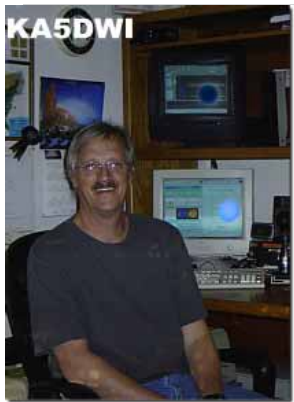


Chairman's Corner

.....

The Chairman's Corner
By Art Jackson KA5DWI



The Annual State of the Club and Pulpit Speech

Happy New Years everyone. I am very happy that this year is coming to an end. Much has happened, some good and some bad. I am still pleased that we got through it in one piece and healthy, and I do not necessarily mean me. Both the club and I

have held up through some trying times.

I am proud to announce that I have joined the rank of approximately 30% of the American public. I became a college graduate at the ripe old age of 55 years. It was not easy. At times, I almost threw in the towel from frustration, exhaustion, discrimination, and occasional 10-page Political Science papers and Number Theory exams on Wednesday evenings. At one time I was wondering what was going to kill me first, the YL from being ignored at trying times, or the day-to-day struggles of **A**cing the next paper or exam. I have told many that I was praying to live long enough to enjoy the moment, and then survive a few days until the grades were out and that GPA was high enough to say "I earned Magna Cum Laude" (finished with a 3.786). Hooray! I made it and I am still here and kicking. The next obstacle is teacher certification and I will figure that out soon. So now I can spend some time with issues of our club.

At the beginning of this year I did my best to forewarn all of you that it would be difficult for me to be an active officer of this club. I had gone as far to seek out my replacement, but no one wanted the job.

2006 had been an interesting year itself. During that year, the club and I personally received rather unique threats from an irate Ham who become upset when I asked members of our Yahoo group not to bad-mouth manufacturers. This club is non-profit and non-commercial and has absolutely no involvement in any pecuniary interest, period. After putting up with that, I kind of wondered if it was worth my time. Luckily, I had the support of John Petersen-KM5ES as my right hand and Webmaster, Jim McMasters-KM5PO as our Bulletin Editor, Larry Hogue-W6OMF, and Howard Hallman-WD5DJT and a few other valuable key members to keep plugging along.

As 2007 began, I felt that as long as someone was producing a bulletin, someone was running the website, someone was collecting membership dues and maintaining the database, S.W.O.T. members were running Nets, and a few were out spreading good cheer, I would not have to be too active and could work in a passive capacity. I was quickly proven wrong.

Unfortunately, John Petersen's (KM5ES) passing changed all of that. Despite my

attentions on other things (like college), I had to take over the Homepage. No doubt that it needed it. It had become a little stale and poorly out of date. If I was going to be responsible for it, it had to have good content. I have done my best under the circumstances to make it informative and a good portal to

*.... DX and the study of VHF
propagation was the underlying
motive for the organization."*



SWOT will have a table in the section for 'clubs and organizations' at the Fort Worth 2008 Ham Fest Jan. 11-12th. Please stop by and pay us a visit if you can! <http://www.fwhamfest.com/>

Weak Signal information. This new responsibility now leads me to think about other issues. Missing the Central States VHF Conference was very disappointing, but a short meeting with Larry Hogue in Sonoma, California helped keep me upbeat and looking into our future.

Several weeks ago, I received an old S.W.O.T. Bulletin produced in March of 1978. Back then, Len Hoops-W5JTA was our Editor. With a typewriter using Courier 8 point and no White-Out, Len produced an absolutely wonderful and highly informative newsletter. In this issue, thirty-four (34) 144 MHz CW and SSB reports were listed from Florida all the way to Hawaii. Tidbits of information were included from all over the country, in addition to information passed on from other VHF organizations. Most important was why S.W.O.T. existed.

On the last page it was stated:
"Organized by four Fort Worth 2 meter SSB operators..... The purpose was to promote the use of 2 Meter SSB and CW through the establishment of nets and activity times and the use nationally of the 145.100 MHz calling frequency. DX and the study of VHF propagation was the underlying motive for the organization."

Now that is what S.W.O.T. should still be about!!

Every one of us that are members of S.W.O.T. has that responsibility, **to promote this part of the hobby**. We need to be re-establishing connections with our members and then doing our best to bring in new members. It matters little what age they are. Yes it would be nice to bring in young participants, but it is us, the more experienced and mature that have the skills to maintain it and have the **MOST TO SHARE** with those entering.

That is my true concern. Despite improved technologies and the Internet as a source of information, I am astounded how we totally fail to get word passed on the enjoyment of this hobby and more important how really simple it is to participate in it. Instead, all I seem to be seeing are complaints about captured Rovers, WSJT locking up a computer, or that the station is down because the H-frame holding the 18XXs collapsed in an ice storm. Whatever happened to, "I just completed a 1,000 mile

2-Meter SSB on Tropo with 30-watts into a 4-element Quad"?? We have an obligation to others wanting to participate in this hobby that it is not that difficult. It is a disservice to tell someone that it **cannot** be done unless you have a TS-2000 fed into KW amplifier and a Vista Intel Duo 5 GHz CPU 12GB memory computer running WSJT propagation creation software. Instead we should be saying, "I have a working IC-290 and a Cc 144-10 antenna available to someone thinking about getting into 2 Meter SSB. I worked 30 states and 100 Grid Squares with it".

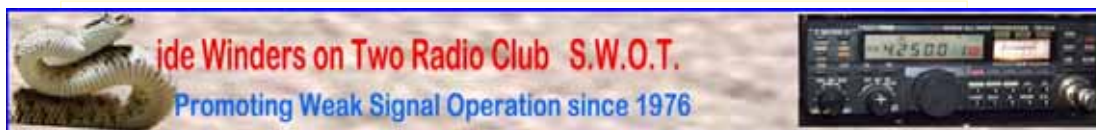
Technology is wonderful, but it scares many off. You cannot achieve rewards and successes in this hobby without others out there participating. We do not need to making it so specialized that we discourage others from joining in. The Nintendo generation can have the technology, but the older generations in the hobby need to "keep it simple", participate, and Elmer (an art that is sadly dying). If you are a S.W.O.T. member (paid, an officer, or past member) and enjoy it, you have an obligation to others to help. Many members (present and past) in this group have given you enjoyment, excitement, and good relationships with other Hams. How about giving back to others? It is a good feeling and S.W.O.T.'s future depends on it.

Encourage others to join S.W.O.T., join our Yahoo Group Page, and when someone has a question give them a simple and positive answer. Start reporting all DX via connections to DX Clusters (in a set format) so the VHFDX.net DX Sherlock and Live MUF maps display the openings. Pictures can be more valuable than words at key times. You can write an article for the Bulletin or gather with others at a local Hamfest. Our survival as an organization and this part of the hobby depends on us more than it ever has. Please do all that you can.

My New Years resolution is to make this my one and only pulpit speech this year. I always appreciate your support and service to the club and wish you all a Happy and prosperous New Years. May there be 100 2-Meter Es openings this year.

73's

Art Jackson KA5DWI S.W.O.T. Chairman



December 2007 "Gathering in West Sacramento"



The December 1st gathering in West Sacramento, CA went off with a great showing of 40 NORCAL members. This was also the annual meeting and gathering of the SideWinders On Two group with door prize and membership drawings a plenty.

A case of wine was donated by WA6KTK, Steve, SWOT#3476 from his family's winery in Napa and

the following took home a great bottle of Merlot.

WA6QAK, Bill SWOT#1497
 KD5FID, Steve, SWOT#3399
 K6HEW, Bob, SWOT#3286
 W6OMF, Larry, SWOT#155
 K6SUE, Sue, SWOT#162
 KJ6KO, Greg
 KC6ZWT, Norm
 KF6KYB, Carla
 K6QG, Lyle
 W6HMB, Tom
 K7QXB, Ron
 KF6LGY, Evelyn

John, KC6SEH, SWOT#3228 donated a Yaesu FT-221R with digital readout and Yaesu desk mic. John, KF6LFO, SWOT#3225 went home with it. Nice radio.

Alan, KF6PGT, SWOT#3303 donated a MFJ 40 meter radio with mic and it went home with K6QXB, Herb, SWOT#3360

Fred, K1YQP, SWOT#3514 donated 20ft of Andrews ½ inch new hardline and it was carried away by David, W6VNO, SWOT#3281

Carl, WF6J, SWOT#3465 donated 2 each 97 inch whips, 2 meter base station vertical antenna, and an Astron 12amp power supply.

The whips were won by KE6QR, Gary, SWOT#3308 and Herb, K6QXB, SWOT#3360. The two meter base antenna was won by our 1st day retired friend Ken, K6WLS (congratulations) and the 12 amp power supply was won by Norm, N6JV.

Sue, K6SUE, SWOT#162 and I W6OMF SWOT#155 donated two hand held radio pouches and two packages of 550 cord. Pouches won by Gordy, WA6ZKY, SWOT#3397, and K7NOM, Bill, SWOT#3307. The 550 cord went to W6HMB, Tom, and Carl, WF6J, SWOT# 3465.

And last but not least our annual membership drawing for excessive monies in the SWOT membership account, plus cash donation from KF6PFT, Bob, SWOT#3358, W6PQL, Jim, SWOT#3511, K6SUE, SWOT#162 and N6GP, Frank, SWOT#1468 resulted in the following:

Three Element M² Beam won by WA6KTK, SWOT#3476

Two meter HO loop won by NA6XX, SWOT#3512

432 HO loop won by W6HOC, SWOT#3419

Thanks to all for a wonderful time... 73
 Larry & Sue



Standing KF6PGT, Alan #3303, sitting (back of his head) W6VNO, David #3281, sitting (side shot) KC6SEH, John #3228, standing W6KBX, Don, sitting at Don's shoulder K6HEW, Bob #3286, sitting KE6QR, Gary #3308, sitting WA6CAX, Bill #3400, sitting KI6ARW, Jennifer #3474, sitting KF6PFT, Bob #3358

If I could answer like this I might be able to stay out of defensive driving class

Top this for a speeding ticket...

Two British traffic patrol officers from North Berwick were involved in an unusual incident while checking for speeding motorists on the A1 Great North Road. One of the officers used a hand-held radar device to check the speed of a vehicle approaching over the crest of a hill, and was surprised when the speed was recorded at over 300 mph. Their radar suddenly stopped working and the officers were not able to reset it.

Just then a deafening roar over the treetops revealed that the radar had in fact latched on to a NATO Tornado fighter jet which was engaged in a low-flying exercise over the Border district, approaching from the North Sea.

Back at police headquarters the chief constable fired off a stiff complaint to the RAF Liaison office.

Back came the reply in true laconic RAF style:



"Thank you for your message, which allows us to complete the file on this incident. You may be interested to know that the tactical computer in the Tornado had detected the

presence of, and subsequently locked onto, your hostile radar equipment and automatically sent a jamming signal back to it. Furthermore, an air-to-ground missile aboard the fully-armed aircraft had also automatically locked onto your equipment. Fortunately the pilot flying the Tornado recognized the situation for what it was, quickly responded to the missile systems alert status, and was able to override the automated defence system before the missile was launched and your hostile radar installation was destroyed.

Good Day..."

Submitted by: Mike Rodgers, #3505



Ron/W6ZI from Collinsville, OK sent in some chilling images of his array fighting to hold ground against mother nature. All the yagis returned to their original shape except the 2 meter antenna (second from top) which has since been repaired and is back in service...

From Howard Holloman, SWOT Secretary. Membership updates and new members:

SWOT#	Call	Name	City	State	Grid
3330	KM6QJ	Travis	Concord	CA	CM98
3356	KG6HVY	Zack	Concord	CA	CM87
3397	WA6ZKY	Gordon	Placerville	CA	CM98
0847	AC6DC	Wilbert	San Jose	CA	CM97
2691	W8NJR	Terry	Ludlow Falls	OH	EN70
3536	KG4ZDM	Trent	Germantown	TN	EM55
3429	WA5UFH	Tip	Edna	TX	EL19
3537	N5GE	Tom	Arlington	TX	EM12
2111	KA5HQR	David	San Antonio	TX	EL09
0121	W5EXZ	John	San Antonio	TX	EL09
3411	K6UE	Francis	Alameda	CA	CM87
1105	WN9GUC	Leon	Tinley Park	IL	EN61
3538	KB9SDE	Roger	Elroy	WI	EN43
3206	KF6BXH	Bill	San Leandro	CA	CM87
1468	N6GP	Frank	Georgetown	CA	CM98
3286	K6HEW	Bob	Vacaville	CA	CM98
3400	WA6CAX	William	Vacaville	CA	CM88

SWOT Bank account balance [Dec. 26, 2007]
\$3,079.63
Howard Holloman, S.W.O.T. Secretary/Treasurer

Volunteerism - by Jim McMasters, KM5PO

Over the past several years I have discussed volunteerism and club operations in general with several of our elders; those individuals that I place at the top of the list regarding their knowledge of how clubs work and don't work. Some of these include leaders and founders of organizations such as SMIRK, ARRL, 10-X, local clubs, and even some all volunteer clubs that are not related to ham radio.

I want to present here my findings through these discussions in a trust that some of you who read this will take something to heart that will in turn create for us a stronger bond within this thing we call the Sidewinders on Two.

A Starting Point

A clear understanding of the objective of the club is fundamental and should be held in mind as the starting point when reviewing these suggestions. The SWOT purpose and objective is "to promote the use of 2 Meter SSB and CW through the establishment of nets ... and to encourage DX activities and the study of VHF propagation". A review of the [Articles of Association and Last Proposed ByLaws](#) would be a rewarding and inspiring activity.

The principles that will be addressed are the following:

- (1) Contagious enthusiasm is essential.
- (2) For stability and growth, membership must reach a critical mass.
- (3) To hold members, each member must be able to identify with the organization and not be intimidated by those with greater experience and expertise.
- (4) Certain club sponsored activities are valuable.
- (5) Politics is to be discouraged.

Remember, these are principles I have gleaned from many sources and they can be applied to various degree in any volunteer driven organization whether it has to do with ham radio or not.

Enthusiasm is essential

Most two meter SSB/CW operators have enthusiasm for some phase of operating or socializing over the air. The thing that SWOT does to encourage this is to provide a recurring newsletter, a website available worldwide, a few regional organized meetings and an organization of weekly on-the-air nets. The formality of calling a net is probably the main point of contact that occurs nationwide in the SWOT organization between members and non-members.

Over-the-air advice on all aspects of VHF fundamentals as well as general encouragement is vital. Newcomers should feel comfortable and at ease with calling and participating in a net. Socializing should be encouraged. DX reports should be solicited. Net control stations should be on the lookout for potential backup stations and others that may be geographically situated to extend SWOT coverage by becoming a net control themselves.

Do we have a volunteer or two to produce simple experiments or construction projects that can be published in the bulletin. We also solicit [and have published several in 2007] SWOT member bulletin reports and articles from around the country. Simply email your material to the Bulletin editor: km5po@arrl.net

All of this effort creates enthusiasm and pride in the mind of our membership.

Of course, enthusiasm also leads to a commitment of time and talent when the objectives are seen to be potentially rewarding. The more members who are so dedicated, the greater the participation will be in the club's activities. The enthusiasm becomes contagious; everyone wants in on the fun. But before this can happen, a small core must pool their enthusiastic efforts to make the club work and work well. This is a very important key to success.

Consistent with the maintaining of enthusiasm is to recognize that members are spread all over the spectrum of skills and the spectrum of interests. The maintaining of enthusiasm, the creation of a feeling of identification, and the fostering of participation are all woven together with showing appreciation of the efforts of all members, regardless of their sophistication or skill level.

Critical Mass

Although it is not advertised, SWOT membership continues to grow at an even pace of approximately 30 new members per year. Of equal significance is the fact that in 2007 alone, we added several new nets. These are very good signs but in my opinion, critical mass in the context of this discussion would mean that SWOT "chapters" or groups which are centered around nets and organized meetings over-the-air, have grown in popularity to a point where national organizations such as the ARRL and the FCC must make recognition of the group as a whole [I like to think big].

Besides general membership, a key thread from the mentors is that critical mass begins with the club's leadership. The minimum critical number is two. Usually, it is the core leaders that are alert to identifying new members to participate at their level. In my opinion, a growth in the general SWOT membership plus some direction and guidance from our leadership will enable the club to find those new leaders that are so important.

I would propose that probably the most effective thing we can do with our existing size is to network with other clubs on a local basis. Where possible, we should join and support our local ham organizations and clubs and be willing to first give of our efforts to them. In many cases these organizations will be found to be open minded to the SWOT message and the time will come to share it. Art Jackson, the SWOT Chairman, has produced an effective powerpoint presentation and has scheduled meetings with local clubs in the DFW area. Other SWOT members have the skill to do this. Who will be next?

Another activity that I think would be worthwhile is an organized effort to recycle low end 2 meter all-mode rigs and antennas. Could a few SWOT members be responsible to review ebay and other sources and communicate these deals to a central server [perhaps a SWOT webpage] where net control stations, other SWOT members or interested parties could review? These rigs will do the job and they are priced good. Shouldn't it somehow be an effort of SWOT to help place these rigs or at least know where they ended up? Perhaps another definition of critical mass for us is when the day comes that many of us simply buy and keep a few setups on hand so that we have them when we find interested parties that want to try out 2 meter SSB/CW!

Members must be able to identify

This requires a sensitivity and reaching out from the club leaders but also a maturing process from the new member. Not all members will find their place in the club no matter how well the club reaches out to them. Do we have contemporary membership materials? Do we announce and follow up new members sufficiently?

The key activity typical within SWOT has always been and will remain simply getting on the air, checking into the nets, and encouraging other 2 meter operators to continue their pursuit. The relatively simple act of assembling a two meter station and participating with a net sufficiently to work two SWOT members and submit the application is the new operator's entry into the fellowship of the club. As a result of this they leave the sidelines of anonymity, of just listening to the others.

While it is a true and good thing that the club attracts individuals with a broad range of experience, skill, and station ability, SWOT is what I like to call a "fundamental baseband" club. We promote the entry level 144 MHz SSB communications essentials. It should be our goal to encourage anyone able to transmit and receive a 2 meter SSB signal to get their equipment on the air and make some contacts starting with some noise generated on the 144.200 calling frequency [call CQ] and attempting to call into one of the organized nets. A natural extension to this experience is to first be amazed by and then actually work some DX stations when the 2 meter band becomes enhanced. Sometimes the bug bites when this happens and the operator then wants to improve the station in order to extend its range and ability. These are good things that SWOT also encourages but they are secondary to the fundamental purpose - encouraging basic 2 meter SSB/CW activity.

Club sponsored activities

Regular SWOT meetings are found in a few parts of the country. The meetings in California are particularly mature and they are to be commended for their efforts. In other areas, a SWOT table and sign-in sheet is maintained at popular hamfests and gatherings.

I would propose that we make an annual organized approach to bring a SWOT presence into the VHF society meetings [at least a dinner]. There are three or four such opportune times throughout the year across the country. The next event is in Florida in the spring of 2008 if I'm not mistaken. A volunteer organizer to produce invitations and coordination at each of the VHF weak signal society meetings would put our historic SWOT organization into the proper setting and group of people. It might even be a venue where we could sponsor a regional competition to see which area of the country could produce the highest number of SWOT old-timers and new recruits! An encouragement to attend might be the addition of some reasonable door-prizes that make sense to a two meter operator.

Politics

We should have this problem. When SWOT is big enough to really see politics develop we'll discuss this one. It gets an honorable mention because many club statesmen have mentioned to me its debilitating effects if not held in check.

Recap

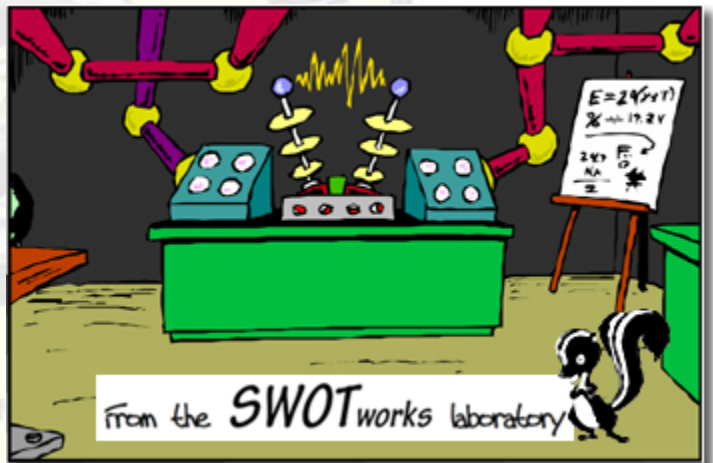
I hope this discussion stirs some interest in you. You and I are what make up SWOT. If the organization and its program are important to

you, show it by your words and actions. If you can volunteer to help in some way or have a good suggestion to make, please contact either Art Jackson, Chairman, ka5dwi@sbcglobal.net or Jim McMasters, Bulletin editor, km5po@arri.net

Dear Howard Hallman,

My name is Theresa DeClerk. I am Frank DeClerk's daughter, call letters WZ9D. You have been sending SWOT letters to him. I am sorry to tell you that my father has passed away. He was diagnosed with lung cancer in May and died July 23, 2007. I know he really loved ham radio. Please put a note in your SWOT letter about dad's death. I know he talked to a great deal of ham operators over the years.

Thank you
Theresa DeClerk



Diodes and RF sensing

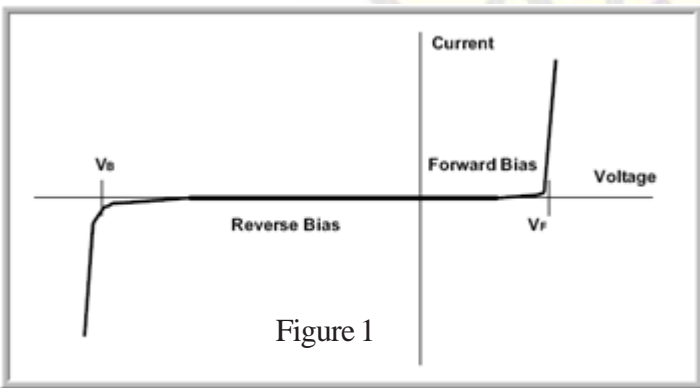
by KM5PO-Jim

We will be studying the fun subject of RF detectors. How much can we do with these little circuits? It pretty much depends on your imagination. RF sniffers can not only teach us a thing or two but can give us many hours of satisfaction in 'tinkering mode' which is where I like to spend a good bit of time. I've enjoyed trying different methods of channeling RF detection as my station has expanded and required a good bit of gear to be mounted a long way from the operating position. The more this happens, the more you want to get good information back from the equipment doing the work! Knowing that you have RF output is a fairly fundamental thing and hence the

need for some form of RF sniffer. It also makes sense to use a relatively inexpensive tool like a sniffer to verify RF output rather than expose more valuable equipment!

At the heart of RF detector circuits we will almost always find a diode. Of course, the most common function of a diode is to allow an electric current to flow in one direction (called the *forward biased* condition) but to block it in the opposite direction (the *reverse biased* condition). Thus, the diode can be thought of as an electronic version of a check valve. For our limited discussion we will look at two kinds of diodes, the common "PN Junction" diode and then the one we will use, the "Schottky" diode. Each have different characteristics, which can be useful depending on the application.

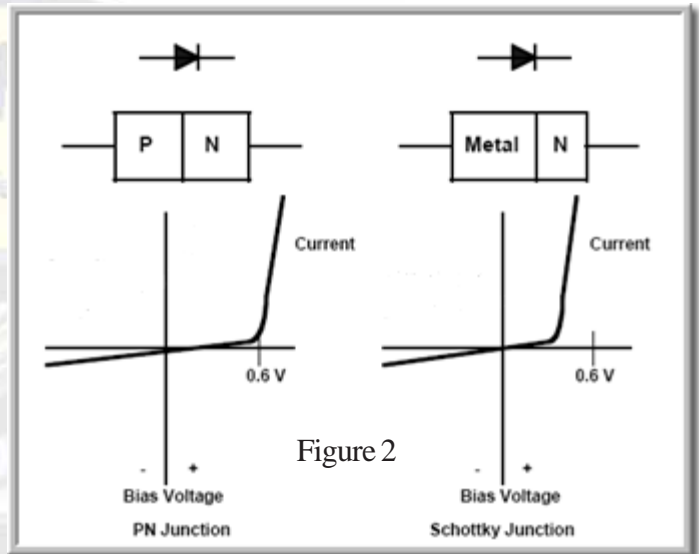
A PN Junction diode consists of two types of semiconductors, n-type and p-type. Placed adjacent to each other, there is a spontaneous flow of electrons between the two pieces until an equilibrium state is created and no electrons flow. A barrier voltage now exists between the two pieces. A forward voltage can easily overcome this once it is greater than the barrier. Applying an opposite voltage, the current is essentially zero unless the voltage is so great that it destroys the diode. The current voltage (I-V) characteristics of the PN diode have the following format as shown in Figure 1. As voltage increases positive (moving right on the X axis), current begins to flow (upward exponential



movement on the Y axis). As voltage swings negative (moving left on the X axis), virtually no current flows (downward on the Y axis) until the device is destroyed by reaching the negative "breakdown" voltage and permitting a damaging current to flow. A current limiting resistor can help prevent this from happening.

The Schottky Barrier diode is a metal-to-semiconductor contact formed between a

metal (usually aluminum) and a doped semiconductor. When a metal semiconductor junction is formed, free electrons flow across the junction from the semiconductor. The flow of electrons builds up a depletion potential across the junction. Under forward bias there are many electrons with enough thermal energy to cross the barrier potential into the metal. Once the applied bias exceeds the built in potential of the junction, the forward current will increase rapidly with the increase in V_f or forward voltage. When the Schottky diode is reverse biased the potential barrier for electrons



becomes large and only a leakage current in the nanoamps range will cross the junction.

Figure 2 shows us the difference between a PN Junction diode and a Schottky diode with a metal to N type barrier. On the left, the PN Junction needs about .6 volts to begin conduction where the Schottky diode on the right requires a good bit less. This forward voltage value can become a factor to a designer working with say a battery driven circuit as the amount of voltage required to start conduction is also the 'voltage drop' across the diode translating to energy used to do work. Less is better.

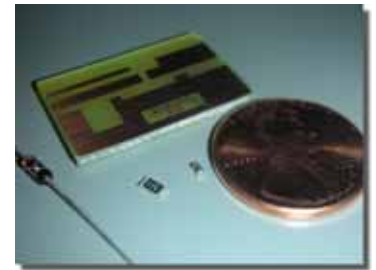
One final characteristic to compare between these two types of diodes is that in a Schottky diode (in contrast to PN type diodes), only 'majority carriers' move the current. Because no 'minority carriers' are present, Schottky diodes have carrier lifetimes that are extremely short enabling extremely fast switching times. This is where we will pick up in the next bulletin but for now, let's get to building this gadget!

To get started, we will adopt a well known circuit¹ and modify it to our liking. In Figure 3 we see the bare-bones RF sniffer schematic. Yes, it takes only 3 components to make this thing work! C1's function is to bypass most of the stray RF therefore preventing it's migration downstream through the DC circuit. It's value will vary with frequency to ensure its bypass ability. R1 gives the diode a DC path to ground that is more predictable than the DC path through a voltmeter and it's associated high impedance plus it provides current limitation. The lower it's value, the lower the voltage output of the circuit



The Avago 5082-2835 Schottky diode comes in a low cost glass package and is optimized for low turn-on voltage.

mount parts. I used these parts because I had them on hand but you can use leaded parts for your project (at 144 MHz) just as well. Just try to keep the leads short.



Three parts, a circuit board, and 10 minutes will produce a bare bones RF detector. I etched lots of boards so if you want one I would be happy to drop one in the mail to you free: km5po@arrl.net

Surface mount parts tend to be very small and do not have leads to work with (like you see on the diode). To fix these tiny parts to a circuit board, I generally 'wet' the pad where the end of the part will be soldered by using a flux dispensing pen that acts like a felt tip pen with solder flux in it. This enables me to pinpoint where I want the solder to go without making a mess. I also use a magnifying hood that fits on your head with several 'flip-down' lenses that vary the magnification produced. Some operators hold tiny parts with tweezers but I generally hold parts by a fingernail. Helps not to drink a pot of coffee before trying this as you want your hands to be steady!

A circuit like this can be built dead-bug style without a circuit board and I've made several this way but the soldering was difficult and unless the circuit is mounted carefully in it's final destination, the component leads receive stress and can break easily. That is why I went to the effort to create a printed circuit board.

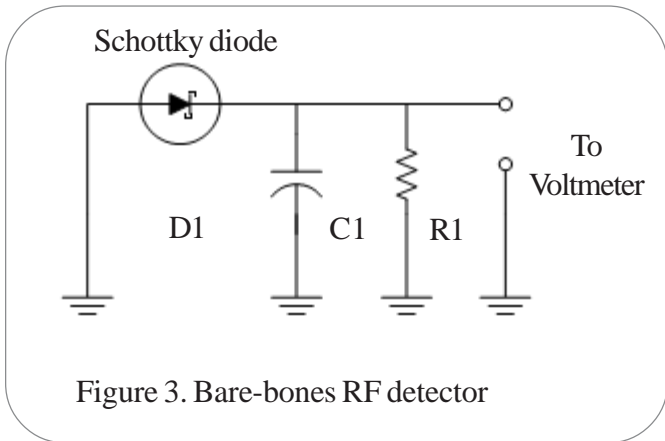
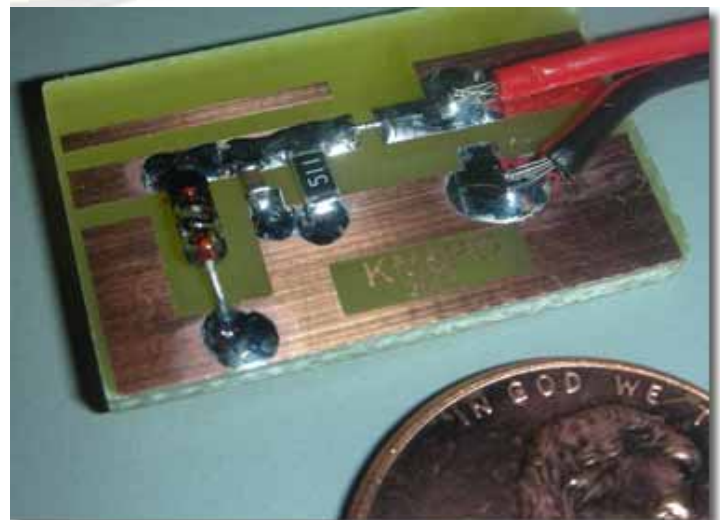


Figure 3. Bare-bones RF detector

Parts list- Bare bones RF detector (for 144 MHz)		
D1	Avago 5082-2835	Mouser #630-5082-2835
C1	100-200 pf	
R1	470 - 1000 ohms	

and the higher the current passing through the diode. R1 being located close to the diode also helps to minimize stray fields in the DC circuit and eliminate ground loops.

The parts used for the capacitor and resistor in the example shown are surface



Assembled circuit.



Here my bare bones RF detector goes to work sensing leakage through the front door of the microwave oven in the kitchen! The digital VOM is indicating 126mV or a little more than one tenth of a volt.

RF Sniffer - continued

I use a not so common CAD drafting program called DesignCAD to layout the circuit, then 'print' the output on Laser Printer Transparency Film. This creates a positive image that I then use with pre-sensitized PCB materials available from Datak.

Once the circuit is assembled try it out by attaching a sensitive VOM to it's output. You should be able to detect output when in the vicinity of RF. Keep in mind that if you hold the sensor near the coax cabled up to the back of your 2 meter rig running 100 watts output and you get little or no reading, this is a good thing. A reading through the sensor indicates *RF leakage!*

Good luck with your building and experimenting and let us hear how your project turns out.

SWOT Net Reports

Here are the net reports for November and December 2007

Northern California W6OMF
(Sunday)

November:
 14 members checked in once
 23 members checked in twice
 24 members checked in three times
 29 members checked in all four times

Totals

63 week one
 63 week two
 62 week three
 65 week four

12 different grids and 3 states. Thanks to all for the effort.

December:
 Week one 56 checkins
 Week two 55 checkins
 Week three 60 checkins
 Week four NO NET
 Week five 53 checkins

25 people checked in all four nets

19 people checked in three times
 27 checked in twice
 19 checked in once

North California KG6WLV
(Tuesday 8pm)
Date Check-ins

November (4 dates):
 11/07 31 check-ins
 11/14 31 check-ins
 11/21 22 check-ins
 11/28 31 check-ins

4x check-ins = 14
 3x check-ins = 10
 2x check-ins = 6
 1x check-ins = 14

SWOT check-ins = 8
 Total 45 different stations
 Total states = 1
 Total grids = 6

December (3 dates):
 12/05 24 checkins
 12/12 33 checkins
 12/19 28 checkins

3x check-ins = 13
 2x check-ins = 15
 1x check-ins = 9
 SWOT check-ins = 8
 Total 42 different stations
 Total states = 1
 Total grids = 6

NORCAL W6DWI (Thursday 8pm)

We had no net Nov-22
 For Nov, 1,8,15,29
 We had 34,25,32,28 check-ins from 1,2,1,1 states with 9,8,11,11 SWOT members.

Grids this month:
 CN82,CM89,CM99,CM88,CM98,CM87,CM97

Best DX ~280 Miles

73 Robin W6DWI

Northeast Missouri NOPB
(Monday 8pm)
Date Check-ins/Grids/
States/SWOT

11/05 no net
 11/12 30 - 20 - 09 - 07
 11/19 31 - 20 - 08 - 06
 11/26 30 - 18 - 07 - 08

North Texas W5FKN (KM5PO sub) (Wednesday 9pm)
Date Check-ins/SWOT/Grids/
States

11/07 13 - 07 - 10 - 03
11/14 18 - 09 - 14 - 02
11/21 no net
11/28 20 - 11 - 16 - 03
12/05 24 - 11 - 16 - 04
12/12 25 - 10 - 14 - 02
12/19 23 - 12 - 12 - 04
12/29 no net

Southeast Ohio AB8XG KD8DJE Sub)
(Tuesday 9pm)
Date CheckIns/SWOT/Grids/
States

11/06 10 - 05 - 02 - 01
11/13 11 - 05 - 02 - 02
11/20 20 - 06 - 06 - 03
11/27 15 - 07 - 05 - 01
12/04 15 - 05 - 02 - 05
12/11 18 - 05 - 02 - 06
12/18 11 - 03 - 02 - 06

E. Oklahoma KD5ZVE
(Thursday 8pm)
Date CheckIns/Grids/States/
SWOT

11/01 15 - 08 - 04 - 11
11/08 20 - 10 - 04 - 13
11/15 15 - 08 - 04 - 10
11/22 no net
11/29 19 - 10 - 04 - 11

12/06 25 - 13 - 05 - 11
12/13 no net
12/20 11 - 07 - 04 - 08
12/27 17 - 09 - 05 - 11

Daytona Beach W2RAC/W1LVL
(Wednesday 8pm)
Date Check-ins

10/03 7 checkins
10/10 5 checkins
10/17 5 checkins
10/24 5 checkins
10/31 5 checkins

11/07 4 checkins
11/14 4 checkins
11/21 5 checkins
11/28 6 checkins

12/05 5 checkins
12/12 9 checkins
12/19 5 checkins
12/26 6 checkins

E. Texas Piney Woods KM5PO (K5LOW -N5TIF sub)
(Saturday 7am)
Date Check-ins/Grids/SWOT/
States

11/03 12 - 06 - 06 - 03
11/10 24 - 10 - 11 - 05
11/17 13 - 05 - 06 - 03
11/24 12 - 06 - 05 - 03

12/01 19 - 07 - 08 - 04
12/08 13 - 04 - 05 - 03
12/15 15 - 07 - 06 - 03
12/22 11 - 06 - 04 - 02
12/29 10 - 06 - 05 - 02

Southern California WB6NOA
(Sunday 7:30pm)

Southern California SWOT net is Sunday evening, with a time change to 7:30pm start, to allow listeners to go watch the 8:00 movie on TV! And 7:50, we move from our net frequency of 144.240 up to 144.250 and say hi to Larry, W6OMF, in the Bay Area, just under 300 miles away with 5/3 signals most evenings. Our latest news is my training of other net control operators on how to SHARE tropo DX with other less-antennaed stations, rather than just making the contact themselves and saying 73!

We usually have 30 to 35 checkins each Sunday evening, covering 5 or 6 grids, with Arizona, Nevada, and the Bay Area our good DX, but LOCAL stations JUST as important as ANY rare DX. Too many net controllers on other weak signal nets overlook their locals, just to gain their own long range DX, and not try to help the locals. I aim to change this on our SWOT net, where this is the way WE run the net where locals are #1, not just DX. - Gordon West WB6NOA

Event and Contest Calendar:

Jan 11-12 Ft. Worth Hamfest

Jan 19-20 ARRL Jan. VHF Seepstakes

June 13-14 Hamcom, Plano, TX

June 14-16 ARRL June VHF contest

June 28-29 ARRL Field Day

What to expect Jan-Apr Meteors:

Chi Capricornids Jan 13 - Feb 28, peak Feb 13/14

April Piscids Apr 8-29, peak Apr 20/21

Lyrids Apr 16-25, peak Apr 22, 10 zHR with outbursts over 100

Full Meteors calendar:
[W8WN](#)
[Gary Kronk](#)

Aurora:

Watch:
<http://umtof.umd.edu/pm/latest2day.gif>
www.spaceweather.com
<http://www.aurorasentry.net/>

Tropo:

Always keep an eye on:
the [Hepburn Forecast](#).
the [APRS Real time VHF propagation map](#).
the [Presence of radar reflectivity \(false echos\) HERE](#)
the [Green Page \(144 Mhz Propagation Logger\)](#)
the [Surface Map](#) (there are many choices)

SWOT and Selected 2-Meter Nets

Help improve our listing of nets! If you find errors or omissions or know of other two meter nets being conducted, please send email to either the bulletin editor: km5po@arrl.net or the SWOT Net Manager- Jimmy Johnson, jjohn357@swbell.net

Day	Local Time	Area	Net	Frequency	Net Control Station
SUN	8:00 pm	Vacaville, CA	NORCAL	144.250	W6OMF Larry
SUN	7:30 pm	Costa Mesa, CA	South California	144.240	WB6NOA Gordon
SUN	8:30 am	Tucson, AZ	Arizona	144.250	N7SQN Al
SUN	8:30 pm	Zebulon, NC		144.220	N1GMV
SUN	9:30 pm	Holland, MI	Michagan SWAM	144.155	K8NFT
MON	7:30 pm	Albuquerque, NM	New Mexico	144.200	N5XZM Bobby
MON	8:00 pm	Colorado	Rocky Mt. VHF +	144.220	N0VSB W6OAL
MON	8:00 pm	Midwestern United States	Northeast Missouri SWOT	144.250	NOPB Phil
MON	9:00 pm	Tidewater, VA		144.230	
TUE	8:00 pm	Bay Area, North California, West Nevada	Northern California SWOT	144.250	KG6WLV John
TUE	9:00 pm	Greater Ohio area	Southeast Ohio SWOT	144.250	AB8XG Kenny KD8DJE Russell
WED	8:00 pm	Florida	Daytona Beach SWOT	144.250	W2RAC Richard W1LVL George
WED	9:00 pm	Texas, Okla, Ark, Louisiana	North Texas SWOT	144.250	W5FKN Bob
THU	8:00 pm	Bay Area, North California, West Nevada	Northern California SWOT	144.250	W6DWI Robin
THU	8:00 pm	Oklahoma, Texas, Ark, Missouri, Kansas	Eastern Oklahoma SWOT	144.250	KD5ZVE Jimmy
SAT	7:00 am	Texas, Okla, Ark, Louisiana	Piney Woods SWOT	144.250	KM5PO Jim

SWOT Nets are highlighted

SIDEWINDERS ON TWO ENROLLMENT OR RENEWAL FORM

NOTE: Though your membership and number are good for life you must renew annually to receive the newsletter and stay on the active list..

Enclosed find check/MO. to: **Howard Hallman WD5DJT, Sec.Treas.**

NOTE: do not make checks out to SWOT. Make checks out to Howard Hallman
**3230 Springfield Lancaster, TX
75134-1214**

New member: \$6 - receive bulletin by email
 \$12 - receive bulletin by US post office

I have worked the following SWOT members:

Call: _____ SWOT No. _____ Call: _____ SWOT No. _____

Renewing: \$6 - receive bulletin by email
 \$12 - receive bulletin by US post office

My SWOT No. is _____

Name: _____ Call _____ Grid Square _____

Street address _____

City _____ State _____ Zip Code _____

Telephone Nos. _____

Optional: I check into the following nets: _____

E-mail _____

Receive Newsletter By Email: YES _____ NO _____

Note: Send all forms to the Secretary-Treasurer at top of this form.

SECRETARY - TREASURER :

Howard Hallman/WD5DJT
3230 Springfield Ave.
Lancaster, TX 75134-1214
Phone: (972)-224-5964
Email: wd5djt@swbell.net
Webpage: <http://home.swbell.net/wd5djt>

CHAIRMAN: Art Jackson/KA5DWI

Email: ka5dwi@sbcglobal.net
Phone: (817)-485-4977

SWOT NET MANAGER:

Jimmy Johnson/KD5ZVE
Email: jjohn357@swbell.net

BULLETIN EDITOR:

Jim McMasters/KM5PO
Email: km5po@arrl.net
Phone: (817)-563-2720
Webpage: <http://www.james-randall.com>

S.W.O.T. GENERAL INFORMATION

Send renewals and new applications for membership to Howard Hallman WD5DJT (See address above). Please make all checks payable to Howard Hallman Include your SWOT # for your renewals.

Send your SWOT "Members Worked" from your log to, SWOT Awards manager, Wade Massey, 1016 Weiss Ave, Princeton TX., 75407 \$1.00 fee for certificate and your certificate number would be appreciated, also SASE.

E-Mail all articles and reports to the Editors' email address listed above or you can mail them to Jim McMasters KM5PO, 2805 Shady Lane South, Arlington, Texas 76601.

MERCHANDISE:

Decals and listings available for \$1.00 each for shipping and handling from the Secretary/Treasurer.

SWOT Patches are available at a price of \$4.00 Each + \$.50 for mailing

Badges are available from "The Sign Man", Rick Pourciau NV5A, [http://](http://www.thesignman.com/menu.html)

www.thesignman.com/menu.html

