



The Best of Amateur Radio

We will be learning about Transmitter Hunting in our July meeting. Come join in the fun.

RADIO DIRECTION FINDING

Michael Stanford – WB7TSQ

A fun and useful aspect of amateur radio is “Radio Direction Finding” or “Transmitter, Fox or Bunny Hunting”. It is the science of locating a radio transmitter by tracking the radio waves to their source. A transmitter hunt is an exciting event, either for the fun of finding a hidden transmitter or tracking down the source of any signal.

A radio (electromagnetic) signal travels away from a transmitter in ever decreasing signal strength. That concept is the basis of being able to locate the direction of the source as well as “homing in” on it as the distance is decreased between the transmitter and receiver.

There are many methods of tracking and direction finding. They can be basically classified into “long” and “short” range techniques.

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We need VE help

If you would like to be a VE volunteer we need:

ARRL/VE Team Chairman
Must be 18 Years Old
Must be a ARRL/VE
Must have a General, Advanced, or Extra class license

VE Contact Person
There is not a license requirement for this position.
Mostly public relations.

VE Team

Dididahdidit

Have a suggestion or question about the Club or Amateur Radio, send them to W7SU@arrl.net and we will help find an answer.

OARC Club Officers

President	Kim Owen N7WLW@arrl.net	N7WLW	731-0101
Vice President	Mike Stanford mike@m-t-com.com	WB7TSQ	393-3912
Secretary	Dallas Pedersen	WB7AKX	392-0859
Treasurer	Gary Hudman	KB7FMS	776-8219
1 st Director	Mike Fullmer kz7o@arrl.net	KZ7O	731-7573
2 nd Director	Sal Salizar	KD7JRX	394-9157
Watts News	Gregg Moore Mkgmoore@relia.net	KD7BPQ	782-3064

License Testing

VEC Testing Contact our vice president or
<http://www.xmission.com/~uarc/testinfo.html>

Selected Local Nets

Sun	8:00 p.m.	146.62	Repeater	APRS (Packet)
Sun	9:00 p.m.	146.62	Repeater	UARC Info
Sun	8:30 p.m.	146.90	Repeater	Saturn Net
Tues	6:30 p.m.	146.90 448.60	Repeater	Weber County ARES
Wed	8:00 p.m.	145.53	Repeater	Box Elder Net
Thurs	7:30 p.m.	144.90	Simplex	Weber North Region ERRS
Thurs	7:00 p.m.	147.04	Repeater	Davis County Net

Those who would be willing to receive the "Watts News" via Email please let us know. Send email to "mkgmoore@relia.net"

OARC Monthly Meeting

Place: Weber County Sheriff's Building
 West 12th St.
 Ogden
 Time: 3rd Saturday of each month
 9:00 a.m.

OARC Breakfast before Meeting

Place: The Branding Iron
 1310 Wall Ave
 Time: 8:00 a.m.

Next Meeting Agenda

July brings us transmitter hunting and August will be our annual steak fry and OARC board elections.

Club Dues and Information

The Ogden Amateur Radio Club is a non-profit organization, incorporated under the laws of the State of Utah. It is also an ARRL Special Service Club. Membership is open to any person interested in Amateur Radio. Full membership is available only to those possessing an FCC issued license. Associated memberships are available to all others. For Watts News subscription only. Membership to the club is for one year, payable anytime during the year.

Fees are as follows:

Single membership	\$15.00
Each additional family member	\$ 8.00
Associate membership	\$10.00

Send Dues to:

**Ogden Amateur Radio Club
 P.O. Box 3353
 Ogden, Utah 84409-1353**

For Sale

12vdc power supply. 15 amp continuous, 20 amp peak. Will run any VHF/UHF radio and will operate an HF rig in SSB mode. Price is \$35. Contact Mike Fullmer, KZ7O at 731-7573.

Transmitter Hunting continued-

They are basically the same – you are looking for the direction the radio signal is coming from. Long range tracking is usually done with some type of directional (Beam, Quad, Loop, Null, etc.) antenna which is connected to a receiver with an “S” (Signal strength) meter. It is important to know if the signal is vertically or horizontally polarized. By rotating your beam 90 degrees, you can look for the strongest signal, which will be the proper polarization (this may need to be done at different locations as reflections will sometimes give a false reading). Once you are certain of the polarization, keep your antenna in that setting. The directional antenna is then pointed in different compass directions until the strongest (or in the case of a “Null antenna”, the weakest) signal is received. That will (usually) indicate the direction of the transmitter. A radio signal may be affected by physical surroundings such as hills, valleys, buildings, etc. A reflection of a radio signal can be very strong and of course, be in a different direction than the transmitter. Once a directional reading has been made and then, traveling to another location and another reading taken, a clearer picture of where the signal is coming from begins to take place. Sometimes this means getting in your vehicle, driving to a location, setting up your antenna, taking a reading, getting back in your vehicle and repeating this process many times. Mounting the directional antenna to the side of your vehicle makes this process easier. Through this procedure, you can begin to narrow in on the area where the transmitter is located. Many times a team approach makes this easier. Once you are in the general location where the transmitter is located and you are resigned to travel by foot, you begin the “short range” techniques. When you begin to get closer to the signal, many times your “S” meter will be full scale and you cannot see any increase or decrease by moving your directional antenna, even 180 degrees away from the transmitter. This is when you must resort to a method of reducing the signal coming into your receiver. There are many methods such as; attenuators, frequency shifters, frequency offset, etc. The basic idea is to lower the signal into your receiver to the point where your “S” meter is below full scale but still showing some signal. Then by varying your antenna direction, you can see the changes in the “S” meter. When you are very close to the transmitter, you will often have a “full scale” signal even with your antenna disconnected (most radios are not perfectly shielded, allowing signals to be received through the radio housing). By changing the receiver frequency slowly up or down (5 khz steps at a time), you can bring your “S” meter back down into mid-range where you can see changes again. Hold your radio close up next to you, and turn around while watching the “S” meter for changes. When your back is toward the transmitter, you will, of course, have the lowest reading. Doppler, dual antenna and many other comparable methods can be used.

It is possible to track a hidden transmitter using the above and similar methods. “Transmitter Hunting” can be a lot of fun and very rewarding! Happy Hunting! 73

Upcoming Activities

August Steak fry & Elections



Weber County A.R.E.S.

Meets time 3rd Saturday of each month @ 10:30 a.m.