



Official Publication of the
West Allis Radio Amateur Club

Hamtrix

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Volume 62, Issue 11 November, 2015

NOVEMBER CLUB HAPPENINGS

Club Meeting

St. Peter's Episcopal Church,
7929 W. Lincoln Avenue, West Allis
November 10, 2015 **7:00pm**

Program

Installing and using Linux
Presenter Frank KA9FZR Steve NO9B

**Join us for a pre-meeting dinner
at Johnny V's Classic Cafe
1650 S 84th St at 5:00pm**



NUT NET

3.985mhz

Monday-Saturday

8:15am CT

One possibility for our December program is a show and tell of where we are on our **"Arduino" projects. With the weather getting cooler we all may have time to look at them again.**

Milwaukee-Florida Net

Every Day on 14.290 Mhz

7:00AM - 9:15AM ET

6:00AM - 8:15AM CT

**Pg 10 Has some new web
sites with good presentations
for system grounding. Very
good explanations.**

WARAC 2-meter net

Every Wednesday at 8pm

MATC repeater 147.045 standard offset
127.3 Hz CTCSS



Club jackets and hats!
Go to club Web site and click on
The GOLD MEDAL IDEAS block
For more info or click here



The President's Shack November 2015

Our elections were held last month and the results are in! We have a new **Secretary, Erwin von der Ehe, WI9EV**, plus a new **Board member, Dave Garnier, WB9OWN**. Congratulations, gentlemen, and thanks for agreeing to hold office in our club.

The remaining officers were reelected. On behalf of myself and the other continuing officers, thank you to the membership for your confidence in reelecting us for another year. And thanks to Mike Johnson, WO9B, for serving as Secretary for the last year.

If you weren't at our club's **Annual Awards Dinner** on Sunday, October 25, you missed a good time with your fellow club members and spouses. The main program was a very interesting history of zoos by Dave Loosen, who works at the Milwaukee County Zoo. Dave also expressed his gratitude to our club for the Radio Merit Badge classes that we did for Boy Scout Troop 580 at Mt Hope Lutheran last spring. In his other life, Dave is Scoutmaster of Troop 580.

WARAC's 2015 **Member of the Year is Steve Dryja, NO9B**. A club member since 2013, he has served as Vice President for three terms and was reelected to his fourth last month. Steve has contributed to our club in other ways, helping (immensely) with sales of donated items for our scholarship fund and with software for the Wisconsin QSO Party. **Congratulations, Steve!**

Thanks to the committee of three that organized the dinner - Frank Humpal, Paul Hass and Erwin von der Ehe. As you know, the last three recipients of the Member of the Year award make up the committee each year, so for the 2016

dinner, Steve will be replacing Frank.

The program for the upcoming **November meeting** will have a computer slant. Frank, KA9FZR, with help from Steve, NO9B will talk about installing and using the **Linux operating system**. As you probably know, Linux has been around for years as an alternative to Windows, and the price is right. Some Ham Radio applications that run on Linux will also be discussed. Find out more from Frank and Steve!

How are you coming with your **Arduino** project(s)? With the warm weather and longer days disappearing, it's time to get back to indoor projects. At our **December meeting** we will have an **Arduino Projects night** with presentation of projects involving a zero-beat detector, monitoring of a photocell using a serial port and interfacing a microphone.

The December meeting will also focus on our **January 9, 2016 Swapfest**. Since we will be in the round building again, there are more details to work out and be aware of.

The **ARRL 10-meter contest** is coming up on the weekend of December 12-13, 2015. To participate in our WARAC "piggy-back" contest, all you need to do is to submit your log to the ARRL as usual and also submit your log to Chuck, W9WLX. During the contest, work as many club members as possible for points in the club competition.

And, as always, please come to the before-meeting dinner at **Johnny V's Classic Café, 1650 S. 84th St. at 5:00PM**.

See you at the meeting! **Bring a friend!**

Tom, K9BTQ

From the editor

November is here and it is still warm as I write this. With a little luck I'll get my refurbished rotor back before the snow flies. The measurements I took of my antenna were enough to allow me to analyze it with a program. The results are in this Hamtrix. If I was really going to do it right I would need to add a lot more data points (like the gutters, the wire mesh under my stucco, maybe even the tall trees in my yard).

I'm sure they would all be important if I had a specific goal and could change a lot of those parameters. As it was I went the other way and put

EDITOR pg10

WARAC General Meeting Minutes

October 13, 2015

Introduction

The meeting was called to order at 7:11 pm by President, Tom Macon, K9BTQ. Overall meeting attendance was 21 including 2 visitors.

Program

The evening's program topics included:
Panadaptor Dongle Presentation by Erwin WI9EV

Business

Election of Officers for 2016 was conducted.
President is Tom Macon K9BTQ
Vice President is Steve Dryja NO9B
Treasurer Howard Smith WA9AXQ
Secretary is Erwin Van Der Ehe WI9EV
2 Year Board Member is Frank Humpal KA9FZR
1 Year Past President Board Member (Replace Erwin's Position) is Dave Garnier WB9OWN

Motion was made and accepted to approve the September meeting minutes as published in Hamtrix.

Upcoming Swap Fests:

Milw Repeater Club is on Oct 31st at the Elks Lodge in Milw
The Fox Cities Swapfest is on Nov 1st in Appleton

Coming Meeting Programs: November is on Setting up a Linux Computer and December is on Arduino Projects.

Annual Awards Dinner: October 25th at Carl's Catering. Hamtrix has the sign up form with specifics.

Chuck W9WLX discussed the Maker's Fair at State Fair Park a couple weeks ago. It was a multi-club booth setup with a live station, CW sending and info on club and Ham activities.

Reminder for the Wednesday evening 2 meter net. Everyone is welcome

The meeting was adjourned at 8:36 pm.

Respectfully submitted,
Mike Johnson, WO9B

W.A.R.A.C. Board Meeting

October 27, 2015

Howard Smith (WA9AXQ), called the meeting to order at 19:17.

Present: President Tom Macon (K9BTQ), Vice President Steve Dryja (NO9B), Treasurer Howard

Smith, (WA9AXQ), Secretary Erwin von der Ehe (WI9EV), 1 Year Past President Director Dave Garnier (WB9OWN), and Frank (KA9FZR)

Howard gave the monthly Treasurer's report. The general fund and scholarship fund are in good shape.

Mike Johnson's recommendations for revising the club bylaws were discussed. Logistics for board review of the constitution & bylaws was also discussed.

Club financial audits

2012 & 2013 audit reports were received by Howard (WA9AXQ) from Bill Reed (N9KPH), and were approved as submitted to the board.

2014 is in process.

Programs

November, 2015: Frank Humpal (KA9ZWF) & Steve Dryja (NO9B) present Linux software installation

December, 2015: Arduino Projects, Arduino "Son of Zero Beat" example by Howard (WA9AXQ)

January, 2016: TBD

Future Program Ideas

Arduino Show & Tell Hamtrix article by Frank (KA9ZWF)

Spotting by Gary (W9XT)

FM38 Repeater System by Dave (KA9WXN)

DSP examples using MathCad® by Steve (NO9B)

Kreg Jig Fastener System by Steve (NO9B)

SO2R Contest operating – Mike (WO9B)

AMSAT – Dick Wood?

Arduino project: Serial port monitoring of photocell

Arduino project: Interfacing to Mic inputs

Three-phase power monitors by Steve (NO9B)

Badger Weather Net – Sullivan

Hex beam Antenna - Mike

Club Operations Manual

Tom (K9BTQ) introduced a status page of all the manual sections. Assignments were made for unfinished sections. Target date for completion of all sections is the April, 2016 board meeting.

Other Items

Replacement badge order to be announced at next general meeting.

2-meter net continues and needs some more check-ins.

Meeting was adjourned at 21:06.

Respectfully submitted,

Erwin von der Ehe (WI9EV)

Secretary, W.A.R.A.C.

2015-10-27

Are You Ready for the ARRL 10 Meter Contest?

By Chuck Dellis, W9WLX
WARAC 10m Contest Chairman

The ARRL 10 meter contest takes place this weekend, starting at 0000Z on December 12 and concluding at 2359 on December 13. Once again this year, the West Allis Radio Amateur Club will have its friendly club competition.

The standard ARRL contest rules for contests below 30 MHz apply. Additionally, take a few minutes to fill out the club contest form and submit it and your log to participate in the club event. You are awarded 5 additional points for every club member worked and any logs submitted electronically will automatically be checked for club member call signs.

The 10 meter band can provide conditions for an active contest. 10 meter aficionados typically rely on E and F layer propagation as well as sporadic E, to drive overall band conditions. It is generally accepted that sporadic E occurs most often in the summer with a secondary occurrence during the winter with peak activity centered close to the solstices. During the winter peak, sporadic E is most common just after sunset.

Single hop sporadic E propagation at 10 meters is around 1300 miles. Along with the E and F layer propagation, it is not unusual to hear loads of activity on 10 meters in December. When 10 is open, high power and a big antenna are not required. Pick up your microphone, key, or both and join in the fun! **See pg 6 for entry form**

Tales from HeathKit

I received my Novice Ticket in 1960. My novice rig consisted of an RME4300 receiver and a Globe Scout 680A transmitter. My first HeathKit experience was building their Q-Multiplier, the HD-11 (a QF-1 in HeathKit Green), and the AM-2 SWR Bridge. Both were great accessories for my station.

After I received my General Class license, I wanted to upgrade my station to SSB capabilities. The RME 4300 receiver was replaced by a Drake 2B receiver. The Globe Scout 680A was replaced by a HeathKit HX-10 Marauder. It turned out that my Dad's second cousin was married to Bill Denk, W8LUH, "One of the Hams at HeathKit". My Dad and I visited Bill at his home and discovered that he was the lead engineer on the Marauder product. He had two Marauder kits that he was working on in his spare time, and offered to sell one of them to me. He also promised to troubleshoot and align the Marauder after I completed the kit. My first task was to build the VFO, a separate chassis that mounted on the main chassis. Talk about having to do the most critical part first. I completed the kit, and returned it to Bill for the checkout. Bill said I did a pretty good job of wiring the unit,

HeathKit from pg7



2015 West Allis Radio Amateur Club 10 Meter Contest

Summary Sheet for WARAC sponsored contest portion

Saturday, December 12, 0000Z to Sunday, December 13, 2359Z

Rules: ARRL General Rules and Rules for HF contests apply.

Operator Name: _____ Call Used: _____

Entry Category (Check one) CW Only: _____ Phone Only: _____ CW & Phone: _____

Power Level (Check one) QRP _____ (0-5 watts) Low Power: _____ (5-150 watts) High Power: _____ (>150 watts)

Scoring

CW QSOs _____ X2 = _____ CW Points

Phone QSOs _____ X1 = _____ Phone Points

CW Points + Phone Points = _____ Contact Points

Class	Power Range	Power Multiplier
QRP	0-5 Watts	2.0
Low	5-150 Watts	1.5
High	>150 Watts	1.0

Contact Points _____ X Power Multiplier _____ = _____ Total QSO Points

Bonus

Number of Club Members Worked _____ X5 = _____ Club Member Points

Total QSO Points _____ + Club Member Points _____ = _____ Final Score

Send this summary sheet and a copy of your log to:

Chuck Dellis
3542 S. Massachusetts Ave.
Milwaukee, WI 53220-1118

2015-12-12 10:00:00 AM CST

HeathKit from pg5

except for a misconnected a wire on the large bandswitch. My SSB station was now complete.

Bill was working on his next project, a new receiver. He showed me one of the prototype chassis. This was to become the SB300 receiver, which was announced in October, 1963. This was HeathKit's answer to the Collins S-Line, which was first announced in November 1958. He was responsible for creating the printed circuit boards for the receiver.



My Ham Radio activities essentially stopped in the Fall of 1965 as I was at Purdue University studying for a Biology degree. Of course, Purdue did have a Ham Radio Club, W9YB, but I was very busy studying, and did not have any time for Ham Radio. During my Sophomore year, I changed majors and transferred into Electrical Engineering. In the Fall of 1965, HeathKit finally announced the last product of its initial SB offering, the SB100 Transceiver. This completed the SB lineup, the SB300 RX, the SB400 TX, the SB200 Linear, and the SB100 XCVR.

Between my Junior and Senior years, I spent the summer working as a technician at HeathKit. I worked in the Scientific Instruments division. During that time, I learned lots about HeathKit, and all of the interesting stories. Here is one...

HeathKit would often have a kit returned because it did not work. The craftsmanship of the assembler was always apparent. Some were done so professionally that they were works of art. Others were so bad that HeathKit would have one of its employees assemble a new kit, check it out, and return that to the customer. The funniest story was the kit that came back with macaroni used as insulation on wires. The manual used the term spaghetti to mean insulated sleeving. Since this customer could not find any spaghetti with a hole in the middle, he used the next best thing, macaroni. The kit did work, but the Manual Department made a change to use the words 'Insulated Sleeving' instead of spaghetti. This is a true story.

The book, 'HeathKit A Guide to the Amateur Radio Products' by Chuck Penson, WA7ZZE, provided additional information.

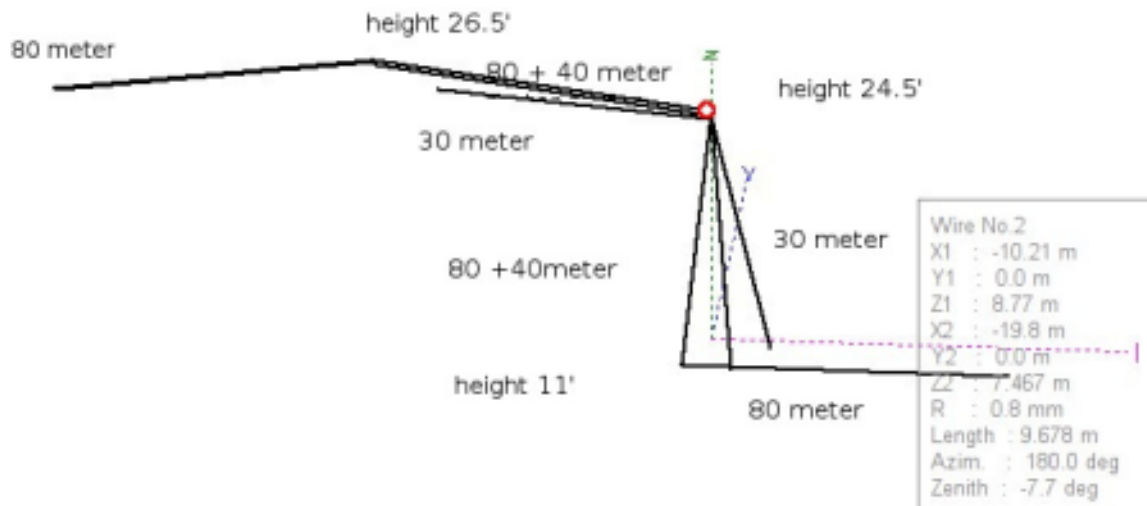
I will share more Tales next month.

Howard, WA9AXQ

KA9FZR bent dipole antenna for 80 meters

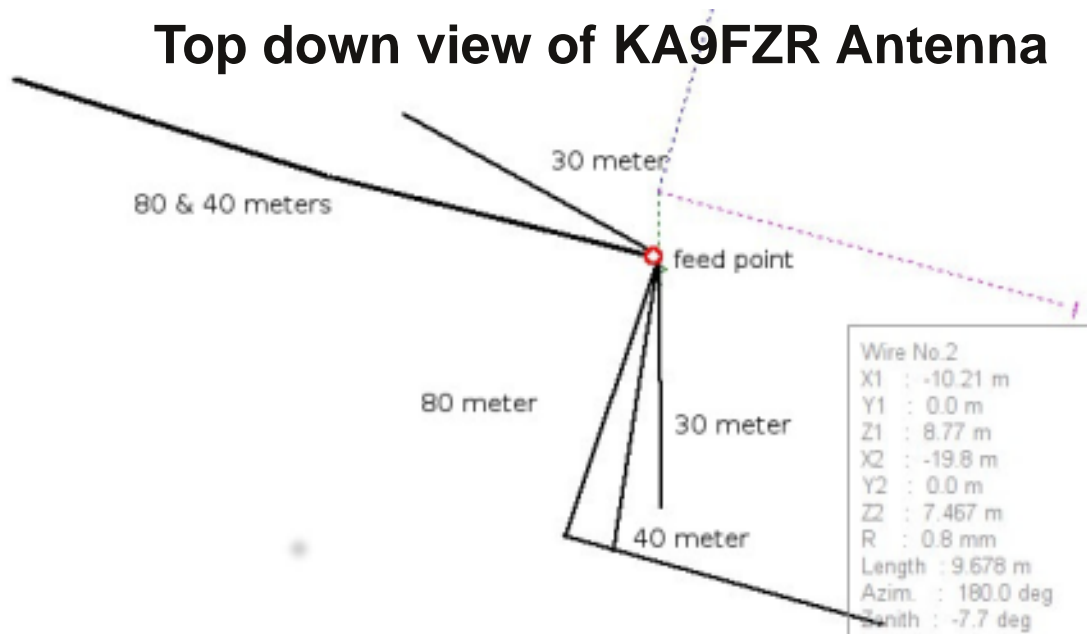
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Antenna view from front of house



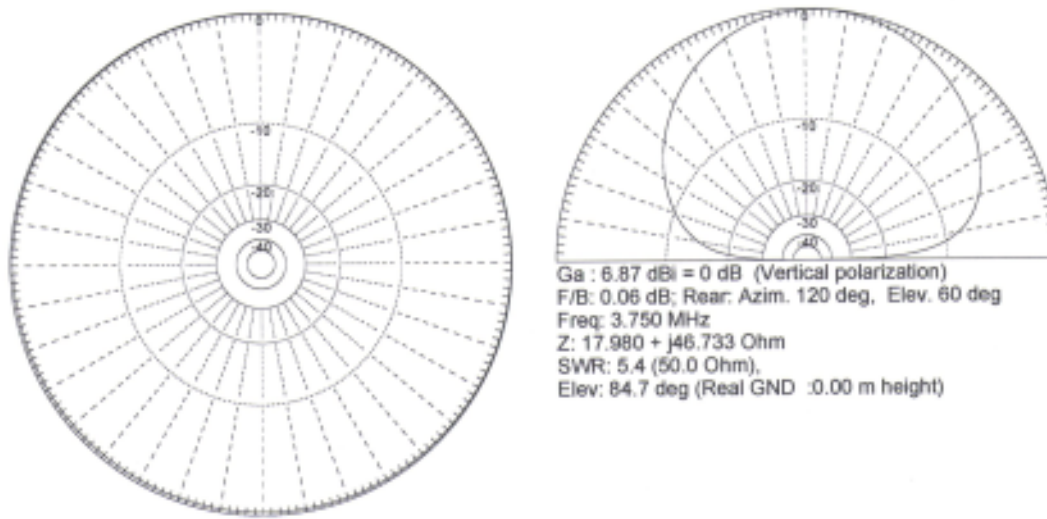
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Top down view of KA9FZR Antenna

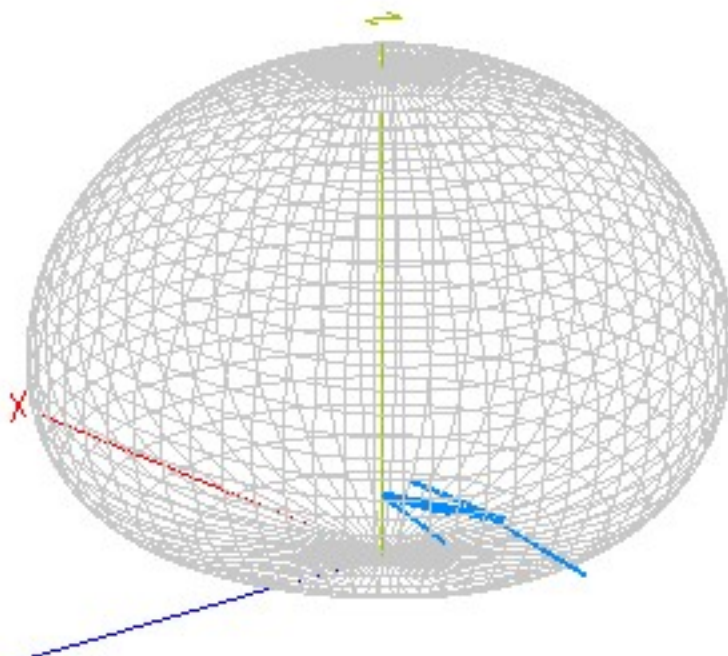


Many times I have mentioned on the air and in person that a bent dipole can work well. I have been on the Nut Net many mornings and much to myself and others surprise have been heard very well with my 5 watt SSB signal.

After a couple years of good signals reports I got interested if my antenna could have something to do with the good signals. There are many antenna analyzer programs out there. Most of them require drawing the antenna in little segments to allow the program to analyze the antenna. That isn't bad with 2D antennas. When you get into 3D antennas it is a lot of



3D illustration of Antenna pattern



work, at best.

The one program I found that would do the segment work was MMANA-GEL you enter the location of the ends of the segment of wire the program divides the segment into short segments automatically .

My antenna pattern is surprisingly normal in fact for a NVIA antenna it looks very good. If the numbers are right it indicates there is some gain going straight up.

This proves that bending

antennas to fit your lot is a very worth while experiment. It can work very well. Any antenna that gets out is better then no antenna.

Pictures from the 2015 Awards Dinner



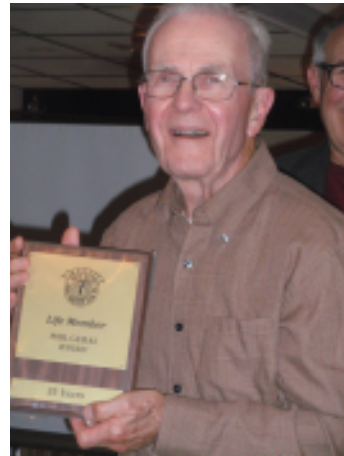
**Steve Dryja NO9B
2015 Member of the Year**



**Dave Loosen who told us about the
History of Zoos.**



Eyeball QSO before dinner



**Phil Gural W9NAW receiving his
35yr award**



**Chuck Dellis
W9WLX
updating us on
club activities**



Good food had by all

Ham Radio on the Internet
(click on red web address)

Anyone can submit websites for this column. I'll check them out and include them. The editor

This sites were sent in by Ron N9AU well worth reading.

For about ten years, I taught classes at trade shows on the topic of power and grounding for audio and video contractors. Slides for those sessions are at

<http://k9yc.com/InfoComm-PowerSystems2012.pdf>

<http://k9yc.com/InfoComm-Grounding2012.pdf>

An extensive "White Paper" on the topic is at

<http://k9yc.com/SurgeXPowerGround.pdf>

Earlier in this thread I posted a link to a tutorial I have given at Pacificon and at several ham clubs on the topic, this time focused on ham installations. I'll post it again. It's exactly what Matt is looking for, and it's what any ham ought to be studying carefully.

<http://k9yc.com/GroundingAndAudio.pdf>

73, Jim K9YC

EDITOR

the antenna up in the space available. I was happy with the results in fact maybe surprised would be a better word. I'm a regular on the morning nut net and even though I'm running 5 watts SSB I am heard regularly with good signal reports. Again there are many factors involved with receiving including local noise, receiver performance, antenna etc. So I'm only giving my end some of the credit.

It's nice to be heard. Since I live in an area with small lots. The low power does make it easier on the neighbors. It's really not their fault how poor some consumer products are at rf rejection.

FOR SALE

WARAC has received a 4 drawer letter size file cabinet. It was manufactured by Cole and is in clean, very good condition. Cost: a donation to the WARAC Scholarship Fund.

Any questions should be directed to Phil, W9NAW, (414.425.3649) for any additional details and pick-up arrangements.

So that will be it for this copy of Hamtrix. I just got off of the Clubs Wednesday repeater net. It is another fun way to get time on your radio. If you're in range and think of it on a Wednesday jump in. Everyone is welcome.

Frank KA9FZR

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***See our Web Page or contact us
for more information on***

- WARAC Memorial Scholarships
- Wisconsin QSO Party
- Midwinter Swapfest
- Worked all Wisconsin Counties Award
- Amateur Radio Classes

WARAC holds meetings on the second Tuesday of each month and board meetings on the fourth Tuesday of each month. Meetings are held at 7:00 PM at:

**St Peter's Episcopal Church
7929 W. Lincoln Avenue
West Allis, WI**

Entry is off the alley at the rear of the church.
A wheel chair ramp and chair-lift are available.