FEEDBACK

PUBLISHER John Fox VA3JRF Date March.1998

Inside this Newsletter

Club Activities

Meetings are held on the Fourth Tuesday of the month at the Georgian Yacht Club at seven-thirty. Come early and get a good seat

Two Metre Net is held each Thursday night at nine. All are welcome. We are always interested in discussion topics.

Club Breakfast is nourished the second and last Saturday of the month at Rockford at nine am

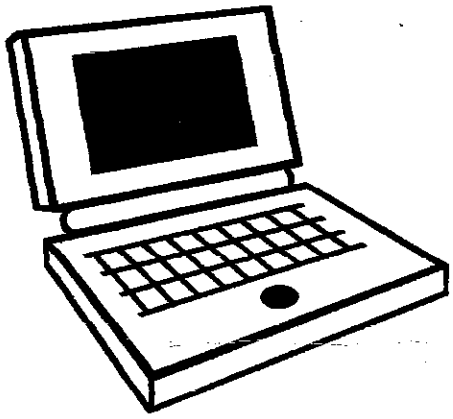
Eighty Metre Net is held Sunday mornings at nine-thirty on 3.783 MHz.

It is of great sadness to report the passing of VE3AEO Ted Scarrow of Owen Sound on Feb. 28, 1998 at the age of 83

Message from the Editor

I wish to thank Brad VE3RHJ for another interesting article for Feedback. I can always use articles for the newsletter. They can be technical, true stories of interesting dx contacts, your reasons for becoming a ham or any other ham related subjects. This is your newsletter and it should reflect your interests. the help would be much appreciated.

E-mail addresses for gbarc members



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Who is this General Failure and why is he reading my hard drive

Coming Events

Pickering Hamfest/fleamarket
April 18,1998

Dayton Hamfest
May 15-17, 1998
Hara Arena, Dayton, Ohio

The official newsletter of the Georgian Bay Amateur Radio Club

Message From the President

Hello to all. Hope everyone is enjoying the winter wonderland with hardly any snow on the ground this year. The snowmobilers and skiers will be taking holidays this year.

John VA3JRF and myself have been all over the place with the business and have had all sorts of antennas for all different bands up and running. Have had lots of fun building and trying them out.

Just a note to remind all that Thursday nights are the 2 metre nets at nine p.m. on 146.940 MHz. and Sunday morning at nine thirty am is the 80 metre net on 3783 KHz.

This month starts another radio course on the four Saturdays in March and the first Saturday in April. Drop in and say hello at the Yacht club in Owen Sound.

Our membership is down this year and we hope to get it back up to where it should be. With the help of the membership we should be able to come up with ideas to increase club membership and activities.

Also at this point I would like to add a thank you to the following businesses and individuals for their help in club activities. A thank you goes out to:

- Carl VE3BY and Midwestern Communications for parts, pieces and know-how in electronics and communications.
- Jim VE3CRV for the use of the tower sites at Owen Sound and soon Woodford
- Grey net for the space for the club homepage and e-mail address

In the radio end of things Carl VE3BY, John VA3JRF and myself took a trip a while back and picked up 50 or so six metre radios that are for amateur use. the cost for the radio to club members will be the cost of crystals and any parts needed to mark the units work. Radios are GE and Motorolas.

Well that's all for now

73 Bob VE3XOX

DX PACKET CLUSTER

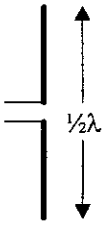
DX Packet Cluster: Many cities have DX (foreign amateur) spotting nodes or networks. HF (High-Frequency) operators connect to their local DX Packet Cluster in order to receive reports on the latest DX. This type of packet came about from those interested in 'chasing' DX. Many amateurs like to frequent the HF bands looking for rare international operators to contact. A DX Cluster allows many HF operators to be connected over packet radio at the same time while operating HF and hunting for DX. When someone finds a DX station, they send a packet message to the DX Cluster, which then sends the information to all other packet operators using the DX Cluster. In this way, you have several stations monitoring the band, looking for DX. Often an amateur will 'spot' (hear) a DX station and then distribute the DX report almost instantly. DX Clusters allow everyone to operate many more hard to find DX stations in one evening than was possible operating by oneself. Some amateurs have been known to attain enough contacts to qualify for DXCC in a matter of weeks. One point though, if your HF station is not a 'big-gun', then it is sometimes best to operate the DX station before posting your spot for others to find. There is a good chance that a pile-up will occur as soon as you make your spot to the DX Cluster and then you will not be able to work the DX station that you found!

The Essential Advanced: Antennas

by Brad Rodriguez, VE3RHJ

OK, you've got your Basic licence and you're on the air. Why not go all the way? You don't need to learn much more for an Advanced qualification, and it's useful knowledge anyway. Read on...

A wire will resonate, like a guitar string, when it is a half-wavelength long. At 147 MHz, the wavelength λ is 300/147 or about 2.04 metres long, so a half wavelength is 1.02 metres. When fed with 147 MHz RF energy, there will be a current maximum, and no voltage, at the center of the wire. There will be maximum voltage, and no current, at the ends of the wire.

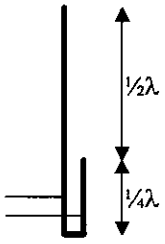


If fed at the center, the antenna is called a **dipole**, also known as a *doublet* or *Hertz* antenna. This is the standard to which other antennas are compared. The feedpoint impedance is roughly 75 ohms.

If mounted vertically, the dipole will emit *vertically polarized* radio waves. This means the electric or *E* field oscillates vertically. (The magnetic or *H* field is always at right angles to the E field.) A horizontally-mounted dipole produces horizontally polarized waves. Polarization is unimportant on HF, due to *Faraday rotation* in the ionosphere; so HF dipoles are usually horizontal for ease of support. At VHF, polarization is important: use vertical for 2 metre FM! Satellites use *circular polarization*, which passes through the ionosphere unchanged.

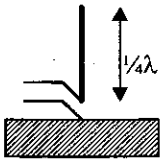
Horizontal dipoles can also be mounted with the ends drooping, as an **inverted V**. Doing this causes the resonant frequency to be slightly lower.

A half-wavelength wire can also be fed at the end. (This was once called "Zepp" feed because Zeppelins would trail a half-wave antenna in the air.)



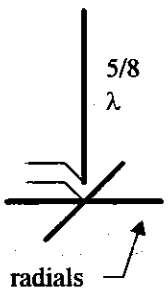
One such antenna is the **J-pole**, which is technically a half-wave end-fed antenna plus a quarter-wave impedance-matching stub.

If you mount half of a dipole (a quarter-wave wire) vertically over a conducting surface, reflection from the surface provides the other half! This is a **¼-wave vertical** (once known as a *Marconi* antenna). Its feedpoint impedance is about 50 Ω.



The conducting surface or ground plane can be a metal sheet, the roof of your car, or even the earth[1] -- as long as it extends at least ¼ wavelength from the antenna. You can "fake" a ground plane with four or more horizontal ¼-wave wires, called *radials*, at the base of the antenna.

A ¼-wave vertical radiates most of the RF energy up into the sky. A lower *angle of radiation* -- ideally, straight out to the horizon -- gives longer range. The **5/8-wave vertical** has a lower angle of radiation, and about 3 decibels (*dB*) more gain[2], than a ¼-wave. But it needs a special matching network at the base to give the proper feedpoint impedance.



You can make a dipole or vertical physically shorter by inserting *loading*

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[1] The earth is a poor conductor and really makes a poor ground plane.

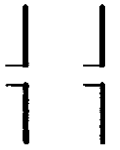
[2] 3 dB gain multiplies your power by 2. In other words, 10 watts into a 5/8 wave is as effective as 20 watts into a ¼-wave. Antenna gain also amplifies *received* signals by the same amount.

coils. These are inductors (coils) which make the antenna look electrically longer. You can also make the antenna work on several frequencies by inserting *traps*. These are parallel inductor-capacitor circuits, which electrically cut off part of the antenna at their resonant frequency.

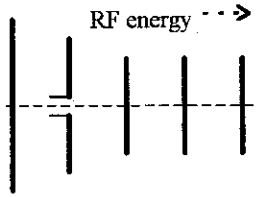
All of the above antennas, when mounted vertically, are *omnidirectional*, which means they radiate equally well in all (horizontal) directions. Vertical dipoles and J-poles have an advantage in that they don't require a ground plane. This can make them easier to install in many places.

If you mount two dipoles in line, and connect them together, you can make an omnidirectional antenna with 3 dB of gain, compared to a dipole. Four dipoles give 6 dB of gain. Such *collinear* (literally, "in the same line") antennas are frequently used for repeaters.

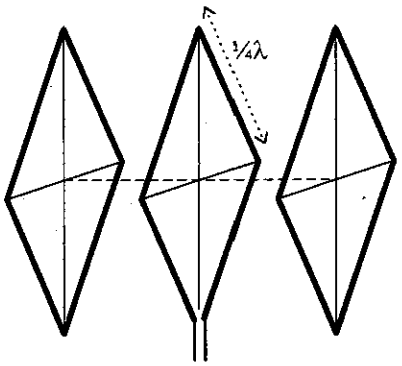
If you mount two or more dipoles side-by-side, and adjust the phase of the RF into each dipole, the radiated energy is reinforced in some directions and cancelled out in others. This provides *directional* gain for both received and transmitted signals. This is called a *phased array*.[3]



A variation of the phased array is the *Yagi-Uda* antenna (named after its inventors). It uses a single *driven element*, and one or more *parasitic* elements. The parasitic dipoles aren't connected to anything; they work by receiving and re-radiating the RF in the air. The phase is controlled by adjusting their length: the shorter elements are *directors*, which tend to focus the RF energy, and a slightly longer element is a *reflector*. Their spacing controls the directional properties. The *front-to-back ratio* tells how much signals from "behind" are attenuated relative to signals from "in front." The five-element "Yagi" (also called a "beam" antenna), with a reflector, a driven element, and three directors, has a typical gain of 10 dB over a dipole.[4]



You can also make driven and parasitic elements with square loops of wire instead



of dipoles. The driven element is one wavelength long (¼λ on a side), the reflector slightly longer, and the director(s) slightly shorter. This *Cubical Quad* antenna has a feedpoint impedance of about 50 ohms.

Antenna gain is usually specified in dB compared to a dipole, or "dBd". You may occasionally see "dBi," gain relative to an *isotropic* antenna. This is a theoretical antenna which radiates equally well in *all* directions (even up and down). A plain dipole has 2.16 dB gain over an isotropic antenna, so if you're told an antenna has 5.16 dBi, you know it is really only 3 dB better than a dipole (3 dBd).

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[3] Phased arrays can also be made with vertical antennas. Many AM radio stations do this.

[4] 10 dB is a gain of 10 times. Where decibels add, gains multiply. Thus, 13 dB = 10 dB + 3 dB corresponds to a gain of 10 x 2 or 20.

Membership list as of Feb. 21 1998

SWL	STAN GUZONAS	BOX 11 FLESHERTON	ONTARIO	N0C1L0
VA3ACI	MARVIN WALSH	99 MILL ST. BOX 98 TARA	ONTARIO	N0H2N0
VA3HUD	ADEN SEAMAN	RR#1 OWEN SOUND	ONTARIO	N4K5N3
VA3JJR	JOE ROBINSON	1534 CARRINGTON RD. MISSISSAUGA	ONTARIO	L5M2K1
VA3JNA	JOE APPLEBY	785 24TH ST. W.OWEN SOUND	ONTARIO	N4K4H9
VA3JRF	JOHN FOX	RR#2 TARA	ONTARIO	N0H2N0
VA3JVO	JIM VanOVERBEEK	93 JEWEL BRIDGE RD,SAUBLE BCH	ONTARIO	N0H2G0
VA3RHJ	WENDY RODRIQUEZ	R#7 MARKDALE	ONTARIO	N0C1H0
VA3SDA	SEAN O'DONOUGHUE	4-1030 1ST STREET W OWEN SOUND	ONTARIO	N4K4K6
VA3SEA	JACK SEAMAN	RR#1 OWEN SOUND	ONTARIO	N4K5N3
VA3STS	BOB MYATT	140 5TH AVE EAST OWEN SOUND	ONTARIO	N4K6C7
VA3WPJ	JACK SINCLAIR	RR#3 OWEN SOUND	ONTARIO	N4K5N5
VE3BFV	JIM HARRON	RR#2 KEMBLE	ONTARIO	N0H1S0
VE3BQM	BERNIE MONDERIE	R.R.#4 240 GORE CRESCENT CHATSWORTH	ONTARIO	N0H1G0
VE3BY	CARL STYAN	R.R.#2 TARA	ONTARIO	N0H2N0
VE3CRV	JIM VAMPLEW	BOX 324 OWEN SOUND	ONTARIO	N4K5P5
VE3DIQ	BILL DOWKES	764 3RD AVE W. OWEN SOUND	ONTARIO	N4K4P3
VE3DKF	JIM FOOTE	49 EMERSON AVE,SAUBLE BEACH	ONTARIO	N0H2G0
VE3DLH	JERRY HUGHES	GENERAL DELIVERY PRICEVILLE	ONTARIO	N0C1K0
VE3DO	IVAN PAYNE	BOX 146 STATION E TORONTO	ONTARIO	M6H4E1
VE3DTS	JACK AVIS	RR#6 WIARTON	ONTARIO	N0H2T0
VE3DXE	KIM STYAN	R.R.#2 TARA	ONTARIO	N0H2N0
VE3DXO	DAVE DIXON	BOX 265 MARKDALE	ONTARIO	N0C1H0
VE3ENS	IAN SINCLAIR	RR#3 OWEN SOUND	ONTARIO	N4K5N5
VE3FFN	WALTER STOYKO	RR#1 PROTON STATION	ONTARIO	N0C1L0
VE3GCQ	GRANT ANDERSON	BOX 1101 OWEN SOUND	ONTARIO	N4K6K6
VE3HMZ	BILL CLIFFORD	785 21st ST "A" East	ONTARIO	N4K6T7
VE3HXX	IAN SUTHERLAND	1775 9TH AVE E. OWEN SOUND	ONTARIO	N4K3T6
VE3IJD	GENE McDONALD	RR#4 TARA, ON	ONTARIO	N0H2N0
VE3IOD	GARY BELL	10-945 9TH AVE W. OWEN SOUND	ONTARIO	N4K4N8
VE3LKD	BOB DROINE	242 7TH ST E. OWEN SOUND	ONTARIO	N4K1H9
VE3MWU	NICK KLAASSENS	RR#3 HEPWORTH	ONTARIO	N0H1P0
VE3NEM	TOM MERNER	RR#4 OWEN SOUND	ONTARIO	N4K5N6
VE3RHJ	BRAD RODRIGUEZ	R#7 MARKDALE	ONTARIO	N0C1H0
VE3TSA	TOM ST.AMAND	1232 3RD AVE E. OWEN SOUND	ONTARIO	N4K2L5
VE3TUX	AUBREY ALDERDICE	RR#4 MEAFORD	ONTARIO	N0H1Y0
VE3TWI	OKKE BOS	769 6TH ST "A" E. OWEN SOUND	ONTARIO	N4K1H4
VE3TXB	JOHN APSITIS	750 DURHAM RD E. DURHAM	ONTARIO	N0G1R0
VE3TYL	JIM LYTTLE	RR#2 SHALLOW LAKE	ONTARIO	N0H2K0
VE3UWD	HENRY OLSEN	373 12 AVE. APT 4 HANOVER	ONTARIO	N4N2T4
VE3VTO	DON SLOANE	RR#1 MAR	ONTARIO	N0X1X0
VE3XOX	BOB VARY	RR#8 OWEN SOUND	ONTARIO	N4K5W4

GBARC 80m Net Schedule

Sundays, 9:30 am local time, 3.783 MHz

VE3FFN Jan 4 Feb 22 Apr 12 May 31

VE3BFV Jan 11 Mar 1 Apr 19 Jun 7

VE3HXX Jan 18 Mar 8 Apr 26 Jun 14

VE3RHJ Jan 25 Mar 15 May 3 Jun 21

VE3DIQ Feb 1 Mar 22 May 10 Jun 28

VE3DXO Feb 8 Mar 29 May 17 Jul 5

VE3DLH Feb 15 Apr 5 May 24 Jul 12

THE SIX METER AMATEUR RADIO BAND
FREQUENTLY ASKED QUESTIONS

(Designed to help encourage hams to use and enjoy this band!)

By Randall Rhea, KG0HW

Updated: February, 1997

"We do these things not because they are easy, but because they are hard."

- John F. Kennedy

WHAT IS THE SIX-METER BAND? Kennedy may not have been talking about the 6 meter band, but he might as well have been. If you like a challenge, this is it! If you want reliable, easy, worldwide ham radio communication, stick to 20 meters. If you enjoy a challenging band that changes moment to moment, 6m is for you!

The 6 meter band is a portion of the radio spectrum around 50 MHz allocated to amateur radio. What attracts hams to this unusual band? It is fascinating because just about all types of propagation pop up on 6m at one time or another: Sporadic E (Es), Tropospheric Ducting, Aurora, Meteors, even F2 skip like an HF band... they're all here. 6m is an acquired taste: a few hams work the band regularly, but many hams never work it at all. Once you acquire the taste, you tend to be hooked for life. The band has become more popular in recent years, thanks to several new 6m-capable radios. There two types of 6m operators: the ones who use FM or packet for local work, and one who work DX with SSB. (Some like me even do both!).

IS FM USED ON 6M? Yes, usually above 52 MHz. The level of activity varies with the area. Its popularity is on the rise thanks to several new all-mode 6m rigs on the market. The main FM simplex frequency is 52.525 MHz. Your local range is better on 6m than on 2m with the same power and a similar antenna. If 2m is too crowded in your area, the FM portion of 6m may be just the solution you need. Most 6m enthusiasts, however, use only SSB or sometimes CW.

ARE REPEATERS USED? There are a several 6m repeaters listed in the ARRL Repeater Directory, but some of them are not operational. This will depend on your area. The offset in the U.S. is usually one MHz. (e.g. 53.330 out, 52.330 in) I would listen to the FM portion of 6m to check for activity in your area.

WHAT ARE THE MOST POPULAR FREQUENCIES? Per the FCC, 50.0 to 50.1 is reserved for CW work in the U.S. Most operation is SSB. 50.110 is the most popular SSB DX frequency, and 50.100 to 50.124 should be used only for DX. Some hams tend to discourage (or flame) U.S. domestic stations from calling CQ in this "DX window". The other popular frequencies tend to vary from area to area, so the following is only a general guide for beginners: 50.125 is the U.S. domestic calling frequency, and most domestic SSB is found between 50.125 and 50.200. Only during hot F2 openings do you find SSB above 50.200.

DO I NEED A BEAM ANTENNA? If you want to win contests, yes. You can have fun with a vertical during openings, (I do with an Icom 706 in my car) but the pros use beams. Most serious operators are horizontally polarized, but cross-polarization does not matter for Es, F2, or Aurora. A few stations use 3-element beams, but a 4 or 5 element beam is so small that a LOT of people use them. Quite a few people have Cushcraft 6- element "Boomers". There are a few other big beams, and the lunatic fringe stacks them. For example, K6QXY has a stack of 4 six-meter beams, each with a 50ft (15m) boom.

HOW HIGH SHOULD MY ANTENNA BE? For sporadic E (Es) openings, a height of about 30 feet is optimum according to studies. For tropo and other modes, the higher the tower the better! Some people have multiple antennas at multiple heights to work different kinds of propagation modes. I live in subdivision where no outdoor antennas are allowed, so I use a 2-element beam in the attic, and it works pretty well. I also use a vertical for local FM work. RG8 or RG213 is plenty good enough cable for most people. Antenna-mounted pre-amps are never needed.

IS THERE PACKET WORK ON 6M? It depends on the area. Local packet work can be found in the higher frequency portions of the band. There has been very little DX packet work.

WHAT RIGS ARE USED? The rig selection has improved significantly in recent years. After the golden years of 6m AM radios in the 60's, the market dried up in the 70's. Today, several manufacturers offer excellent 6m rigs. Probably 50% of the active

stations have 80 to 150 W output, either from old Icom 551D s (the 551 is 10W), or from solid-state (brick) amplifiers following the many types of 10W rigs, such as the Yaesu Ft-620B or the Kenwood TS-600. The Icom 575H is very popular, as it has an excellent receiver and 100 watts (the 575A is 10 watts). HF rigs that add 6m (such as the Icom 726 or 706) can be effective but usually lack receiver sensitivity. Perhaps 40% of the stations run just 10 to 20 W, but most serious operators run higher power. The remaining 10% have tube rigs such as the Drake TR-6. Good 6m rigs tend to be expensive, even on the used market. Swan and Heathkit tube rigs are the least expensive and can be quite usable, but you will run into problems typical of older rigs, such as drift (especially on the Swan). The kilowatt is rare on 6m: such high power sometimes does not help and causes terrible TVI. The norm for serious stations is 100 to 150 watts, but you can have a lot of fun with a lot less power. Expect to see inexpensive SSB 6m rigs from companies like MFJ as we approach the next sunspot peak, which is due around 1999.

CAN I USE A TRANSVERTER WITH AN HF RIG TO GET ON 6M? Yes. A transverter allows you to use an HF rig on 6m (or other VHF/UHF bands). Many 6m operators swear by the transverter + HF rig + brick amplifier setup. Keep in mind, however, that some of the transverters are kits, and most HF rigs must be modified to support transverters. In these cases, some experience with electronics is necessary. The results are well worth it. The top-of-the-line transverters are from a German company called SSB Electronics. They outperform 6m rigs but are expensive. Down East Microwave and Ten Tec also sell very popular assembled and kit units. If you already have an excellent HF rig, the transverter is a great way to go. Keep in mind that mediocre HF rigs may produce mediocre results.

I LISTEN TO 6M OCCASIONALLY, BUT I NEVER HEAR ANYONE. Openings on 6m are rare, especially during low points in the sunspot cycle. For hams in far northern latitudes (say 50 degrees and above), aurora openings are common. The most common openings in middle and southern latitudes are a result of sporadic E (Es), which occurs most often in June. F2 openings occur only when the solar flux is high. The frequency where you are most likely to hear someone is 50.125 USB. An explanation of the many types of propagation on 6m follows.

HOW OFTEN ARE THERE F2 OPENINGS? F2 propagation, the kind that we know and love on 20 meters, occurs rarely on 6m. Only at the peak times of the sunspot cycle, a few years out of each eleven, does the band open up for F2. When it does happen, the band becomes a frenzy of activity, and behaves similar to 10 meters. In the last cycle, there were many openings in 1989 through 1991, but that cycle had an unusually long period of peak activity. Cycles average 11 years, but the last peak happened only 8 years after the previous one. Openings occur most often in Autumn during the daytime. A few stations have worked 100 or more countries, but they have been patiently working the fleeting openings for many years. The March, 1993 QST magazine has an excellent article on 6m propagation that shows a correlation between solar flux and openings.

HOW IS TROPO PROPAGATION ON 6M? The ordinary ground-wave tropospheric ducting range on six isn't quite as great as on 2m. There are a number of reasons. Since there are so many other propagation modes on six, people don't try very hard on tropo. Antenna gain often is higher on two. Noise is lower on two. At least in the summer, stations like W3BWU (Pittsburgh), W3IDZ (northern NJ) are easily worked from Maryland with the beam pointing at them, and can be heard at almost any pointing. They are in the 150-W class.

HOW IS METEOR PROPAGATION? Any area workable by meteors can be worked more easily by Es or aurora. Even though meteor bursts are much stronger and longer on six than on two, little use has been made of them. There has been a VERY little meteor-burst packet work on six. W3OTC had the first such contact (with W0RPK). W3XO worked him a few years later.

WHAT ABOUT IONOSCATTER? Some people think it's really meteors, but every weekend morning there are a number of nearly- kilowatt stations working each other on SSB at distances of about 600 - 1000 miles by ionospheric scatter. Sigs are weak, and it takes good beams, height, and power, but it is very reliable. See the old NBS papers by Bailey, Bateman and Kirby, et al. Bateman and Kirby

were/are hams. Ross Bateman recently died. Dick Kirby continues as head of ITU in Geneva.

HOW IS AURORA? It is much easier than on two. SSB is usually intelligible, but CW is easier to work. Point north about dusk, most commonly in March and October/November. (In northern Europe, hams report Aurora peaks around dusk and again around midnight.) Lots of people in the far northern latitudes work this mode when it happens. Aurora can occur as far south as the mid-U.S. during bad solar storms. The March, 1989 storm was so powerful that Aurora was visible in San Francisco and power was knocked out all over Canada.

WHAT ABOUT SPORADIC E (Es)? Es is the most common propagation mode on 6m. The term "sporadic" is accurate: stations can pop in and out and then fade quickly. Studies (see March, 1993 -QST- Magazine) have shown that Es has nothing to do with the sunspot cycle; it is much more a function of the time of year. Es can occur anytime, but is most common around the solstices (June 21 and December 21). In the southern latitudes, the peak occurs around Christmas with a minor peak in June. The northern latitudes find peak times in June and July with a minor peak at Christmas. February is the low point, but this year (1996), we even had a good opening then. In addition to the common single-hop range of 500 - 1500 miles, there are quite a few double- and-more hop contacts on 6m. Now that a number of Europeans are on six, we find that they can be worked from the US east coast each summer. Likewise the Caribbean stations work all over the US. The US west coast can work Hawaii, Alaska, and Mexico. You will also hear some hams on June DXPedition trips to Mexico and the Caribbean; they are easy to work in the late afternoon or early evening, even with 10W and a vertical. The VHF contest in the middle of June is also a good time to work Es.

HOW SHOULD I LOOK FOR SPORADIC E (Es)? Within two weeks of the Winter and Summer Solstice (June 21 and December 21), you should be monitoring 50.125 as often as possible; this is the most common time and frequency for Es. I would also check 50.110, 28.885 MHz, and CW beacons between 50.00 and 50.100. 10 meters and the 27 MHz Citizen's Band are good indicators of 6m Es: If you hear Es on 10m and the stations are less than 1000 miles away, it's time to check for Es on 6m. If the stations on 10m are 500 miles away, you can be virtually certain that 6m is open. Likewise, a station on 6m from 500 miles away means Es on 2m is possible.

WHAT ABOUT TRANSEQUATORIAL PROPAGATION? - The southern US gets a number of openings to South America by some kind of ionospherically-ducted propagation. The stations are generally about equidistant either side of the magnetic equator. Given exceptional luck, an Es opening linked into this mode can make it available to more northern stations. This mode has bad flutter fading and a touch of the auroral spectrum spreading. This mode also works sometimes on two meters if you use CW and really good gear. It has been worked on 432 MHz.

ANY MOONBOUNCE (EME)? - There have been a few EME contacts on six, but the required antenna size and high background noise makes it out of the reach of most people.

WHAT ABOUT TVI PROBLEMS? There is no doubt about it, six has TVI troubles. You don't find a lot of people on 6m in channel 2 areas unless cable is widely used. VCRs are very prone to 6m pickup. Some cordless phones, baby monitors, and kiddie walkie-talkies operate on 49 MHz. Most consumer electronic equipment has poor RFI shielding. The common connecting or power cable is a quarter-wave antenna for six. The TV owners have their revenge since the 13th harmonic of the color subcarrier, or something, of TV sets and TV games puts out a birdie at 50.113 MHz to bother the 6m operators in return. There is also quite a bit of trouble from noisy power distribution lines if they aren't buried (usually bad insulators or poor guy bonding). I would get a book on curing TVI. Often, using snap-on ferrite filters on any cables (patch cords, power cords) of home electronics equipment can help, and these are inexpensive and available at Radio Shack.

History of the APRS

The idea of APRS was born in 1989 when some Australians attended an IAPR sponsored meeting in Finland and had discussions with IAPR member organizations. That same year, Prof Mike Duff from University College London (who was IAPR secretary

at the time) was invited speaker at an IREE conference on Image Processing in Canberra. He encouraged the formation of an Australian Pattern Recognition body as there was such interest in the area here.

The society was launched at a Special Interest Group meeting at Monash University in February 1990, as part of the Australian Computer Science Conference. A constitution was drafted that month and about 40 initial members were recruited, most in Victoria and Melbourne. By 1991 the society had almost doubled in numbers and the first national conference, DICTA-91, was held in Melbourne in December 1991. The following year, State branches were introduced so that local meetings could be organized, and these currently operate in Victoria, New South Wales and Queensland. Other states have nominated representatives as contact persons for APRS liaison.

Since 1991, specialist workshops and national conferences have been held in alternate years: DICTA-93 in Sydney and DICTA-95 in Brisbane. Limited numbers of conference proceedings are still available for purchase: send e-mail to A.Maeder@qut.edu.au for further information. Past workshops have covered Commercialization of Image Processing Research, Spatial Data Manipulation, and Colour Image Analysis/Visualization.

The APRS produces a newsletter approximately quarterly which is distributed with the IAPR world newsletter. Members enjoy discounts at technical meetings sponsored by APRS and regular meetings organized by State branches. Total membership has now reached nearly 200 and APRS is currently planning to host the 14th International Conference on Pattern Recognition, the premier event sponsored by IAPR, in Australia in 1998.

What is APRS?

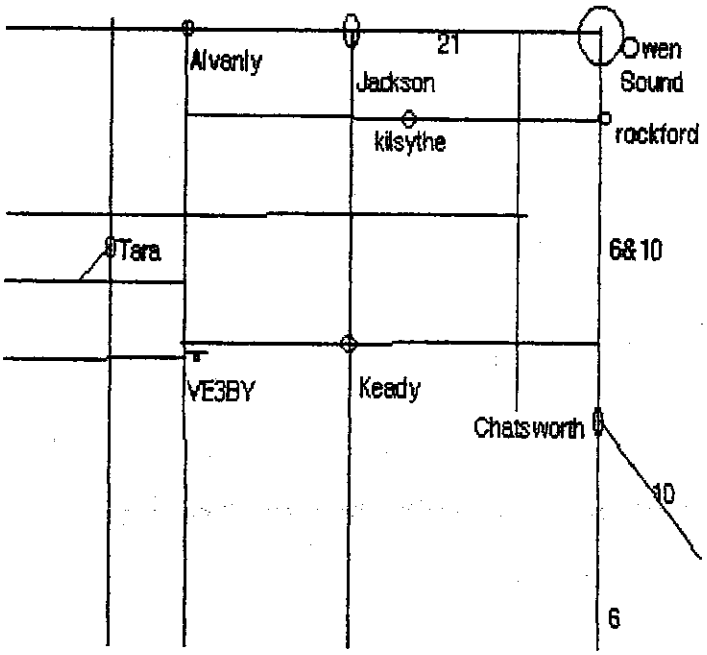
APRS is a radio based position reporting system written by Bob Bruninga, an instructor at the US Naval Academy in Annapolis, MD. It has been released as shareware.

After APRS became popular, Keith Sproul wrote a Macintosh version (MacAPRS), and his brother Mark ported it over to Windows 95 and 3.1 (WinAPRS).

Not to be outdone, Steve Dimse created JavAPRS, which runs in conjunction with a JAVA capable web browser using online, live Internet data. Dale Heatherington wrote a server that allows TNC data from a particular area to flow onto the Internet for use with JavAPRS.

With the Internet taking its share of packet users away from the radio, APRS is a practical use for AX.25 Packet Radio. In this area we have about 50 BBS users, and about 15 active APRS users in my area.

Field Day this year is to be held at Carl (VE3BY) and Kim's (VE3DXE)place. Thanks to Carl and Kim for their hospitality. Here is a map showing how to get to the field day site. (bear with me on my map drawing skills)



Repeater Codes and SPEED DIAL Numbers for VE3TIV

AUTOPATCH ON ----- 501 AUTOPATCH OFF ------ #50

SPEED DIAL Numbers turn on the patch and dial the number. On completion of the call use #50 to turn off the autopatch.

Emergency Numbers

OPP Mount Forest.....911
Kincardine Fire Dept.....912
Ambulance.....913
OPP Kincardine.....914
Water Rescue.....915
Kincardine P.U.C.....916
Ripley Fire Dept.....917
Tiverton Fire Dept.....918
Kincardine Hospital.....919

PERSONAL NUMBERS

CALL	SPEED DIAL	TEL. NUMBER
VE3BUJ	885	395-3607
VE3COE	888	396-9147
VE3CPV	851	396-9875
VE3DBP	852	395-5598
VE3DJL	853	396-7939
VA3ECE	893	396-4196
VE3EEN	855	396-7183
VE3EFX	856	396-9762
VE3ERA	857	396-4561
VE3EYN	884	396-2080
VE3EZL	858	395-3747
VE3FCW	897	832-9583
VE3FLN	859	396-9636
VE3FTK	860	396-4375
VE3FWK	891	396-9766
VE3GXS	861	396-3872
VA3HBK	895	396-9888
VE3HIR	862	396-9762
VE3IYY	863	396-4454
VE3JFB	864	396-9639
VE3JON	886	395-0613
VE3KED	865	396-9177
VE3KHQ	898	368-7952
VA3KWR	896	396-2115
VE3LCY	866	396-7332
VE3LPE	867	396-4196
VA3MSQ	899	396-7458
VE3MTF	868	396-2897
VE3OVV	869	396-3981
VE3PDQ	889	396-9147
VE3PYV	870	396-3813
VE3RGL	871	396-2051
VE3SLQ	873	396-9119
VE3TAI	887	396-2349
VE3TIH	874	396-3249
VE3UBO	875	396-4690
VA3VAL	894	396-2051
VE3VBF	892	395-2225
VE3VBP	878	396-2580
VE3WPB	879	396-7281
VE3WWS	880	832-5614
VE3XDR	876	396-9569
VE3YDR	881	396-9569
VE3ZUE	882	396-3981

Information supplied by

Bill VE3EFX

Thank you Bill