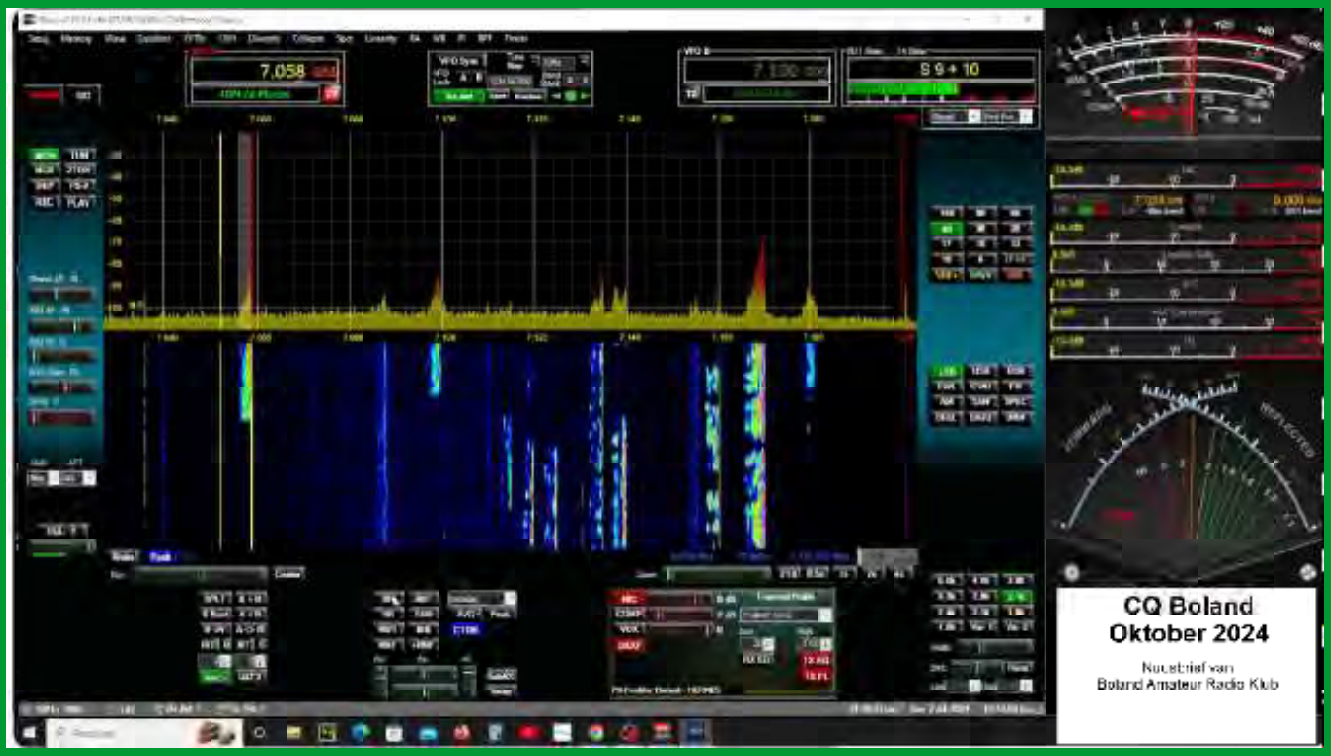
4 of 2024
Oktober-November Uitgawe / Edition

CQ BOLAND



Thetes en Hermes Light 2
Nuwe Komitee vir 2024/25
Antenna idees en planne
Radio nuus.

Boland Amateur Radio Klub
ZS1BAK

JOU KOMITEE VAN BOLAND AMATEUR RADIO KLUB 2024/25:

	Voorsitter *+ CQ Boland / Web*	Marius Lubbe, ZS1ML	voorsitter@bark.org.za
	Tesourier	Alwyn Du Plessis, ZS1APC	boeredata@breede.co.za
	Sekretaris	Francois Wooding ZS1FR	zs1fr@bark.org.za
	RAE	Jannie Kirsten ZS1JFK	rae@bark.org.za
	Tegnies	Schalk BurgerZR1SWB	schalk.gwb@gmail.com
	Geleenthede	Johan Brink ZS1JAB	events@bark.org.za
	Administrasie	Petrus Claassen ZS1CLA	petrusclaassen@gmail.com
	Radio Sport	Jan Lamprecht ZS1LAM	lamplumb@gmail.com

Gekoöpteerde lede:

Rassie Erasmus ZS1YT: Historikus vir die klub en SARL verteenwoordiger rassie@bark.org.za

Epos kan ook gerig word aan zs1bak@bark.org.za
Nuusbrokkies vir CQ Boland of die weeklikse bulletin na nuus@bark.org.za

KLUB BULLETINS
Tyd: Sondae om 7:45 op 3730kHz en om 9:30 op 7092kHz LSB en 145,650 FM
Frekwensies: 3730kHz, 7092kHz LSB en 145,650 FM en 145.700 FM

KLUB BULLETIN NUUS
Rassie Erasmus ZS1YT

BARK se bulletin word elke Sondag om 9h30 uitgesaai op die 145.700 of 145.650 herhaler. Binnekort hoop ons om ook ‘n Echolink skakel aan die 700 herhaler te hê sodat stasies wat nie op 2m kan luister nie, ook die bulletin kan ontvang en in-rapporteer.
Die HF uitsendings van die BARK bulletin is soms ‘n bietjie van ‘n probleem. Daar is net te min lede wat bereid is om die bulletin op 80m om 7h45 te lees of selfs ook op 40m te lees of te herlei vanaf die herhaleruitsending. Dit is so jammer want BARK het lede wat nie die heraleruitsendings kan ontvang nie maar graag die bulletin wil luister.

BARK Vlag

Indien jy bereid is om van tyd tot tyd ‘n bulletin te herlei kontak asb. vir Rassie by rassiezs1yt@gmail.com om jou naam op die rooster te plaas. Jy kan self die datums noem waar jy bereid is om ‘n uitsending op 80m of 40m te doen. Wees deel van die span!

Die eienaars van Kenwood TS 2000 radios kan die radio inspan om die herleiwerk outomaties te doen. Vra vir Schalk ZR1SWB hoe om jou Kenwood TS-2000 in te stel.

HERHALER NUUS.

Soos meeste van u seker weet is probleme met die 145.700 herhaler te Constantia berg het die probleem met waarskynlik sy antenna en/of voerlyn wat veroorsaak dat die herhaler baie krapperig is tydens erge reën en wind. Hierdie terrein behoort aan Sentech en Sentech personeel moet teenwoordig wees op terrein wanneer daar aan die antennas gewerk word. Dit maak dit nogal moeilik om die antenna te vervang. Ons het nou samewerking van Sentech gekry en beoog om binnekort ’n nuwe antenna daar op te sit. Ons is egter naarstiglik aan die soek na ’n gesertifiseerde toring-klimmer om ons daarmee te help en sal dit waardeer as jy of iemand wat jy ken ons kan help daarmee asb. Kontak Marius of Rassie asb.
Bitter min BARK lede word op die 2 DMR herhalers in die Wes Kaap gehoor. Dit is nogal handige tegnologie en meer lede kan gerus 1 van die DMR herhalers gebruik.

Dankie aan die BARK lede wat gereeld bydra tot die herhalerfonds. esoek wcrwg.co.za vir al die inligting oor herhalers.

Die bankbesonderhede van die Herhalerwerkgroep is soos volg:
Bank: FNB Rekening Tipe: Tjek
Rekeningnommer: 62338034937
Takkode: 250655 (Elektroniese deposito)
Takkode: 200612 (Teen deposito)

Gebruik asseblief jou roepsein as verwysing. Alle skenkings sal erken word met dank.

WEBWERF / WEBSITE
http://www.bark.org.za

NUWE LEDE EN BELANGSTELLENDES:
Ons is ‘n vriendelike, hulpvaardige en hartlike groep mense in hierdie klub en verwelkom nuwe lede en belangstellendes van die Kaapstad, en Boland gebied en verder verwyder.

Of jy ‘n groentjie is wat graag die SARL se eksamen wil skryf of ‘n ou hand wat terugkeer na die stokperdjie, voel asseblief vry om enige van die persone hierbo te kontak vir meer inligting oor die klub en ons fantastiese stokperdjie. Kontak Jannie zs1jfk@gmail.com

NEW MEMBERS AND INTERESTED PARTIES:
We are friendly, helpful, and a genial group of people in this club and welcome new members from the Cape Town area, Boland and further afield and any other interested parties.

Whether you are a person looking to join the hobby and take the SARL Exam or an old hand coming back to the hobby, please feel free to contact Jannie zs1jfk@gmail.com for more information about the club and our fantastic hobby.

BYDRAES TOT CQ BOLAND
Die redaksie van CQ BOLAND verwelkom alle artikels en bydraes vanaf Boland se Amateurs en vriende van die klub. Bydraes mag egter volgens die diskresie van die redakteur aangepas en geplaas word om sodoende die toepaslikheid inligting en artikels te verseker. E-pos bydraes na zs1ml@bark.org.za asseblief.

CONTRIBUTIONS TO CQ BOLAND
The editor of CQ BOLAND welcome all articles and contributions from Boland's members and friends of the club. Contributions may, however, be edited and posted at the discretion of the editor, thus

ensuring the appropriateness of any information and articles. Email contributions to zs1ml@bark.org.za please.

BOLAND AMATEUR RADIO KLUB
RAE KLAS A KURSUS 2024

RAE Klas A Kursus 2025

Kontak: Jannie Kirsten (ZS1JFK): zs1jfk@gmail.com
Indien jy belangstel om die RAE te skryf en jou amateurradiolisensie te bekom, voel gerus vry om by die volgende BARK RAE Klas A kursus aan te sluit. Die kursus vind twee keer per jaar plaas en enigiemand is welkom om aan te sluit. Kontak Jannie om te hoor wanneer die volgende kursus plaasvind.

Aanlyn registrasiestelsel:
Maak asseblief seker dat julle deur middel van die gepasde aanlyn registrasiestelsels vir beide die RAE sowel as die BARK RAE kursus geregistreer het. Die twee registrasies word apart hanteer.

1. Kandidate moet na die volgende adres gaan om vir die **RAE** te registreer: **http://www.sarl.org.za/Web3/RAE/RAERegistration.aspx**
2. Nadat jy vir die RAE self geregistreer het, kan jy gerus die volgende skakel gebruik om vir die **BARK RAE kursus** te registreer: **https://forms.gle/8t4c7prxePvcq63eA**

Koste:
Die koste vir die kursus beloop **R250** en is betaalbaar met registrasie. Die kostes sluit BARK lidmaatskap vir die eerste jaar in. Die bankbesonderhede is as volg:
Bank: Nedbank
Rekeningnommer: 1187147885

Gebruik asseblief "RAE + jou van" as bewys van betaling en stuur dit na zs1jfk@gmail.com

Skedule:
Die kursus duur 13 weke met sessies wat op Dinsdae aande om 19:00 tot 21:00 oor Zoom aangebied word.

Studiemateriaal:
Die RAE studiemateriaal is beskikbaar om af te laai vanaf die SARL webwerf by die volgende adres: **http://www.sarl.org.za/public/licences/rae.asp**

Enige addisionele hulpbronne vir die kursus sal deur middel van **Google Drive** gedeel word.

Eksamenlokaal:
Dit is elke kandidaat se verantwoordelikheid om seker te maak dat hulle by 'n geregistreerde eksamenlokaal ingedeel is. Vir meer inligting oor beskikbare eksamenlokale, sien gerus die volgende skakel: **http://www.sarl.org.za/Web3/RAE/ExamCentresPublic.aspx**

BARK bied self ‘n eksamenlokaal by die **Stellenbosch Vliegklub**: R44, Stellenbosch, 7600 (aanwysings beskikbaar) GPS: -33.97952495667173, 18.8194676430059

HF Assessering:

As deel van die kursus word van jou verwag om te leer hoe om ‘n HF stasie op ‘n veilige manier te bedryf sonder om met ander in te meng. Die praktiese HF Assessering sal plaasvind op ‘n tyd en plek wat nog bepaal sal word. BARK assessors is **net beskikbaar op hierdie aangewysde dag** waar almal gelyk geassesseer sal word en geen alternatiewe assesserings gaan deur BARK gereël word nie.

Indien jy nie die BARK HF Assessering kan bywoon nie, moet jy asseblief self met ‘n geregistreerde HF Assessor reël om dit afgehandel te kry voor of op die dag van die RAE. Vir ‘n lys van geregistreerde HF Assessors, sien gerus die volgende skakel:
http://www.sarl.org.za/Web3/RAE/HFAssessorsPublic.aspx

HULPMIDDELS VIR RAE KANDIDATE: / HELPFUL RESOURCES FOR RAE CANDIDATES:

Sien die BARK webwerf: https://bark.org.za/kursus-rae/

KOMPETISIE ALMANAK / CONTEST CALENDER

The 2023 SARL Contest Manual V1.1 (Blue Book) is available here
The 2023 Diary of Events is available here

CONTEST PREFERRED SPECTRUM

14.1 Contest activity shall not take place on the 5, 10, 18 and 24 MHz bands.
Non-contesting radio amateurs are recommended to use the contest-free HF bands (60, 30, 17 and 12 m) during the largest international contests.

14.2 The following frequencies is an extract from the IARU Region 1 band plan.
http://www.sarl.org.za/public/licences/bandplan.asp

80M
CW: 3 510 3 560 kHz
SSB: 3 603 - 3 650 kHz and 3 700 3 800 kHz
(3 651 to 3 699.99 is a contest free segment)

40M
CW: 7 000 7 040 kHz
SSB: 7 063 7 100 kHz and 7 130 7 200 kHz
(7 101 to 7 129.99 is a contest free segment)

20M
CW: 14 000 14 060 kHz
SSB: 14 125 14 300 kHz

6M / VHF / UHF Contest Frequencies

50,200 – 50,250 MHz	SSB/CW
50,250 – 50,300 MHz	Digital
50,350 – 50,400 MHz	FM
144,200 – 144,250 MHz	SSB/CW
144,250 – 144,300 MHz	Digital
144,350 – 144,400 MHz	FM
145,500 – 145,575 MHz	FM
432,200 – 432,250 MHz	SSB/CW
432,250 – 432,300 MHz	Digital
432,350 – 432.400 MHz	FM

WCRWG Status Report: 2024-10-01

This and previous reports can be found at http://wcrwg.co.za/category/status-report/

General requirements: upgrade and maintenance program

1. Cash donations
2. High quality N-type male and female connectors for ½" heliax
3. VHF and UHF ferrite circulators;
4. N-type F-F Lightning Protection units;

-	Station Location	Band	Mode	Tone	TX MHz	RX MHz	Latitude	Longitude	Grid	Status
1	CPUT Bellville	6m	Beacon	-	50.080	-	33°55'55"S	18°38'32"E	JF96HB	UP
2	Cape Town	2m	Beacon	-	144.435	-	33°55'10"S	18°25'24"E	JF96FB	UP
3	Helderberg	2m	APRS	-	144.800	144.800	34°02'25"S	18°51'23"E	JF95KX	UP
4	Du Toitskloof	2m	APRS	-	144.800	144.800	33°45'00"S	19°11'45"E	JF96OG	UP
5	Hanskop	2m	Voice	88.5	145.600	145.000	34°06'08"S	18°57'58"E	JF95LV	UP
6	Piketberg	2m	Voice	88.5	145.625	145.025	32°49'10"S	18°44'18"E	JF97IC	DOWN
7	Du Toitskloof	2m	Voice	88.5	145.650	145.050	33°40'30"S	19°05'23"E	JF96NH	UP
8	Riversdale	2m	Voice	88.5	145.650	145.050	34°01'10"S	21°07'41"E	KF05NX	UP
9	Jonaskop	2m	Voice	88.5	145.675	145.075	33°58'20"S	19°30'23"E	JF96SA	UP
10	George	2m	Voice	88.5	145.700	145.100	33°55'39"S	22°27'00"E	KF16FB	UP
11	Constantiaberg	2m	Voice	88.5	145.700	145.100	34°03'15"S	18°23'13"E	JF95EW	UP
12	Hermanus	2m	Voice	88.5	145.725	145.125	34°23'51"S	19°09'39"E	JF95NO	UP
13	Tygerberg	2m	Voice	88.5	145.750	145.150	33°49'31"S	18°36'18"E	JF96HE	UP
14	Tygerberg	70cm	Voice	88.5	434.625	433.025	33°49'31"S	18°36'18"E	JF96HE	UP
15	Verkykerskop	70cm	Voice	88.5	434.650	433.050	34°06'08"S	18°57'58"E	JF95LV	UP
16	Helderberg	70cm	DMR	-	438.350	430.750	34°02'25"S	18°51'23"E	JF95KX	UP
17	Signal Hill	70cm	DMR	-	438.400	430.800	33°54'56"S	18°24'41"E	JF96EC	UP

Notes and other info like DTMF codes are published on the WCRWG website. https://wcrwg.co.za/

Send fault reports via e-mail to: **wc-repeater-fault@googlegroups.com**
To receive the weekly report direct via e-mail, subscribe to:
wc-repeater-announcements@googlegroups.com
You can subscribe by sending an e-mail message to
wc-repeater-announcements+subscribe@googlegroups.com

Scheduled repeater usage

Please be aware of the following scheduled use of the specified repeaters and, **except for emergency traffic**, kindly keep them clear for these activities. Times are given in SAST.

USE	USER	AFFECTED REPEATERS		FROM	TO	ON	NOTES
Net	CTARC	145.750	Kanonkop	20.00	21.00	Mondays	CT Net
Bulletin	HWC	145.700	Constantiaberg	19.30	20.30	Wednesdays	Except the first Wednesday of each month
Bulletin	BARK	145.700	Constantiaberg	09.30	10.30	Sundays	
Bulletin	CTARC	145.750	Kanonkop	08.30	09.30	Sundays	SARL bulletin followed by club bulletin

The WCRWG has a new website packed full of information on all the repeaters and detailed reports of activities. You can access this website via the link **http://www.wcrwg.co.za/**
Any notes, updates, incidents or donations are to be sent by e-mail to '**reports@wcrwg.co.za**' to reach that mailbox no later than 16:00 SAST on the Tuesday of publication of the report. Any information received after that will be held over to the following report.

Account Information

Account Name: Western Cape Repeater Working Group (WCRWG)
Bank: FNB
Account type: Cheque
Account number: 62338034937
Branch code: 250655 (Electronic payments) Branch code: 200612 (Counter deposits)

HANDIGE HANDE:

Jan Lampbrecht ZS1LAM het besluit hy het 600 Ohm voerlyn nodig en dit self gemaak.

Uiteraard omdat hy ’n loodgieter is, het hy talent met metaal en is hy veelsydig met allerhande toerusting.

Hier is ’n paar voorbeelde:

Jan verduidelik dat hy vir draad paneeldraad of ”panel wire” gebruik omdat dit meer buigsaam is as die huis elektriese draad, wat maar ’n stywe affêre kan wees.
Die spasieer stukke is nylon pyp 8mm o/d buite dimensie 6mm i/d interne dimensie. Dan natuurlik die aller-handige kabel rits-bindertjies Baie geluk Jan ek dink dit gaan goed werk.

Ons hoor graag van julle projekte, die ander lede vind dit interessant om te sien wie doen wat.

KLUB NUUS:

Van die Voorsitter:

Toewyding van Lede vir 'n Suksesvolle Klub

Geagte lede van die Boland Amateur Radio Klub,
Omdat dit ’n baie belangrike saak is, herhaal ek dit sodat die wat nog nie kennis geneem het van die inhoud nie, dit asseblief sal doen.

Die Belang van Aktiewe Deelname
Ons klub se sukses en voortbestaan hang af van elkeen van julle. Dit vereis meer as net die bywoning van vergaderings of die luister na bulletins. Dit vereis aktiewe deelname, toewyding en 'n bereidwilligheid om by te dra tot die take wat nodig is om ons klub funksioneel en lewendig te hou. Hier is 'n paar aspekte wat dit neem om ons klub suksesvol te maak:

1. Aktiewe Deelname
Elke lid moet bereid wees om hul deel te doen. Dit beteken nie net om passief in die agtergrond te staan nie, maar om aktief betrokke te raak. Of dit nou die opstel en lees van bulletins is, of die organisering van gebeure en werksessies, elkeen van ons het 'n rol om te speel. Dit is nie genoeg om net 'n toeskouer te wees nie; ons moet almal bereid wees om op die voorgrond te tree en ons tyd en energie in te sit.

2. Samewerking en Spanwerk
Ons kan nie staatmaak op 'n handjie vol mense om alles te doen nie. Dit is uitputtend en onregverdig. Ons moet as 'n span saamwerk, waar take en verantwoordelikhede gedeel word, en waar ons mekaar ondersteun. Spanwerk en samewerking is die ruggraat van enige suksesvolle organisasie. Wanneer ons as 'n eenheid werk, kan ons meer bereik en die las verlig wat op enkelinge geplaas word.

3. Vrywillige Bydraes
Baie van die take wat gedoen moet word, is nie indrukwekkend of hoogs sigbaar nie, maar dit maak nie hul belang minder nie. Van administratiewe pligte tot tegniese ondersteuning, elke taak is noodsaaklik vir die vlotte funksionering van ons klub. Vrywillige bydraes is die lewensbloed van ons klub. Dit is hierdie onselfsugtige handelinge wat die ratwerk van ons organisasie glad laat verloop.
Die Rol van die Bestuurskomitee
Ons bestuurskomitee werk onvermoeid om seker te maak dat die klub vlot funksioneer. Hulle het reeds baie take op hulle hande, van die beplanning en organisering van vergaderings, tot die bestuur van administratiewe pligte en die oplossing van tegniese probleme. Dit is nie die komitee se voorkeur om alle verantwoordelikhede op hulself te neem nie, maar eerder om die lede self te betrek.

4. Opleiding en Vaardigheidsontwikkeling
Ons moet bereid wees om nuwe vaardighede aan te leer en ons kennis te deel. Dit verhoog nie net ons individuele vermoëns nie, maar versterk ook die algehele kapasiteit van ons klub. Deur opleiding en mentorskap kan ons verseker dat meer lede bekwaam is om by te dra. Kennis is mag, en wanneer ons almal goed toegerus is, kan ons beter bydraes lewer.

5. Kommunikasie en Deursigtigheid
Effektiewe kommunikasie is noodsaaklik. Lede moet op hoogte gehou word van gebeure, verantwoordelikhede en die klub se verwagtinge. Deursigtigheid in ons werking en besluitneming bevorder 'n kultuur van vertroue en samewerking. Deur openlik en eerlik te kommunikeer, kan ons misverstande voorkom en 'n sterker, meer verenigde klub bou.

6. Toewyding en Verantwoordelikheid
Elke lid moet 'n gevoel van verantwoordelikheid hê. Ons moet besef dat die sukses van ons klub nie net afhang van ander nie, maar ook van ons eie toewyding en deelname. Elke persoon se bydrae is waardevol en onvervangbaar. Vra jouself af: Doen ek genoeg om my kant te bring? Is ek bereid om my hande vuil te maak en die ekstra myl te loop vir die welstand van ons klub?

Die Pad Vorentoe
Ons het 'n wonderlike gemeenskap en klub wat ryk is aan geskiedenis en potensiaal. Maar om hierdie potensiaal te verwesenlik, het ons elke lid se volle toewyding en deelname nodig. Laat ons saamwerk om die Boland Amateur Radio Klub nie net te onderhou nie, maar te laat floreer. Ons moet mekaar ondersteun, take deel, en die verantwoordelikheid neem om ons klub te maak wat dit kan wees.
Kom ons maak 'n verbintenis aan onsself en aan mekaar om die beste weergawe van ons klub te skep. Dit is nie die werk van 'n paar individue nie, maar die gesamentlike poging van ons almal. Ons moet almal verantwoordelikheid neem en ons kant bring om ons klub suksesvol te maak.

Met radio-groete,

Marius Lubbe ZS1ML
Voorsitter
Boland Amateur Radio Klub

Algemene Klub nuus:

Dagsê lede,

Die nuwe naambalkies is reeds uitgereik aan die meerderheid van ons lede wat bestel het en dit lyk of almal baie tevrede is met die resultaat.

Daar is egter 'n klein hoeveelheid mense wat nog nie hulle balkies in ontvangs geneem het nie en hulle moet asb. aandui wat ons daarmee moet doen.

Ons kan dit aanstuur na jou teen R130 stuk met Courier Guy, of jy kan dit by my (Marius ZS1ML) huis kom haal in Kenridge, Durbanville, of by ons volgende vergadering kry.

Indien jy nog nie jou eie balkie bestel het nie, is nou die tyd. Dit kos R150 stuk en ons probeer ten minste 10 eenhede bymekaar maak om 'n bestelling te plaas. As jy nou bestel en ons genoeg deelname het mag jy dit op die volgende vergardering kry of voor dit as jy wil kom optel of laat koerier.

Betaling moet gemaak word aan die klub rekening met jou Roepsein en "naambalkie" as verwysing asb. Stuur ook asseblief bewys van betaling aan die e-posse: finansies@bark.org.za en voorsitter@bark.org.za waar moontlik.

Ons bankrekening besonderhede is op Facebook beskikbaar en dit is natuurlik ook op ons webtuiste waar jy dit kan kry onder: "Kontak Ons" https://bark.org.za/contact/

Bankrekening: Nedbank.
Rekeningnommer: 1187147885 (cheque account)
Tak kode: 198765
Bank Naam: NEDBANK LIMITED

Bank Tak: NEDBANK SOUTH Africa

Volgende klubvergadering
Die volgende klubbyeenkoms is geskeduleer vir einde November of die eerste week van Desember maar ons sal binnekort bevestig. Ons is besig met reëlings vir ’n skaapspit by n plek en tyd wat nog aan u gestuur sal word per e-pos en WhatApp groep. Die geleentheid sal jou niks kos nie, behalwe drankies wat plaaslik by die kroeg gekoop sal moet word, indien die plek wel so kroeg het, maar weereens, ons sal alle reëlings bevestig.

Verjaarsdae en ander nuus word aangekondig elke Sondae op ons vele klub nuus bulletins; gaan luister daarna, dis sal jou gelukkig laat voel!

Short Tip / Kortlikse Wysheid

When dealing with antennas, if the frequency is too low, it means the antenna is too long for the desired frequency. Therefore, you should shorten the wire.

Here's a general guideline:

- **To increase the frequency, you shorten the wire.**
- **To decrease the frequency, you lengthen the wire.**

Wanneer jy met antennas werk, indien jy die frekwensie wil verhoog, moet jy die draad verkort.

Hier is 'n algemene riglyn:

- **Om die frekwensie te verhoog, verkort jy die draad.**
- **Om die frekwensie te verlaag, verleng jy die draad.**

BARK Algemene Jaarvergadering 2024

Johan Brink ZS1JAB

September is geken as die begin van Lente-Maand, en met die laaste paar druppels voor ons die regte "Kaapse Lente" verwelkom, het ons lede 'n reënerige Saterdag, 28 September 2024, aangedurf om by die BARK se Algemene Jaarvergadering aan te sluit. 'n Gerame 35 lede was teenwoordig, om die stand van BARK aan te hoor en insette te lewer.

Alwyn du Plessis, ZS1APC, het die Finansiële Jaarstate aangebied en die state is verbatim aanvaar sonder enige kanting of kwalifisering. Die voorstel om die BARK se vastedeposito-rekening met R10,000 te versterk, is ook aanvaar – 'n aanduiding van 'n gesonde kontantvloei.

'n Nuwe komitee vir die nuwe jaargang is verkies, en die poste is as volg ingedien:

- Voorsitter – Marius Lubbe (ZS1ML)
- Onder-Voorsitter & Geleenthede – Johan Brink (ZS1JAB)
- Tesourier – Alwyn du Plessis (ZS1APC)
- Sekretaris – Francois Wooding (ZS1FR)
- Administrasie – Petrus Claassen (ZS1CLA)
- RAE – Jannie Kirsten (ZS1JFK)
- Tegnies -Schalk Burger 9ZR1SWB)
- Kompetisiemeester – Jan Lamprecht (ZS1LAM)

Petrus Claassen, ZS1CLA, is as nuwe Komiteelid verwelkom, en BARK bedank hartlik die uitgaande Komiteelede vir hul uitmuntende bydraes tot die gesonde groei van die Boland Amateur Radio Klub.

Soos enige sterk-groeiende klub, verkies die Komitee van BARK om dinamies en relevant te bly tot die lede se veranderende lewens, en daarom is daar beraadslaag oor die geskiktheid van die geskeduleerde tyd van die BARK Bulletin wat tot-en-met hede op Sondae-oggende uitgesaai word. 'n Gesonde gesprek is hier rondom gelei met heelwat insette vanaf die lede, wat daartoe gelei het dat daar 'n dubbel-meningspeil gerig is aan die lede op die Klub se WhatsApp ledegroepe.

'n Hernude versoek is aan die lede gerig om betrokke te raak by die Nuusspan, aangesien daar 'n tekort aan hande en stemme is om 'n gemaklike register van samestelling en uitsending by te hou. Die BARK-Komitee het benadruk dat die bulletin wat voorheen nie uitgegaan het nie, 'n resultaat van 'n beskikbaarheidsprobleem was, en dus die beroep tot meer ledebetrokkenheid hiertoe.

Met die moeilike sake uit die pad gerol, is die datum vir die BARK se Jaareindfunksie voorgestel as die 30ste November of die 7de Desember, met aggeslaan op die skolevakansie. Die raad het dit besin en goedgekeur om die kos vir die geleentheid te reël en befonds, om seker te maak dat daar een minder item op die lys is vir lede om oor te wonder en finansies nie 'n hindernis is vir soveel moontlik lede om die laaste vergadering van die jaar by te kan woon nie.

Ter afsluiting, het Georg ZS1GFL vir ons ‘n insiggewende tegniese aanbieding van die HERMES-projek gelewer, wat baie interessant gevind het. Ses RAE-kandidate is daarna bygestaan om hul HF-assesserings te voltooi, en ‘n paar brawe manne het ‘n vleisie op die kole gegooi tussen die reëndruppels, om die vergadering tot ‘n sluiting te bring.

Die Komitee dank elk van ons lede vir hul insette, en nooi almal om nuwe idees, bekommernisse of ander interessanthede met ons te deel, wat daartoe lei dat die Boland Amateur Radio Klub ‘n voortdurende sukses bly.

What is Amateur Radio and what does the hobby comprise?

ZS1ML

Amateur radio, often referred to as "ham radio," is a hobby that involves the use of designated radio frequencies for non-commercial communication, experimentation, and technical education. It offers a broad scope of activities, attracting enthusiasts with diverse interests and technical skills.

Scope of Amateur Radio:

1. **Communication**: Amateur radio operators, or "hams," communicate with others locally, nationally, and even globally. They use various radio frequencies to connect, often without relying on the internet or cell networks. Contacts can be made via voice, Morse code (CW), digital modes, and even satellites or moon-bouncing (Earth-Moon-Earth, EME) transmissions.
2. **Technical Experimentation**: The hobby encourages experimentation with electronics and radio technology. Hams build and modify equipment like antennas, transmitters, and receivers, or develop new communication modes and protocols. The flexibility of amateur radio makes it a testing ground for innovations in wireless technology.
3. **Emergency Communications**: Amateur radio plays a crucial role in providing emergency communication when conventional networks fail. Hams are often trained in disaster response and coordinate with public safety officials to ensure communication is maintained during crises such as natural disasters.

4. **Contests and Awards**: Hams participate in contests, where they try to make as many contacts as possible within a specified time frame. There are also awards for achievements such as contacting stations in every country (DXCC) or every state (WAS).
5. **Satellite Communication**: Amateur radio operators can communicate via low-Earth-orbiting satellites (called "amateur satellites" or "AMSAT"), making it possible to connect over long distances using small handheld radios.
6. **Public Service**: Hams often volunteer for public service communications, assisting with events like marathons or parades, providing logistical communication for organizers, or supporting local emergency management.
7. **Digital Modes**: With the advancement of technology, amateur radio has adopted digital communication methods such as FT8, PSK31, and DMR. These modes allow efficient, long-distance communication even under poor conditions and often use computers to transmit and receive signals.
8. **Radio Astronomy**: Some hams engage in radio astronomy by building receivers to detect signals from space, providing insights into celestial phenomena.

Details and Requirements:

- **Licensing**: To operate on amateur frequencies, individuals must obtain a license from their country's regulatory body (e.g., FCC in the U.S., SARL in South Africa). Licensing ensures operators understand the technical aspects of radio and the rules governing its use.
- **Frequency Bands**: Amateur radio is allocated specific frequency ranges, from low-frequency (LF) bands to very high-frequency (VHF) and ultra-high-frequency (UHF) bands. Each band has unique characteristics affecting signal propagation, distance, and atmospheric interaction.
- **Equipment**: Operators use various equipment, from simple handheld radios (HTs) to complex high-power transceivers with external antennas. Many hams build their equipment, while others purchase commercial gear.
- **Community**: Amateur radio has a strong sense of community. Local clubs, such as the Boland Amateur Radio Club, provide support, education, and social opportunities for hams. Operators can also communicate with one another through global organizations like the International Amateur Radio Union (IARU).

In essence, amateur radio combines communication, technical experimentation, and community service, making it a rich and diverse hobby with numerous facets for people of all technical abilities and interests.

Wat is amateurradio en wat behels die stokperdjie?

ZS1ML

Amateurradio, dikwels bekend as "hamradio," is 'n stokperdjie wat die gebruik van gespesifiseerde radiofrekwensies vir nie-kommersiële kommunikasie, eksperimentering, en tegniese opleiding behels. Dit bied 'n wye omvang van aktiwiteite en trek entoesiaste aan met uiteenlopende belange en tegniese vaardighede.

Omvang van Amateurradio:

1. **Kommunikasie**: Amateurradio-operateurs, of "hams," kommunikeer met ander plaaslik, nasionaal, en selfs wêreldwyd. Hulle gebruik verskeie radiofrekwensies om kontak te maak, dikwels sonder om op die internet of selfoonnetwerke te staat te maak. Kontakte kan gemaak word via stem, Morse-kode (CW), digitale modusse, en selfs satelliete of maan-weerkaatsings (Earth-Moon-Earth, EME) uitsendings.
2. **Tegniese Eksperimentering**: Die stokperdjie moedig eksperimente met elektronika en radiotegnologie aan. Hams bou en verander toerusting soos antennas, senders, en ontvangers, of ontwikkel nuwe kommunikasie-modusse en protokolle. Die buigsaamheid van amateurradio maak dit 'n toetsgrond vir innovasies in draadlose tegnologie.
3. **Noodkommunikasie**: Amateurradio speel 'n belangrike rol in die voorsiening van noodkommunikasie wanneer konvensionele netwerke misluk. Hams is dikwels opgelei in rampreaksie en koördineer met openbare veiligheidsbeamptes om te verseker dat kommunikasie behou word tydens krisisse soos natuurrampe.
4. **Kompetisies en Toekennings**: Hams neem deel aan kompetisies waar hulle probeer om soveel kontakte as moontlik te maak binne 'n gespesifiseerde tydperk. Daar is ook toekennings vir prestasies soos om kontakte in elke land (DXCC) of elke staat (WAS) te maak.
5. **Satellietkommunikasie**: Amateurradio-operateurs kan kommunikeer via lae-Aarde-bane satelliete (genoem "amateursatelliete" of "AMSAT"), wat dit moontlik maak om oor lang afstande te kommunikeer met klein draagbare radios.
6. **Openbare Diens**: Hams vrywillig dikwels vir openbare diens-kommunikasie deur bystand te verleen by geleenthede soos marathons of parades, logistiese kommunikasie vir organiseerders te verskaf, of plaaslike noodbestuur te ondersteun.
7. **Digitale Modusse**: Met die vooruitgang van tegnologie het amateurradio digitale kommunikasie-metodes aangeneem soos FT8, PSK31, en DMR. Hierdie modusse maak doeltreffende, langafstandkommunikasie moontlik, selfs onder swak toestande, en gebruik dikwels rekenaars om seine te stuur en te ontvang.
8. **Radiosterrekunde**: Sommige hams raak betrokke by radiosterrekunde deur ontvangers te bou om seine uit die ruimte op te tel, wat insig bied in hemelse verskynsels.

Besonderhede en Vereistes:

- **Lisensiëring**: Om op amateurradio-frekwensies te werk, moet individue 'n lisensie van hul land se regulatoriese liggaam kry (bv. FCC in die VSA, SARL in Suid-Afrika). Lisensiëring verseker dat operateurs die tegniese aspekte van radio en die reëls wat die gebruik daarvan reguleer, verstaan.
- **Frekwensie-bande**: Amateurradio word spesifieke frekwensiebande toegeken, van lae-frekwensie (LF) bande tot baie hoë-frekwensie (VHF) en ultra-hoë-frekwensie (UHF) bande. Elke band het unieke eienskappe wat seinpropagasie, afstand en atmosferiese interaksie beïnvloed.
- **Toerusting**: Operateurs gebruik verskeie toerusting, van eenvoudige draagbare radios (HT's) tot komplekse hoëkrag-senders met eksterne antennas. Baie hams bou hul toerusting, terwyl ander kommersiële toerusting koop.

- **Gemeenskap**: Amateurradio het 'n sterk gemeenskapsgevoel. Plaaslike klubs, soos die Boland Amateurradioklub, bied ondersteuning, opleiding, en sosiale geleenthede vir hams. Operateurs kan ook met mekaar kommunikeer deur wêreldwye organisasies soos die Internasionale Amateur Radio Unie (IARU).

In wese kombineer amateurradio kommunikasie, tegniese eksperimentering en gemeenskapsdiens, wat dit 'n ryk en diverse stokperdjie maak met talle aspekte vir mense van alle tegniese vermoëns en belange.

Die Rol van Amateurradio ná Orkaan Helen:

’n Omvattende Ontleding en Aktuele Ontwikkelings

Orkaan Helen het op **14 September 2024** oor die suidooste van die Verenigde State gespoel, en wydverspreide verwoesting was die nasleep van hierdie kragtige Kategori 4-storm. Helen se winde van tot **140 mph (225 km/h)** en die hewige reënval het duisende mense se lewens ontwrig, huise vernietig, kragonderbrekings veroorsaak en groot gedeeltes van die kommunikasie-infrastruktuur platgevee. Die verwoesting was wydverspreid, wat selfs vir goed voorbereide nooddienste uitdagings ingehou het. In hierdie tyd van krisis het die rol van amateurradio-operateurs weer eens op die voorgrond getree, as ’n onskatbare noodsaaklike hulpmiddel om kritieke kommunikasiedienste te bied en as ’n koördineringskanaal vir reddingsoperasies te dien. Hierdie opstel ondersoek die gebruik van amateurradio tydens reddingsituasies ná Orkaan Helen en kyk ook na hoe dit tot vandag toe steeds ’n impak maak in die rampgebiede.

Die Ineenstorting van Konvensionele Kommunikasie

Toe Orkaan Helen op **14 September 2024** aanland, het sy dodelike winde en oorstromings groot dele van die kommunikasie-infrastruktuur vernietig. Selfoontorings is platgevee, telefoonlyne het neergeval en kragstasies is afgesny, wat groot streke sonder krag gelaat het. Hierdie vernietiging het nie net huise nie, maar ook kritieke dienste, soos hospitale en nooddienste, lamgelê, veral in landelike gebiede waar

rugsteunopsies dikwels beperk is. Mense was van mekaar afgesny en in isolasie gelaat sonder enige manier om hulp te vra of om belangrike inligting oor die storm en sy gevaar te ontvang.

In sulke oomblikke word die waarde van die amateurradio-gemeenskap duidelik. Anders as tradisionele kommunikasienetwerke wat staatmaak op groot, sentrale infrastruktuur, kan amateurradio in 'n gedesentraliseerde manier funksioneer, wat beteken dat dit onafhanklik van groot netwerke werk. Baie operateurs het vroegtydig voorberei en batteryaangedrewe transceivers gereed gehou om te aktiveer sodra die orkaan getref het. Soos met vorige rampe, het hulle vinnig opgetree om in die gaping te tree wat deur die ineenstorting van konvensionele kommunikasie gelaat is. Gedurende die storm, wat oor die tydperk van **14 tot 18 September 2024** sy verwoesting voortgesit het, het amateurradio-operateurs begin help om mense in nood met nooddienste te verbind en reddingspanne gekoördineer waar ander kommunikasiekanale gefaal het.

Die Rol van Amateurradio in Reddingsoperasies

Amateurradio-operateurs het oor 'n wye verskeidenheid van frekwensies gewerk, van VHF en UHF tot HF, wat hulle in staat gestel het om oor groot afstande te kommunikeer. In gebiede waar selfoonseine en internet nie meer beskikbaar was nie, het amateurs die enigste lewenslyn vir baie mense geword. Baie van hierdie operateurs was reeds georganiseer in noodgevalle-netwerke, bekend as **ARES (Amateur Radio Emergency Service)** en **RACES (Radio Amateur Civil Emergency Service)**, wat spesifiek ingestel is om in sulke krisisse te help.

In die onmiddellike nasleep van die storm het hierdie operateurs belangrike inligting deurgegee, soos die ligging van mense wat hulp nodig gehad het en die status van infrastruktuur soos paaie en brûe wat deur reddingspanne gebruik moes word. Hierdie inligting was noodsaaklik vir die koördinering van hulp en het daartoe gelei dat talle lewens gered is.

Voortgesette Uitdagings en Aktuele Ontwikkelings

Selfs ná die storm se wind en reën opgehou het, het die herstel van die verwoeste gebiede stadig gevorder. In sommige van die mees afgesonderde en verwoeste dele van die suidooste van die Verenigde State, veral in landelike gemeenskappe, was amateurradio steeds vir weke ná die storm van kardinale belang vir die koördinering van hulpbronne en noodsaaklike dienste.

Teen **Oktober 2024** is daar steeds gebiede wat sukkel om hul krag- en kommunikasiedienste ten volle te herstel. Nuwe noodgevallefrekwensies is in werking gestel om voortdurende koördinering tussen

humanitêre organisasies en nooddienste moontlik te maak. Die **ARRL (American Radio Relay League)** het in 'n onlangse verklaring genoem dat die bydraes van die amateurradio-gemeenskap nie net beperk was tot die onmiddellike tydperk ná die storm nie, maar ook in die herstelproses, aangesien dit steeds dien as ’n brug vir kommunikasiereëlings in afgesnyde gemeenskappe.

Volgens berigte van **4 Oktober 2024** bly sommige van die amateurradio-netwerke aktief in die rampgebiede, wat nou fokus op die oordrag van logistieke inligting wat met die verspreiding van humanitêre hulp en mediese voorraad verband hou. Baie operateurs wat tydens die ramp gehelp het, het ook bygedra tot die ontwikkeling van toekomstige planne vir noodkommunikasie, om beter voorbereid te wees vir soortgelyke rampe in die toekoms.

Slotgedagtes

Orkaan Helen se verwoesting het weer eens die onvervangbare rol van amateurradio in rampsituasies beklemtoon. Terwyl moderne kommunikasiestelsels hoogs gesofistikeerd en effektief is, kan hulle kwesbaar wees vir natuurlike rampe soos orkaan Helen. In sulke oomblikke tree amateurradio as ’n noodsaaklike brug in om gemeenskappe te verbind en lewens te red.

Amateurradio-operateurs het tydens en ná Orkaan Helen 'n sleutelrol gespeel in die herstelproses en het weereens bewys dat hulle, met hul passie vir tegnologie en hul toewyding om te help, kan bydra tot die oorbrugging van die leemtes wat ander kommunikasiesisteme soms laat. Met die huidige herstel wat aan die gang is en verdere pogings om die infrastruktuur te herstel, sal die lessen wat uit hierdie ramp geleer is, waarskynlik gebruik word om toekomstige rampe beter die hoof te bied en die rol van amateurradio verder te versterk.

'N Netjiese truuk met 'n EFHW-draadantenne van 20 m

John VA3KOT

Een van my gunsteling YouTube-kanale kom van die Britse Waters- en Stanton-ham-radio winkel. Die aanbieder is Peter Waters G3OJV wat die inhoud lewer, is 'n verfrissend beskeie, saggeaarde manier. Alhoewel dit 'n kommersiële kanaal is, stel Peter onderwerpe bekend wat van algemene belang is vir hamme met slegs beskeie maatskappy promosionele inhoud.

'n Stormloop na die shack

Een van sy onlangse video's was getiteld "The Forgotten FB5 Ham Radio Antenna". Jy kan dit hier kyk. Nadat ek dit self gekyk het, het ek 'n sterk drang gevoel om na my shack te jaag om 'n idee te probeer wat geïnspireer is deur Peter se video.

Die FB5 is 'n multibandantenne wat in die 1960's deur 'n ander Engelse ham uitgevind is. Die naam van die antenna is afgelei van die gebruik van ferrietkrale wat op hoë stroompunte langs 'n draad geplaas is om die resonante frekwensie daarvan te verander. Deur verskeie ferriete op strategiese punte op 'n wire te plaas, kan die antenna resonant gemaak word op 5 nie-WARC-bande (80, 40, 20, 15, 10m). Die FB5 is uitgevind voordat die WARC -bands aan radio -amateurs beskikbaar gestel is, sodat dit aanpasbaar kan wees vir elke band wat vandag toeganklik is vir hamme.

Hmm, wonder ek?

Ek geniet dit baie om met antennas te eksperimenteer, maar ek beplan nie om self 'n FB5 te bou nie. Die idee wat my stormloop na die hut veroorsaak het, was die konsep om ferrietkrale te gebruik om die resonante frekwensie van 'n draadantenne te verander. Kan hierdie idee aangepas word vir gebruik met 'n antenna wat reeds deel uitmaak van my kit?

'n Vinnige soektog in die rommel-laai het geen geskikte ferrietkrale aan die lig gebring wat ek kon gebruik nie, maar daar was verskeie snap-on ferriete van die tipe wat gewoonlik vir EMI-onderdrukking gebruik word. Ek het 'n paar hiervan gegryp om te sien of hulle die nodige werk sou doen.

In Peter se video haal hy die uitvinder se voorstel aan dat die FB5 se doeltreffendheid verbeter kan word deur verskeie ferrietkrale by elke plasingspunt te gebruik. Met dit in gedagte, het ek 8 draaddraaie om elk van twee snap-on ferriete aan die een kant van 'n draad gewikkel en dan die lengte van die draad tot ongeveer 17 voet (5.2 meter) aangepas. Sonder die ferriete sou 17 voet (5.2 meter) draad naby resonansie op 20m (met 'n teenvoeter) wees, so waar sou die draad resoneer met die ferriete?

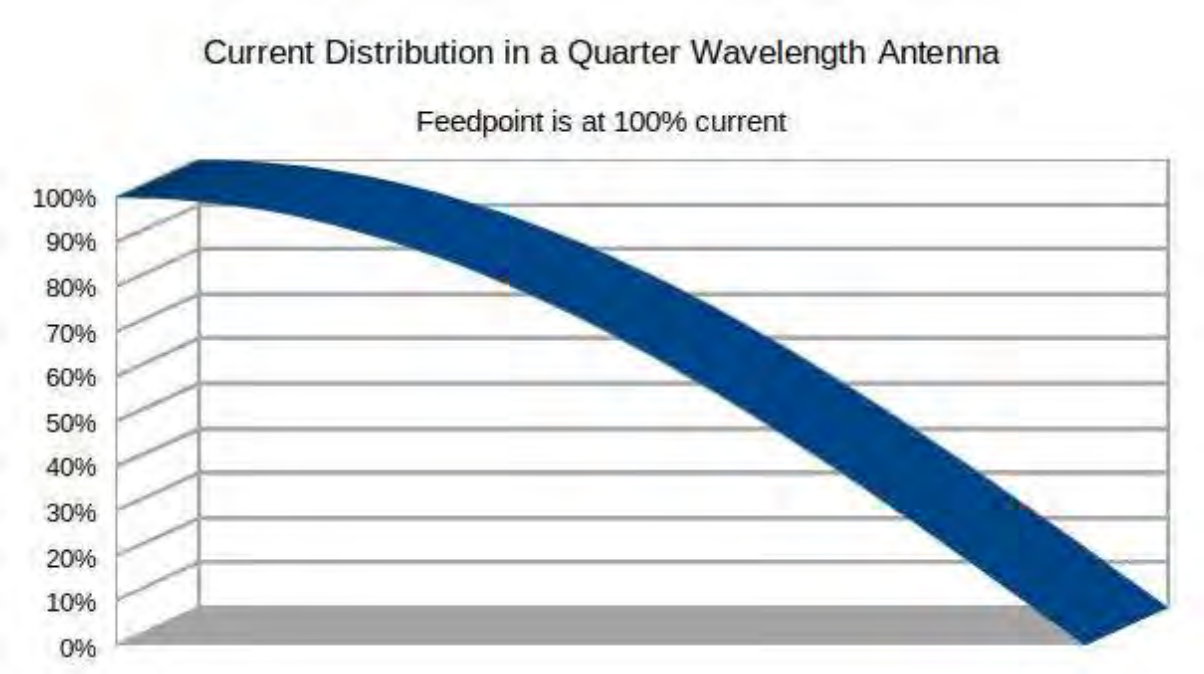
My Rig Expert AA55 Zoom antenna ontleder het my die antwoord op daardie vraag gegee. Ek het die Rig Expert opdrag gegee om die SWR van 3-30 MHz te beplan en daar op die helder kleurskerm was die antwoord. My draad van 17 voet (5.2 meter) was nie resonant oor die hele amateur HF-spektrum nie!

Sjoe!

Natuurlik stel 16 draaddraaie op snap-on ferriete induktansie in wat nie teenwoordig sou wees as verskeie individuele ferrietkrale gebruik is nie.

Ek het geleidelik die aantal draaie verminder en die impak by elke stap met die antenna-ontleder gemonitor. Eers toe die eksperiment gevorder het tot 'n punt waarop slegs 'n enkele draaddraai om net een ferriet bereik is, het die hoop ontstaan om resonansie binne 'n hamband te vind. Die teikenband was 40m.

'n Draad van 17 voet is ongeveer 'n kwart golflengte lank op die 20m-band. Die stroomverspreiding op 'n kwart golflengte antenna lei tot maksimum stroom by die voerpunt. Dus, om die ferriete daar te plaas, sal die resonansie daarvan die maksimum invloed hê.



Soos ons voorheen op hierdie blog bespreek het, daal die stroom op 'n kwart golflengte draad sinusvormig vanaf die voerpunt na die verste punt. Aangesien die eksperiment tot dusver resonansie onder die 40m-band opgelewer het, is besluit om die ferriet van die voerpunt af te probeer wegskuif. Dit was gedeeltelik suksesvol, maar dit was moeilik om die presiese punt langs die draad te vind waar resonansie binne die 40m-band (7-7,3 MHz in Noord-Amerika) sou val.

Miskien was die ferriet wat ek gebruik het te effektief, het ek gedink. Nog 'n soektog in die junque-laai het 'n klein tipe 6-mengsel van poeieryster-toroid aan die lig gebring. Ek het 'n paar draaie deur hierdie toroid gewikkel, maar dit het baie minder effek gehad, so dit was terug na die ferriet. My snap-on ferrites is 'n onbekende mengsel, maar is vermoedelik tipe 31 of tipe 43.

Met beperkte keuse in ferrietmateriaal om mee te werk, het ek gedink dat dieselfde eksperiment miskien 'n beter kans op sukses met 'n langer draad sou hê. Klein veranderinge in ferrietplasing langs 'n halwe golflengte draad kan fyner stemverstelling moontlik maak as wat die geval is met 'n kwart golflengte draad. My raaiskoot was reg op die geld!

Een van die mees gebruikte antennas in my hamsak is 'n End-Fed Half Wave met skakels vir 20m, 30m en 40m. Die eerste gedeelte, resonant op 20m, is ongeveer 31ft (9.45meters) lank. Ek het die draad van die 49:1-impedansie-bypassende transformator geskei en voortgegaan om die ferriet-truuk uit te probeer in 'n soeke na 40m.

'n Draad van 31 voet (9,45 meter) is amper die regte lengte vir 'n kwart golflengte antenna op 40m. Dit sou 'n eenvoudige saak wees om 'n paar voet draad by te voeg en Robert sou jou pa se broer wees. Alternatiewelik sal byna enige ontvanger 'n draad van 31 voet (9,45 meter) op 40 m resoneer. Maar die doel van die eksperiment was om te ondersoek of 'n klein ferriet eerder die werk sou doen.

Yabba-dabba-doo!

Dit behoort 'n maklike taak vir die nederige klein snap-on te wees; 31 voet draad is al byna die regte lengte. Om mee te begin is die ferriet by die voerpunt geplaas. Gevolgtrekking: te veel elektromagie. Volgende stap: beweeg die ferriet op die draad, weg van die maksimum stroompunt. Resultaat: beter! Verder op die draad? Nog beter. Uiteindelik het 'n punt ongeveer 2 voet onder die middelpunt van die draad (ongeveer 13,5 voet (4,115 meter) bo die voerpunt) 'n lekker lae SWR aan die CW-punt van die 40-band opgelewer.

Is dit 'n praktiese antenna?

Ek het probeer om die hoeveelheid draad wat ek na die veld dra vir draagbare bewerkings te verminder, so in daardie sin ja, as dit moontlik is om dieselfde draad vir meer as een antenna te gebruik, dan is dit 'n praktiese idee.

Sal ek dit ooit gebruik?

Waarskynlik nie, maar die punt van die oefening was om te eksperimenteer. Is dit nie die beste aspek van ons stokperdjie nie? Ons kry lisensie om RF oor te dra om twee hoofredes: staatsdiens en om menslike kennis van elektromagnetrickery uit te brei. As ons net ons radio's as 'n sosiale medium sou gebruik, kan ons die risiko loop om ons aanspraak op die gebruik van die beperkte radiospektrum te verswak. Wel, dit is my 2 sent werd.

Help om *HamRadioOutsidetheBox te ondersteun*

Geen "tip-jar", "koop vir my 'n koffie", Patreon of Amazon skakels hier nie. Ek geniet my stokperdjie en ek geniet dit om daaroor te skryf. As jy hierdie blog wil ondersteun**, volg/*teken asseblief in*** deur die skakel onderaan my tuisblad te gebruik, of ***hou van***, ***lewer kommentaar*** (skakels onderaan elke plasing), ***plaas*** of

deel skakels na my plasings op sosiale media. As jy my direk wil e-pos, sal jy my e-posadres op my QRZ.com-bladsy vind . Dankie!

Die volgende kopieregkennisgewing is van toepassing op alle inhoud op hierdie blog.

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'n Amateur se Gids tot die "StationMaster" Logboek Program

ZS1ML Marius Lubbe, September 2024

Inleiding

In die wêreld van amateur radio is dit belangrik om jou kontakte (QSOs) op rekord te hou. Of jy nou met 'n vriend oor die radio gesels of met iemand aan die ander kant van die wêreld kontak maak, 'n goeie logstelsel help jou om georganiseerd te bly. Dit is waar **StationMaster** inkom—'n kragtige hulpmiddel wat meer is as net 'n logboek. Dit help jou om jou hele radiostasie te bestuur, van kontakte aanteken tot deelname aan kompetisies en selfs afstandbeheer van jou stasie.

In hierdie gids gaan ons die funksies van StationMaster op 'n eenvoudige, verstaanbare manier verduidelik. Ons gaan bespreek hoe dit werk en gee voorbeelde van hoe dit jou met jou radio-operasies kan help. Hier is wat ons gaan dek:

1. Die Basiese Funksies: Kontakte Log, Rekordhou en Vind van Kontakte
2. Kompetisies en Toekenning-jaagtogte met StationMaster
3. Digitale Modusse en Sagteware Integrasie
4. Afstandsbeheer: Bestuur Jou Stasie van Enige Plek
5. Opsomming

Hoofstuk 1: Die Basiese Funksies: Kontakte Log, Rekordhou en Vind van Kontakte

Die hoofdoel van StationMaster is om jou QSOs aan te teken. Maar dit doen baie meer as om net jou kontakte op rekord te hou—dit help jou om gedetailleerde inligting oor elke kontak te stoor, wat dit maklik maak om later terug te kyk na jou aktiwiteite.

Maklike Kontak-Logging

Wanneer jy 'n kontak maak, wil jy basiese besonderhede aanteken soos:

- **Roep-letter** van die stasie waarmee jy gepraat het
- **Datum en tyd** van die QSO
- **Frekwensie** of band wat jy gebruik het
- **Seinverslae** (hoe goed julle mekaar kon hoor)

- **Modus** (SSB, CW, FT8, ens.)
- **Ligging** (soos land of rooster-vierkant)

Met StationMaster kan baie van hierdie besonderhede outomaties aangeteken word as jou transceiver via CAT-beheer gekoppel is (dit beteken dat die sagteware met jou radio praat om dinge soos frekwensie en modus outomaties te kry). Dit maak die logging-proses vinniger en help om foute te voorkom.

Voorbeeld: Hou Telling van QSOs oor Tyd

Kom ons sê jy het 'n QSO gemaak met 'n stasie in Frankryk op die 20-meter band. Met StationMaster kan jy vinnig al die besonderhede aanteken—tyd, frekwensie, seinverslae en meer—en as jy CAT gebruik, gebeur dit outomaties. Namate jy meer kontakte maak, laat StationMaster jou maklik sien hoeveel lande jy al gewerk het, op watter bande jy aktief was, en dit genereer selfs interessante verslae om jou vordering te wys.

Soek en Organiseer Jou Logs

Wat as jy later 'n spesifieke QSO wil vind? StationMaster het kragtige soek- en filterfunksies, so jy kan ou QSOs opsoek volgens roepletter, datum, band of ander besonderhede. Jy kan selfs persoonlike notas byvoeg oor die kontak, soos watter toerusting jy gebruik het of spesiale omstandighede.

Byvoorbeeld, as jy wil kyk of jy 'n stasie al op 'n spesifieke band gewerk het, maak StationMaster dit maklik om daardie inligting binne sekondes te vind.

Hoofstuk 2: Kompetisies en Toekenning-jaagtogte met StationMaster

Vir diegene wat hou van kompetisies of die jaag van toekennings soos DXCC of Worked All States (WAS), bied StationMaster spesiale funksies wat die proses glad maak en jou vordering maklik laat volg.

Logging Tydens Kompetisies

In kompetisies tel elke sekonde, en jy het 'n log nodig wat byhou. StationMaster het ingeboude sjablone vir baie populêre kompetisies, soos die **CQ World Wide DX Contest** of **ARRL Field Day**. Hierdie sjablone stel die log-velde outomaties aan om by die reëls van die kompetisie te pas, wat dinge baie makliker maak tydens die hitte van die oomblik.

Regstreekse Punting

Een van die lekkerste dinge van StationMaster is dat dit jou kompetisiepunte in reële tyd kan bereken. Jy sal onmiddellik weet hoe goed jy vaar, wat jou motiveer en help om jou strategie aan te pas.

Voorbeeld: Jaag die DXCC Toekenning

As jy mik vir die DX Century Club (DXCC) toekenning, wat vereis dat jy bevestigde kontakte met 100 lande maak, kan StationMaster jou help om te volg watter lande jy al gewerk het en watter jy nog moet kry. Dit koppel selfs aan **Logbook of the World (LoTW)** om jou bevestigde QSOs outomaties by te werk, wat jou baie handwerk spaar.

Hoofstuk 3: Digitale Modusse en Sagteware Integrasie

Digitale modusse soos FT8, PSK31 en RTTY het geweldig gewild geraak, en StationMaster is ontwerp om maklik met hulle saam te werk. Jy kan StationMaster met gewilde digitale modus sagteware koppel, en jou QSOs sal outomaties aangeteken word sonder enige ekstra moeite.

Maklike Integrasie met WSJT-X en FLDigi

StationMaster werk uitstekend saam met digitale modus programme soos **WSJT-X** (gebruik vir FT8 en JT65) en **FLDigi** (gebruik vir PSK31 en RTTY). Terwyl jy digitale kontakte maak, teken StationMaster hulle outomaties aan en trek al die belangrike besonderhede in, soos frekwensie en seinverslae.

Dit beteken jy kan fokus op kontakte maak sonder om bekommerd te wees oor handmatige logging.

Voorbeeld: Werk met FT8

Kom ons sê jy maak 'n klomp FT8 kontakte op 'n besige dag. Met StationMaster wat gekoppel is aan **WSJT-X**, sal al jou QSOs onmiddellik aangeteken word, sonder dat jy enige iets hoef te doen. Dit hou selfs rekord van nuwe rooster-vierkante of lande wat jy gewerk het—ideaal vir iemand wat digitale DX jaag.

Hoofstuk 4: Afstandsbeheer: Bestuur Jou Stasie van Enige Plek

Namate meer operateurs na afstandbeheer van hulle stasies oorgaan, skyn StationMaster se afstandbeheerfunksies. Dit laat jou toe om QSOs aan te teken en jou stasie van enige plek met 'n internetverbinding te bestuur.

Afstands-Logging en Beheer

Jy kan StationMaster gebruik om met jou transceiver op afstand te verbind en kontakte aan te teken net soos jy by die huis sou doen. Of jy nou jou stasie van 'n ander kamer in jou huis of van die ander kant van die wêreld bestuur, StationMaster hou alles gesinkroniseer.

Voorbeeld: 'n Afstandsstasie Bestuur

Stel jou voor jy reis, maar jy wil steeds jou tuisstasie gebruik. Met StationMaster kan jy op afstand by jou stasie aanmeld, jou radio beheer, en kontakte in reële tyd aan teken. Jy kan selfs jou antennas of versterkers bestuur as hulle gekoppel is. Dit is amper soos om in jou shack te wees, maak nie saak waar jy is nie!

Opsomming

StationMaster is meer as net 'n logboekprogram—dit is 'n volledige bestuurshulpmiddel wat die lewe vir amateur radio operateurs baie makliker maak. Of jy nou QSOs aanteken, deelneem aan kompetisies, toekennings jaag, of 'n afstandsstasie bestuur, StationMaster het die funksies wat jy nodig het om georganiseerd en gefokus te bly op die lekker deel van die stokperdjie: kontakte maak.

Van die basiese logging-funksies tot gevorderde kompetisie-sjablone, regstreekse punte en digitale modus-integrasie, help StationMaster om die moeite uit jou stasiebestuur te neem. Dit is 'n veelsydige en gebruikersvriendelike program wat saam met jou kan groei soos jou amateur radio belangstellings ontwikkel.

Of jy nou pas begin of al jare op die lug is, StationMaster is 'n uitstekende metgesel om jou QSOs by te hou en jou radiobedrywighede maklik en doeltreffend te bestuur.

Implementing the Hermes-Lite 2 in Your Ham Shack:

A Comprehensive Guide

Author: ZS1ML Marius Lubbe - Cape Town, South Africa.

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Introduction

Amateur radio, often referred to as ham radio, has evolved significantly with the advent of software-defined radio (SDR) technology. SDRs offer flexibility, enhanced performance, and the ability to experiment with cutting-edge features that traditional radios cannot match. Among the various SDR options available to enthusiasts, the **Hermes-Lite 2** stands out as a cost-effective, open-source transceiver that brings high-end capabilities within reach of hobbyists and professionals alike.

In this comprehensive guide, we'll explore what the Hermes-Lite 2 is and walk you through the steps to implement it in your ham shack. We'll also cover the download and setup process of the latest **Thetis** software, which is essential for operating the Hermes-Lite 2. Let's dive in and get you on the air with this exciting SDR!

Understanding the Hermes-Lite 2

What is the Hermes-Lite 2?

The Hermes-Lite 2 is a low-cost, open-source, direct-sampling SDR transceiver designed primarily for amateur radio use. Inspired by the original Hermes SDR project, the Hermes-Lite 2 aims to make high-performance SDR accessible by reducing costs without significantly compromising functionality. It operates on the HF bands (0 to 38 MHz) and offers up to 5 watts of output power, making it suitable for a wide range of amateur radio applications.

Discussion:

Imagine having a powerful SDR transceiver that's both affordable and versatile. That's exactly what the Hermes-Lite 2 brings to the table. It's like having a Swiss Army knife for your ham shack! Whether you're a seasoned operator or just starting out, this little device opens up a world of possibilities. Plus, being

open-source means you can peek under the hood and even tinker with the code if you're feeling adventurous.

Key Features

- **Direct Sampling Architecture**: Utilizes direct sampling of the RF spectrum, allowing for high-fidelity signal reception and transmission.
- **Open-Source Hardware and Software**: Both the design schematics and firmware are openly available, encouraging community-driven development and customization.
- **Ethernet Connectivity**: Connects via standard Ethernet, enabling high-speed data transfer and remote operation capabilities.
- **Compact Design**: A small form factor makes it ideal for portable operations or installations with limited space.
- **Cost-Effective**: Designed to be affordable without sacrificing essential features, making advanced SDR technology accessible to more users.

Discussion:

One of the coolest things about the Hermes-Lite 2 is its direct sampling architecture. This means it directly converts radio signals from analog to digital, resulting in crystal-clear audio and impressive performance. And let's not forget its Ethernet connectivity! Gone are the days of dealing with finicky USB drivers—you can simply plug it into your network and you're good to go. Its compact size also means it won't take over your entire desk, leaving you more room for other gadgets or that cup of coffee during late-night sessions.

Implementing the Hermes-Lite 2 in Your Ham Shack

Implementing the Hermes-Lite 2 involves several steps, including hardware setup, software installation, and configuration. Below is a step-by-step guide to assist you through the process.

Discussion:

Setting up new equipment can feel a bit daunting, but don't worry—we're in this together! I'll guide you through each step, and before you know it, you'll be exploring the airwaves with your new Hermes-Lite 2. So, let's roll up our sleeves and get started!

1. Acquiring the Hermes-Lite 2

Purchase Options:

- **Group Buys**: The Hermes-Lite 2 is often available through group buys organized by the community. Check the official Hermes-Lite Groups.io Community or related forums for information on upcoming group purchases.
- **Assembled Units**: Some vendors offer fully assembled and tested units. Ensure you purchase from reputable sources to guarantee quality and support.

Discussion:

First things first—we need to get our hands on a Hermes-Lite 2. Since it's a community-driven project, it's often available through group buys. Think of it as a bunch of ham enthusiasts coming together to

make this amazing tech accessible. If you're eager to start right away, some vendors offer assembled units. Just make sure to check reviews or ask around in the community to ensure you're buying from a trustworthy source.

2. Hardware Setup

Unboxing and Inspection

- **Components Check**: Ensure all components are included, such as the Hermes-Lite 2 board, power supply (if provided), Ethernet cable, and any additional accessories.
- **Physical Inspection**: Check for any visible damage that may have occurred during shipping.

Discussion:

Unboxing new gear is always exciting! Take a moment to savor it. As you unpack, make sure all the components are there. It's like opening a present—you want to make sure you have all the pieces before you start playing. Give everything a quick look-over to ensure there aren't any shipping mishaps.

Power Supply Connection

- **Voltage Requirements**: The Hermes-Lite 2 typically requires a 13.8V DC power supply capable of supplying at least 2A.
- **Connecting the Power**: Use a reliable power supply with clean output to prevent noise interference.

Discussion:

Powering up your new transceiver is a crucial step. Think of the power supply as the heartbeat of your setup. Using a clean, stable power source not only ensures optimal performance but also extends the life of your equipment. If you already have a power supply for other gear, make sure it meets the voltage and current requirements.

Antenna Connection

- **Antenna Types**: Connect an HF antenna appropriate for the frequencies you intend to use.
- **SMA Connector**: The Hermes-Lite 2 uses an SMA connector for the antenna. Use an SMA-compatible cable or adapter if necessary.
- **Antenna Tuning**: Ensure your antenna is properly tuned to avoid high SWR, which can damage the transceiver.

Discussion:

Your antenna is your gateway to the world, so let's get it right! The Hermes-Lite 2 uses an SMA connector, which might be different from what you're used to. No worries—adapters are easy to find. Make sure your antenna is tuned; a well-tuned antenna is like having a clear conversation without background noise.

Ethernet Connection

- **Direct Connection**: Connect the Hermes-Lite 2 directly to your computer's Ethernet port using a standard Ethernet cable.
- **Network Switch**: Alternatively, connect through a network switch or router if you plan to operate the transceiver over your local network.
- **IP Address Configuration**: The Hermes-Lite 2 typically uses DHCP to obtain an IP address. Ensure your network supports DHCP or configure a static IP address if necessary.

Discussion:

Connecting via Ethernet is one of the joys of modern SDRs. It's straightforward and reliable. If your network uses DHCP (which most home networks do), the Hermes-Lite 2 will grab an IP address automatically. It's almost like plug-and-play! If you run into any hiccups, a quick router reset often does the trick.

Grounding

- **Safety Ground**: Connect the Hermes-Lite 2 to a proper earth ground to protect against static discharge and electrical interference.
- **RF Grounding**: Proper grounding can also improve the transceiver's performance by reducing noise.

Discussion:

Grounding might not be the most glamorous part of the setup, but it's essential. Think of it as the unsung hero that keeps everything running smoothly. Proper grounding safeguards your equipment and can significantly reduce unwanted noise, giving you clearer signals.

3. Software Setup: Downloading and Installing Thetis

Thetis is an advanced SDR software application that provides control over the Hermes-Lite 2's functions and features.

Discussion:

Now that the hardware is set up, it's time to bring it to life with software! Thetis is like the command center for your Hermes-Lite 2. Don't worry if you're not a software guru; the installation process is user-friendly, and I'll walk you through it step by step.

Downloading Thetis

1. **Visit the Official Repository**:
    - Access the latest version of Thetis from the Apache Labs GitHub repository.
    - Alternatively, visit the OpenHPSDR Downloads page for official releases.
2. **Select the Appropriate Version**:
    - Choose the version compatible with your operating system (Windows 7/8/10/11).
    - Ensure you download the latest stable release for optimal performance.

Discussion:

Downloading Thetis is straightforward. Head over to the official site and grab the latest version. It's always a good idea to use the most recent stable release to benefit from the latest features and fixes. Make sure you choose the version that matches your operating system—no one likes compatibility surprises!

Installing Thetis

1. **Run the Installer**:
    - Locate the downloaded installer file (e.g., ThetisSetup_x.xx.msi) and double-click to begin installation.
2. **Follow Installation Prompts**:
    - Accept the license agreement and follow the on-screen instructions.
    - Choose the default installation directory or specify a custom path.
3. **Install Additional Components**:
    - The installer may prompt you to install additional components such as Microsoft Visual C++ Redistributables. Accept these to ensure Thetis functions correctly.

Discussion:

Installation is a breeze. Just follow the prompts, and you'll be up and running in no time. If the installer asks to add some extra components, go ahead—these are necessary for Thetis to function properly. Think of them as the spices in a recipe; they enhance the overall experience.

Configuring Thetis

1. **Launch Thetis**:
    - After installation, launch Thetis from the desktop shortcut or start menu.
2. **Initial Setup Wizard**:
    - On first launch, Thetis may present a configuration wizard.
    - Select **Hermes Lite** as your radio model.
3. **Network Configuration**:

- Navigate to **Setup** > **Hardware Config**.
- Under **Device**, ensure that the **Hermes Lite** is selected.
- Click **Discover** to search for your Hermes-Lite 2 on the network.
- If the device is not found, manually enter its IP address.

4. **Audio Settings**:
   - Go to **Setup** > **Audio**.
   - Select your preferred audio playback and recording devices (e.g., your computer's speakers and microphone).
5. **Calibration**:
   - Perform any necessary calibrations, such as setting the correct frequency offset.
   - Refer to the Hermes-Lite 2 documentation for specific calibration procedures.
6. **Saving Configuration**:
   - After completing the setup, save your configuration to avoid re-entering settings in future sessions.

Discussion:

Configuring Thetis is where the magic happens! The initial setup wizard is your friend here. Selecting the correct radio model and network settings ensures that Thetis communicates effectively with your Hermes-Lite 2. Don't forget to set up your audio devices so you can hear and be heard. Saving your configuration is like bookmarking a favorite page—you'll appreciate it every time you start Thetis.

4. Testing and Operation

Receiving Signals

- **Antenna Check**: Ensure your antenna is connected and properly tuned.
- **Band Selection**: Select the desired frequency band within Thetis.
- **Signal Monitoring**: Use the waterfall display to observe signals and adjust settings like gain and filter bandwidth.

Discussion:

Now comes the exciting part—receiving signals! With your antenna connected and tuned, select a band and watch the waterfall display light up. It's fascinating to see the spectrum come alive with activity. Adjusting settings like gain and filters helps you hone in on the signals you want to hear.

Transmitting Signals

- **License Compliance**: Only transmit if you hold a valid amateur radio license for the operating bands.
- **Power Settings**: Adjust the output power within permissible limits.
- **Microphone Configuration**: Set up your microphone in the audio settings.
- **PTT Control**: Use the software PTT button or configure an external PTT switch.

Discussion:

Ready to make your voice heard? Before you transmit, double-check that you're operating within the legal guidelines. Setting up your microphone and PTT controls ensures smooth communication. Whether you're chatting with a friend across town or reaching out halfway around the world, transmitting is where the fun truly begins.

Digital Modes

- **Third-Party Software**: Install digital mode software like WSJT-X or FLDIGI.
- **Virtual Audio Cables**: Use virtual audio routing software to interface Thetis with digital mode applications.
- **CAT Control**: Configure CAT (Computer Aided Transceiver) control for frequency synchronization.

Discussion:

Exploring digital modes adds another layer of enjoyment to your ham radio experience. Software like WSJT-X opens up modes like FT8 and JT65, allowing for long-distance communication even under challenging conditions. Setting up virtual audio cables might seem tricky, but once configured, it seamlessly integrates Thetis with your digital mode software.

Tips for Successful Implementation

Firmware Updates

- **Staying Current**: Regularly check for firmware updates for the Hermes-Lite 2 to benefit from improvements and new features.
- **Update Procedure**: Follow the manufacturer's instructions carefully when updating firmware to avoid damaging the device.

Discussion:

Keeping your firmware up-to-date ensures you get the most out of your Hermes-Lite 2. It's like updating your smartphone—you gain access to new features and improvements. Just be sure to follow the update instructions closely to avoid any hiccups.

Community Support

- **Forums and Groups**: Join the Hermes-Lite community forums and mailing lists for support and to share experiences.
- **Documentation**: Refer to official documentation and user manuals for detailed technical information.

Discussion:

Don't underestimate the power of community. Other users can be a great resource for tips, troubleshooting, and inspiration. Sharing your experiences not only helps others but can also enhance your own understanding. Plus, it's always nice to connect with fellow enthusiasts who share your passion.

Experimentation

- **Software Exploration**: Try different SDR software compatible with the Hermes-Lite 2 to find what best suits your preferences.
- **Customization**: Take advantage of the open-source nature to customize and enhance the hardware and software.

Discussion:

One of the joys of SDR is the ability to experiment. Feel free to explore different software options or even dabble in coding if that's your thing. The open-source nature of the Hermes-Lite 2 means you're not limited to one way of doing things. It's your setup—make it uniquely yours!

Regulatory Compliance

- **Operating Regulations**: Adhere strictly to the amateur radio regulations in your country, including frequency allocations and power limits.
- **Etiquette**: Practice good operating etiquette to maintain a positive experience for all amateur radio users.

Discussion:

Being a responsible operator is key to enjoying ham radio. Following regulations ensures that everyone can share the airwaves harmoniously. Plus, good etiquette like identifying your station and respecting others' conversations goes a long way in building a positive community.

Conclusion

The Hermes-Lite 2 presents an exciting opportunity for amateur radio enthusiasts to delve into the world of software-defined radio without the prohibitive costs associated with high-end commercial equipment. By following the steps outlined in this guide, you can successfully implement the Hermes-Lite 2 in your ham shack, enhancing your capabilities and enjoying the rich features offered by SDR technology.

Discussion:

Congratulations on setting up your Hermes-Lite 2! You've taken a significant step into the modern world of amateur radio. Whether you're interested in casual conversations, contesting, or digital modes, your new setup is ready to deliver. Remember, the journey doesn't end here—there's always more to learn and explore. Happy transmitting!

Whether you're interested in exploring new communication modes, experimenting with digital signals, or simply enjoying high-quality radio operation, the Hermes-Lite 2 coupled with Thetis software provides a robust platform for your amateur radio pursuits. Embrace the flexibility and innovation that SDR brings to ham radio, and become part of a vibrant community pushing the boundaries of wireless communication.

References

- **Hermes-Lite Official Website**: hermeslite.com

- **OpenHPSDR Project**: openhpsdr.org
- **Thetis Software Repository**: GitHub - OpenHPSDR-Thetis
- **Hermes-Lite Groups.io Community**: groups.io/g/Hermes-Lite
- **Amateur Radio Licensing Information**: Check your country's communications authority (e.g., FCC in the USA, Ofcom in the UK)

By immersing yourself in the capabilities of the Hermes-Lite 2 and Thetis software, you not only upgrade your ham shack but also contribute to the evolving landscape of amateur radio technology. Happy transmitting!

Discussion:

Thanks for sticking with me through this guide! I hope you found it helpful and maybe even a bit inspiring. The world of ham radio is vast and full of opportunities for exploration and learning. Don't hesitate to reach out to the community if you have questions or just want to share your experiences. Here's to many enjoyable hours on the air—73!

Guide to Long Path and Short Path in Ham Radio

Introduction

Ham radio is a fascinating hobby that lets us connect with people all around the globe. But to make the most of it, especially for long-distance communication, we need to understand some key concepts like "long path" and "short path" propagation. These terms describe the routes that radio waves take when traveling between two points on Earth. Whether you're trying to chat with someone in Australasia from South Africa or the United States, knowing about these paths can make a big difference in your signal quality.

The Basics of Radio Wave Propagation

1. Radio Waves and the Ionosphere

Radio waves are a type of electromagnetic wave that can travel through space at the speed of light. However, when they reach Earth's atmosphere, they interact with a special layer called the ionosphere. The ionosphere is a part of the upper atmosphere that's charged by solar radiation. This layer can bounce radio waves back to Earth, allowing us to communicate over long distances.

2. The Great Circle Path

The shortest distance between two points on a sphere (like Earth) is along a curve called the Great Circle Path. In ham radio, the Great Circle Path is what we usually refer to as the "short path." The "long path" is the longer, opposite route that circles around the other way.

What Are Long Path and Short Path?

1. Short Path

The short path is the direct route between two places, following the Great Circle Path. For example, the short path between South Africa and Australasia heads southeast across the Indian Ocean.

Key Points About Short Path:

- **Quickest route:** The signal travels faster since it's the shortest distance.
- **Best during the day:** Short path tends to work well in daylight when the ionosphere is stable.
- **Predictable:** Short path signals are usually easier to work with because there are fewer variables affecting them.

2. Long Path

The long path, on the other hand, takes the scenic route. It goes the long way around the globe, often covering a huge distance—up to 40,000 kilometers. For instance, if you're in the U.S. trying to reach Australasia via the long path, your signal might travel westward across the Pacific Ocean, Asia, and Europe before it finally arrives.

Key Points About Long Path:

- **Longer journey:** It's a much longer trip, so the signal takes more time to get there.
- **Better at night:** Long path tends to work better at night, especially on lower frequency bands where the ionosphere is more reflective.
- **Unique conditions:** Long path signals might pass through different atmospheric conditions, making them less predictable but sometimes stronger.

Factors That Affect Long Path and Short Path

1. The Ionosphere

The ionosphere's behavior depends on things like solar activity, time of day, season, and the frequency you're using. When the Sun is active, the ionosphere is more charged up, which usually helps with long-distance communication, especially during the day. At night, the lower layers of the ionosphere weaken, which can make long path communication more effective.

2. Solar Cycles

The Sun goes through an 11-year cycle of varying activity. During the peak of this cycle, known as the solar maximum, the ionosphere is more ionized, which boosts both short and long path communication. During the solar minimum, communication can be more challenging, especially on higher frequencies.

3. Geomagnetic Activity

Geomagnetic disturbances, like those caused by solar flares, can mess with the ionosphere and disrupt radio signals. Sometimes, these disturbances affect both short and long path propagation, but other times, the long path might bypass the worst of it, giving you a clearer signal.

4. Geographical Features

Things like mountains, oceans, and large landmasses can also influence how radio waves travel. Oceans, for instance, generally provide better conditions for signal propagation because there are fewer obstacles and less noise.

How to Use Long Path and Short Path to Your Advantage

1. Choosing the Right Frequency

Picking the right frequency is key. Higher frequencies (above 14 MHz) usually work better for short path during the day, while lower frequencies (below 14 MHz) might be better for long path, especially at night. It's all about experimenting to see what works best at the time.

2. Timing Matters

Understanding how the ionosphere changes throughout the day can help you pick the best times to communicate. Short path is usually more reliable during the day, while long path might come into play after sunset, especially in the late evening or early morning.

3. Watch the Solar and Geomagnetic Activity

Keeping an eye on solar and geomagnetic conditions can give you a heads-up on how the ionosphere might behave. Tools that show solar flux, K-index, and A-index can help you decide when to try long path or short path communication.

4. Antenna Direction and Polarization

Pointing your antenna in the right direction is crucial. For short path, aim toward the direct Great Circle route. For long path, rotate the antenna 180 degrees. Also, playing around with the polarization (whether your antenna is horizontal or vertical) can sometimes improve your signal, especially for long path.

5. The Magic of Grey Line Propagation

The "grey line" is the twilight zone between night and day. During this time, long path propagation can be especially strong because the ionosphere is in a state of change. It’s a great time to try for those long-distance contacts!

Real-World Examples

1. South Africa to Australasia

When you’re trying to reach Australasia from South Africa, the short path is usually the best bet during the day on higher bands like 20m and 15m. But in the evening, especially around the grey line, you might find the long path gives you a stronger signal, especially on lower bands like 40m.

2. United States to Australasia

If you’re in the U.S. trying to connect with Australasia, short path usually works well in the late afternoon on bands like 20m and 17m. As night falls, try the long path westward; it might work better on 40m and 80m.

Advanced Tips

1. Handling Multipath Signals

Sometimes, both short and long path signals can reach you at the same time, causing them to interfere with each other (called multipath propagation). This can make your signal fade in and out (QSB). To manage this, you might need to tweak your antenna orientation or polarization.

2. Using Digital Modes

Digital modes like FT8, PSK31, and JT65 are less affected by signal fading and noise, making them perfect for long path communication. These modes can decode even the faintest signals, which is a big plus when conditions aren’t ideal.

3. Using Propagation Prediction Tools

There are some great software tools out there, like VOACAP and DX Atlas, that can help you predict when and where to expect good propagation. These tools use real-time data to model the ionosphere, giving you a better idea of the best times and frequencies to use.

Conclusion

Understanding how long path and short path propagation work can really boost your ability to make those long-distance contacts. By getting a handle on the ionosphere, solar cycles, and geomagnetic

effects, and by using some smart strategies like choosing the right frequency and timing, you'll be well on your way to better communication. Whether you're reaching out from South Africa to Australasia or from the U.S. to Australasia, knowing how to use these propagation techniques opens up a whole new world of possibilities in ham radio.

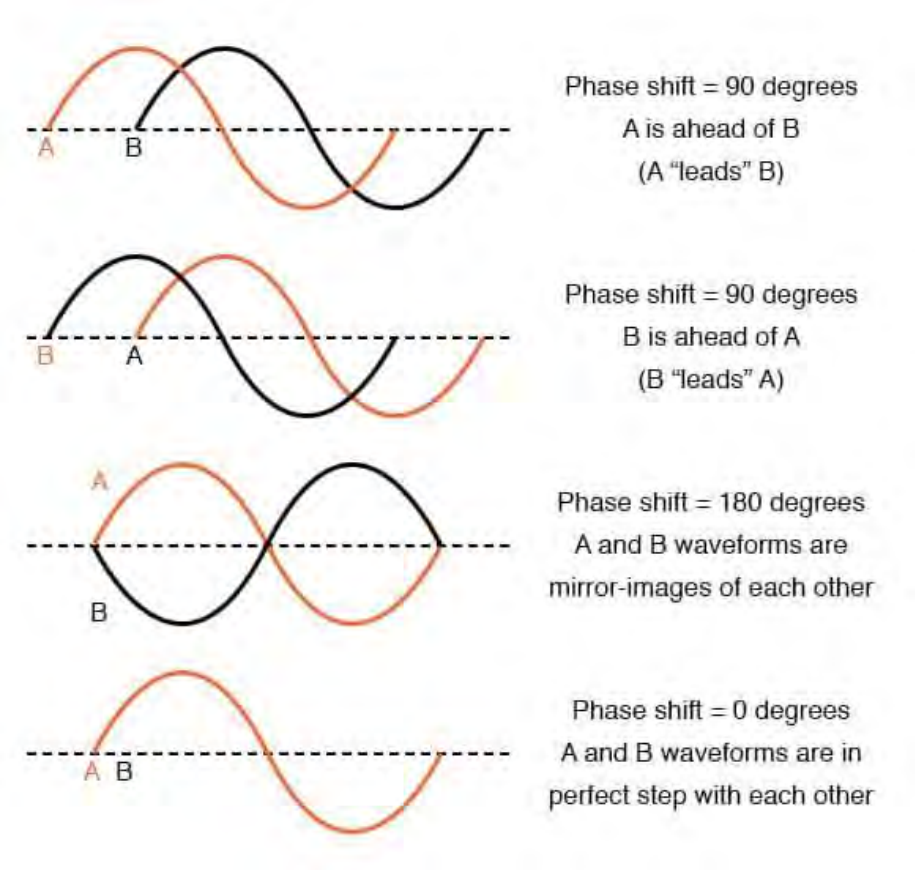
Gebruik AI om geraas in 'n radiosein uit te skakel by : https://krisp.ai/

Geplaas op 29 Oktober 2023 deur Jean-Paul Suijs - PA9X

Vir meer as agt jaar sukkel ek met mensgemaakte geraas, of QRM. Hierin is ek nie alleen nie. Die hele hamradiowêreld ervaar 'n vinnige toename in mensgemaakte geraas. Die resultaat van die baie elektriese toestelle wat in die huis gebruik word. Van telefoonlaaiers tot LED-ligte en van e-fietse tot sonpaneelstelsels. Maar die radioamateur sou nie 'n radioamateur wees as dit nie eksperimenteer met middele om QRM uit 'n radiosein uit te skakel nie.

Verwerk die sein voordat dit in die ontvanger ingaan

Baie eksperimente is gedoen met die verwerking van die radiosignaal voordat dit die ontvanger binnegaan, soos met die QRM Eliminator X-fase en met spesiale ontvang modusse soos Diversiteit. Albei metodes wat staatmaak op faseverskuiwing. Vervaardigers van ontvanger gebruik metodes in die ontvanger self met 'n verskeidenheid SDR-gebaseerde tegnieke soos Dynamic Noise Reduction en Noise Blanker. Maar daar is 'n ander manier om 'n radiosein van geraas te stroop. Nie in die hoëfrekwensie-deel nie, maar direk by die klankuitset. Met klankverwerkingsprogramme wat kunsmatige intelligensie of AI gebruik.



Faseverskuiwingstegnieke om 'n spesifieke geraasspoor te kanselleer

AI leer watter deel van die sein geraas is

AI is selfleer, solank u genoeg data verskaf. AI kan dus eintlik leer hoe om 'n radiosein van geraas te stroop. U hoef slegs 'n datastel seine met geraas en sonder geraas aan te bied. Dan leer AI watter deel van die sein geraas is en dus gestroop moet word. Vir elke tipe inmenging moet u AI met 'n skoon sein en 'n sein met geraas voer. Dit is nogal tydrowend, aangesien daar 'n hele paar verskillende soorte inmenging is en baie nuwe soorte inmenging daagliks verskyn.

Reeds beskikbare klankverwerkingsprogramme

Nou is daar programme beskikbaar wat dit reeds op 'n manier geleer het. Oudiovisuele redakteurs gebruik AI om die klank van agtergrondgeraas te stroop. Byvoorbeeld geraas van masjinerie, geklets, motors wat verbyry, ensovoorts.

Ek het op MyEdit.online so 'n aanlyn AI-app gebruik om 'n opname van 'n radiosein wat ek tydens 'n wedstryd opgetel het, te verwerk. Dit is die wedstrydstasie CR6K op die 15 meter kortgolfband, met inmenging van die mikro-omskakelaars van 'n sonpaneelinstallasie op my buurman se dak. Ontvanger is die SDRplay RSPduo en antenna 'n Wellgood aktiewe lus v4.1.

ONVERWERKTE SEIN:

https://www.pa9x.com/wp-content/uploads/2023/08/QSO-with-solar-panel-inverter-QRM-15m-20230805.mp3

VERWERKTE SEIN MET BEHULP VAN AI:

https://www.pa9x.com/wp-content/uploads/2023/08/QSO-AI-noise-cancelling-QRM-15m-20230805.mp3

Die een nadeel van hierdie aanlyn-app is dat u klank as 'n lêer moet oplaai om dit te wysig. Dit is nie gerieflik in ons geval nie. Ons wil dit intyds doen met beperkte vertraging.

Intydse geraas kanselleer deur u rekenaar

Daardie programme bestaan wel, dikwels as inproppe vir bekende aanlyn vergaderingprogramme soos Zoom, Microsoft Teams en Google Meet. Hierdie programme, wat bedoel is om agtergrondgeraas te onderdruk, het blitsvinnig ontwikkel toe Covid-19 mense baie meer aanlyn laat ontmoet het. Een so 'n app met 'n gratis proeftyd is dié van Krisp.ai.

U installeer hierdie app op u rekenaar; Windows 11 in my geval. Dit installeer dan 'n virtuele mikrofoon waarop die app die bewerking intyds uitvoer. In Windows kan u dit dan instel om na hierdie mikrofoon te luister.

'N Paar demo's op mediumgolf en kortgolf

Hieronder is 'n demo van 'n mediumgolfsein in AM, versteur deur QRM vanaf die omskakelaar van my buurman se sonpaneelinstallasie. Ontvanger is 'n SDRPlay RSPduo en die antenna 'n Wellgood-aktiewe lus. Verskoning vir die slegte gehalte...

Geraas kanselleer op medium golf met 'n breëband AM sein.

Dit is beslis nog nie perfek nie. Namate interferensie toeneem, verdraai die klankgehalte. Met 'n smal sein soos in SSB werk dit ook baie minder goed as 'n breëbandsein soos in AM op mediumgolf. Die app sukkel om spraak van QRM te onderskei teen 'n lae SNR (sein-tot-geraas-verhouding).

Hieronder is 'n demo met 'n smal band SSB-sein op die 20 meter-band. Ontvanger is 'n SDRPlay RSPduo en antenna 'n spinnerak. Verskoning vir die slegte gehalte...

Geraas kanselleer op kortgolf met 'n smal band SSB sein.

Die geraas wat met die Krisp.ai app kanselleer, laat steeds iets te wense oor hierdie tipe sein. Hierdie app is duidelik ontwikkel vir 'hifi'-toespraak.

Beter intydse verwerkingsprogramme

Ek glo daar is beter intydse verwerkingsprogramme daar buite, soos die aanlyn een by MyEdit.online, wat 'n beter werk op 'n smalband SSB-sein kan doen. As jy dit gelees het en een gevind het, stuur 'n e-pos via my e-posadres op my QRZ.com bladsy. Of stuur vir my 'n boodskap via Twitter.

Vrywaring: Ek is nie 'n IT-kenner nie. As jy ondersteuning nodig het om die klank op jou rekenaar op te stel, kontak asseblief die ondersteuning van daardie toepassing.

BUILD-PLAN Moxon – 10M band

ZS1ML

Dimension	Wavelengths	Meters	Millimeters
Frequency 28 100 MHz	1.0	10.706875	10706.875
Diameter 2.5 mm	0.000233	0.0025	2.5
A	0.340352	3.644105	3644.105446
B	0.050723	0.543083	543.082776
C	0.009337	0.099972	99.97194
D	0.071734	0.768045	768.044613
E	0.131794	1.411099	1411.09933

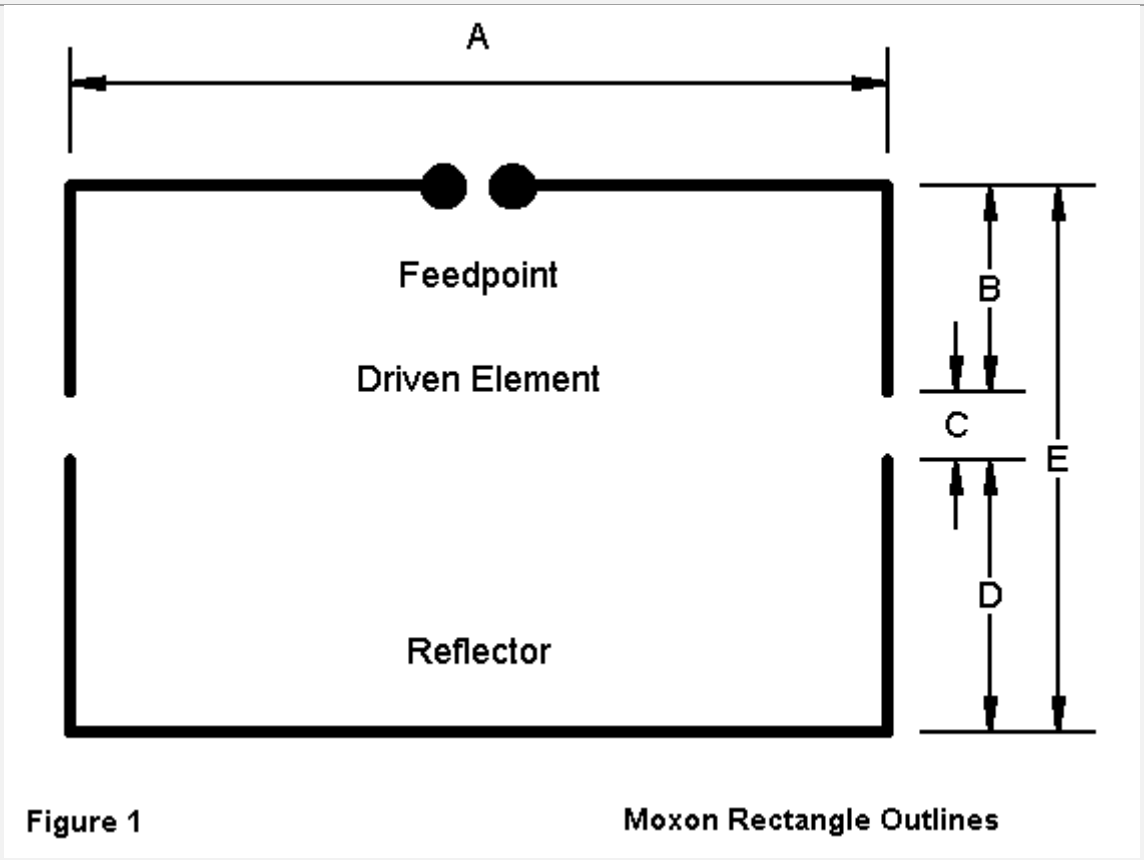


Figure 1 **Moxon Rectangle Outlines**

To build a 10M Moxon antenna using 2.5mm electric house wire, based on the dimensions above, follow these steps:

Materials Needed:

- **2.5mm electric house wire** (length determined by the dimensions below)
- PVC pipes or any non-conductive support material for the frame

- Insulators for the ends of the wire
- Coaxial cable for the feedline (e.g., RG-58)
- Connector (PL-259 or equivalent for your rig)
- Basic tools (wire cutters, measuring tape, soldering iron, etc.)

Dimensions:

The Moxon antenna is designed for a frequency of **28.100 MHz** and has the following key dimensions (in millimeters):

- **A** (overall width of the antenna): 3644.11 mm
- **B** (element spacing): 543.08 mm
- **C** (element length gap): 99.97 mm
- **D** (reflector element length): 768.04 mm
- **E** (driven element length): 1411.10 mm

Steps to Build:

1. **Prepare the Wire:**
    - Cut the **2.5mm electric wire** according to the following lengths:
        - For the **driven element** (front): 2 pieces, each **1411.10 mm**.
        - For the **reflector element** (rear): 2 pieces, each **768.04 mm**.
        - For the **spacers** (gap between elements): 2 pieces, each **543.08 mm**.
2. **Frame Construction:**
    - Create a rectangular frame using PVC pipes or any other non-conductive material, ensuring that the dimensions for the overall antenna width and spacing between elements are respected (A = 3644.11 mm, B = 543.08 mm).
    - Attach the wire to the frame, shaping it according to the specified dimensions. Ensure that the ends of the driven and reflector elements maintain a gap (C = 99.97 mm).
3. **Assembling the Antenna:**
    - Secure the wires to the PVC frame, making sure they follow the Moxon shape.
    - Insulate the wire ends where necessary to avoid short circuits.
4. **Feedline Connection:**
    - Solder the coaxial cable's center conductor to the **driven element** and the shield to the other part of the wire.
    - Ensure the feedpoint is properly insulated and secure.
5. **Final Checks:**
    - Measure and adjust to ensure all the dimensions conform to the provided values.

- Test the antenna with an SWR meter to verify performance and adjust for resonance.

This process should yield a well-functioning Moxon antenna for the 10M band using 2.5mm electric house wire.

Major QMX Operator Flaw Exposed

By **John VA3KOT** on August 28, 2024

QMX non culpa, mea culpa!

I thought I was smart. I have a physics degree; college taught us 1970s long-haired layabouts 3 ways to build an atomic bomb. But half a century later I make simple errors with my ham radio equipment. The fault is mine and not QRP Labs brilliant little QMX transceiver.

In the last post I described a side-by-side receiver comparison between an Icom IC-705 and the QMX. I recounted how when both radios were tuned to the same weak signal, the 705 heard it but the QMX didn't.

I left my friend's shack with my tail between my legs. I was so sure that on a receive only comparison the QMX would prove itself the equal of the mighty (and mighty expensive) 705. I had several ideas for things to check. Could it have been my earbuds? I switched out the simple over-the-ear earbuds for other headphones, but they all sounded the same.

Could it be the AGC?

The QMX's AGC is highly sophisticated with 8 individual user-adjustable parameters. But wait, an AGC's job is to attenuate strong signals. Surely it would not impact weak signals? I ruled that out.

Could it be the audio gain?

Using the QMX's terminal mode it is possible to adjust the audio gain independently for each band. After reading the QMX manual more carefully I had a better understanding of how to read the signal strength indicator on the main display. It helps to have 2 pieces of test equipment: a reference signal source (I used an Elecraft XG3) and an electron microscope to count the tiny dots on the QMX display.

My QMX is the low band version supporting 80m, 60m, 40m, 30m and 20m. I have no interest in the 60m band so I ignored it. For each of the other 4 bands I checked the displayed signal strength when a 50 microvolt signal was injected. 50 microvolts is supposed to register S9 on a receiver, but the QMX showed S8 (or maybe my electron microscope is out of calibration).

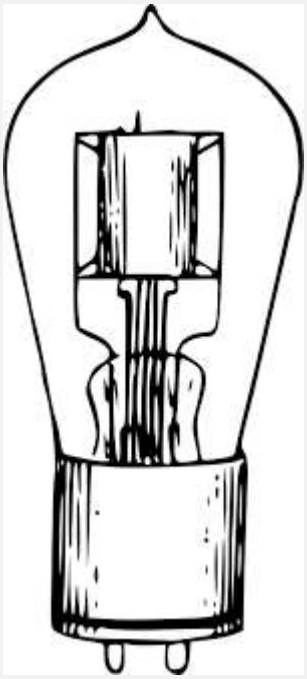
I adjusted the audio gain on each band so that S9 was displayed. Could this have been the problem? No, not very likely at all. One S-unit shouldn't make enough difference to cause even a weak signal to disappear. Good CW operators can often dig enough signal out of the noise to make a valid contact.

Could it be the CW filters?

The CW filters on the QMX are complex but I am not going to make any excuses. The resident genius behind all the wizardry is QRP Labs owner Hans Summers G0UPL who understands these things a whole lot better than I do. It took me a while to understand the new filters introduced in a recent firmware release.

As an aside I have to heap praise on the effortless firmware upgrade process QRP Labs products use. When I received my QMX in the spring it had firmware version 18; now it has version 26. Each release makes the

radio incrementally better with more features. Each time I tell my wife ("you don't need another radio!") that I have a new radio. She now just says: "oh, another new firmware release?".



Real radios glow in the dark. I built my first tube receiver in the 1960s. It was a regenerative receiver that would transmit wideband RF if the "reaction" control wasn't adjusted properly. Then I graduated to using transistors; I still have some of those early devices in my junque collection. Later, as a ham, I bought commercial transceivers but they were all analog devices. The QRP Labs QMX is the first SDR-based radio I have owned and I am still catching up on the differences between SDR and analog radios.

Perhaps the biggest change I have difficulty understanding is the absence of features that I had relied on in the past. For example, the QMX has no RF amplifier so there is no RF gain control. On older radios I was accustomed to adjusting the RF gain control to balance sensitivity with reduced background noise. So when I started using the QMX I was looking for a way to kill the background noise. Filters - bingo! Use a narrow filter to attenuate the noise - oh, but wait ...

My QMX was set to a bandwidth of 100Hz using the wizardry of cascading audio filters. That produced less noise than wider filters, but it also became the source of my radio's apparent deafness. Let me explain.

If you go to pota.app (the main Parks on the Air website) you will see a list of spots - I am referring to CW spots here. These spots are usually sourced from the Reverse Beacon Network (RBN). RBN skimmers often report frequencies slightly off where they are supposed to be - often 100Hz or so. Imagine a situation in which a weak station's frequency report is off by 100Hz, and then Bozo-the-Brainless (yours truly) has set his filter to be 100Hz wide. Do you see a potential problem here?

Sitting in the Outback (out in the backyard) recently I was tuning around hunting POTA stations with my QMX. I couldn't hear one of the activators so, just on a whim, I changed the CW filter from 100Hz to 200Hz. Abracadabra - signal appeared.

Putting the filters to the test

Back in the shack the Elecraft XG3 signal source was pulled out and set to produce a -107dBm signal on 14020 KHz. A sensitive amplified speaker was plugged into the QMX and the presence of a CW tone was verified. The QMX's tuning was adjusted over a +/- 100Hz range while the CW filter was set to 300Hz, 200Hz, 100Hz and 50Hz.

The results were not unexpected. At a filter width of 300Hz and a receiver frequency of 14020.10 or 14019.9 the signal was loud and clear. At a filter width of 200Hz the signal was still audible, although noticeably quieter. At a filter width of 100Hz the signal was still barely audible and at a filter width of 50Hz there was no detectable signal.

Yes, the signal was still barely audible with a filter width of 100Hz, but the test was conducted using a precise RF signal source with no background noise. In the real world - i.e. out in the Big Blue Sky Shack, with a temperamental nearby star spewing huge clouds of radiation that dwarf our entire planet, and human-caused interference from LED lights, power lines and other sources - conditions are much tougher.

Quod erat demonstrandum, the baby-size box of Turkish electrickery wears big-boy pants and its operator wears a pointed dunce hat. Of course, I knew all along that my wonderful little QMX would redeem itself.

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No "tip-jar", "buy me a coffee", Patreon, or Amazon links here. I enjoy my hobby and I enjoy writing about it. If you would like to support this blog please **follow/*subscribe*** using the link at the bottom of my home page,. If you would like to email me directly you will find my email address on my QRZ.com page. Thank you!

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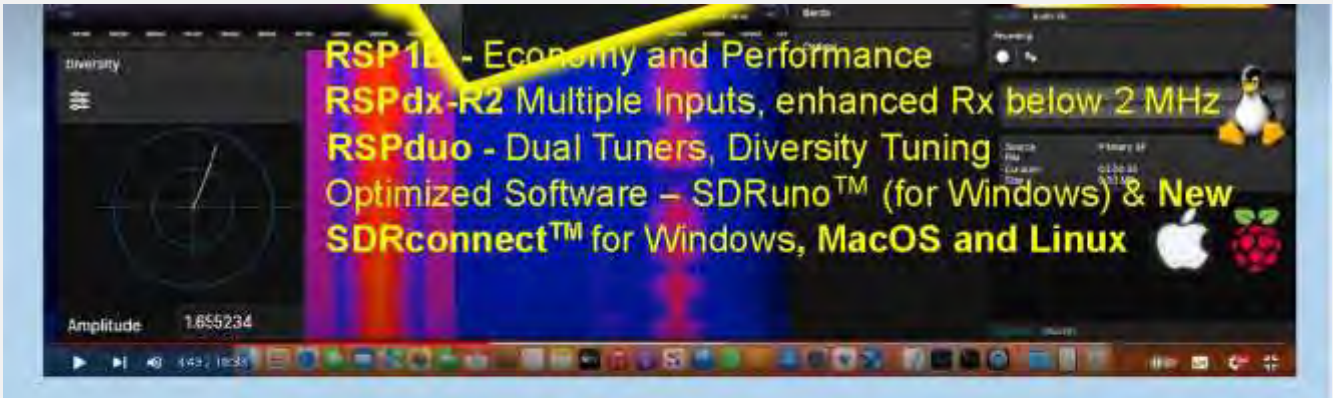

SDRplay SDR Receivers

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- Use as a stand-alone general coverage RX, or as panadapter
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- SDRconnect includes multi-platform server software for multiple remote connections
- RSPdx/RSPdx-R2 have multi antenna ports and enhanced performance below 2MHz
- RSPduo has two tuners for widely-spaced multiband monitoring & mix and match applications
- RSPduo offers diversity tuning for signal enhancement & noise cancellation
- Backed by large and growing SDR receiver user community

Key specifications and highlights	RSP1B	RSPdx	RSPdx-R2	RSPduo
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Up to 10MHz visible bandwidth				
14-bit ADC silicon technology plus multiple high-performance input filters			Software	
selectable AM/FM & DAB broadcast band notch filters				
4.7V Bias-T for powering external remote antenna amplifier				
Powers over the USB cable with a simple type B socket				
50Ω SMA antenna input(s) for 1kHz to 2GHz operation (software selectable)	1	2	2	2
Additional software selectable Hi-Z input for up to 30MHz operation				
Additional software selectable 50Ω BNC input for up to 200MHz operation				
Additional LF/VLF filter for below 500kHz				
HDR mode below 2MHz for Higher Dynamic Range				
Enhancements vs RSPdx (Dynamic range below 2MHz & Noise perf below 1MHz)				
24MHz Reference clock input (+ output on RSPduo)				
Dual tuners enabling reception on 2 totally independent 2MHz ranges				
Dual tuners enabling diversity reception using SDRuno and SDRconnect				

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SDRplay

Radio Spectrum Processors

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RSP1B

RSPdx -R2

The SDRplay RSPdx-R2 is an enhanced version of the popular RSPdx . Housed in a strong steel case, in addition to the functionality of the RSP1B, the RSPdx-R2 provides three software selectable antenna inputs and an external clock input. It offers substantially enhanced HF performance, using a special "HDR mode" optimised for the demanding radio reception conditions below 2MHz. An additional 500kHz low pass filter is also included for LF/VLF enthusiasts.

RSPduo

The SDRplay RSPduo is a complete dual-tuner SDR receiver. Like the other models, it's a wideband full featured 14-bit SDR which covers the RF spectrum from 1kHz to 2GHz giving 10MHz of spectrum visibility. Alternatively, it can simultaneously monitor two completely separate 2MHz bands of spectrum anywhere between 1kHz and 2GHz. Perfect for real-time antenna comparisons. With either our Windows SDRuno or our multi-platform SDRconnect software, the RSPduo offers diversity tuning. This enables both signal enhancement and noise cancellation. The RSPduo also provides three software selectable antenna inputs, one of which is a high impedance input for direct connection to a long wire antenna

When used with SDRplay's own SDRuno or SDRconnect software, the RSP becomes a high-performance general coverage receiver or spectrum monitoring instrument for the lab.

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September 2024

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- NL770S Mobile dual band @ R335
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FT140-43(sa) toroids
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Aanbevelings vanaf lede, waar ons radio amateurs, verskeie goeters en katoeters, betroubaar kan kry.
The list I wish I had when I started, proven and trusted suppliers of all sorts of components and material.

Handelaar / Supplier	*Adres / Address*	*Items*	*Notas*
Aluminium Alloys Cape Town	14 Binder Street Entrance opposite Tygerberg Engine Rebuilders, Parow East, Cape Town, 7501 021 911 5032	Aluminium Pipe of all lengths and sizes, great for masts, deliver daily.	
Bombastik.co.za	107 Kenridge Avenue, Kenridge, Durbanville. 082 785 7763 info@bombastik.co.za	Geat variety of ham radio accessories, antennas and tools at affordable prices. Drivers, software and recommended video lists are on our site. 'Great Service' is our motto!	
Communica	36 Marine Drive, Paarden Eiland, Cape Town, 7405. Phone: +27 (021) 510 2055 Fax: +27 (021) 447 0959 Sales: salesct@communica.co.za Web: https://www.communica.co.za/	Komponente, Connectors, Coax, verskeie draad, kabels en alles wat jou hart begeer.	
Cords.co.za	**Unit 13, Northgate Business Park, Gold Street, Northgate Estate Brooklyn, Cape Town, 7405** 021 703 5836 sales@cords.co.za	They have a particular strength in locating "hard-to-find" cable types. CORDS makes custom retractile (coiled) cords, harness and loom assemblies; and offers wire and cable cutting, stripping, crimping, soldering, and finishing services.	
HotTools	Jacques Scholtz ZS6JPS – Managing Director & Imports Landline +27 11-452-4446 (ext 111) Cell +27 61-785-0972 / Skype me here Please feel free to try us for any quote requests – email sales@hottools.co.za Any compliments or complaints, please direct to our sales manager here / Click here to download our catalogue	30A kragbronne, SWR meters, coax, soldeersel en soldeer stasies, oskilloskope, multimeter, krimpers en allerhande gereedskap. Baie vriendelik en behulpsaam	
Giga.co.za - Anton Janovsky	www.giga.co.za Johannesburg, Gauteng 2061 Online shop only: **Tel:** 087-897-6621 / 087-802-5749	Electronic manufacturer, Importer of Industrial and domestic **communication products. (Online Store only.)**	

Jaycor	Johannesburg en Woodstock CPT https://www.jaycor.co.za/ 021 447 4247	Coax en elektroniese parte.
Jedelect Distributors	41 Section St, Paarden Eiland, Cape Town, 7405 Phone: 021 511 2713, 021 511 0262, 021 511 2949 Cell: 083 253 3040 Email: ros@jedelect.co.za	Cable Manufacturers & Suppliers
Magnavolt Trading 512	24 Cabernet Rd, Kuils River, Cape Town, 7580 / Naby Zevenwacht Mall Phone: 021 905 3620	Coax, Connectors en antennas.
Mantech	https://www.mantech.co.za/ 24 Mail Street, Western Province Park, Epping +2721 535 3150 / +2787 233 5006 Email: cape@mantech.co.za	Coax van alle tipes, Connectors en elektroniese items en toerusting. Elektriese en elektroniese komponente.
RFG Communications	Gants industrial area in Strand, Western Cape Tel: (021) 853 5140 General email: info@rfgcom.co.za Sales email: wayne@rfgcom.co.za https://www.rfgcom.co.za/	sales of two-way radio Kenwood, Icom and Motorola.
Sam Ford	**Sam's Radio Accessories** 9 Carnation St, Gallo Manor, Sandton 011 802 2976 Email sam.ford@radioacc.co.za http://radioacc.co.za/	Radio's, Radio komponente en alles wat jy sal verwag van 'n goeie radio handelaar. Hy koerier maklik en billik.

Noem dat jy die advertensies hier gesien het asb.

See next page for: IARU Region 1 HF Band Plan

IARU Region 1 HF Band Plan

HF 160m – 6m Band Plan			
Frequency	Mode	Preferred Mode and Usage	Compiled by ZS1GWL
160m Band:			
1 810 – 1 838	CW	CW, 1836: QRP Centre of Activity	
1 838 – 1 840	LSB	Narrow band modes	
1 840 – 2 000	LSB	All modes – digimodes	
80m Band:			
3 500 – 3 510	CW	CW, priority for intercontinental operation	
3 510 – 3 560	CW	CW, contest preferred, 3 555: QRS Centre of Activity	
3 560 – 3 570	CW	CW, 3 560: QRP Centre of Activity	
3 600 – 3 650	LSB	All modes, SSB contest preferred, 3 630: Digital Voice Centre of Activity	
3 650 – 3 700	QRP	All modes, 3 690: SSB QRP Centre of Activity	
3 700 – 3 775	LSB	All modes, SSB contest preferred	
3 775 – 3 800	LSB	All modes, SSB contest preferred, priority for intercontinental operation	
60m Band:			
5290	WSPR	WSPR Beacons for the propagation project	
5 350.0 – 5 354.0	CW	CW, Narrow band modes – digimodes	
5 354.0 – 5 366.0	SSB	All modes, USB recommended for voice operation	
5357	SSB	FT8 CoA	
5360	SSB	SOTA/WWFF CoA (international)	
5 366.0 – 5 366.5	SSB	Weak signal narrow band modes	
5 366.6 – 5 450.0	SSB	All modes, USB recommended for voice operation, 5370: Calling	
5390	SSB	SOTA/ZSFF/WAGS CoA	
5410	SSB	Emergency CoA (SARL Hamnet)	
40m Band:			
7 000 – 7 040	CW	CW, 7 030: QRP Centre of Activity	
7 050 – 7 100	SSB	All modes, SSB contest, 7 070: Digital Voice Centre, 7 090: SSB QRP	
7 100 – 7 130	SSB	All modes, 7 110: Reg 1 Emergency Centre of Activity	
7 130 – 7 175	SSB	All modes, SSB contest preferred, 7 165: Image Centre of Activity	
7 175 – 7 200	SSB	All modes, SSB contest preferred, priority for intercontinental operation	
30m Band:			
10 100 – 10 140	CW	CW, 10116: QRP Centre Of activity	
10 140 – 10 150	SSB	Narrow band modes – digimodes	
20m Band:			
14 000 – 14 060	CW	CW, contest preferred, 14 055: QRS Centre of Activity	
14 060 – 14 070	CW	CW, 14 060: QRP Centre of Activity	
14 099 – 14 101	IBP	IBP, exclusively for beacons	
14 101 – 14 125	SSB	All modes	
14 125 – 14 300	SSB	All modes, SSB contest, 14 130: Digital Voice Centre, 14 195: Priority DX	
14 300 – 14 350	SSB	All modes, 14 300: Global Emergency centre of Activity	

17m Band:		
18 068 – 18 095	CW	CW, 18 086: QRP Centre of Activity
18 111 – 18 120	SSB	All modes – digimodes, automatically controlled data stations
18 120 – 18 168	SSB	All modes, 18 130: SSB QRP Centre of Activity
15m Band:		
21 000 – 21 070	CW	CW, 21 055: QRS Centre of Activity, 21 060 – QRP Centre
21 120 – 21 149	SSB	Narrow band modes
21 151 – 21 450	SSB	All modes, 21 180: Digital Voice Centre, 21 360: Global Emergency
12m Band:		
24 890 – 24 915	CW	CW, 24 906: QRP centre of activity
24 931 – 24 940	SSB	All modes – digimodes, automatically controlled data stations
24 940 – 24 990	QRP	All modes, 24 950: SSB QRP Centre of Activity
10m Band:		
28 000 – 28 070	CW	CW 28 055: QRS Centre of Activity, 28 060 – QRP Centre
28 150 – 28 320	SSB	All modes – digimodes, automatically controlled data stations
28 320 – 29 100	SSB	All modes, 28 330: Digital Voice Centre of Activity, 28 360: QRP Centre
29 100 – 29 200	SSB	All modes – FM simplex – 10 channels
29 200 – 29 300	SSB	All modes – digimodes, automatically controlled data stations
29 300 – 29 510	SAT	Satellite Links
29 520 – 29 590	SSB	All modes – FM repeater input (RH1 – RH8)
29 600	SSB	All modes – FM calling channel
29 610	SSB	All modes – FM simplex repeater (parrot – input and output)
6m Band:		
50 000 – 50 100	CW	CW, 50 080: Beacons, 50 090: Centre of Activity,
50 100 – 50 500	SSB	All modes
50 100 – 50 130	SSB	Intercontinental, 50 11: DX Calling
50150	SSB	SSB Centre oc Activity
50 255 – 50 400	SSB	Digimodes
50 500 – 52 000	SSB	All Modes
50510	SSB	SSTV (AFSK)
50 520 – 50 540	SSB	Simplex FM Internet gateways
50550	SSB	FAX
50600	SSB	RTTY(FSK)
50 620 – 50 750	SSB	Digital Communications
50630	SSB	Digital Video Calling
51 210 – 51 390	SSB	FM/DV Repeater inputs
51 410 – 51 590	SSB	FM/DV Repeater Simplex
51510	SSB	FM Calling Freq
51 810 – 51 990	SSB	FM Repeaters Output

Tot volgende keer!

Lees gerus ons radio artikels op www.learnminds.co.za en www.bombastik.co.za

73, Marius ZS1ML