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# WATTS

11-2013

Year 83 + 11m

Monthly newsletter of the Pretoria Amateur Radio Club  
Maandelikse nuusbrieff van die Pretoria Amateur Radio Klub.



PARC, PO Box 73696, Lynnwood Ridge 0040, RSA



<http://www.parc.org.za> mail: [zs6pta@zs6pta.org.za](mailto:zs6pta@zs6pta.org.za)

Bulletins: 145,725 MHz 08:45 Sundays/Sondae

Relays: 1.840, 3.700, 7.066, 10.135, 14.235, 51.400, 438.825, 1297 MHz

Activated frequencies are announced prior to bulletins

Swapshop: 2m and 7.066 MHz Live on-air after bulletins

Bulletin repeats Mondays | herhalings : Maandae 2m 19:45



**The recent Mozambique DX-pedition: Charlie NF4A and Tjerk ZS6P operating C82DX**



## In this issue

- Member news and activities Lede-nuus en Aktiwiteite
- Technical | Dynamic microphones for ham radio | Tegnies  
Ham radio goodwill and friendship  
Run your laptop on 12VDC
- Page eight -- Bladsy agt

## In hierdie uitgawe

### Next club events

**Fleamarkets at PMC**  
Sat 7 Dec

**Club social at U.P.**  
Thursday 7 Nov. 7pm  
**Raspberry Pi talk by Theo ZS6TVB**  
**Club committee meeting**  
Thursday 21 Nov. 7pm

# PARC Management team / Bestuurspan Aug. 2013 – Aug. 2014

## Committee members

<b>Chairman, Contests, Liason</b>	Pierre Holtzhausen	ZS6PJH	<a href="mailto:zs6pih@telkomsa.net">zs6pih@telkomsa.net</a>	012-655-0726	082-575-5799
<b>Vice Chairman, SARL liason</b>	Fritz Sutherland	ZS6SF	<a href="mailto:fritzs@icon.co.za">fritzs@icon.co.za</a>	012-811-3875	083-304-0028
<b>Secretary</b>	Jean de Villiers	ZS6ARA	<a href="mailto:zs6ara@webmail.co.za">zs6ara@webmail.co.za</a>	012-663-6554	083-627-2506
<b>Treasurer, SARS</b>	Andre van Tonder	ZS6BRC	<a href="mailto:andre.vtonder@absamail.co.za">andre.vtonder@absamail.co.za</a>	361-3292	082-467-0287
<b>Motorsport, Social</b>	Johan de Bruyn	ZS6JHB	<a href="mailto:zs6jhb@gmail.com">zs6jhb@gmail.com</a>	012-803-7385	079-333-4107
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<b>RAE, Bulletin co-ordinator</b>	Vincent Harrison	ZS6BTY	<a href="mailto:zs6bty@telkomsa.net">zs6bty@telkomsa.net</a>	012-998-8165	083-754-0115
<b>Repeaters</b>	Craig Symington	ZS6RH	<a href="mailto:zs6rh@hotmail.co.za">zs6rh@hotmail.co.za</a>		081-334-6817
<b>Fleamarket</b>	Almero Dupisani	ZS6LDP	<a href="mailto:almero.dupisani@up.ac.za">almero.dupisani@up.ac.za</a>		083-938-8955
<b>Clubhouse</b>	Pieter Fourie	ZS6CN	<a href="mailto:pieter2@vodamail.co.za">pieter2@vodamail.co.za</a>	012-804-7417	083-573-7048
<b>Club activities</b>	Richard Peer	ZS6UK	<a href="mailto:zs6uk@peer.co.za">zs6uk@peer.co.za</a>	012-333-0612	082-651-6556

## Co-opted/Geko-opteer:

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<b>WATTS newsletter/Kits</b>	Hans Kappetijn	ZS6KR	<a href="mailto:zs6kr@wbs.co.za">zs6kr@wbs.co.za</a>	012-333-2612	072-204-3991
<b>Historian, Archives, Awards</b>	Tjerk Lammers	ZS6P	<a href="mailto:zs6p@iafrica.com">zs6p@iafrica.com</a>	012-809-0006	
<b>Digital, photographer, sound</b>	Theo Bresler	ZS6TVB	<a href="mailto:theo@bresler.co.za">theo@bresler.co.za</a>		082-698-1742

## Don't emulate these playboys.... Stick to the Amateur Code!

### The first radio nerds were a bunch of trolls

by KE4ZHN from eham.net

Today, there's a lot of scaremongering in the media surrounding online trolling. When people are being terrible to each other, there's often this knee-jerk reaction to blame the technology rather than acknowledge that human beings have always been just plain horrible. Case in point: the radio trolls of 1910.

An editorial in the December 1915 issue of [Electrical Experimenter](#) magazine explained that around 1910, radio trolls were playing dangerous pranks by sending out things like bogus SOS signals. This, of course, was causing coastal radio operators who at first took the calls as genuine to more and more assume that they were getting trolled.

"Radio" hadn't become the accepted term for wireless technology yet, (that would be standardized in the U.S. [in 1922](#)), so you'll notice the term "wireless" in its place in the 1915 *Electrical Experimenter* excerpt below:

*"In those early days the wireless amateurs in this country were a rather reckless sort of element and became more and more disliked on account of their growing mischief."*

*False distress and alarm calls by perverted "humorists" were the usual "smart" acts, and when a coastal station received a [\[distress call\]](#) in those days the thought was always uppermost in the operator's mind that the call was one of the usual amateur hoaxes. Despite Mr. Gernsback's vigorous warnings through his editorials in Modern Electrics, of which publication he was editor, the mischief continued, till in 1910 several bills were introduced in Washington which fairly promised to throttle the activities of every wireless enthusiast in the country".*

Who knows how many boy-who-cried-wolf scenarios caused actual distress calls to go unheeded? It's a question that I've sadly never seen serious historical research on.

As Keith Massie and Stephen D. Perry note in their [2002 paper](#), *Hugo Gernsback and Radio Magazines: An Influential Intersection in Broadcast History*, there was considerable political debate in the early 1910s about what kind of legislation was necessary to regulate these trolls.

Future science fiction publisher (and radio tech pioneer) [Hugo Gernsback](#) was a tireless advocate for the radio amateurs, trying to rein in the more irresponsible in the radio community and make sure that "hostile legislation" wouldn't get through Congress.

Radio remained largely the domain of the amateur throughout the 1910s (excluding military use, especially during WWI). But it was through Gernsback's magazines and amateur radio organizations like the Wireless Association of America that he was able to influence legislation to protect early adopters from getting squeezed out of this bold new experiment. Some laws were passed, like the Radio Act of 1912, which first tried to regulate this unruly and disparate community of tinkerers. But it was arguably appeals to shame on the pages of his magazines which worked best at clamping down on the bad apples. And as we know, [shame is a powerful force](#).

## Birthdays Verjaarsdae

Nov.

- 03 Blaine, son of Heather and Vince ZS6BTY
- 06 Sollie ZS6SV
- 07 Andrew, son of Lynn and Andre ZS6BRC
- 10 Luther ZS6E ( 97 )
- 11 Peggy, sw of Ed ZS6UT
- 12 Emmerick, seun van Erna en Whitey ZS6JJJ
- 12 Fritz ZS6SF
- 16 Jean, daughter of Lynn and Andre ZS6BRC
- 16 Vlasta ZS6-2501, sw of Ivan ZS6CCW



## Anniversaries Herdenkings

Nov.

05 Nina and Edwin ZR6ESP

- 19 Joe ZS6TB
- 22 Caitlin, daughter of Heather and Vince ZS6BTY
- 25 Gordon ZS6AGV
- 25 Tony ZS6CRO
- 27 Janice, dogter van Ellen en Joe ZS6AIC
- 27 Karin, lv van Sarel ZS6EK

## Lief en Leed | Joys and Sorrows

Bertha, lv van Hans ZS6KR kan nou baie beter sien na haar operasies

## Nuwe lid | New Member

Hartlike welkom aan **Pieter Neveling ZS6PC**

## Diary | Dagboek (UTC times)

Nov.

- 02-03 Ukranian DX contest 12:00-12:00
- 03 DARC Digital Contest 11:00-17:00
- 07 **Club social at TUKS 19:00. see detail below**
- 09-10 WAE DX Contest RTTY 00:00-23:59
- 09-10 OK/OM DX Contest CW 12:00-12:00
- 16-17 ARRL EME Contest 00:00-23:59
- 16-17 SARL Field Day HF contest 10:00-10:00
- 16-17 LZ DX Contest 12:00-12:00
- 23-24 CQWW CW Contest 00:00-24:00

History: **Bill ZS6KO and Clive ZS6AVP (Both SK)**



## Snippets | Brokkies

The C82DX expedition ended 22 October. Info on [www.C82DX.com](http://www.C82DX.com)

The Swazi expedition happens 18-27 Nov. See [www.swazidx.org](http://www.swazidx.org)  
Live video webstreaming and logging!

Members are requested to check their details on the members page on our website. Please correct or add information as in future this will be our only database.

**NB: 7 Nov Club Social: Talk by Theo ZS6TVB on the RASPBERRY PI.**

## Done with 100W and a hexbeam at 7m!

(not Haylee , but Roger ZS6RJ keeping our reputation high in ZS.





## Dynamic Microphones designed specifically for amateur radio use

from MOMTJ website. Ed: not the latest but good information.

### Heil HM-12 Genesis microphone

The Heil HM-12 Genesis dynamic microphone I am told, uses Heil's new HC-6 dynamic element and therefore has a higher output than some typical dynamic mic's. The frequency response is 80 Hz to 14 kHz together with the hallmark Heil +4dB lift at 2kHz to enhance the clarity of the audio and unlike a standard dynamic hand microphone, the HM-12 also has a built in PTT switch.

### Too Expensive? –

The HM-12 might seem rather expensive at £70.00 when you consider that a microphone such as the t.bone MB 95, which as very crisp clear vocal audio, can be bought for £20.00 from [www.thomann.de](http://www.thomann.de) , even a high quality vocal microphone such as Beyerdynamic TGV 35d s can be bought for about £45.00 from many authorized dealers such as [www.soundexposure.com](http://www.soundexposure.com)

### Heil HC-6 & the new Gold Elite microphone

Heil Sound Introduces New HC-6 Dynamic Microphone Element: Official Introduction at the Dayton Hamvention May 14, 2010. Heil Sound revolutionized amateur radio audio with their tailored response HC Series elements in 1982, which allowed the non-DSP transmitters of that era to produce different transmit responses by selecting the right microphone element.

Fast-forward 30 years. Bob Heil has designed the new Heil HC-6 that, by adjusting the DSP EQ of the modern transceivers, will produce beautiful, full range broadcast audio as well as narrow response contest/DX audio of the Heil HC-4 all from this one specially designed dynamic microphone element. The many 'voices' of the HC-6 are truly amazing. Using a .82 inch diameter Mylar diaphragm, the - 3dB points of the wide frequency range is set at 100Hz and 12.5 kHz. With sensitivity of - 57dB at 600 Ohms nominal output impedance centered at 1 kHz. The HC -6 Audio response can be equalized to match just about any requirements."

### The HC-6 element is used in the Gold Elite microphone

The new Gold Elite microphone is designed and crafted specifically for amateur radio communications. It contains two distinctly different high performance dynamic elements that are available at the flip of a switch to meet the different types of communications. The WIDE position has the HEIL Elite full range element producing smooth articulate 60Hz – 16 kHz audio with the traditional Heil +4 dB peak centered at 2 kHz. This gives the new Gold Elite excellent voice articulation". "The NARROW position features the new HC-5.1 dynamic element. In 1982, Heil Sound revolutionized amateur radio audio with their tailored response HC-4 and HC-5 elements for radios that had NO tone adjustments". "The HC-6 is designed to respond to those older rigs as well as today's transceivers with on-board DSP EQ. The HC-6 produces full range broadcast audio as well as the tailored DX/Contest audio by simply adjusting your DSP EQ".

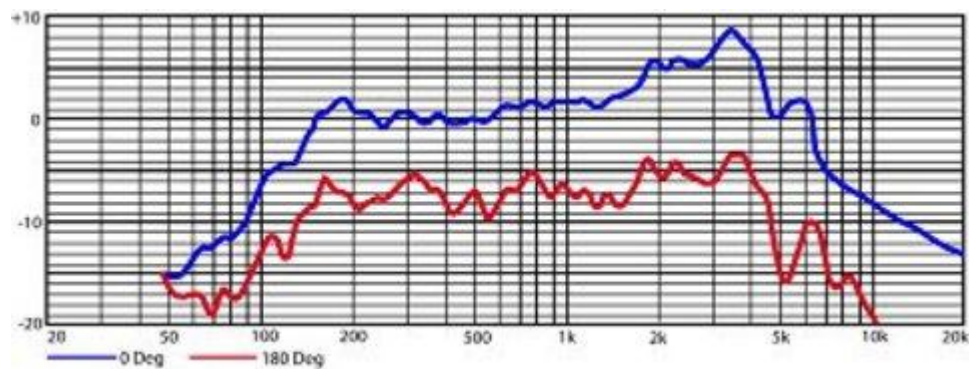
<http://www.heilsound.com/amateur>

Spec's

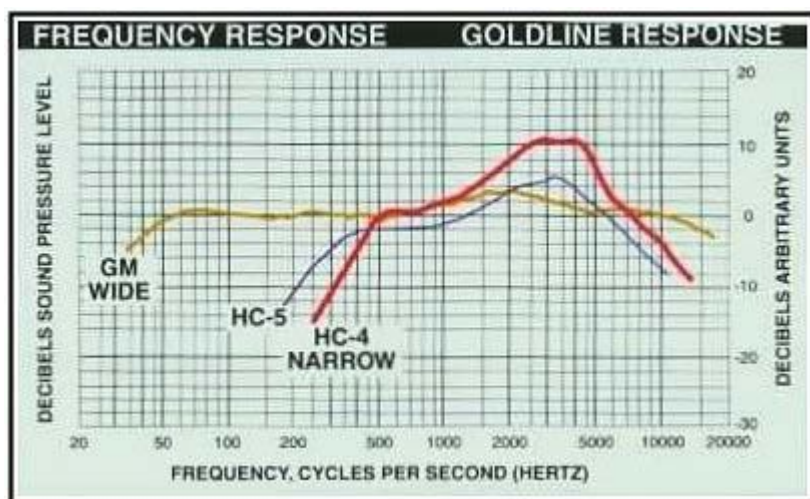
HC-6 wide.....: 60 Hz - 16 kHz @ -55 dB at 600 Ohms

HC-6 wide -6dB points.....: 100Hz - 12.5 kHz @ - 57dB at 600 Ohms

HC-5.1 narrow..... 200 Hz - 8 kHz @-58 dB at 1000 Ohms

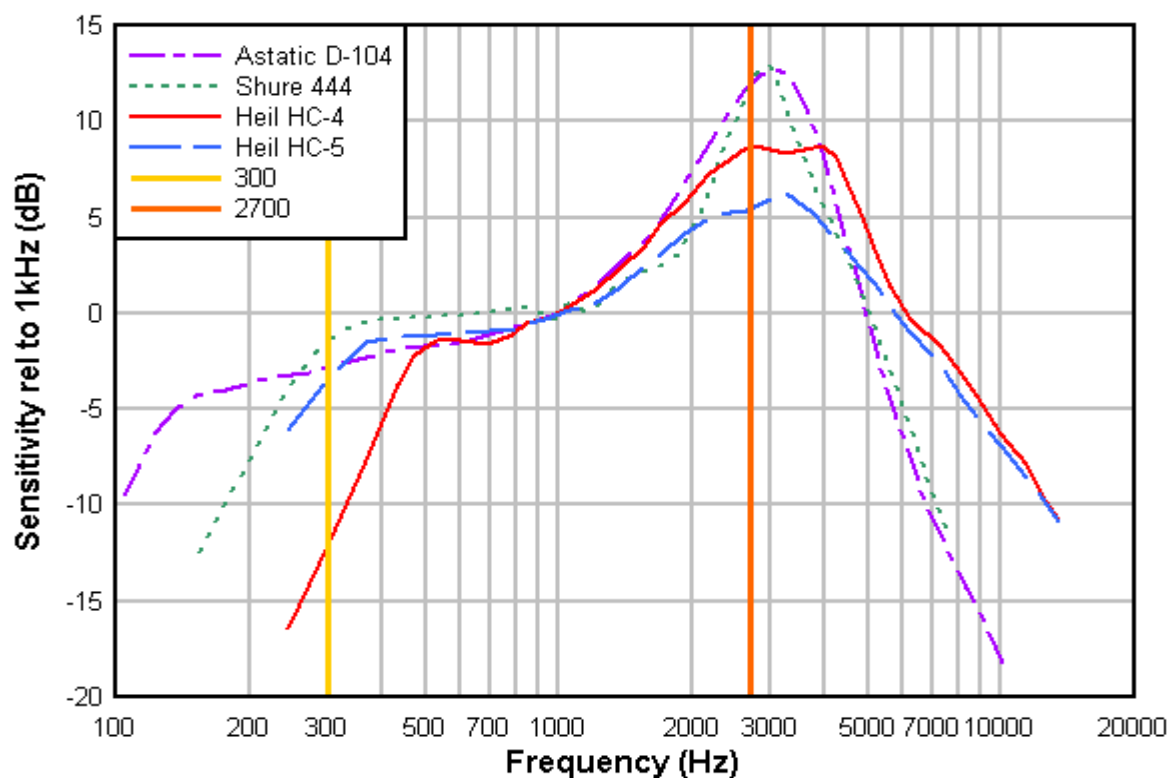


Heil HC-6 Frequency Response Graph



Heil HC-4 Narrow, HC-5 and GM Wide (not Gold Elite) Comparison Frequency Response

## 'Legendary' microphone frequency responses



Above graph from VK1OD - <http://vk1od.net>

Other graphs and information from Heil Sound - <http://www.heilsound.com/amateur>

# Ham Radio, Goodwill, and Friendship

[C Larson \(VA4SR\)](#) on August 30, 2013

Friendship is nothing other than goodwill and affection in divine and human things. --- *De Amicitia*, Cicero

Friendship and goodwill are deeply connected. You can't say that you have goodwill toward someone and not be open to their friendship. You can't say that you are someone's friend and not exhibit goodwill toward them. In the USA Title 47 of the FCC part 97.1 (e), states that the amateur radio service is, in part, designed to continue and extend international goodwill. It's a good addition to otherwise sterile regulations.

There are two classic works written on friendship. The first, *De Amicitia* was written by Cicero in 44 BC. The second was a rewriting and expansion of *De Amicitia* by Aelred of Rievaulx in the early/mid-12th century. He entitled his work, *On Spiritual Friendship*. Both of them are extremely discerning works about what constitutes friendship and what does not. Both works recognize different levels of what is commonly called friendship. Yet only one is true friendship, and as such would lead to genuine international goodwill.

Both of these works recognize that:

- The term friendship is often applied to people who are involved together in activities that are criminal. Some friendships are based on this type of common activity. Friendship in these activities serves to bolster one another's courage to act in manners that prey upon others, or to denigrate one another's characters. Sadly, some people never advance beyond this level of behavior, and wind up ruining the lives of both themselves and others around them. This type of friendship ends when one of the parties ceases to participate in the activity.

- The term friendship is also used with others who are engaged in the same activities that are considered above board. People become friends because of common goals. These include business, special interest clubs, and associations. It may even include a sense of nationalism, or ethnic pride. And many marriages and other social contracts fall under this type of friendship. But once again, in spite of the goals of these common activities being positive and perhaps even noble, these friendships end when participation in the common goal ceases. Business partnerships dissolve, marriages end. In the end you are not welcome back at the office if you take another job, or in your spouse's home once you separate. It doesn't have to be that way, but it most often is.

The dynamics of these relationships highlight these so-called forms of friendship to be *conditional*. When considered in the context of international goodwill, then that international goodwill associated with them is also *disingenuous*. You cannot say that you have international goodwill in some things, or at certain times, or with some people, and not at others. That's just prejudice in disguise.

By definition goodwill transcends the limitations that you may want to impose. In other words, genuine goodwill is not conditional. As someone with training in clinical depth psychology one of the most difficult things that I have had to discuss with people whose relationships have dissolved has been their complicity in the lack of genuine goodwill between parties...we all want to be self-justified and to think more kindly of ourselves. And indeed, a large part of therapy is involved in unmasking these cover-ups that we use to tell ourselves that we are nice people, when actually we are not.

- But both the Roman statesman Cicero and the Anglo- Saxon Aelred agree that there is a genuine friendship which begets genuine goodwill. According to both of them genuine goodwill emerges from friendship that is founded on friendship for friendship's sake. This friendship may be disappointed when one of the partners has a moral failure. But it is reconciliatory and stays loyal even when one or the other is no longer a part of the association that caused it to form in the first place. This action, and neither of the first two, is the only basis for promoting genuine goodwill.

When it comes to amateur radio genuine goodwill could not be more needed today. As radio operators have the opportunity to talk with others around the world it is imperative that we become friends not so that some goal can be achieved, but simply for the sake of friendship for its own sake. This may not be easy for everyone to do. Without ever having taken the opportunity to see the world through someone else's eyes, it is difficult, but it is not impossible, and is certainly a starting point for developing a better working practice of goodwill on the air.

Radio communication based on one's unspoken assumptions of national or political superiority are not true goodwill. True goodwill involves a selflessness that may even cost you something for the sake of radio communication. If you want to learn how to be genuinely good-willed, then you need be asking questions of others more than talking about yourself. You also need to learn to suspend your judgment. And finally, it is important to enlarge your worldview enough to allow the things you learn from others to start a dialogue in your own head about your own beliefs, how these might be only a partial and perhaps ego-driven (or even adolescent) view of the world. By being opened up in this we become even more people of goodwill, able to accept others who might have a very different take on life than yourself, which as for me is one of the reasons that I am an amateur radio operator.

73 de VA4SR

## Comments:

by [AI2IA](#) on August 30, 2013

This is a kind of lofty, philosophical essay somewhat distant from the mike and the key of amateur radio.

Put concisely, the essence of ham radio good will and friendship is found in RAG CHEWING.

Not everyone is good at this in the beginning, but the fact is that you can get better and better at it as you go. You really don't even need to be good at it, just friendly.

It's not necessary to stay a long time on the air in a QSO. Ask a few questions. Share a few ideas. Talk about conditions and wish the other ham good times. You'll see him down the log.

Every time you fire up the rig, make it a point to call CQ at least once before you go QRT, and you will be right up there with the best of them.

by [N4UM](#) on August 31, 2013

[Mail this to a friend!](#)

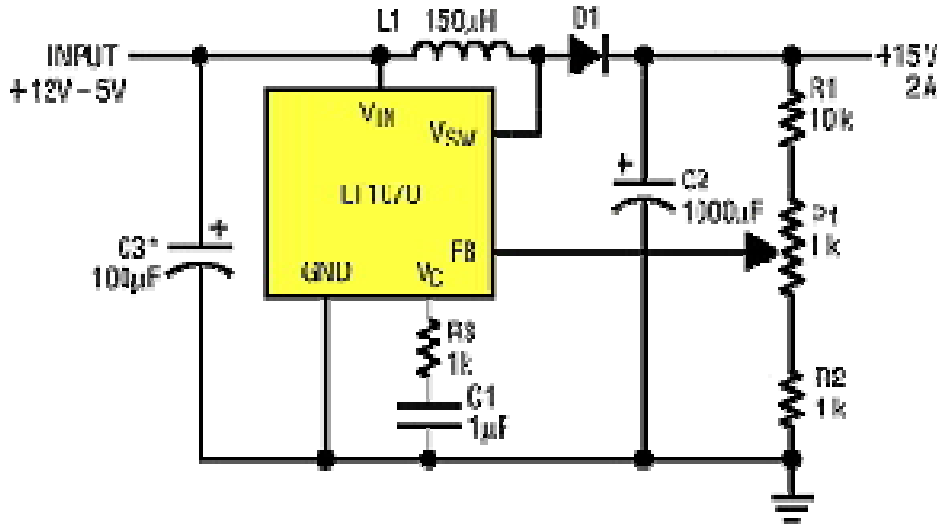
To me goodwill is working to find the good in those you don't know while friendship is working to put up with the bad in those you do.

# Laptop on board, when the 12 Volt battery is just not enough

(Hal.halcoss.com)

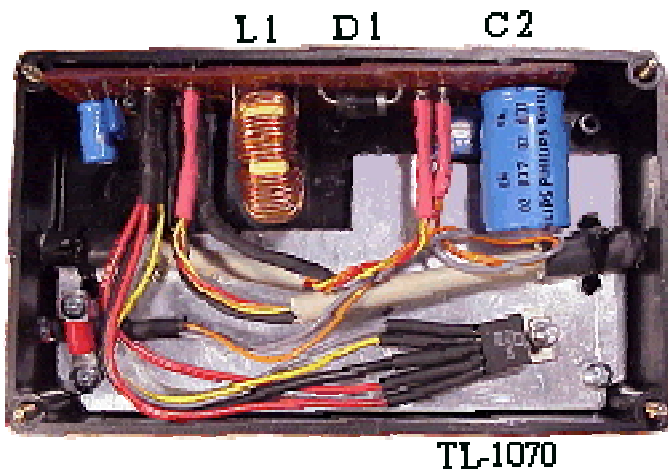
My laptop on board just does not work on the 12 Volt supply from the batteries. To solve this problem I needed to make a DC-to-DC converter (shown on the right) that could generate 15 - 18 Volts DC with a current of about 2 - 3 Amps.

As a solution I used an [LT-1070 from Linear Technology](#), which can have a peak, switch current of 5



Amps and the maximum voltage supplied can be as high as 40 Volts. For most Notebooks this will be sufficient. (My IBM Thinkpad 600 draws about 1.8 amps at 16 Volts) The efficiency of the circuit is high; with no load the current is neglect able. (only 6mA quiescent current)

When in operation (at about 1.8 Amps constant) the LT-1070 becomes only hand warm. I have for security reasons made a small aluminium plate to cool the LT-1070. The Diode D1 should be a fast turn-off diode. Schottky diodes are best in this regard and offer better efficiency in the forward mode. Even when the supply battery power drops to about 5 Volts, the converter still operates perfect (not pleasant for the batteries and should be avoided). The circuit should be fused with a fuse of about 5 Amps (Slow blow)



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  - 30A DC Anderson Power Poles
  - Connectors RF and Audio
  - Plug-in triple sequential industrial timer

Contact Hans at 012-333-2612 or 072-204-3991



## Long Term HF Propagation Prediction for Nov. 2013

Courtesy ZS6BTY

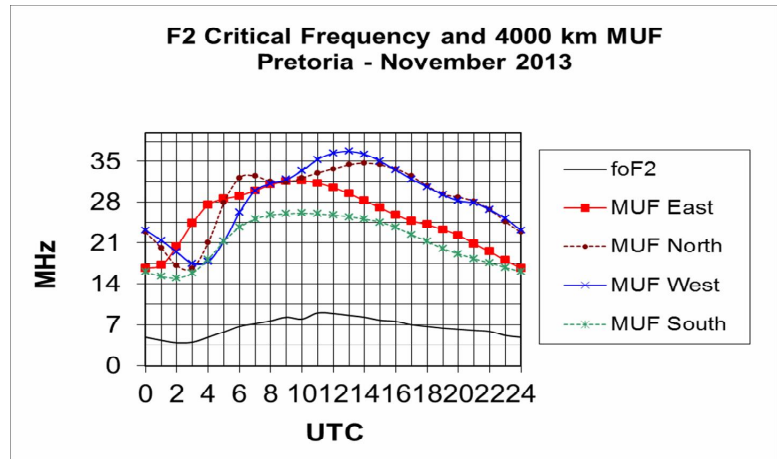
(see also our website propagation tab)

### DX Operating

The graph shows the 4000 km maximum useable frequency (MUF) to the East, North, West and South from Pretoria for the first hop using the F2 layer.

### Local Operating

The F2 critical frequency (foF2) is the maximum frequency that will reflect when you transmit straight up. E-layer reflection is not shown.



**Family life is changing....**



Each year 2,000,000 smokers either quit smoking or die of tobacco-related diseases.

Zero is the only number that cannot be represented by Roman numerals.

Kites were used in the American Civil War to deliver letters and newspapers.

Peanut oil is used for cooking in submarines because it doesn't smoke unless it's heated above 450F.

The banana cannot reproduce itself. It can be propagated only by the hand of man.

Airports at higher altitudes require a longer airstrip due to lower air density.

Intelligent people have more zinc and copper in their hair.

A comet's tail always points away from the sun.

The military salute is a motion from medieval times, when knights in armor raised their visors to reveal their identity.

If you get into the bottom of a well or a tall chimney and look up, you can see stars, even in the middle of the day.

In ancient times strangers shook hands to show that they were unarmed.

The moon moves about two inches away from the Earth each year.

The Earth gets 100 tons heavier every day due to falling space dust.

Due to earth's gravity it is impossible for mountains to be higher than 15,000 meters.

Soldiers do not march in step when going across bridges because they could set up a vibration which could be sufficient to knock the bridge down.

Everything weighs one percent less at the equator.

For every extra kilogram carried on a space flight, 530 kg of excess fuel are needed at lift-off.