May 1997

The Ohm Town News

Voice of the Bridgerland Amateur Radio Club

The President's Corner

By Dave Fullmer N7RRZ

We as the BARC Officers are very sorry that all of you did not receive your last *Ohm Town News* in a more-timely manner.

As for this is the May's Newsletter, we are including a calendar of events that will be going on in the up and coming months.

We also want to start a classified section in the June paper for items for sale and items that people are looking for (Ham related items only), please send items to:

BARC/Ohm Town News
Att. Classified Section
PO Box 111
Providence, Utah 84332

We also would like to invite any comments or questions directed to the club be published in the Ohm Town News, please send them to the above address with Att. Letters to the Editor.

Don't forget about our club breakfast on Saturday May 10th at 9:00 am in the mourning at JJ North's.

See you all at club meeting

Ham Profile

Dean (N7WDY) and Tammy (N7YTO) Stevens

If you've been involved with BARC much at all you probably already know something about Dean and Tammy Stevens. Dean was a club Board Member for '93 & '96, and served as BARC's president for '94 & '95. Tammy is our new secretary for this year.

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Ham Profile

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They first became interested in Ham radio several years ago. Dean had been involved with CB radio, and then a friend, Jeff Tingey, introduced him to Ham radio. Dean (N7WDY) earned his license in January of '92.

Tammy (N7YTO) for her license in June of that same year. She was interested in getting her License so she could keep her better track of Dean, as he was often away with scouts and other activities. She really appreciates being able to communicate with him.

Dean was born in July of 1958 and grew up in Oakley, Utah (near Park City). He attended South Summit High, as small school, where he was active in the FFA (Future Farmers of America) and showed dairy cattle. He graduated with a class of only 36 members.

Tammy was born in January of '61 in Daniels, Utah (near Heber City). She grew up

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Ham Profile

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there and graduated from Wasatch High School. While in high school, she enjoyed woodworking and during her senior year was president of the FHA (Future Homemakers of America).

After graduation they both came to USU. It turned out that one of Dean's roommates knew Tammy and set them up for a blind date. Near the first of October in '79 they double dated with Dean's roommate and attended a Spanish dancing program at the university. After the date Tammy told her friends "it could never work" for her and Dean because hew was "just too short" for her. They didn't see each other for a couple of months and then they started to date again. They dated through December and Christmas break, and were engaged by the middle of January. They were married July 11, 1980.

They are now the proud parents of five beautiful children: Melissa. 16; Heidi, 14; Curtis, 12; Julie, 10; and Michael, 10 months. They enjoy Ham radio as a family. They are all involved with Ham Radio Field Days, LoToJa, The Mountain Man Rendezvous, etc. They have made it a family requirement that when a child is old enough for a driver's license, they must also earn their Ham radio license, so they can keep in touch while they are off with the family car! Also, as a family, they run s yard-care business. This helps them earn family vacation money.

Dean works for Mountain Fuel in their warehouse. Tammy works at the Logan Regional Hospital. She is a pediatric pool therapist, and helps with physical therapy and swimming.

Working the MIR

By: Gary T. Roberts **KC7HHK**

Working the MIR space station is easier

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Working the MIR

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than you think. I've been able to contact the MIR space station regularly with a very modest base station, or even from my car.

If you already have a packet station at home and, you have a Technician or higher-class license, then you already have the equipment you need to start a friendship with the cosmonauts and astronauts on the station. The space stations packet system is not a Packet Bulletin Board, but is a Personal Message System (the same mailbox system that currently comes with most TNC's,). The MIR Personal Message System experiment is specifically designed to allow easy access for beginners.

A lot has changed in the past few years on the MIR station. MIR has changed its 2-meter frequencies and also added some 70-centimeter packet and a repeater.

A little about MIR

The MIR space station has been manned continuously for over 10 years. Amateur radio has been in MIR for over six years. Every three to six months there is a change in crews. For a few weeks, both crews live on MIR and exchange vital information on continuing experiments and other important information. One of the items discussed is the MIREX experiment. Many crews have realized that the ham station can really be a huge help in contacting family and friends back on earth. During the breakup of the former Soviet Union the MIR crew was literally stranded in the station, amateur radio became a very vital link to the rest of the world.

Currently, the MIR crew consists of two Russian engineers and an international guest. Astronaut Norman Thagard (who was my first contact on MIR {R0MIR}), was the first American to live on board Mir and stayed for

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Working the MIR

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over two months. Astronaut Shannon Lucid set a new American space endurance record with her 194-day stay aboard Mir from April to September 1996, as a member of Crew #21. She was also the first and only American YL to ever be aboard Mir.

Crew #22 arrived in two stages. Commander Valery Korzun and Flight Engineer Alexander Kaleri (U8MIR) arrived via a Soyuz rocket on August 14. Then, on September 15, American astronaut John Blaha, KC5TZQ, arrived via the Space Shuttle Atlantis. Astronaut Blaha returned to Earth in January 1997, when the next taxi (shuttle) came to take him home.

The 2-Meter Station

For many years, the 2-meter ham station onboard Mir was an ICOM IC-228A transceiver, with voice and the standard 1200-baud AX.25 packet on 145.550-MHZ simplex. Recently, the station has changed both the radio and the frequency.

The IC-228A was replaced with a Kenwood TM-733 (European version). The simplex frequency of 145.550 MHZ was causing interference with European simplex operations (and the Europeans do a lot more simplex than we do here in the U.S.) and was changed last November in accordance with a new band plan adopted by reps. from Region 1 of the International Amateur Radio Union (IARU), which includes all of Europe and Africa.

An additional change was made more recently. As of Jan. 1, 1997, both the voice and packet operations are on "split" frequencies, with the uplink on 145.200 MHZ and downlink (where you listen) on 145.800 MHZ. Always listen on 145.800 and set a –600 kHz offset to transmit.

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Working the MIR

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The radio is currently connected to an externally mounted dualband antenna (2 meters and 70 centimeters). The typical power output is 25 watts, although power levels of 5 watts have been more common more recently. Anyone on Earth with a similar setup should have no problem hearing the Mir crew or connecting to the Mir Personal Mailbox System.

Is It Over Your QTH

Here in the Cache Valley and all along the Wasach Front, we usually have Mir pass over 6 to 8 times every day. This provides many opportunities daily for a contact with the space station. The station is in a nearly circular orbit approximately 240 miles above Earth. It takes Mir approximately 93 minutes to make one complete orbit around the world. If you were to look at Mir's path on a flat map, it would look as though it was tracing a big sine wave across the map. The top of the sine-wave orbit is approximately 51 Degrees North latitude. Mir passes are on an average of about 10 minutes per pass.

Now What Ya Need Is

To work Mir form your QTH, you should have at least the following amateur radio equipment: A 2-meter radio with an output rating of at least 25 watts (but not always. During the summer I was able to talk to Mir with my handheld set to high power.), an omnidirectional antenna or a small beam with a short run of good quality coax, and a standard 1200-baud AX.25 packet modem (TNC). This is all you need. It is also nice to have a computer with a satellite-tracking program so that you don't have to monitor Mir's frequency all the time. Also, there are many sites on the InterNet that will predict passes for you. (* http://acsprod1.acs.ncsu.edu/scripts/Ham

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Working the MIR

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Radio/sattrack to name one)

What Now

This is all you need to work the space station. Remember the best thing to do before you try to connect (with your TNC) or talk with Mir, first and for most, is to LISTEN. Also, remember that you are not the only station trying to via for Mir's attention. During the daylight hours, Mir's Personal Mailbox System gets a lot of use. Also, when the Cosmonauts or Astronauts are on voice, be kind and courteous. They deal with a massive pileup every time they call CQ. The best times to connect are during the early morning hours or late at night. When you finally work Mir (by voice or packet), send off for the QSL card.

Working the Mir space station can be a great achievement. Not everyone has the opportunity to talk with Astronauts, let alone Cosmonauts, while they are in space. You, because of you desire to be a radio amateur operator, has this opportunity everyday. Good Luck and happy Mir-ing.

Final Notes

1. Because Mir is traveling at a faster speed than we are, you need to set you radio up so that you can deal with the Doppler shift. This is not critical when working with 2-meters. But on 70 cm it becomes quite a problem. Here is a list of memory settings that you might want to program into your radio to overcome this phenomenon. (These are not necessary on two meter. However, they will make your QSO last longer.)

2 meter voice or packet

Channel 1 145.200 TX/145.805 RX

Channel 2 145.200 TX/145.800 RX

Channel 3 145.200 TX/145.795 RX

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Working the MIR

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Mir Frequencies

2 meter packet and voice (simplex)
TX: 145.200 RX: 145.800
440 voice FM (simplex)
TX: 435.725 RX: 437.925
440 FM Repeater
TX: 435.750 RX: 437.950
440 FM Packet (9600 baud)
TX: 435.775 RX: 437.975

Field Day

Don't forget to mark or re-mark your calendar for this year's Field Day. It will be held the last weekend in June (that'd be June 28th and 29th) starting at noon on Saturday (but we'll be setting up before that. This is the very best way to try some new modes, get on the ol' HF rig, learn a lot of new stuff, and have a great outdoor meal! Questions? Wanna' help? Call Jim, K7OA, 245-6632.

May Club Meeting

We invite all of you to attend the May club meeting, to be held in the Hyde Park City Offices at 113 East Center in Hyde Park., May 8, 1997, beginning at 7:30PM. Refreshments will be served.

Joe Corbett, N7NJR will share his two amateur radio favorites with us, Amateur Television (ATV) and QRP (extra low power) transmitter design and building. Joe is one of the few remaining amateurs who still gets a big kick out of building some of his own gear...called "home brew" in amateur language, and is planning to share some of those ideas with us. He is planning to have demonstrations of his setups, especially the ATV system. I am sure you will find it very interesting. Come and join us.