/MONTH*

*****USE BACK OF FORM FOR ADDITIONAL FAMILY MEMBERS*****

INCLUDES 2 **FREE** MACROS

Contact: Duff, N9KKH 593-9984

MAKE CHECKS PAYABLE TO LRA

Loveland Repeater Association
 P.O. Box 1733
 Loveland, CO 80539-1733

TOTAL ENCLOSED DUES

Loveland Repeater Association
P.O. Box 1733
Loveland, CO
80539-1733



Amateur Radio Serving the Community
Since 1978