



Dixie Amateur Radio Club

September 2010

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Who Are We?

The Dixie Amateur Radio Club, Inc. is a non-profit IRS 501(c)(3) association of federally licensed Amateur Radio operators (also known as "ham radio" operators) who primarily reside in southwestern Utah, mostly in the greater St. George City metropolitan area. We also have members who live in rural areas of Washington County and in areas outside of the county. The Dixie Amateur Radio Club, Inc. is a formally "Affiliated Club" with the American Radio Relay League (ARRL) "The National Association for Amateur Radio".

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"It's not the class of license the Amateur holds. It's the class of the Amateur that holds the license!"



Your Help Needed!

St. George Marathon and Huntsman Senior Games Next Month!

Two of the biggest events in St. George are next month. The first is the St. George Marathon. This is the 34th running of what has become a prestige race. This race can be used as qualification to the Boston and New York Marathons.



The Dixie Amateur Radio Club has been involved in the operation of this race for many years. Some of the duties that our radio operators perform include:



- ◆ Communications from each aid station, relaying needs, summoning help if needed.
- ◆ Shuttle operations. The infamous "sag wagon," picking up runners who cannot continue. The names and numbers of the runners are reported to Net Control. There is also a nurse on each shuttle to assist with medical needs if required.
- ◆ Bus communications. The "sag wagons" deliver the runners who can't continue to a holding area, where a bus transports them the rest of the way to the finish line.
- ◆ Net Control and Finish Line communications.

Lynn Bateman KE7MXZ is coordinating the efforts of DARC this year. If you can assist, please contact Lynn at lbateman@skyviewmail.com.



The HUNTSMAN WORLD SENIOR GAMES, as it is known today, began in 1987 as the World Senior Games, an international senior sports competition. Founded by Daisy and John H. Morgan, Jr., the Games began with their vision of an international sports event for men and women ages 55 and better. In 1989 Jon M. Huntsman, Chairman of the Huntsman Corporation, became the Games' principal sponsor after recognizing that the Games not only fostered lifetime fitness, but also expanded Utah's economic vitality.

There are many opportunities for DARC members to assist in events at the Senior Games. Many events need volunteers for communications. Road races, bicycle races, a 5 and 10K race and a half-marathon are only a few of the events we need you for. Contact the club at w7drc@arrl.net for volunteer information.

2010 Board Members

President...C. R. "Nick" Nickle W7CRN
 Vice-President....Kory Talbot KE7MMH
 Secretary..... Kevin Merrill KE7TLW
 Treasurer.....Harold Wells KE7OZG
 Board Member.....Scott Taylor KE7YIQ
 Board Member..Bruce Bissell KE7LGD
 Board Member....Ken Forshee KE7DZI

Past Presidents of DARC

2009.....Ken Forshee K4SHE
 2008.....Ric Wayman K7DLX
 2007.....Hal Whiting K12U
 2006.....Hal Whiting K12U
 2005.....Gary Zabriskie N7ARE
 2004.....Dan Farwell W8EQA
 2003.....Dan Farwell W8EQA
 2002.....Ron Sappington W17Z
 2001.....Travis Lofthouse KD7FRN
 2000.....Stephen Jeppson N7WWV
 1999.....
 1998.....
 1997.....Gerald Newton N7MWY
 1996.....Dick Groves KB7THB
 1995.....
 1994.....
 1993.....Steve Kimber W7VEW
 1992.....
 1991.....
 1990.....
 1989.....
 1988.....
 1987.....
 1986.....
 1985.....
 1984.....Walder C. May KA7STK

Can anyone help me complete this list?
 Please contact Ric Wayman at
 k7dlxham@gmail.com

SUBMISSIONS WANTED!

Send your ideas, bios, articles, cartoons, etc.
 to Ric Wayman at k7dlxham@gmail.com.
 ALL HELP WILL BE APPRECIATED!

Nick Nickle, W7CRN

President's Corner



Nick, W7CRN

The September Board of Directors meeting will be held on Thursday, September 2nd at 7:00 PM in room E of the Community Arts Building, 86 South Main Street in St George, members are welcome to attend.

Longtime club member moving!

Dan Farwell (W8EQA) Honorary Lifetime member of DARC and his XYL, Melody W7RRR, recently announced plans to sell their home in St George and move to Paragonah. Dan has served the club for many years in many positions including: President, Vice President, Board Member, Events Coordinator, Sunday Night Net Manager, Call Sign Trustee for W7DRC, Technical Committee Member, Volunteer Examiner, Newsletter Editor, Nominating Committee Member, to name a few. Thru Dan's effort in the club and his employer's Volunteerism program, DARC has received significant financial contributions from the Wal*Mart Foundation – thanks again Dan. We will all miss Dan and Melody when they move from the area, however, Dan remains a Lifetime member of the club and we look forward to seeing them from time to time. It will be difficult to fill Dan's shoes, but we must move forward. The following have volunteered to help fill positions:

Bill Wells (W7WFW) will assume the responsibilities of **Call Sign Trustee for W7DRC.**

Ric Wayman (K7DLX) will assume the responsibilities of the **Sunday Night Net Manager.**

We are still looking for an individual to assume the responsibilities of **Events Coordinator**, if you would be interested serving in this position please contact me or a member of the board of trustees.

146.64 Repeater Status.

The 64 repeater is now back in operation at the new Webb Hill site. There are still a few "tweaks" that need to be done, but the repeater should provide us much better coverage in the St George area. The 64 duplexer is beginning to show its age (over 40 years old) as the insertion loss is increasing and the isolation is decreasing. The duplexer is still working; however, we may soon find it necessary to replace this unit (\$1500 - \$2000). Repeater repair

(Continued on page 4)

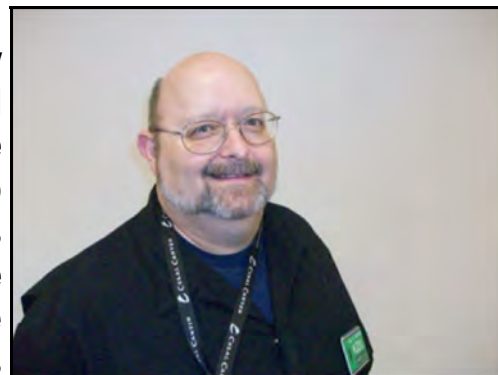


ARES Update

By Hal Whiting, KI2U

The Washington County ARES has signed a new Memorandum of Understanding with Dixie Regional Medical Center. New requirements for training have been established by DRMC for amateur radio operators. FEMA has a number of free online courses that provide guidance and learning in the management of disasters. As part of the communications cadre it is important to have this training. Here is the URL to the FEMA courses list:

<http://training.fema.gov/IS/crslist.asp>



Hal Whiting, KI2U
Washington County
ARES Coordinator

The courses you need to complete are:

IS-100
IS-100HC
IS-200.a
IS-200.HCa
IS-700.a

There is an additional course that is a classroom only class and it is being worked to have that course taught locally to which the ARES operators would be invited to participate in. (A great opportunity).

For those who have expressed an interest in ARES, this is what ARES is about. Providing emergency communications support to our served agencies. Please understand that when the emergency happens it will be too late to prepare. We need your participation and preparation. If interested please email washington.co.ut.ares@gmail.com

Congratulations are in order!

Ken K4SHE and Maxine KE7HNY Forshee
50 years of marriage!



Picture courtesy Bruce Bissell KE7LGD

Kevin Merrill KE7TLW and his new wife Alisha



President's Message (cont.)

(Continued from page 2)

and relocation costs were about \$800, the club will be reimbursed about \$460 from our equipment insurance policy – maintenance of our repeaters are paid for by our member's dues and donations, if you use the repeaters and have not paid your dues, please do so (donations are also accepted). Thanks to **Bill Wells**

(W7WFW) and **Lloyd Apple (K6LGA)** for their effort in the repair and relocation of the 64 repeater.

The **September 15th club meeting** will feature presentations on **Echo Link** by **Bindy Boylin (KB6UJR)** and on **IRLP** by **Kory Talbot (KE7MMH)**.

September Events

The DARC will have a booth at the **Washington County Emergency Preparedness Expo September 11th** in the Dixie Center. There will be handouts on ham radio for distribution to the public and a brief video introducing ham radio. Nick Nickle (W7CRN) coordinator.

Utah BSA Centennial Jamboree September 18th. DARC will provide an HF/VHF station and a Satellite station for this event. There will be a planned contact with the International Space Station on Saturday between 11:00 am and 11:30 am. Event callsign N7B. Frank Eldredge W7GGR is coordinator.

Coming Events

34th St George Marathon – October 2, 2010 Lynn Bateman (KE7MXZ) Coordinator.

Huntsman's World Senior Games – October 4th to October 19th, 2010

Thanks & 73,

Nick

Nick Nickle – W7CRN

This is not a scientific dissertation about devices used to keep your aluminum fishing boat in place or mammoth sea going vessels from drifting into undesirable places. The Boat Anchors we are going to discuss are remnants of days gone by. They are part of our ham radio heritage and an integral part of radio history!

Farwell and Good

Boat Anchors

By Dan Farwell, W8EQA

The term *boat anchor* refers to ham radio equipment that was built before the age of the transistor. Equipment manufactured before the time of electronic miniaturization. At a place in radio history when



massive size denoted quality and portability wasn't a factor. Equipment made from the early portions of the 20th century qualifies by definition but, for our study we'll concentrate on the ham radio boat anchors designed and built in the 1950s and 1960s. So what is a boat anchor? For lack of a better description it's a radio that might often be outdated and superceded by models that are smaller, lighter and have more built in features. Boat anchors were BIG and when they became broken or unwanted could easily serve their last function as a dead weight on the end of some anchor rope or as a door stop!

My first encounters were as a young man about ten years old. I can still remember the massive receiver and separate but, equally huge transmitter sitting on the desk in an attic ham shack. The room was full of their warm orange glow and the smell of superheated dust on the chassis and wiring created an unforgettable smell that I still cherish today.

Weird "beeps" and "burps" emanated from the speaker and it was all a wondrous world, foreign and exotic, strange but somehow friendly. Their names and their size demanded respect: Collins, Johnson, World Radio Labs, Gonset, Hallicrafters, Hammarlund, Heath and National to name just a few. Their niche in time remains secure thanks to the efforts thousands of radio amateurs that grew up hoping and dreaming that one day they would own and operate one of these behemoths from their childhood fantasies.

Just like classic automobiles from this time period that are loved and restored so are the vintage radio models that once inhabited attics, basements and garages across America. They are found and resurrected and enjoy the place of honor in many a ham shack. They fan an undying flame from our youth. From a time when life was simple and these pieces of radio history were beyond the financial grasp of most of their young admirers.



Today organizations like SPAM (Society for the Preservation of Amplitude Modulation) and countless boat anchor clubs representing the marques of their choice help to keep the magic alive. A look at <http://www.ac6v.com> reveals more boat anchor web sites than you can look at in a day's time. This is a great place to start to explore the era of the boat anchor and get involved with reliving your dreams.

Good luck and good hunting and welcome to the world of ham radio boat anchors.

Dan Farwell, W8EQA, is a past president of the DARC, and an honorary life member. His contributions to the club are numerous. He lives in St. George with his wife Melody, W7RRR, and when not working for the Wal-Mart Distribution Center can be found on the HF bands running the rare DX stations. This is part of a series Dan has written about his life as a ham operator and knowledge he has gained through the years he would like to share.

Six Meter Operation

The "Mighty Wide" 6 Meter Dipole

By Brian Smith, G0IER

Editor's Note: With the sunspot cycle starting to kick up again, an article on VHF operation is more than appropriate right now. With the new influx of Technician class licensees, this article about operation on the "Magic Band" of Six Meters. will hopefully excite you to try your hand at DXing on VHF. Since the author is British, he has given the dimensions in millimeters. Conversions can be done on <http://www.google.com> - you are responsible for verifying the correct conversion.

This article describes a simple but effective wide bandwidth six metre antenna. Construction details are for an indoor version , sturdier materials and weather-proofing could be added for outside use. It's simple , easy to build , and excellent standing wave ratio across the whole of the six metre amateur band.

Every single loft mounted six metre antenna that I tried had one frustrating problem. Lack of bandwidth. The best performance I could get was a usable bandwidth of about one megahertz using the ' double coaxial ' dipole arrangement featured in my ancient copy of Pat Hawker's G3VA book " Amateur Radio Techniques ". This is only half the bandspace available to United Kingdom amateurs , and left me with a choice of the morse section of the band OR the frequency modulated (F.M.) portion. Not both .

Not wanting to be restricted to one portion of the band only I continued searching for a suitable wideband antenna. An intriguing design was eventually found in the Amateur Radio Relay League Antenna Handbook. (Chapter 15 - 1)

I rescaled the antenna for use on the six metre band and also modified the tuning arrangement. The results were excellent so I have detailed them in this article. Anyone who wants to try six metres will find this a superb utility antenna.

The antenna offers the benefit of folded dipole construction , which is a wider bandwidth , plus the convenience of fifty ohm coaxial cable feed. Other positive points of the antenna are:

- 1 - Simple 50 ohm coaxial feed design
- 2 - No Antenna Tuning Unit required
- 3 - Wide Bandwidth - 50 . 00 to 52 . 00 Megahertz
- 4 - Lightweight - ideal for portable / indoor use

The difference between the "mighty - wide"six metre dipole and its nearest rival makes an interesting comparison. I have plotted the Standing Wave Ratio of the antenna and the coax dipole . The results are shown in: FIGURE ONE.

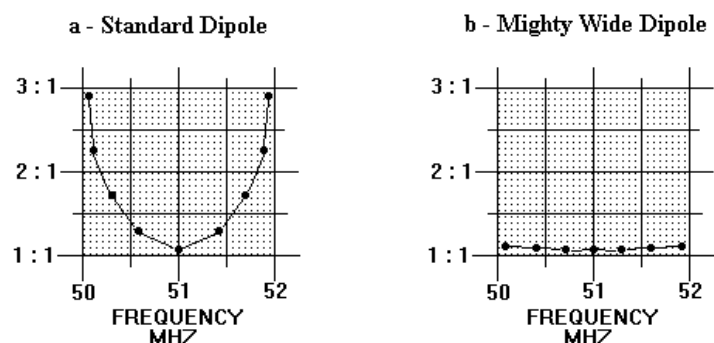
Construction of the dipole is simple. My antenna is loft mounted so the constructional details given here can be considered for an indoor or portable version of the antenna.

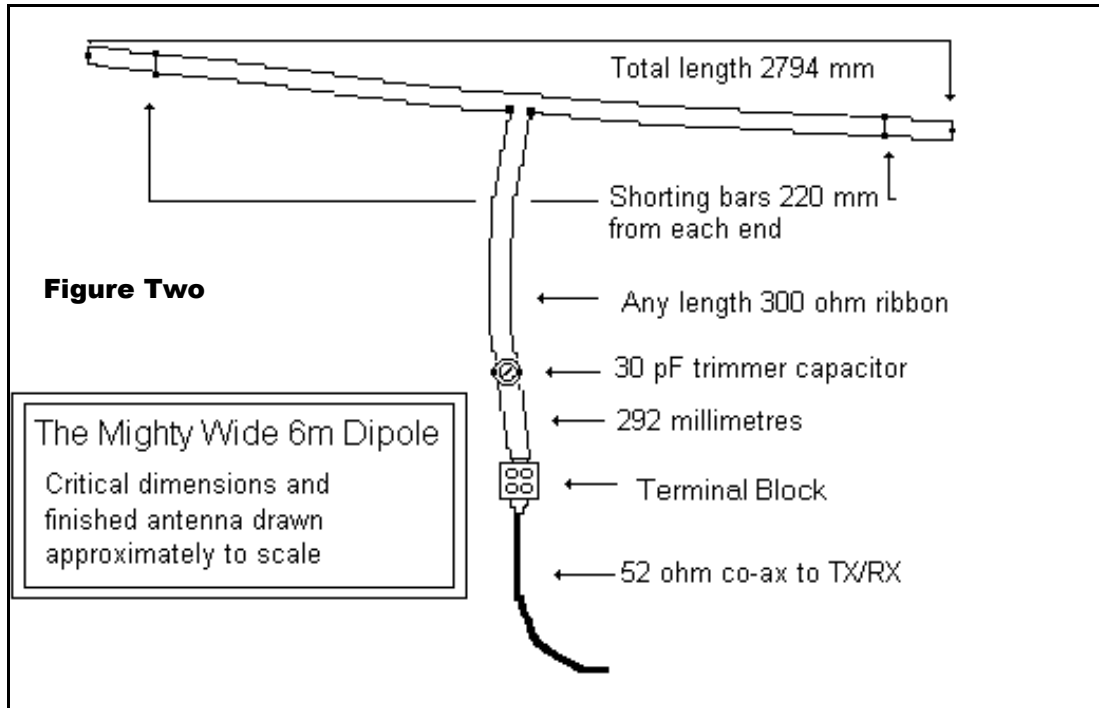
The whole dipole is made from ribbon cable of the three hundred ohm type . Details of the device are shown in FIGURE TWO.

I used the non - slotted variety of ribbon cable , which is available from several catalogues. The radiating element of the antenna has a total length of 2794 millimetres. The antenna feedpoint is connected to a section of the same ribbon feeder.

(Continued on page 7)

FIGURE ONE. Standing Wave Ratio plotted against frequency





(Continued from page 6)
 This section can be of any length, which is most convenient for siting the antenna.

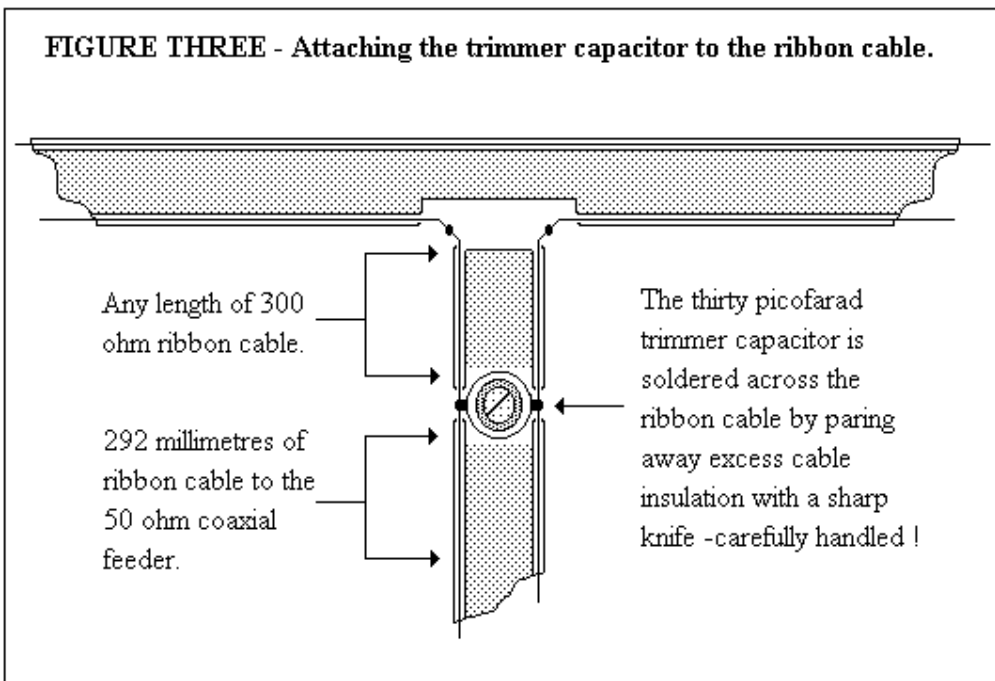
Two shorting links are placed across the ribbon cable radiating element. The links are placed at distance of 220 millimetres from each end of the antenna. I soldered the shorting link wires across the ribbon cable by first paring away excess cable sheathing with a sharp modelling knife. Do be careful if you try the same technique, or you may need to add bandages to the component list !

Figure Two

The Mighty Wide 6m Dipole
 Critical dimensions and finished antenna drawn approximately to scale

A thirty picofarad ceramic trimmer capacitor will be required. The trimmer is used as a capacitive reactance element. This transforms the antenna impedance down to fifty ohms.

The trimmer capacitor is soldered across the ribbon cable as shown in FIGURE THREE. I used the same paring technique detailed earlier to expose the ribbon cable conductor. Remember to leave a length of ribbon cable below the trimmer capacitor. The fifty ohm coaxial cable from the transceiver is attached to the ribbon cable at a point 292 millimetres below the trimmer capacitor connection point. Electricians terminal block makes an ideal connector for attaching the coax cable to the ribbon cable.



After building the mighty wide dipole I mounted the device in the loft. I adjusted the trimmer capacitor for the best standing wave ratio with the transceiver tuned to a frequency of 51 000 Megahertz. I was delighted to find that after adjustment the S.W.R. ratio hardly varied across the the United Kingdom six metre band allocation of 50 . 00 to 52 . 00 Mhz. I tried the antenna in several positions. This included using an inverted V mounting. The trimmer capacitor did not need to be re-adjusted for any of the positions tried. All in all I have found it to be an extremely useful antenna. I can now cover the whole six metre band with no antenna tuning unit required.

I am now considering rescaling the device for use on the WARC bands of 12 and 17 metres. I may even put one up for use on ten metres when things improve !

K7DLX's Word Search

HAM ANTENNAS

M	C	K	X	J	C	A	W	A	W	D	H	X	T	U
A	O	P	R	G	F	U	X	B	U	L	A	O	K	T
R	A	N	D	O	M	W	I	R	E	X	I	D	V	I
C	I	D	O	I	R	E	P	G	O	L	I	X	S	G
O	L	R	T	P	H	C	B	W	A	P	E	O	O	Y
N	K	H	P	C	O	T	I	C	O	V	T	Z	U	I
I	R	O	C	O	T	L	I	L	A	R	O	O	T	K
T	G	M	S	K	O	T	E	W	O	Z	E	P	P	N
L	U	B	U	C	R	L	R	P	X	B	G	F	L	X
Z	A	I	F	E	W	E	I	B	W	Q	A	E	J	S
J	O	C	V	G	T	C	B	G	B	Y	R	R	L	O
V	J	C	I	R	U	F	M	K	A	X	E	S	A	D
I	E	H	A	L	F	W	A	V	E	Y	V	S	Z	P
I	Y	U	Z	B	E	N	D	F	E	D	E	I	U	H
J	Q	V	V	E	U	H	G	J	L	V	B	W	V	M

Found 0 of 17

- BEVERAGE
- DIPOLE
- ENDFED
- HALFWAVE
- HELICAL
- ISOTROPIC
- LOGPERIODIC
- LOOP
- MARCONI
- MONOPOLE
- PARABOLIC
- QUARTERWAVE
- RANDOMWIRE
- RHOMBIC
- VERTICAL
- YAGI
- ZEPP

SUCH A HAM SH-005

Stan & Cliff have been working all day on installing my clothesline, Mary.

SUCH A HAM SH-012

We thought **YOU** were bringing the food.