WATTS

01-2017
Year 87 + 01m

Monthly Newsletter of the Pretoria Amateur Radio Club
Maandelikse Nuusbrief van die Pretoria Amateur Radio Klub

PARC, PO Box 73696, Lynnwood Ridge 0040, RSA
http://www.parc.org.za zs6pta@zs6pta.org.za

Bulletins : 145.725 MHz on Sundays / Sondae at 08:45
Relays: 1.840, 3.700, 7.066, 10.135, 14.235, 51.400, 438.825, 1297 MHz
Activated frequencies are announced prior to bulletins
Swopshop : 2m and 7.066 MHz live on-air after bulletins
Bulletin repeats on Mondays / herhalings op Maandae : 2m 19:45

Season's Greetings from a cold Czech Republic : Ivan OK1LL (ZS6CCW) and Vlasta Jancuskova (ZS6-2501)

In This Issue / In Hierdie Uitgawe

Club Meetings / Klub Vergaderings

Club Social Meeting :

Saturday the 7th of January 2017 from 14h00 at SAM

Committee Meeting :

Wednesday the 11th of January 2017 from 19h00 at SAM

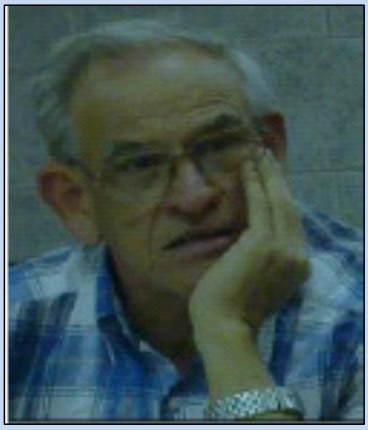
Best wishes for a Happy and Prosperous New Year to all PARC Members, Non-Members and Watts Readers

PARC Committee Members / Komiteelede : 2016 - 2017

Graham Reid ZS6GJR
Chairman and Web Coordinator

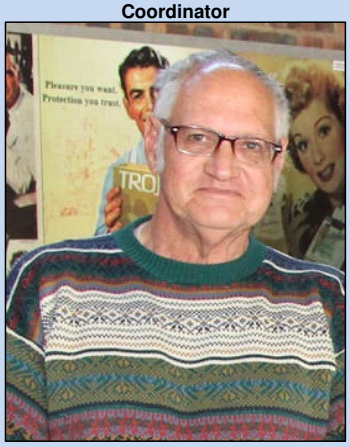
Johan de Bruyn ZS6JHB
Vice Chairman, Rallies & Social

Etienne Naude ZS6EFN
Public Relations, RAE & Bulletin Coordinator



Andre van Tonder ZS6BRC
Treasurer

Whitey Joubert ZS6JJJ
Social



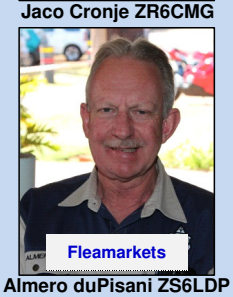
Pieter Fourie ZS6CN
Clubhouse Manager

Louis de Wet ZS6SK
Watts Newsletter, Secretary and RAE

Jaco Cronje ZR6CMG

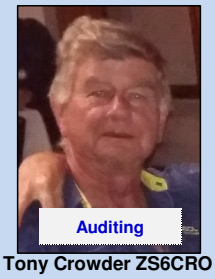
Pierre Holtzhausen ZS6PJH

Co-opted Members



Almero duPisani ZS6LDP

Tjerk Lammers ZS6P



Tony Crowder ZS6CRO

Elected Members	Name	Callsign	Email Adress	Tel No	Mobile No
Chairman, Web co-ordination	Graham Reid	ZS6GJR	greid@wol.co.za	012-667-2720	083-701-0511
Vice Chairman, Repeater & Rallies	Johan de Bruyn	ZS6JHB	zs6jhb@gmail.com	012-803-9418	079-333-4107
Bulletins, RAE & Liason	Etienne Naude	ZS6EFN	etienne@afrigrid.com	012-661-6745	082-553-0542
Treasurer	Andre van Tonder	ZS6BRC	andreh.vtonder@absamail.co.za	012-361-3292	079-869-0753
Clubhouse Manager	Pieter Fourie	ZS6CN	pieterzs6cn@gmail.com	012-804-7417	082-573-7048
Social	Whitey Joubert	ZS6JJJ	zs6jjj@gmail.com	012-993-2267	072-120-4516
Secretary, Watts & RAE	Louis de Wet	ZS6SK	louis.zs6sk@gmail.com	012-349-1044	072-140-9893
Co-Opted Members	**Name**	**Callsign**	**Email Adress**	**Tel No**	**Mobile No**
Fleamarkets	Alméro Dupisani	ZS6LDP	almero.dupisani@up.ac.za	012-420-3779	083-938-8955
Auditor	Tony Crowder	ZS6CRO	tcrowder@telkomsa.net	011-672-3311	
Historian, Archives, Awards	Tjerk Lammers	ZS6P	zs6p@iafrica.com	012-809-0006	083-976-4387
Contests	Jaco Cronje	ZR6CMG	jacocronje@yahoo.com		081-474-2220
Contests	Pierre Holtzhausen	ZS6PJH	zs6pjh@telkomsa.net	012-655-0726	082-575-5799

Birthdays / Verjaarsdae – January / Januarie

05 Pierre Holtzhausen ZS6PJH

10 Wynand Wessels ZR6WW

Spouse's Birthdays / Verjaardae – January / Januarie

18 Zelda, spouse of Wynand Wessels ZR6WW

Anniversaries / Herdenkings – January / Januarie

05 Louise en Louis (Almero) Du Pisani ZS6LDP
07 Doreen ZR6DDB en Johan de Bruyn ZS6JHB
11 Judy and David Botha ZS6DBB
20 Helga and Hans-Peter Knoepfler ZS6AJS

Lief en Leed / Joys and Sorrows

Jaco Cronje ZR6CMG sterk nog aan na hart chirurgie.
Kenny Martin ZS6KMM ondergaan chemoterapie en bestraling. Ons wens u alle voorspeod toe.
Pierre Britz sterk aan na onlangse chirurgie.
Pine Pienaar ZS6GST sterk tans aan in die hospital na chirurgie
Andre Coetzee's ZS6GCA parents, Johan (85) and Lene (81) celebrated their 60th wedding anniversary on the 1st of January 2017.

Contests and Diary of Events – January 2017 / Kompetisies en Dagboek van Gebeure – Januarie 2017 (UTC Times)

01	**Start of 2017 CQ Marathon**
08	DARC 10-Meter Contest : 09h00 – 10h59
14 - 15	**Hunting Lions in the Air (see SARL bulletin 24 December 2016)**
15	NRAU-Baltic Contest, SSB : 06h30 – 08h30
15	NRAU-Baltic Contest, CW : 09h00 – 11h00
20	LZ Open Contest : 18h00 – 22h00
20 - 22	**Pears National VHF/UHF Contest**
21 - 22	Hungarian DX Contest : 12h00 – 11h59
27 - 29	CQ 160-Meter Contest, CW : 22h00 – 22h00
28	**Summer QRP Sprint**
28 - 29	UBA DX Contest : 13h00 – 13h00

PARC SUBS : PARK LEDEGELD : FROM / VANAF : 30-06-2017

Bank	First National Bank	**Ordinary Members / Gewone Lede : R160** **Spouses / Pensioners : R60**	**Your call sign must appear as statement text!**
Branch Code	25 20 45		
Account No	546 000 426 73		

Please remit your subs in time to our Treasurer, or pay per transfer into the PARC account
Betaal asb. u ledegelde betyds aan ons Tesourier, of betaal per oorplasing in die PARC rekening

Please Note : If your Club fees are not paid up to date, birthday details cannot be displayed in Watts

PARC Flea Market dates for 2017 / PARK Vlooimark datums vir 2017

26 March / 26 Maart ; 6 May / 6 Mei ; 29 July / 29 Julie ; 28 October / 28 Oktober

For more information please listen to the Sunday Bulletins or contact Alméro Du Pisani ZS6LDP

PARC Bulletin Presenters : January – March 2017

Date	Presenter	Date	Presenter
1 January	Almero du Pisani ZS6LDP	19 February	Tjerk Lammers ZS6P
8 January	Etienne Naude ZS6EFN	26 February	Johan de Bruyn ZS6JHB
15 January	Tjerk Lammers ZS6P	5 March	Louis de Wet ZS6SK
22 January	Johan de Bruyn ZS6JHB	12 March	Almero du Pisani ZS6LDP
29 January	Louis de Wet ZS6SK	19 March	Etienne Naude ZS6EFN
5 February	Almero du Pisani ZS6LDP	26 March	Tjerk Lammers ZS6P
12 February	Etienne Naude ZS6EFN	2 April	Johan de Bruyn ZS6JHB

Please do contact Etienne Naude ZS6EFN or Jean de Villiers ZS6ARA for more information or any Bulletin arrangements

New Year's Message from PARC Chairman, Graham Reid ZS6GJR

Hopefully all our members, their families, friends and other interested parties reading this end of year version of Watts had a Merry Christmas.

On behalf of the committee of PARC I would like to take this opportunity to wish you and your families a Very Happy and Successful New Year for 2017. I would also like you all to remember any friends and relatives that went silent key during 2016 – our thoughts and wishes go out to all the families of those no longer with us.

Hopelik het al ons lede, hulle families, vriende asook ander geintereseerde partye wat hierdie einde van die jaar weergawe van Watts lees, 'n baie Geseende Kersfees gehad het.

Namens die PARK komitee will ek graag van hierdie geleentheid gebruik maak om julle en julle families a Baie Gelukkige en suksesvolle Nuwe Jaar vir 2017 toe te wens. Ek sal graag dat julle almal enige vriende of gesinslede onthou wat deur die jaar 2016 Stille Sleutel geword het – ons gedagtes en beste wense gaan uit aan al die families van daardie mense wat nie meer met ons is.

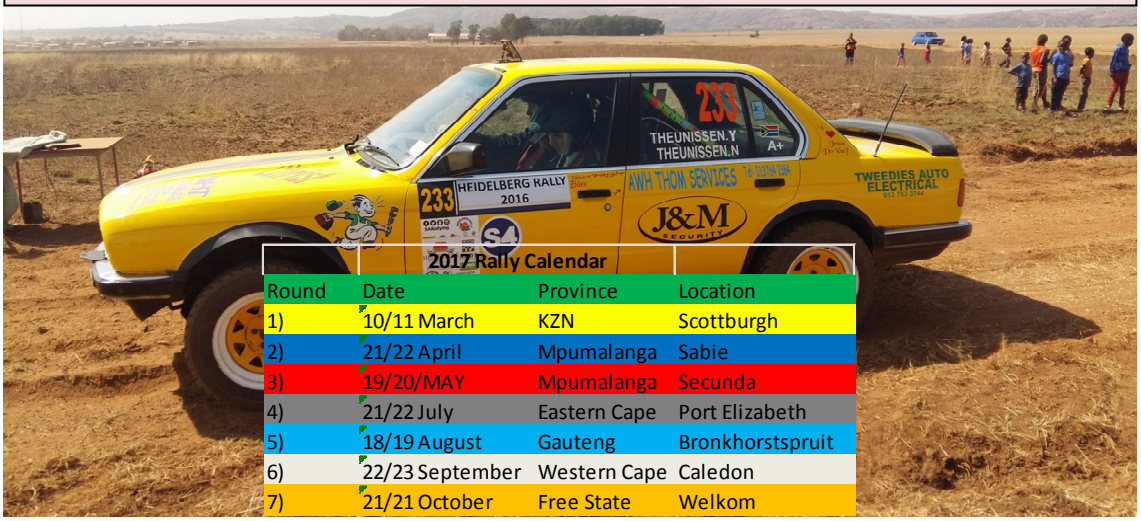
Thanks for supporting the PARC bulletin as well as the other Club activities during the last year and please keep this up going forward into 2017. Please also send any interesting news and articles to the Watts Editor for publication in the upcoming issues.

Dankie vir julle ondersteuning van die PARK bulletin asook die ander Klub aktiwiteite gedurende die vorige jaar en hou asseblief aan met hierdie ondersteuning vorentoe deur 2017. Stuur asseblief enige interesante nuus en artikels aan die Watts Redakteur vir publikasie in die opkomende weergawes.

73's
Graham Reid
PARC Chairman

Rally News 2017 : Tydren Nuus 2017

Die 2017 tydren seisoen beloof om weer net so opwindend te wees. Indien u sou belangstel om met radio ondersteuning betrokke te raak, kontak gerus vir Johan de Bruyn ZS6JHB by 079-333-4107 of zs6jhb@gmail.com



2017 Rally Calendar

Round	Date	Province	Location
1)	10/11 March	KZN	Scottburgh
2)	21/22 April	Mpumalanga	Sabie
3)	19/20/MAY	Mpumalanga	Secunda
4)	21/22 July	Eastern Cape	Port Elizabeth
5)	18/19 August	Gauteng	Bronkhorstspruit
6)	22/23 September	Western Cape	Caledon
7)	21/21 October	Free State	Welkom

RAE May 2017 Syllabus and Lectures

Lectures for the May 2017 Radio Amateur Examination will be presented by PARC from the 21st of January. The course presented by PARC is free of charge. For more information on the lectures, please do contact Etienne Naude ZS6EFN at etienne@afrigrid.co.za.

Week	Date	Material	Tutor
1	21-Jan-17	RAE Information Session	E/LdW/VH
2	28-Jan-17	Chapter 1 - 4	E
3	4-Feb-17	Chapter 5 - 7	E
4	11-Feb-17	Chapter 8 - 10	E
5	18-Feb-17	Chapter 11 - 13	LdW
6	25-Feb-17	Chapter 14 - 16	LdW
7	4-Mar-17	Chapters 17 - 19	LdW
8	11-Mar-17	Break	
9	18-Mar-17	Chapters 20 - 22	LdW
10	25-Mar-17	Chapter 23 - 25	LdW
11	1-Apr-17	Chapters 26 - 27	VH
12	8-Apr-17	Chapters 28 - 30	E
13	15-Apr-17	Break	
14	22-Apr-17	Chapters 31 - 33	E
15	29-Apr-17	Break	
16	6-May-17	HF Assessment	E/LdW/VH
17	13-May-17	Revision	E/LdW
	21-May-16	RAE	
	E	Etienne Naude	
	LdW	Louis de Wet	
	VH	Vincent Harrison	

Chapter		Tutor
1	Overview of Amateur Radio	E
2	Operating Procedures	E
3	Basic Electrical Concepts	E
4	Resistance and Ohm's Law	E
5	The Resistor and Potentiometer	E
6	Direct Current	E
7	Power in DC Circuits	E
8	Alternating Current	E
9	Capacitance and the Capacitor	E
10	Inductance and the Inductor	E
11	Tuned Circuits	LdW
12	Decibel Notation	LdW
13	Filters	LdW
14	The Transformer	LdW
15	Semiconductors and the Diode	LdW
16	The Power Supply	LdW
17	Bipolar Junction Transistor	LdW
18	The Transistor Amplifier	LdW
19	The Oscillator	LdW
20	Frequency Translator	LdW
21	Modulation Methods	LdW
22	The Transmitter	LdW
23	Receiver Fundamentals	LdW
24	The Super Heterodyne Receiver	LdW
25	Transceivers and Transverters	LdW
26	Antennas	VH
27	Propagation	VH
28	Electromagnetic Compatibility	E
29	Measurements	E
30	Digital Systems	E
31	Digital Communication Modes	E
32	Safety Considerations	E
33	Before You Go	E

Lecture notes for the RAE can be obtained from the SARL website at http://www.sarl.org.za/public/licences/rae.asp. The various files which can be downloaded required for study for the RAE include the following:

The following documents are available. Click on the document title to download a copy.

Reference Date	Document Title	File Type	Size
2016-06-14	SARL Inleiding tot Amateurradio - Klas A Studiegids	PDF	980 kB
2016-05-06	ICASA Regulations - Effective for Oct 2016 examination and onwards	PDF	286 kB
2016-05-05	SARL RAE Class A Study Guide - 2016 Effective for Oct 2016 exam and onwards	PDF	4.6 MB
2016-05-05	HF Assessment Preparation Guide - Effective for Oct 2016 Exam and onwards	PDF	1.3 MB

Venue and times:

Lectures will be presented in the Board Room of Waterlab (Pty) Ltd from 9h00 – 12h00 each of the dates (Saturdays) listed above. The address of the venue is 23B de Havilland Crescent, Persequor Park, Pretoria. Please do contact Louis de Wet ZS6SK at louis.zs6sk@gmail.com if you require more information on the venue.

Linear Amplifier SEND Interfacing : by Hans Kappetijn ZS6KR

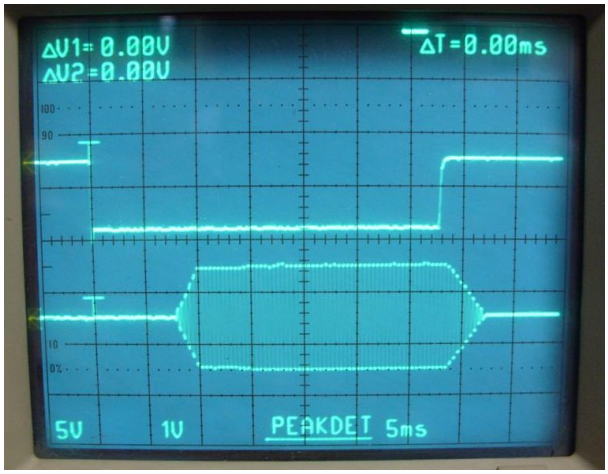
I was asked by another club member to investigate the coupling of his IC-7100 radio to a non-ICOM amplifier and got into experimental mood over the holidays since I also have a 7100 that has not seen an amplifier yet. The findings below are to create an awareness of the factors involved.

If radio and amplifier parameters are not properly known, then “hot switching” can cause damage to both units. The amplifier may receive RF from the radio before its RF relay has properly switched over and finally settled from receive to transmit. Similarly amplifier relay dropout must occur after RF TX has ceased.

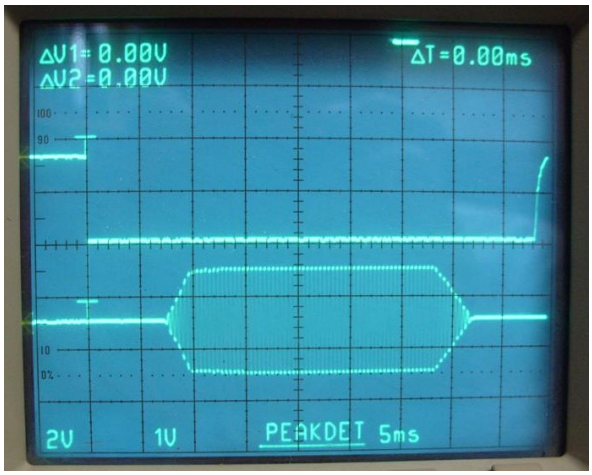
Every relay has a pull-in delay and release delay of several milliseconds very dependent on its construction as they are made for all type of service.
A really fast one that can be fitted as an option in amplifiers is a vacuum relay but although they are desirable especially for QSK operation, most standard fitted relays are suitable for general use.

Depending on the radio model driving an amplifier, there can be as many as three relays involved in the PTT chain. First the radio can have a built-in SEND relay (or not). If that SEND relay is inadequate, you need another in between to take the stress of driving the amplifier’s relay coil.
The total delay can exceed the onset of RF as RF and PTT run different paths with their own individual delays. Note that this is not recommended for QSK operation but OK for SSB and semi-break-in CW.

Taking some measurements on my IC-7600 which has an ACC1 HSEND and a relay driven SEND RCA output socket, one can already see a wide difference in timing:



HSEND ACC1 output pin3
Onset delay 8ms. Release -4ms



SEND from radio internal reed relay
Onset delay 8ms. Release +10ms

In these pictures, the start of electronic HSEND is where “T” is placed and represents the oscilloscope trigger point initiated by HSEND itself. So what does an extra relay cause?

One would think a hot switch will take place on HSEND release but with an amplifier relay also in the chain the end result could be like in the second picture.

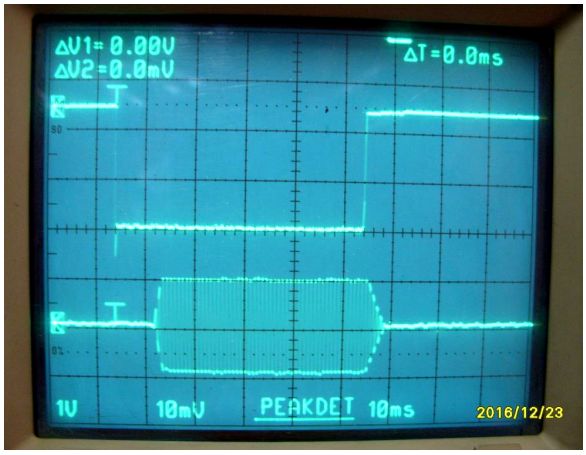
Hopefully relay switching times are published so you know where your safety margins are.
Interestingly, the IC-7600 reed relay has a very fast pull-in (“T” to RF onset about the same) but a slow release of some 10ms.
Of course we do not know what electronic design drives that relay but the end result is text book.

Published figures (from W0QF) for electronic HSEND release can be different for different radios:
IC-746pro=+8ms, IC-756pro=+5ms, IC-706Mk2G: -4,5ms., IC-7000: -5,5ms.
The last two are thus similar to an IC-7600.

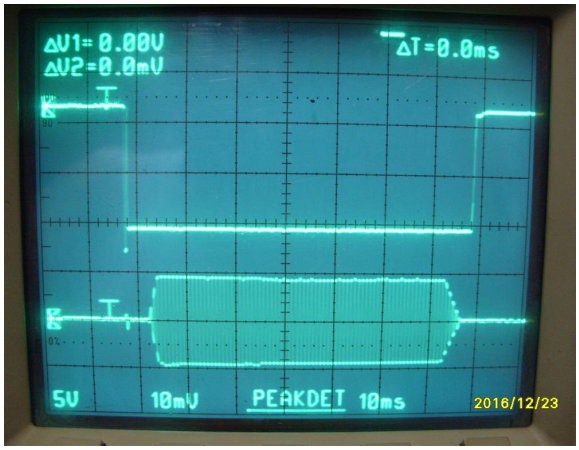
Most radios have a FIXED RF onset delay of generally 7-12ms. Onset delays are often not published.
It is within this space of time that relays must pull in and stabilize (stop bouncing).

The IC-7100 has similar situations and only has an HSEND (ACC1) electronic output available:

The next photos are still triggered by HSEND at “T“ but the traces now show SEND outputs from contacts of randomly chosen relays connected to HSEND.
SEND onset will creep closer to the RF onset if a relay is slow and the contact release will get longer.

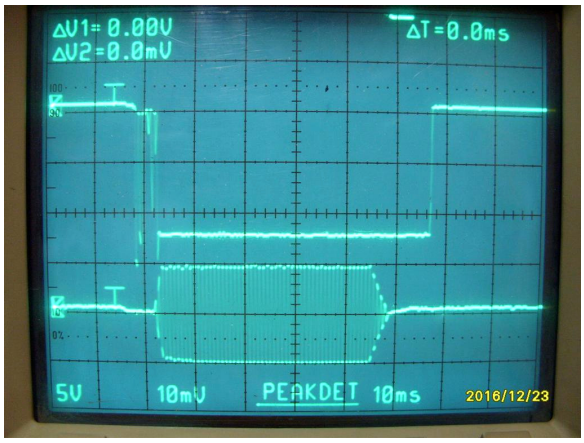


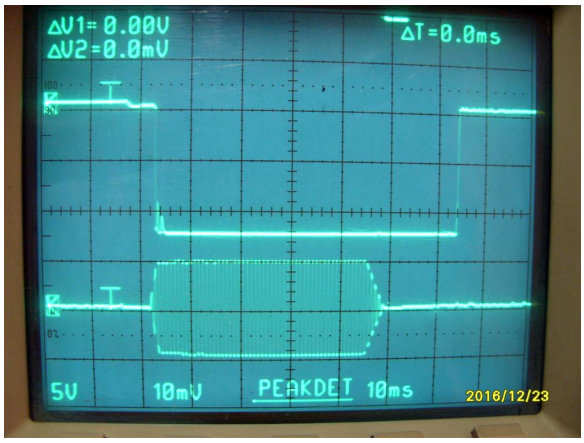
HSEND ACC1 output pin3
Onset delay 9ms. Release -5ms



Same via external relay on breadboard
Onset delay 5ms. Release +4ms.

The above pictures were taken with different WPM CW, so hence the difference in RF lengths. The figures thus tell us that the relay pull-in is 4ms and its release takes 9ms.
Generally the onset time is the one to watch. Below are some really poor relay responses.





The best advice that can be given is to scrutinize relay performance in terms of speed, current handling and even contact plating. Reputable manufacturers will publish these specifications.

Ideally radios can drive a same brand amplifier without trouble when following the user manual.
An amplifier’s relay coil is always driven directly from external sources and generally needs to be pulled down to ground. *Always read the specification of this input*. Some are X volts and Y mA which your HSEND or SEND output must handle. Most radios – not all – use an NPN transistor pulling down.
If you feel more comfortable with an opto-coupled HSEND connection (safeguards HSEND output and adds no delays) then a 4-pin opto-coupler and a MOSFET driver transistor will do the job nicely.

More modern radios may have a menu option to use “Reed” relay or “MOS-FET” output. The latter option permits driving amplifier relay coils of higher voltage and current.

Mixing brands however forces serious investigation into equipment specifications and the possible need to employ an extra electronic or electromechanical interface. This is especially true for transistorized radios driving valve amplifiers.

Why Your Son Should Learn Radio - A Talk with "Dad"

April 1935 Short Wave Craft

From keeping your son off the streets and out of pool rooms to learning the use of his hands and mind for designing, building, and operating radio, John T. Frye, later of "Carl & Jerry" authorship fame in Popular Electronics magazine, offers no less than eight good reasons why a man should encourage his son (and/or daughter) to take up amateur radio as a hobby - preferably one that will last a lifetime. As is true with any activity that requires a person to exercise hand-eye coordination and think logically about the order and method for best accomplishing a task, Ham radio offers the complete gambit of life skills that should be nurtured at an early age. In the same manner a musician benefits mightily from learning to read and play music while the brain is still in the process of wiring itself with specific neural connections that make certain tasks more natural, a kid who learns to build, finish, adjust, and operate electronics or model airplanes, or to perform acrobatics, sports, and similar activities will possess a significant advantage over the vast majority of people who decide later in life to adopt that activity. Parents, now is the time to get started on little Jack or Jill; they will thank you later.

The author discusses the many valuable things that the Study of radio will do for young men.

By John T. Frye (W9EGV)

Hello there, Dad! I hope that you will not mind my calling you that; I am so used to hearing that boy of yours say "dad" that it seems to come rather natural. You see, I am the radio amateur with whom your kid has been spending most of his time lately. The boy tells me that you are none too enthusiastic about his new interest in radio; and, since I am chiefly responsible for his becoming interested in the game, I thought that I had better drop around and have a talk with you. If I cannot cause you to change your mind about Jack's new hobby, I shall have to try and undo the damage I have done. After all, he is your son; and it is your privilege to rear him as you see fit.

If you cling to your aversion for amateur radio, I do not think that you will have any trouble with Jack. He has a great deal of respect for your opinion. While he is all up in the air about becoming an amateur, if you say drop it, he will drop it. He reasons that if you do not want him to take up the hobby there must be something radically wrong with it.

By the way, just what are your reasons for not wanting him to go ahead with the game? Oh yes, I see. You are afraid that it will cost him too much money; that it will take his mind off his school studies; and that it will end up by his becoming a regular radio "nut." Well, those are good, hard business reasons such as I should expect from a business man like yourself. I shall attempt to answer them in the same businesslike manner.

Author's First Transmitter Cost Less Than $5.00

In the first place, let us take the matter of cost. You say that it will cost too much. Do you know that my first radio station, including both transmitter and receiver, was built for less than five dollars? Yet, with that little station, I consistently talked with other amateurs a thousand miles away! Surely, you do not consider five dollars an exorbitant price to pay for a year's entertainment and instruction.

From another point of view, a thing costs too much only when the buyer pays more than it is worth. Let us take a glance at what this "amateur game" is going to do for your boy! Then we shall be in a better position to judge whether or not it will be worth the money he puts into it.

I always thought that that old "saw" about an idle mind being the Devil's workshop contained a-good-bit of common sense. Let me tell you a little incident that I saw the other evening.

I dropped into the corner drug store for a soda, and while I was sitting there, two boys came in and stopped at the magazine rack. One of them made a grab for Short Wave Craft and began to scan the pages avidly. The other loitered for some time without picking up any magazine; then, when he thought no one was watching him, he furtively snatched up one of those "rags" that specialize in pornographic pictures and smutty jokes. Which one of those boys would you rather have for a son? If amateur radio can give Jack something to keep his mind occupied, it will do him a service of incalculable value.

"Ham" Radio Keeps Boy at Home!

Another thing that must be marked up to the credit of the amateur game is the fact that it keeps the boy at home, off the streets, and out of pool rooms. You might just as well face this fact: when your boy is home, he is under your influence; when he is away from home, you do not know whose influence he is under. There are too many boys who regard the ancestral roof-tree as merely a sort of refueling and rest station! I know several fathers who would consider almost any price a good investment if it would insure their son's presence around the house. Evenings are the best times for radio operation, and I am sure that you will discover Jack will spend the greater number of his evenings right here in the house if he becomes an amateur.

Short-Wave Radio Creates "Objective!"

In addition to teaching him to use his head and hands, amateur radio performs still another service for the amateur. It gives him a concrete "objective" for which to work, and it teaches him to expend the fruits of his labors wisely and carefully. I know a particular case of a boy who refused to work at any of the tasks that are are usually depended upon for supplying a boy with "pocket money." Distributing newspapers, running errands, selling magazines, and all other suggestions left him unenthusiastic.

Teaches Responsibility

Then, too, amateur radio is a great "teacher!" In the first place, it teaches responsibility. The amateur is licensed by the Federal government, and he is required to observe the rules and regulations of radio communication. He is made to realize that he is held strictly responsible for all the activities of his particular station. At the same time, the keeping of schedules and the handling of messages augment this feeling of responsibility. "Traffic handling" is a great instructor in punctuality, exactness, and dispatch.

One of the first things that Jack will learn is that he must use his head and his hands if he is going to do anything in the amateur game. Of the fifty thousand amateurs in the United States, no two of them are confronted with exactly the same problems. Radio, ,as does any modern science, demands the ability to reason clearly and logically. The building of a receiver, the ironing out of the "bugs" in a transmitter, and the erection of a good antenna are literally "hotbeds" of problems in radio theory. These problems must be met and conquered by a combination of theoretical knowledge and clean, sharp reasoning!

Once the problems of theory are solved, the amateur is confronted by new problems of actual construction. He knows that his station will have to undergo the most exacting scrutiny at the hands of fellow amateurs, and he wishes to make it as neat, as convenient, and as efficient as it lies in his power to make it. In other words, his skill as a workman is "challenged"; and I could take you on a tour of amateur stations that would convince you how marvelously some amateurs meet this challenge!

Then he became interested in "radio"! At once, his character underwent a marvelous change. He threw off his lethargy and became one of the most "industrious" boys in the town. He passed papers, sold magazines, ran errands, mowed lawns, and did a number of things to earn money that showed remarkable ingenuity and business acumen on his part. What was the reason for the change? Why the boy had a need for money. He looked upon his jobs in terms of transformers, tubes, and condensers. Money, to him, took on an entirely new meaning. For the first time, he understood that economic phrase "a medium of exchange."

The lesson that the lad learns from the expenditure of his money is almost as valuable as any of the other services of the hobby. He learns to spend his money in a manner which will give him the greatest return. It does not take an amateur long to realize that all catalogue bargains are not what they seem. He learns to compare prices and values, to select equipment with an eye to the future enlargement of his station, and to distinguish between actual quality and advertising propaganda. It is not unusual sight to see an amateur poring over half a score of catalogues in order to secure the best price on a particular piece of needed apparatus.

Radio Answers Desire to Travel

Finally, we come to a service that, although it does not possess the tangibility of the former listed services, has all of their importance. Do you know what it was that made the lad of a few decades ago run away to sea? It was the same urge which prompts the modern lad to hitch-hike" across the country - an innate craving for adventure, for new experiences. Amateur radio furnishes a safe outlet for this

desire; flinging messages across thousands of miles of spaces, chatting with fellow amateurs in the far corners of the earth, sending the spoken word into faraway homes, exploring the mysteries of the ultra-short waves, all of these things spell thrilling adventure to the youth of today. Why that is the factor that makes the hobby so fascinating to the boys from seven to seventy. They are given a chance to do things which they never did before; they are permitted to talk to people whom they will never see. Amateur radio has given them a key to a "magic world" of modern science, and they revel in their esoteric delights.

To sum up what we have been talking about, we may expect amateur radio to do these things for Jack: It will keep him busy at home rather than loafing about on the streets. It will give him something to do with his head and his hands and will encourage him to use his faculties to the very limit of their power. It will teach him habits of punctuality, tenacity, and efficiency. It will instill in him a sense of responsibility and will make him resourceful and self-reliant. It will encourage him to work for his spending money and will give him experience in the wise spending of his funds. It will give to him that breath of adventure and romance that will satisfy his boyish craving for these qualities. Honestly, can you really believe that any price in terms of mere dollars and cents is too much to pay for an array of character-building services such as those listed above?

Amateur Radio an Urge to Greater Scholastic Endeavors

Let us now take up your second objection: You say that you are afraid that the hobby will take the boy's mind off his school lessons. I am going to admit quite frankly that there is that possibility in the case of a boy who goes his own way, with absolutely no guidance from his parents. Happily, in Jack's particular case, this danger is not present. You know that a boy has an "immense amount of enthusiasm" and that he is likely to plunge into anything he does with his whole body and soul. There is where your steadying hand will be needed. Rightly controlled, Jack's interest in radio can be used as an impetus to scholastic endeavor rather than detriment.

Let me explain what I mean. Radio is a science, and it requires a knowledge of mathematics that goes quite a bit beyond the learning of multiplication. Jack will soon find himself up against formulae that will require a more than superficial acquaintance with the higher branches of mathematics. A knowledge of physics is nearly indispensable for the radio amateur. Light and sound are so closely related to electricity that a knowledge of the principles of all three should be in the mental quiver of the conscientious amateur. Chemistry, too, will prove to be a basic science for this new hobby. You have only to point out these facts to Jack and you will find him viewing these subjects with an entirely new interest. Encourage him to approach his hobby from a scientific angle. Make him desire to know the why as soon as he has learned the how. Let him learn the thrill of being able to forecast exactly how his apparatus will function even before he assembles the parts.

It is only natural that he will take a greater interest in the affairs of the world when he is in daily communication with amateurs in all parts of the globe. You will find him poring over maps in search of out-of-the-way countries, and he'll nonchalantly speak of outlandish little principalities that are halfway around the globe, as though they were in the next state. His horizon will be enlarged; geography will assume a reality that it never possessed before.

Finally, I may point out a fact that every parent knows and uses. A boy's "hobby" places in the hands of his father and mother a powerful tool with which to shape the lad's activities. The exercise of the hobby can be bestowed as a reward for commendable action, and the denial of this privilege can be used as a form of punishment. For instance, suppose that you tell Jack that he may "radio" as much as he pleases after he has finished his homework!

Why not offer to buy him a new "bottle" - the Ham designation of a tube, sir-if he makes an average of B? You'll find that such methods will achieve marvelous results!

No Danger of Son Becoming Radio "Nut"

The third of your objections was expressed in, the fear that Jack would become a radio "nut." I know what you mean. You think that perhaps he will become unbalanced and will be able to think only on radio. I have seen that type of individual, and I know what a bore he is. Monomania is just as much a form of insanity as any of the less common types. If I thought that there was any danger of Jack falling into that particular pitfall, I should be even more strongly opposed than you, to his taking up amateur radio. However, I am not in the least worried about, his becoming a "nut."

My faith is based on a knowledge of the boy and his habits. He likes outdoor sports; he is good in athletics; you and he go on hunting and fishing trips; he has a host of friends who are constantly demanding his company; and he enjoys the social gatherings of his crowds. In the face of all these

varied interests, why do you fear his becoming unbalanced? Depend upon it: that healthy young body of his will demand exercise and activity that will not be satisfied by the pursuit of his hobby. In fact, the hobby will , really balance up his life. At the present time, there is too strong an accent on the lazy, careless seeking for entertainment. Nothing the boy does builds toward a definite achievement by which he can measure, his progress. This new hobby will inject a note of serious study and painstaking construction into his present butterfly existence. His completed station will be something that he can show to his friends with that pleasant glow of pride which arises from a knowledge of work well done.

Dangers of Discouraging Boy's Scientific Interest

Candidly, sir, I should dislike to take the responsibility of discouraging a boy's interest in any scientific line. Who knows what may come of his enthusiasm. Edison's interest in chemistry, Ford's interest in machinery, and Marconi's interest in radio were all, at one time, hobbies. Perhaps this boyish liking for radio may be a signpost of the lad's destiny. At least, it betokens a mental alertness, a healthy desire for knowledge on the part of Jack that I should welcome with the greatest happiness if I were his father. Give me a boy who asks questions, who experiments, and who takes a keen interest in his hobby. That boy has the foundation for a successful life. He is awake, and his brain "absorbs knowledge as a sponge does water"! I know some boys who go through life with a dull apathetic attitude that is entirely devoid of enthusiasm. Nothing stirs them; nothing arouses their interest. They have only scorn for others who become excited over a hobby. Would you prefer that Jack be one of those fellows?

Resumé

Well, Dad, I think that about winds up my little speech; I have tried to be perfectly honest in showing you what I believe to be the advantages of this amateur radio game, and what I have told you is based on my own observation and experience. I have showed you what the hobby has to offer the boy, and now I should like to add just one more point. Amateur radio is one hobby that can grow up with the youth. It offers the adult as much as it does the high school boy. From a simple knowledge of fundamental principles, the amateur can climb upward until he has mastered the intricacies of technical theory. From there, he can set forth, intrepidly into the unexplored reaches of its various fields. Radio is new enough that it holds forth unparalleled opportunities for the radio experimenter.

Ultra-short waves, television, power transmission, and pathological application are but a few of the many fields that beckon the experimenter.

Amateur radio might truly be said to be "all things to all men"! The amateur may expend as much money and as much time as he desires upon his hobby with the assurance that he will receive the greatest possible return in pleasure and instruction for his expenditure. The game has a dozen and one different branches from which the amateur may select his particular form of activity. Code transmission, 'phone transmission, television, "DX" hunting, five meter experimenting, traffic handling, and equipment design are a few of the branches of which I speak. Surely one of these will prove attractive to any person who is interested in the science of radio in any form.

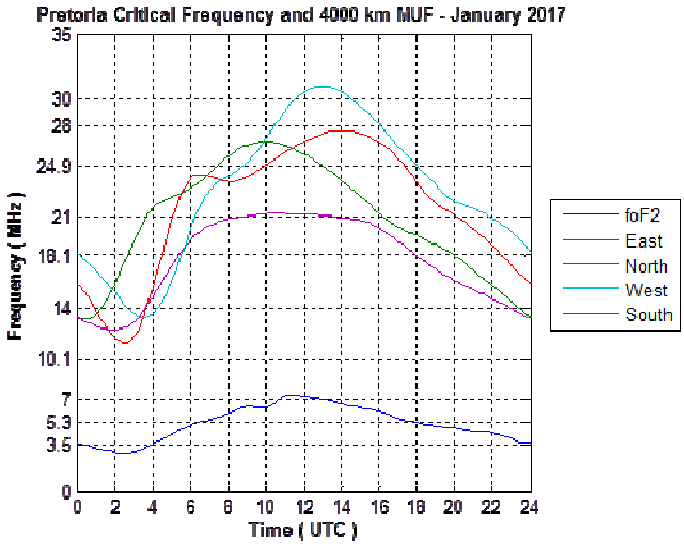
There you are! My argument is complete! The decision is now in your hands. Will you permit that boy of yours to go ahead with his hobby?

This article can be found at the following website:

http://www.rfcafe.com/references/short-wave-craft/why-your-son-should-learn-radio-april-1935-short-wave-craft.htm

My first question I would like to ask in retrospect would be: “why only your son”? What about your daughter? Well, obviously times have changed significantly for the good since 1934, and Ham Radio has become available and accesible for all genders, races and ages. This is the wonder of Ham Radio. Enjoying a hobby which has elements of both the old and technologically advanced. It however does not end there. The other activities associated with, and other hobbies branching from ham radio are quite astounding to say the least. This may include astronomy, stamp collecting, motor sport, marathons, search and rescue, safety and security, assistance at accidents, floods and other natural disasters. Ham Radio not only incorporate the other sciences such as physics, chemistry and mathematics, but also branches into the computer sciences and programming.

It is such a pleasure to see our youth participating in Ham Radio, but on the other hand it is disconcerting to see how little of our youth is actually interested in radio, as cellphones and computers dominate the social, technological and information scene. Hopefully this old article may be read by a young person or two who might be interested in Ham Radio.



Long Term HF Propagation for January 2017

DX Operating

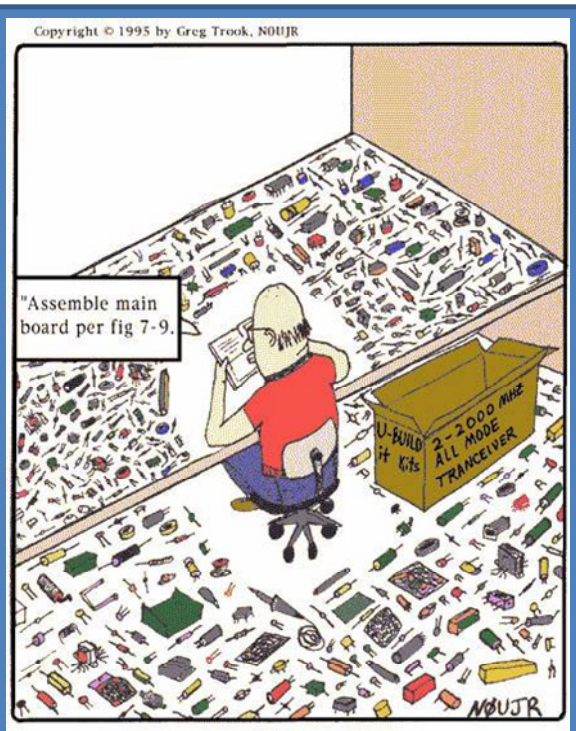
The graph shows the 4000 km maximum useable frequency (MUF) to the East, North, West and South from Pretoria for the first hop using the F2 layer.

Local Operating

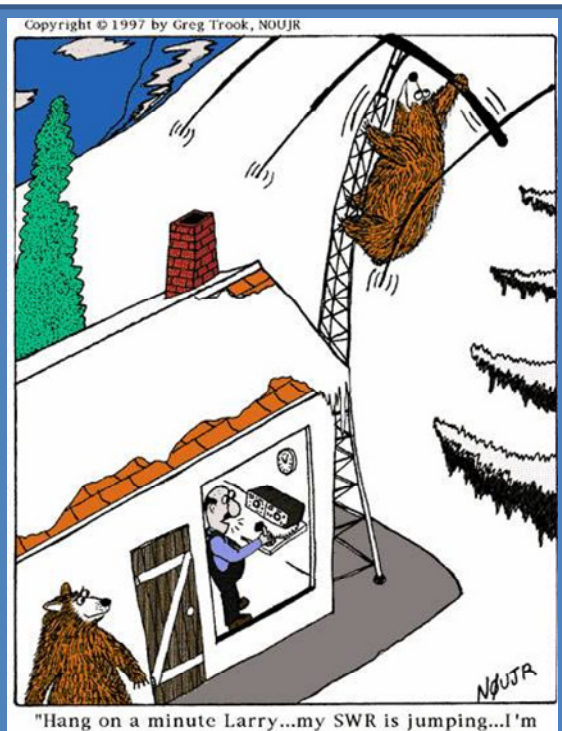
The F2 critical frequency (foF2) is the maximum F-layer frequency for short range communications.

See also the Propagation tab at http://www.parc.org.za/

Courtesy Vincent ZS6BTY



Kit fun.



"Hang on a minute Larry...my SWR is jumping...I'm going outside and see what the problem is..."