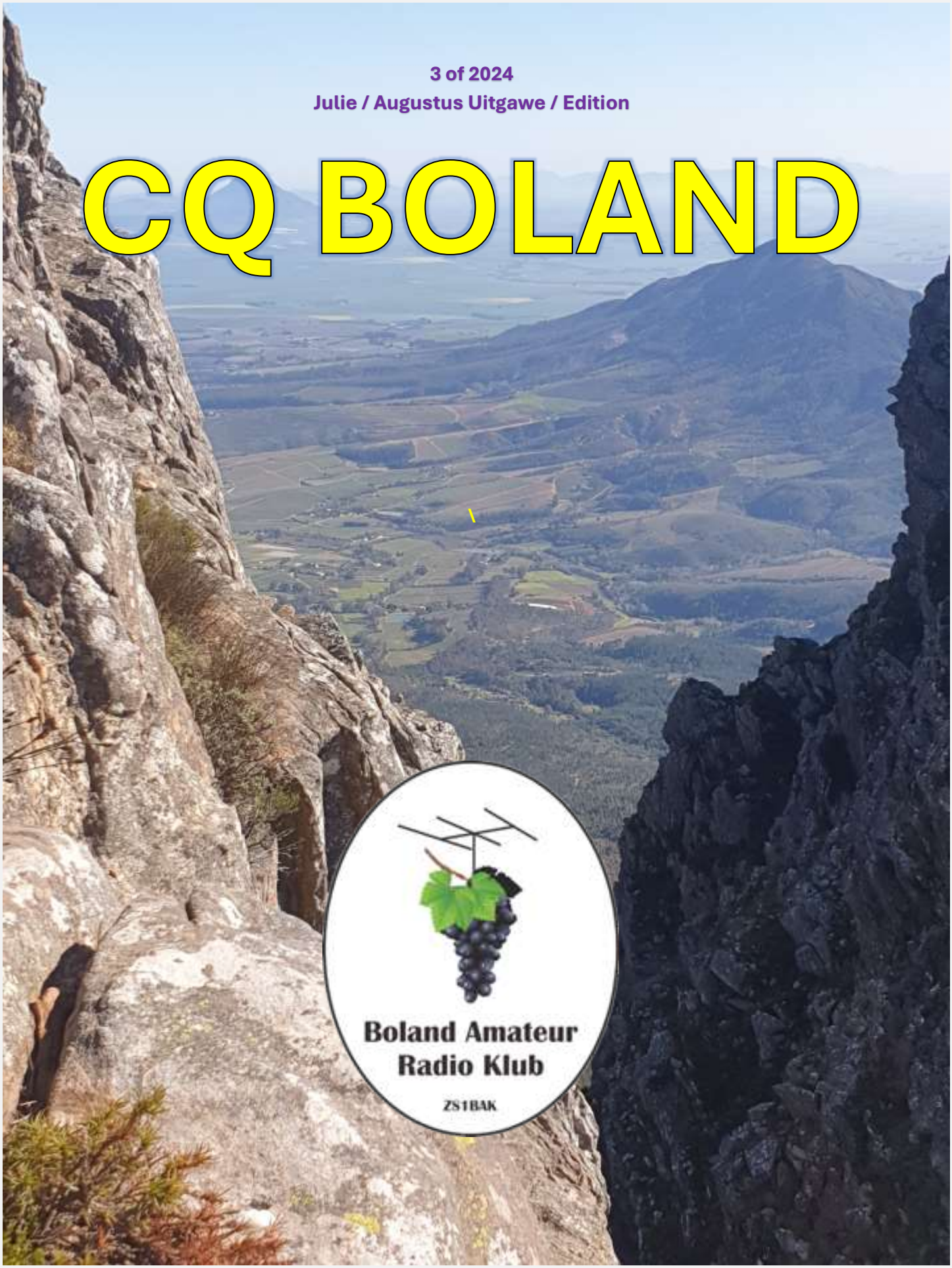
3 of 2024
Julie / Augustus Uitgawe / Edition

CQ BOLAND



BARK - Established 1948

JOU KOMITEE VAN BOLAND AMATEUR RADIO KLUB 2023/24:

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	Sekretaris	Francois Wooding ZS1FR	zs1fr@bark.org.za
	Tegnies / RAE	Jannie Kirsten ZS1JFK	rae@bark.org.za
	Tegnies	Schalk BurgerZR1SWB	schalk.gwb@gmail.com
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	Jeug / Nuwe lede / Geleenthede	Lee Bezuidenhout, ZS1GWL	scubapetey@gmail.com

Gekoöpteerde lede:

Rassie Erasmus ZS1YT: Historikus vir die klub en SARL verteenwoordiger rassie@bark.org.za
Jan Lamprecht ZS1LAM: Kompetisie Meester / Radio Sport lamplumb@gmail.com
Welkom aan: Petrus Claassen ZS1CLA: Administrasie Bystand petrusclaassen@gmail.com

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

Bulletinnuus
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.
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 die Hawekwa terrein bokant die Paarl waar die 145.650 herhaler gehuisves word nou net van Sonkrag afhanklik vir sy werking.
Die Eskom krag is op 30 Junie af geskakel en dit wil bleik asof die herhaler goed gewerk het deur die ergste deel van die winter met sonskyn wat soms maar skaars was. Die rede vir die afskakel van Eskom was natuurlik die kostes van R3500/maand om ‘n verbinding op so ‘n afgeleë terrein te voorsien.
Die 4 batterye by die 145.650 herhaler is reeds 5 jaar oud en sal natuurlik in die nabye toekoms vervang moet word.

Die 145.675 herhaler te Jonaskop buite Villierdorp werk goed en het ook gedurende die winter vir lang tye net op sy 2 batterye en 1 sonpaneel staat gemaak tydens Eskom onderbrekings.

Die 145.700 herhaler te Constantia berg het ‘n probleem met sy antenna en/of voerlyn wat veroorsaak dat die herhaler baie krapperig is tydens erge reen 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.

Die 145.600 en 434.650 herhalers op Hansekop, bokant Somerset Wes, werk baie goed maar word bitter min gebruik. Die 434.650 gee ook toegang tot die herhaler by Hermanus op 145.725

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. Besoek 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.
'n Status verslag van die herhalers word weekliks uitgestuur. Baie dankie aan Paul ZS1V wat die verslag op datum hou. Jy kan dit kry by http://wcrwg.co.za/category/status-report/ Jy kan ook versoek dat dit elke week per e-pos aan jou gestuur word.

	Station location	Band	Mode	Tone	TX Freq MHz	RX Freq MHz	Band width	Latitude	Longatude	Grid
1	Hermanus	2m	Voice	88,5	145,725	145,125	NFM	34°23"51' S	19°09"39' E	JF95NO
2	George	2m	Voice	88,5	145,700	145,100	FM	33°55"39' S	22°27"00' E	KF16FB
3	Constantiaberg	2m	Voice	88,5	145,700	145,100	NFM	34°03"15' S	18°23"13' E	JF95EW
4	Du Toitskloof	2m	Voice	88,5	145,650	145,050	NFM	33°40"30' S	19°05"23' E	JF96NH
6	Riversdale	2m	Voice	88,5	145,650	145,050	FM	34°01"10' S	21°07"41' E	KF05NX
7	Piketberg	2m	Voice	88,5	145,625	145,025	NFM	32°49"10' S	18°44"18' E	JF97IC
8	Tygerberg	2m	Voice		145,750	145,150	FM	33°49"31' S	18°36"18' E	JF96HE
9	Verkykerskop	2m	Voice	88,5	145,600	145,000	NFM	34°06"08' S	18°57"58' E	JF95LV
10	Jonaskop	2m	Voice	88,5	145,675	145,075	NFM	33°58"20' S	19°30"23' E	JF96SA
12	Verkykerskop	70cm	Voice	88,5	434,650	433,050	FM	34°06"08' S	18°57"58' E	JF95LV
13	Tygerberg	70cm	Voice		434,625	433,025	FM	33°49"31' S	18°36"18' E	JF96HE
5	Botlaryberg									
16	Botlaryberg									
17	Helderberg	70 cm	DMR		438,350	430,750	Dmr tier 2	34°02"25' S	18°51"23' E	JF95KX
18	Signal Hill	70 cm	DMR		438,400	430,800	Dmr tier 2	33°54'56"S	18°24'41"E	JF96EC
11	CPUT Bellville	6m beacon	Beacon		50,080		FM	33°55"55' S	18°38"32' E	JF96HB
15	Cape Town	2m beacon	Beacon		144,435		FM	33°55"10' S	18°25"24' E	JF96FB
14	Helderberg	2m APRS	APRS		144,800	144,800	FM	34°02"25' S	18°51"23' E	JF95KX
19	Du Toitskloof	2m APRS	APRS		144,800	144,800	FM	33°45"00' S	19°11"45' E	JF96OG

BARK Vlag

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

KLUB NUUS:

Van die Voorsitter:

Toewyding van Lede vir 'n Suksesvolle Klub

Geagte lede van die Boland Amateur Radio Klub,

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 Saterdag 28 September 2024 by n plek wat nog aan u gestuur sal word per e-pos en WhatApp groep.

Die vergadering sal waarskynlik begin om 10h00, aangesien ons ‘n hele aantal interssante praatjies en demonstrasies reël en na die tyd gaan die braaivleisvure aangesteek word. Onthou dit is ‘n “bring en braai”. Die klub sal die hout voorsien. U moet egter u eie braai rooster saambring en natuurlik alles wat verder met so ‘n geleentheid gepaard gaan.

Hoewel daar stoele is, is dit raadsaam om u eie kampstoel te bring vir buite sit.

Meer inligting asook ‘n roetekaart sal nader aan die tyd aan lede uitgestuur word.

BARK HF assesserings word by Bombastik, 107 Kenridge laan, Kenridge, Durbanville gedoen.
BARK nooi die huidige RAE kandidate uit om te kom deelneem aan ‘n veldstasie by Bombastik op nasionale Velddag **7 September 2024**.

Ons vra lede om ons op daardie dag te ondersteun om ons nuwe kandidate goeie QSO’s te gee.

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.**

The Wolf DDC/DUC and RS-998 Radios: Diving into Cutting-Edge Ham Radio Tech!

Author: Marius Lubbe ZS1ML

Hey There, Radio Enthusiasts!

Welcome to the fascinating world of the Wolf DDC/DUC and RS-998 radios! If you're into amateur radio, these two beauties are probably on your radar (pun totally intended). They're jam-packed with features, have a fantastic range, and are super customizable thanks to their open-source design. Let's dive into what makes these radios so special, shall we?

The Backstory: From Idea to Reality
How It All Began
It all started back in 2018 with a Russian ham radio operator known as UA3REO. His goal? To create an all-mode transceiver that could handle anything thrown at it using digital down-conversion (DDC) and digital up-conversion (DUC) technologies. Fancy words, but they basically mean the radio can precisely handle a wide range of frequencies and signals. Cool, right?

Community Power
What's really neat is that this project was open-source from the get-go. This means ham radio enthusiasts from all over the world could pitch in with ideas and improvements. Fast forward to 2023, and voilà, the first commercial versions of these radios hit the market, including the souped-up RS-998.

Photos from Retevis: https://www.retevis.com/100w-hf-uv-all-mode-ddc-duc-transceiver-radio-sdr-transceiver

The Nitty-Gritty: Features and Specs

Alright, let's talk about what these radios can actually do.

1. Frequency Range:
    - Receiving: A whopping 0-750 MHz. Yep, you read that right.
    - Transmitting: 0-200 MHz and 360-480 MHz. Covers a lot of ground.
2. Power Output:
    - Wolf DDC/DUC: Up to 20W on shortwave bands and 7W on VHF/UHF bands.
    - RS-998: This beast goes up to 100W on transmission!
3. Display:
    - A 7-inch touch screen that's easy to read even in sunlight. Perfect for outdoor ops.
4. Modulation Modes:
    - CW, LSB, USB, AM, FM, WFM, and digital modes. It's like having a Swiss Army knife of radios.

5. Hardware:
    - High-speed 16-bit ADC for digitizing signals.
    - FPGA processor for smooth DDC/DUC conversion.
    - Low-noise amplifier and adjustable attenuator (0-31dB).
6. Extras:
    - CW decoding, FT8 codec, online radio viewing, and more. Plus, it's all housed in a rugged aluminum case.

Getting Hands-On: Functionality and Interface

User-Friendly Design
Both the Wolf DDC/DUC and RS-998 are super user-friendly. The heart of the interface is a 7-inch touch screen that supports multi-touch gestures. Navigating through the menus and settings is a breeze, even if you're new to this kind of tech.

Easy Navigation
The menus are well-organized, so you won't have to hunt for settings. Adjusting modulation modes, frequency ranges, and power output is straightforward. Plus, the 3D spectrum and waterfall display give you real-time feedback on what's happening in the RF environment.

Versatile Modulation and Modes
With support for CW, LSB, USB, AM, FM, WFM, and digital modes, you can do pretty much anything. Whether you're into casual chats or digital communications, these radios have got you covered. The built-in decoders for CW and FT8 are a nice touch too.

Connectivity and Recording

WiFi connectivity means you can control the radios remotely and view online radio streams. The TF card slot supports up to 16GB of storage, perfect for recording and playback. And updating the firmware? Easy peasy with the TF card.
Built to Last: Design and Build

Tough and Ready
The radios are encased in anodized aluminum, making them tough enough for both base and mobile operations. The passive cooling system keeps them from overheating during long sessions.

Front Panel Features
The front panel features the touch screen and a few physical buttons and knobs for essential controls like volume and tuning. It's a great mix of modern touch and traditional tactile feedback.

All the Ports You Need
Dual antenna ports, audio, and data connections (USB, Line In/Out), and a protected power input make these radios versatile and easy to connect to other equipment.

RS-998: The Powerhouse
The RS-998 is the big brother of the Wolf DDC/DUC. Here's what sets it apart:

1. Power Output: Up to 100W transmission power. Great for those who need more oomph.
2. Built-in Antenna Tuner: Automatically adjusts to the antenna impedance.
3. Extra Durability: Even more rugged, perfect for heavy-duty use.

Pricing (in ZAR and USD)
Here's the scoop on the pricing before any import duties or tax:

- Wolf DDC/DUC: About ZAR 17,717.50 (US$ 950).
- RS-998: Around ZAR 33,570.00 (US$ 1,800).

Sure, they're an investment, but with all the features and durability, they're worth every cent.

Where Can You Use These Radios?
Amateur Radio Fun
These radios are perfect for ham radio operators. Whether you're chatting with a buddy down the street or connecting with someone across the globe, you'll have all the tools you need.
Emergency Comms
In emergency situations, these radios can be lifesavers. Their robustness and high power output make them reliable for coordinating disaster relief efforts.
Research and Experimentation
Because they're open-source, these radios are great for tinkerers and researchers. Modify the software and firmware to your heart's content and discover new ways to use SDR technology.

Wrapping It Up
The Wolf DDC/DUC and RS-998 radios are truly game-changers in the amateur radio world. With wide frequency coverage, multiple modulation modes, and a ton of customization options, they're a dream for any radio operator. Plus, the continuous community support and firmware updates mean these radios will stay relevant and powerful for years to come.
Interested? Check out sites like AliExpress and Banggood for more details and to get your hands on one of these awesome radios. **Retevis currently have a special** on the 100W HF+UV All Mode DDC/DUC Transceiver Radio SDR Transceiver = https://www.retevis.com/100w-hf-uv-all-mode-ddc-duc-transceiver-radio-sdr-transceiver

Happy radioing!

The sBitx V3: Your New Favorite Radio

Author: Marius Lubbe ZS1ML

Hey, radio enthusiast!

Let's chat about something really exciting – the sBitx V3. Whether you're new to the world of amateur radio or a seasoned pro, this little powerhouse is designed to make your experience fun, educational, and super satisfying.

I hope to get my hands on a prebuilt version of this radio and bring you a full report about it and it various possible adaptations and uses.

Meet Ashhar Farhan: The Man Behind the Magic

First things first, let's talk about the brilliant and hardwaorking mastermind behind the sBitx V3 – Ashhar Farhan, also known by his call sign VU2ESE.

Farhan is pretty much a legend in the amateur radio community. He's the genius who created the BITX series, which has been a game-changer because of its simplicity, affordability, and reliability.

His goal? To make high-quality radio gear that's accessible to everyone, not just the tech-savvy pros. Farhan isn't just building radios; he's building a community where everyone can learn, share, and grow together.

The Philosophy: Keeping It Simple and Fun

When Farhan designed the sBitx V3, he focused on three main things: making it accessible, educational, and hackable. Here's the lowdown:

1. Accessible: Farhan wanted to make sure that anyone could get their hands on a great radio without breaking the bank. The sBitx V3 is affordable and designed so that even beginners can put it together with a bit of patience.
2. Educational: This radio isn't just for talking across the waves; it's a learning tool. Farhan built it so you can dive into both analog and digital aspects of radio, helping you learn as you go.
3. Hackable: The sBitx V3 is open-source, which means you can tweak, modify, and customize it to your heart's content. Farhan encourages everyone to dig in, experiment, and make the radio truly theirs.

The sBitx Journey: How It All Came Together

The sBitx V3 didn't just pop up overnight. It's the result of years of innovation, trial and error, and a whole lot of community feedback. Here's a quick trip down memory lane:

1. BITX Series: The BITX radios were where it all began. They were simple, effective, and a huge hit because they were so easy to build and customize. This laid the groundwork for what was to come.
2. sBitx V1 and V2: These earlier versions were Farhan's first steps into combining traditional analog tech with modern digital SDR (Software Defined Radio) technology. They were experimental, paving the way for the big leap forward.
3. sBitx V3: And here we are! The V3 takes everything that was great about the previous models and cranks it up a notch. It blends the reliability of analog with the flexibility of digital, giving you a radio that's high-performing and versatile.

FT8 Mode in action. This is a complete computer in one case.

Why You'll Love the sBitx V3
Let's break down some of the cool features that make the sBitx V3 stand out:

Receiver:

- Hybrid Design: It uses a superhet design with a 40 MHz intermediate frequency (IF), which makes filtering a breeze and helps keep your signal clear.
- Wideband Coverage: You can tune in to frequencies from 100 kHz to 30 MHz, giving you plenty of options for listening and operating.
- Digital Modes: The radio supports popular digital modes like FT8, RTTY, PSK31, and more, so you can experiment with different ways of communicating.

Transmitter:

- Power Output: The sBitx V3 delivers 25 watts on the 80m and 40m bands and adjusts power for other bands. This means you'll have reliable communication, no matter where you are.
- Clean Signal: It uses three-section low-pass filters to ensure that your transmissions are crystal clear.
- Two-Tone Generator: This feature is perfect for tuning your antenna and making sure your setup is working perfectly.

User Interface and Usability:

- Touchscreen and GUI: The radio comes with a Raspberry Pi 4 and a 7-inch touchscreen, making it super user-friendly. Plus, you can customize the interface using HTML/CSS/JavaScript to fit your style.
- Logging and Macros: Keeping track of your contacts is easy with the built-in logging and macro features. You can also automate repetitive tasks, making operations smoother.
- Web Accessibility: You can operate the sBitx V3 over WiFi through a web browser, which means you can control it remotely. How cool is that?

Portability:

- Compact and Lightweight: The sBitx V3 is small enough to fit in a backpack, making it perfect for field operations like Parks on the Air (POTA) or Summits on the Air (SOTA).
- Battery Operation: It works with lightweight LiPo batteries, giving you hours of operating time in the field.

Open Source and Hackable:

- Full Access: The sBitx V3's code and hardware are open-source, so you can modify and customize it to your liking.
- Community Support: There's a vibrant community ready to help you with modifications, troubleshooting, and sharing tips.

Made in India, Perfect for South Africa
Here's something extra special – the sBitx V3 is designed and built in India, with top-notch quality for the masses. It's ideally suited for South African users, with everything you need to take your amateur radio experience to the next level.

Conclusion: More Than Just a Radio
The sBitx V3 is more than just a radio; it's your gateway to learning, exploring, and having fun in the world of amateur radio. Farhan's vision has brought to life a radio that's accessible, educational, and endlessly customizable. Whether you're assembling it from a kit, tweaking the software, or taking it out on your next adventure, the sBitx V3 is built to make your experience richer and more rewarding.

So, order your completed unit today and start playing as if with any other radio, except with a lot more functionality, or grab your soldering iron, fire up your Linux skills, and dive into the world of the sBitx V3. Happy tinkering!

And remember, you can get it through Bombastik.co.za, who can handle the import for you, or you can do it yourself. Just keep in mind to factor in import costs, handling fees, and VAT. This is a radio that's designed for everyone, with a quality that's sure to impress. Enjoy the journey!

73 Marius ZS1ML

Die sBitx V3: Jou Nuwe Gunsteling Radio

Hallo daar, radio-entoesias! Kom ons gesels oor iets regtig opwindend – die sBitx V3. Of jy nou nuut is in die wêreld van amateur-radio of 'n ervare operateur, hierdie kragtige radio is ontwerp om jou ervaring pret, opvoedkundig en baie bevredigend te maak.

Ontmoet Ashhar Farhan: Die Man Agter die Legende..

Kom ons begin by die meesterbrein agter die sBitx V3 – Ashhar Farhan, ook bekend as VU2ESE.

Farhan is 'n legende in die amateur-radio gemeenskap. Hy is die brein agter die BITX-reeks, wat 'n deurbraak was danksy sy eenvoud, bekostigbaarheid en betroubaarheid.

Sy doel? Om hoë kwaliteit radio-toerusting vir almal toeganklik te maak, nie net vir die tegnies vaardige pro's nie. Farhan bou nie net radios nie; hy bou 'n gemeenskap waar almal kan leer, deel en saam groei.

Die Filosofie: Hou Dit Eenvoudig en Pret

Toe Farhan die sBitx V3 ontwerp het, het hy op drie hoof aspekte gefokus: om dit toeganklik, opvoedkundig en aanpasbaar te maak. Hier is hoe dit werk:

1. **Toeganklik**: Farhan wou seker maak dat enigeen 'n goeie radio in die hande kan kry sonder om die bank te breek. Die sBitx V3 is bekostigbaar en so ontwerp dat selfs beginners dit met 'n bietjie geduld kan bou.
2. **Opvoedkundig**: Hierdie radio is nie net vir gesels oor die luggolwe nie; dit is 'n leermiddel. Farhan het dit so gebou dat jy kan duik in beide analoog en digitale aspekte van radio, en leer terwyl jy gaan.

3. **Aanpasbaar**: Die sBitx V3 is open-source, wat beteken dat jy dit kan aanpas en verander soos jy wil. Farhan moedig almal aan om in te delf, te eksperimenteer, en die radio werklik hulle eie te maak.

Die sBitx Reis: Hoe Dit Alles Tot Stand Gekom Het
Die sBitx V3 het nie oornag verskyn nie. Dit is die resultaat van jare se innovasie, proef en fout, en baie terugvoer van die gemeenskap. Hier is 'n vinnige reis deur die geskiedenis:

1. **BITX Reeks**: Die BITX radios was waar dit alles begin het. Hulle was eenvoudig, doeltreffend, en het 'n groot treffer geword omdat hulle so maklik was om te bou en aan te pas. Dit het die grondslag gelê vir wat sou kom.
2. **sBitx V1 en V2**: Hierdie vroeë weergawes was Farhan se eerste stappe om tradisionele analoog tegnologie met moderne digitale SDR (Software Defined Radio) tegnologie te kombineer. Hulle was eksperimenteel, maar het die weg gebaan vir die groot sprong vorentoe.
3. **sBitx V3**: En hier is ons nou! Die V3 neem alles wat wonderlik was oor die vorige modelle en verbeter dit nog verder. Dit kombineer die betroubaarheid van analoog met die buigsaamheid van digitaal, wat jou 'n radio gee wat hoë-prestasie en veelsydig is.

FT8 Modus in werking.

Waarom Jy van die sBitx V3 Sal Hou...
Kom ons breek die koel kenmerke van die sBitx V3 af:

Ontvanger:

- **Hibriede Ontwerp**: Dit gebruik 'n superhet ontwerp met 'n 40 MHz intermediêre frekwensie (IF), wat filtering eenvoudig maak en help om jou sein duidelik te hou.
- **Wye Bandbreedte**: Jy kan inskakel op frekwensies van 100 kHz tot 30 MHz, wat jou baie opsies gee om te luister en te werk.
- **Digitale Modes**: Die radio ondersteun gewilde digitale modes soos FT8, RTTY, PSK31, en meer, sodat jy kan eksperimenteer met verskillende maniere om te kommunikeer.

Sender:

- **Kraguitset**: Die sBitx V3 lewer 25 watt op die 80m en 40m bande en pas krag aan vir ander bande. Dit beteken jy sal betroubare kommunikasie hê, maak nie saak waar jy is nie.
- **Skoon Sein**: Dit gebruik drie-seksie laagdeurlaatfilters om te verseker dat jou uitsendings kristalhelder is.
- **Tweeklankgenerator**: Hierdie funksie is perfek om jou antenna in te stel en seker te maak jou opstelling werk perfek.

Gebruikerskoppelvlak en Bruikbaarheid:

- **Raakskerm en GUI**: Die radio kom met 'n Raspberry Pi 4 en 'n 7-duim raakskerm, wat dit super gebruikersvriendelik maak. Plus, jy kan die koppelvlak aanpas met HTML/CSS/JavaScript om by jou styl te pas.
- **Logging en Makros**: Dit is maklik om jou kontakte by te hou met die ingeboude logging en makro funksies. Jy kan ook herhalende take outomatiseer, wat operasies gladder maak.
- **Webtoeganklikheid**: Jy kan die sBitx V3 oor WiFi bedryf deur 'n webblaaier, wat beteken jy kan dit op afstand beheer. Hoe koel is dit nie?

Draagbaarheid:

- **Kompak en Liggewig**: Die sBitx V3 is klein genoeg om in 'n rugsak te pas, wat dit perfek maak vir veldoperasies soos Parks on the Air (POTA) of Summits on the Air (SOTA).
- **Batterywerking**: Dit werk met liggewig LiPo-batterye, wat jou ure se bedryfstyd in die veld gee.

Oop Bron en Aanpasbaar:

- **Volle Toegang**: Die sBitx V3 se kode en hardeware is open-source, sodat jy dit kan aanpas en verander soos jy wil.
- **Gemeenskapsondersteuning**: Daar is 'n lewendige gemeenskap wat gereed is om jou te help met aanpassings, foutopsporing, en wenke deel.

Gemaak in Indië, Perfek vir Suid-Afrika
Hier is iets ekstra spesiaal – die sBitx V3 is ontwerp en gebou in Indië, met topgehalte vir die massas. Dit is ideaal vir Suid-Afrikaanse gebruikers, met alles wat jy nodig het om jou amateur-radio ervaring na die volgende vlak te neem.

Gevolgtrekking: Meer as net 'n Radio
Die sBitx V3 is meer as net 'n radio; dit is jou toegang tot leer, verkenning en pret in die wêreld van amateur-radio. Farhan se visie het 'n radio tot lewe gebring wat toeganklik, opvoedkundig, en eindeloos aanpasbaar is. Of jy dit nou uit 'n kit bou, die sagteware aanpas, of dit saamneem op jou volgende avontuur, die sBitx V3 is gebou om jou ervaring ryker en meer bevredigend te maak.

So, bestel vandag nog jou voltooide eenheid en begin net speel net soos enige ander radio, maar met baie meer funksionaliteit, of gryp jou soldeerbout, laai jou Raspberry Pi - Linux vaardighede op, en duik in die wêreld van die sBitx V3. Lekker eksperimenteer!

En onthou, jy kan dit kry deur **Bombastik.co.za**, wat die invoer vir jou kan hanteer, of jy kan dit self doen. Hou net in gedagte om invoer koste, hanteringsfooie, en BTW by te reken. Dit is 'n radio wat vir almal ontwerp is, met 'n gehalte wat jou sal beïndruk. Geniet die reis!

73 Marius Lubbe ZS1ML

TECHNICAL MUSINGS:

In-Depth Exploration of Local Oscillator (LO) Bands

Or…Concepts I researched as I wanted to know more about what it means.

Marius Lubbe ZS1ML

1. The Role of Local Oscillators in Superheterodyne Receivers

The superheterodyne receiver, a cornerstone of modern radio technology, relies on a local oscillator (LO) to convert a high-frequency signal to a lower, intermediate frequency (IF) that can be more easily processed. This conversion process, known as heterodyning, is central to the operation of these receivers.

- Frequency Conversion: The primary role of the LO is to shift the incoming radio frequency (RF) signal to the intermediate frequency. The LO generates a signal that either adds to or subtracts from the RF signal, depending on whether the LO is set above or below the desired signal frequency. The result is an IF, which is the difference between the LO frequency and the RF frequency.
- Intermediate Frequency (IF): The IF is typically lower than the original RF signal, making it easier to filter, amplify, and demodulate. The choice of IF is crucial because it affects the receiver's sensitivity and selectivity. A common IF in many radio receivers is 455 kHz, but this can vary depending on the application.

2. LO Bands and Their Importance

LO bands refer to the range of frequencies that the LO can generate. The selection of an LO band is essential for various reasons:

- Coverage of Desired RF Bands: The LO must be tunable over a range that allows the receiver to cover the desired RF bands. For example, in a shortwave receiver covering 3 MHz to 30 MHz, the LO must be able to generate frequencies that can mix with any signal in this range to produce the desired IF.
- Image Frequency Rejection: One challenge in superheterodyne receivers is the presence of image frequencies. An image frequency is a signal at a different frequency that can also produce the same IF when mixed with the LO. Proper LO design and filtering are necessary to reject these unwanted signals, which can otherwise interfere with the desired signal.
- LO Stability and Phase Noise: The stability of the LO is critical. Any drift in the LO frequency can cause the IF to drift, leading to signal loss or distortion. Additionally, phase noise, which is the rapid, short-term frequency fluctuations of the LO, can degrade the performance of the receiver, particularly in high-sensitivity applications.

3. Practical Applications of LO Bands

LO bands are utilized in various applications across different types of radio equipment:

- Broadcast Radio Receivers: In AM and FM radios, the LO is used to tune the receiver to the desired station. The LO frequency is adjusted so that the difference between the LO and the station frequency equals the IF, which is then processed to extract the audio signal.
- Communication Receivers and Transceivers: In more sophisticated communication systems, such as those used in amateur radio, military communications, or commercial two-way radios, multiple LO bands may be employed to cover a wide range of frequencies. This allows the receiver or transceiver to operate across multiple bands, such as HF, VHF, and UHF.
- Spectrum Analyzers: In a spectrum analyzer, the LO is used to sweep across a range of frequencies, allowing the device to display the power of signals within that range. The precision and stability of the LO directly impact the accuracy of the spectrum analysis.

- Frequency Synthesizers: Modern receivers often use frequency synthesizers, which generate LO signals by mixing signals from multiple sources. This allows for precise tuning and the ability to cover a wide range of frequencies with a single LO.

4. Technical Considerations in LO Design
Designing an LO involves several technical considerations:

- Tuning Range: The LO must be tunable across the entire range of frequencies that the receiver needs to cover. This often requires careful design of the oscillator circuitry, including the use of varactors or phase-locked loops (PLLs) to achieve the desired range.
- Phase Noise: Reducing phase noise is essential, particularly in high-performance receivers. Low phase noise minimizes signal distortion and improves the receiver's ability to handle weak signals.
- Temperature Stability: The LO's frequency should remain stable across a range of operating temperatures. Temperature compensation techniques, such as using temperature-stable components or compensating circuits, are often employed to maintain stability.
- Power Consumption: In portable or battery-powered devices, the power consumption of the LO is a critical factor. Efficient LO design can extend battery life without sacrificing performance.

5. Advanced Concepts: Multiple LO Stages and Dual Conversion
In more advanced receivers, multiple LO stages may be used. This is known as dual or triple conversion.

- Dual Conversion: In a dual conversion receiver, two LOs are used to convert the RF signal to two different IFs. The first LO mixes the RF signal to a higher IF, and the second LO further converts it to a lower, final IF. This approach helps to improve image rejection and selectivity.
- Triple Conversion: Similarly, a triple conversion receiver uses three LOs, allowing for even finer control over image rejection and other performance parameters. This is often used in very high-performance or specialized communication systems.

6. Emerging Technologies and Future Trends
The field of RF design is continually evolving, and so is the technology behind LO bands:

- Software-Defined Radios (SDRs): SDRs are increasingly replacing traditional hardware-based receivers. In an SDR, the LO functions may be implemented in software, offering greater flexibility and the ability to process a broader range of signals. This shift is also leading to innovations in how LO signals are generated and managed.
- Direct Conversion Receivers: Unlike superheterodyne receivers, direct conversion receivers convert the RF signal directly to baseband (zero IF) without an intermediate frequency. This eliminates the need for traditional LO bands but introduces new challenges, such as dealing with DC offsets and I/Q imbalance.
- Integrated Circuit LOs: Advances in semiconductor technology have led to the development of highly integrated LOs on a chip, reducing size, cost, and power consumption while improving performance.

Conclusion
LO bands are a fundamental concept in the design and operation of radio receivers, particularly those based on the superheterodyne architecture. Understanding how LO bands work and their importance in frequency conversion, image rejection, and receiver performance is crucial for anyone involved in RF design or communications technology. As technology advances, the role of LOs continues to evolve, with new approaches such as SDRs and integrated circuits pushing the boundaries of what is possible in RF communications.

Build Your Own Transmitting Air Variable Capacitors!

By: David Hammack, N4DFP

As I was building my transmatch, I became increasingly dissatisfied with my choice of capacitors. They were too small for more than about a hundred watts, and the ganged capacitor was in pretty sad shape.

The frame was rusted and I could not remove all of the oxidation from the plates. I had a very nice Hammerlund 450pf that would do well for the Input Tuning, but I didn't have an equivalent ganged capacitor to use for Output Tuning. I am temporarily disabled and have no income at the moment, so it looked as if my transmatch would either be constructed of inferior parts or put on hold indefinitely.

As I was looking over the Web, I came across an article by DL5DBM, Anwar von Sroka on building your own capacitors. It looked pretty simple, but I was concerned that the materials would strain my very limited budget. I did some thinking and looked around my local hardware store to check the price of materials. I found that the heavier gauge sheet metal was beyond my price range, but a 10' roll of aluminum roof flashing was only about $4.00. I figured I could manage that, so I looked for the other materials. A 3' stick of 1/4" all-thread was only $0.99. I couldn't find the spacers, and did not have a tubing cutter to make them with. I knew from experimentation that the spacing on the Hammerlund Capacitor's plates was the same as a 1/4" nut, so I decided to use nuts as spacers. I didn't feel the flashing would be suitable to make the contact spring for the rotor, so I found a small compression spring to use for tensioning the rotor to the contact plate. I also decided to use nylon filled stop nuts for securing and adjusting the rotor.

The total bill of materials came to less than $15.00, and all materials were found at my local hardware store. I had some Lexan on hand to use for endplates, but any good non-conductive material such as PlexiGlass, Teflon, Nylon, Lucite, or phenolic would work. Usable scraps are usually available at reasonable prices at most glass shops or plastics suppliers. I would recommend not less than 1/4" thickness.

Construction

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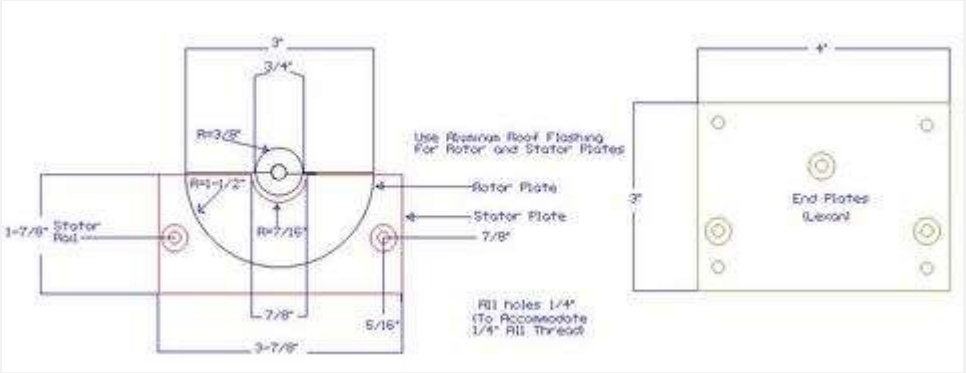
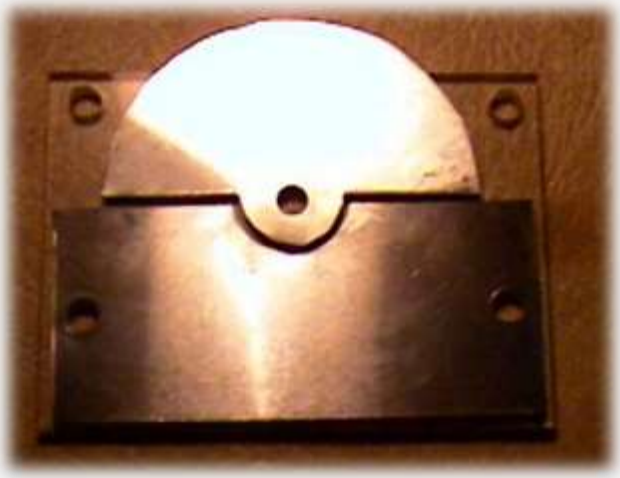
Rather than use Anwar's measurements, I modeled my capacitor on the Hammerlund. Since it was 25 plates on the rotor and 24 plates on the stator, rated at 450pf, I figured that 12 rotor and 12 stator plates would give me something on the order of 220pf. I measured the Hamerlund as illustrated:

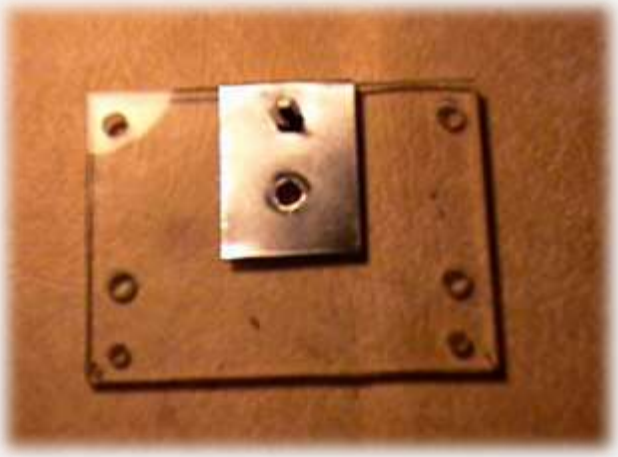


This layout was drawn with Cadvance 6.5b, a free program available at www.cadvance.com

One major advantage to using flashing is the ease with which you can work it. It can be easlily cut with a good pair of utilty scissors. Do NOT use your XYL's favorite dress shears for this!

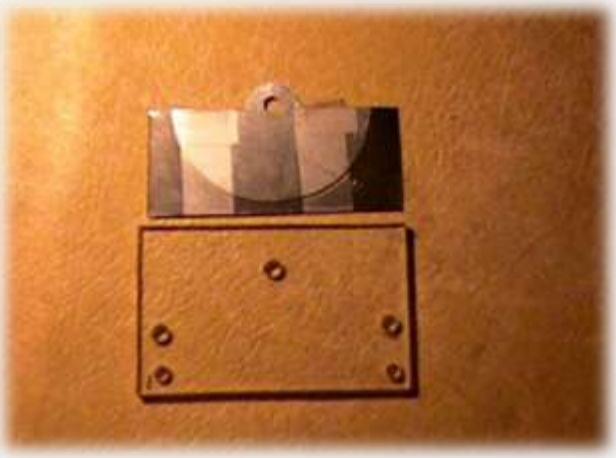


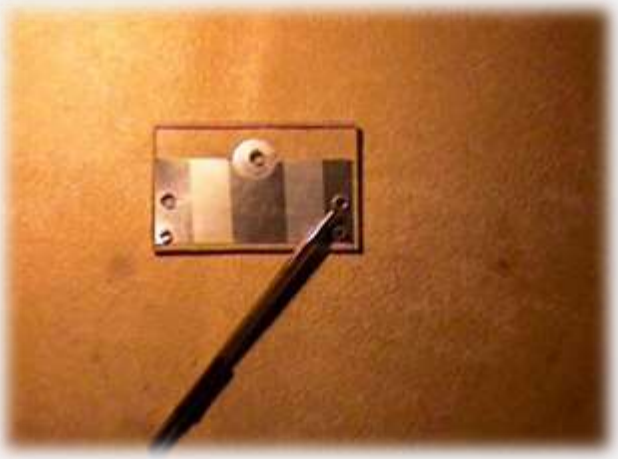
When making your plates, lay out one of each, cut them out, and then use them as templates to layout the rest. Here are the plates, all cut out. Since no one is perfect, make sure you mark an index on each plate as you cut it out. This will insure proper alignment when you assemble the device.



Drill the endplates. It is a good idea to drill both together so the holes will match front and back. To make the contact plate for the rotor, cut a strip of flashing long enough to cover the rotor shaft hole on both sides. After bending the strip over the endplate, drill a small hole to accommodate a 1" 6-32 brass screw.

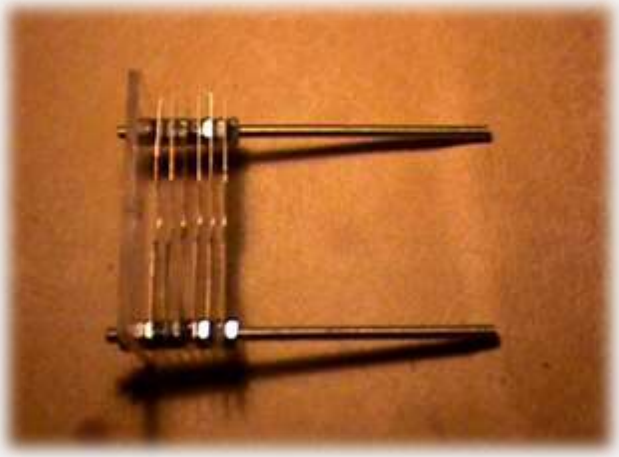
Next, drill the shaft holes in the rotor plates. Again, in order to insure the uniformity of the parts, you should drill all the holes at once. I used scrap Lexan to hold the plates in the jaws of a Vice-Grip. Dimple the top plate of the stack at the center of the hole. It is a good idea to drill a small pilot hole before drilling the 1/4" hole.





Now, take a rotor plate and a stator plate and tape them together in full mesh. Make sure the shaft tab on the rotor plate is properly aligned with the cut out in the stator plate.

Separate the rotor and stator plates you just marked. Stack all of the stator plates together insuring that the rotor tab cutout matches and tape them. This will keep them from slipping when you clamp them for drilling.



Begin mounting the stator plates. First flatten them as much as possible, removing the bows, twists, and curls. Make sure they are properly aligned. This is where the index marks you put on the plates come in handy.

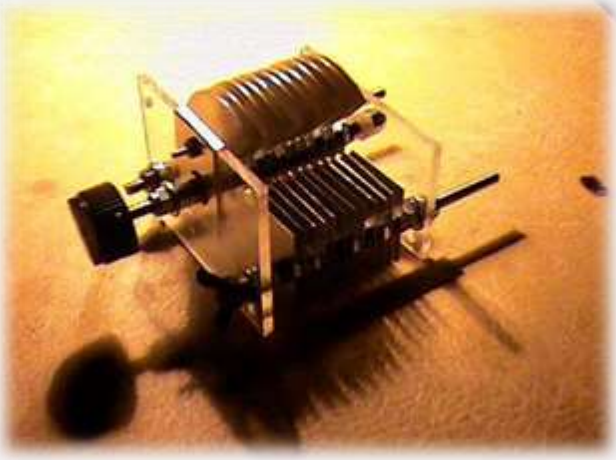
Align the shaft hole in the endplate with the shaft hole in the rotor plate and square the endplate over the parts to be marked. I used a carbide tip scribe for marking, but any sharp pointed object could be used. In a pinch, you could use the point on your pencil compass for marking.

Cut the all-thread for the stator rails. For a 220pf capacitor of 12 plates, 4-1/2" is adequate. Mount these in the back end plate, leaving 3/8" to 1/2" beyond the outside nut. Secure them to the inside using 2 nuts per rail to leave adequate space for the rotor.

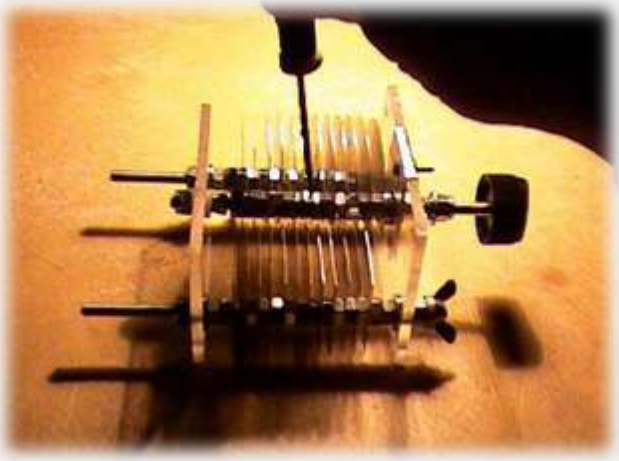
As you mount the plates, tighten the nuts finger tight - do NOT use a wrench. Excess torque will deform the plates, making alignment extremely difficult. Look for a bowing in the plate. Either the plate was not flat, or the nuts are too tight. Correct this now before proceeding to the next plate.

Once the stator is assembled, assemble the rotor, again flattening the plates as much as possible. The shaft should be cut an 1-1/2" to 2" longer than the stator rails. Use a stop nut as the last nut in the rotor assembly, and then a regular nut.

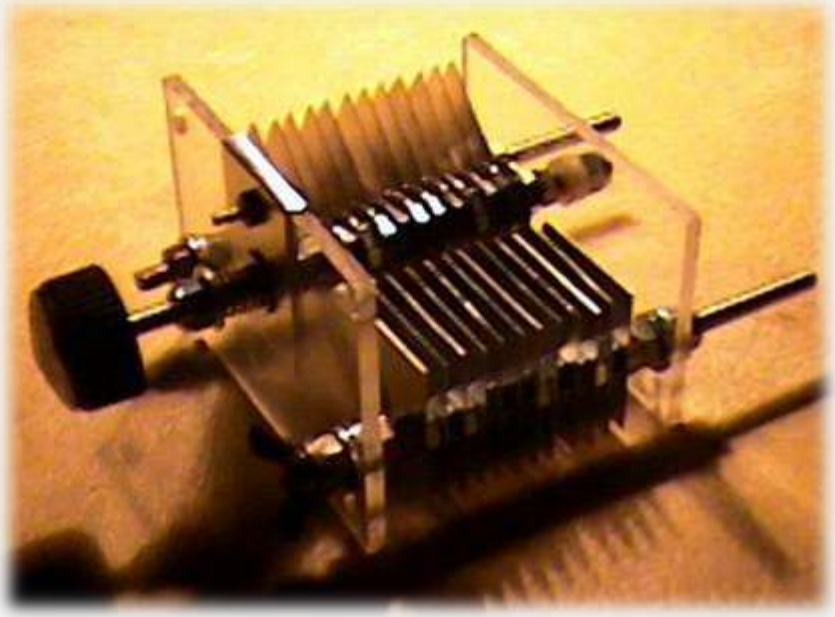
This will hold the regular nut allowing you to torque the first plate into position, and will later be used to adjust the turn tension. Assembly of the rotor will require a wrench. As illustrated, use some kind of spacer to tighten the plates against. This will insure that the plates remain level and allow you to torque the nuts fairly tightly.



Now you are ready for final assembly. Hold the completed rotor in a full un-mesh position and insert the shaft into the back endplate using 2 Teflon or Nylon washers on either side of the plate at the rotor shaft. You may need to add a washer to each side of the stator to allow space. Secure the rotor with a stop nut . Rotate the rotor to full mesh and install the front plate. Secure the plate with regular nuts on the stator. Place a flat washer, the compression spring, and another flat washer on the rotor shaft. Secure these with a stop nut. Tighten the stop nut till the spring compresses, tensioning the rotor shaft. Now tighten the stop nut on the other end of the rotor to center the rotor plates in the stator. Judge proper centering at the shaft.



It is possible that you find the rotor turns too freely to suit you. You can adjust turns tension by tightening the inside stop nut on the rotor shaft against the backplate to provide a more pleasing tension. Likely, you will need to adjust the rotor plates. This is accomplished using a small screwdriver to slightly bend the plates at the shaft. Be gentle, a little at the shaft translates to a large movement at the outer radius. If you have developed a slight bow in a stator plate, use the screwdriver in the same manner at the nuts on the stator rail. Only as a last resort should you attempt to adjust the capacitor with needle nosed pliers.



Now your capacitor is complete and ready for your project!

Conclusion
As I assmbled this unit, I came to the conclusion that Anwar's use of spacers, rather than nuts is probably a good idea. If I were using spacers, I would use a stop nut on either end of the assembly to prevent loosening. Flashing is not the best material to use. If you can find it easily, I would recommend a heavier gauge material. Anwar made a very valid point of which I was not aware when he critiqued my design, which I will pass on here. Sharp corners should be radiused to prevent arc over. It would be a simple matter to round of the corners with a mill file as you drill the holes. I suspect if I use significant power, I will probably have to rebuild the capacitor with radiused corners after it arcs over.

Transmitting air variables are becoming scarce and expensive, even at Hamfests, and the kit capacitor from TenTec is over $50.00. This is a viable alternative for medium power projects. Though I have not tested it, I suspect a carefully aligned capacitor of this type would easily carry a kilowatt. This would be perfect for a Transmatch or the coupling capacitor in a Loop Antenna without breaking the bank. Ham Radio is a fun hobby, but it doesn't necessarilly have to be expensive, as long as you carry on the HomeBrew tradition!

I would like to thank Anwar von Sroka, whose excellant article inspired this project.
Make sure you look at my Transmatch Project in which I used a homebrewed double ganged capacitor.

RADIOS, ACCESSORIES AND ELECTRONICS DEALER SECTION

- X50 Base Antennas @ R1095
- X200 Base Antennas @ R1395
- D3000N Discone Antenna @ R1650
- Shengda Dual Band VHF/UHF Base Yagi @R1195
- CB Base End Fed Halfwave Vertical @ R1395
- Mag Mount @ R445 - Suited for Sirio Antenna or Any WEBB type fitting.
- CB Mobile Antenna - Sirio with PL259 type fitting @ R695
- NL770L Mobile dual band @ R435
- NL770H Mobile dual band @ R435
- NL770S Mobile dual band @ R335
- CR9800 Quad Band Mobile Antenna @ R875
- Dual Band Mag Mount with Whip @ R545
- Mini Mag Mount @ R95 (has sma male connector)
- 6 in 1 Programming cable @ R305
- 8 in 1 Programming cable @ R370
- BaoFeng UV-5, UV82 etc Programming Cable@ R225
- BaoFeng UV-9 Programming Cable @ R225
- BaoFeng UV-5R 4Watt handheld dual band radio @ R650
- BaoFeng UV-5RM 8Watt Radio, including Airband Receive @ R850
- BaoFeng BF888 UHF Radio per Pair @ R585
- BaoFeng BF888 Additional Battery @ R120
- BaoFeng UV-5R Additional Battery @ R195
- BaoFeng UV-K5 Additional Battery @ R299
- BaoFeng UV-5RM Additional Battery @ R299
- BaoFeng UV-9R Additional Battery @ R320
- BaoFeng UV5 Charger Complete 220VAC @ R220
- BaoFeng UV5 Charger Cradle Only @ R185
- BaoFeng UV-K5 Charger Complete 220VAC @ R245
- BaoFeng BF888 Charger USB Type @ R180
- BaoFeng Battery Belt Clip @ R30
- BaoFeng Battery Replacement Body Clip @ R30
- USB Charger Cable for 3800mAh Battery @R140
- Car Charger USB @ R140
- Retevis RT3S DMR Dual Band Analog &Digital 5Watt Handheld @ R2595
- Retevis RT3S Programming Cable @ R250
- Retevis RT3S Additional Battery @ R345
- DMR Jumbo Spot @ R2295 (Complete with charger and setup)
- QYT KT8900 Dual Band Mobile Radio @ R1850
- QYT KT8900 Programming Cable @ R280
- QYT KT-WP12 Mobile Dual Band Radio @ R2400
- Anytone AT-5888UV Mobile Dual Band Radio @ R4695
- Anytone AT-D878UVII Plus Portable Dual Band DMR @ R4895
- TYT TH-9800 Quad Band 50Watt Mobile Radio with Cross Band Repeat @ R5195
- TYT TH-7800 Dual Band 50Watt Mobile Radiowith Cross Band Repeat @ R4650
- TYT MD-9600 Dual Band & Analog Mobile Radio + Programming Cable @ R5595
- TYT TH-8600 Dual Band Radio @ R2695
- TYT Programming Cable @ R250
- Microphone Replacement for TYT TH-7800/9800/8600 @ R350
- Surecom Repeater Controller SR-628 @ R2395
- Surecom SWR & Power Meter VHF/UHF SW-102 @ R1550
- Nissei Digital SWR & Watt Meter DG-503 @ R3695

- K33 Stainless Boot/Hatch/Bonnet Antenna Mount @ R345
- Cable Assembly for K33 @ R330
- ICOM CAT Cable @ R320
- Yaesu CAT/Programming Cable forFT857/897/817 @ R320
- SMA Female to SO239 Adapter @ R85
- RH951S Handheld Dual band Antennas with SMA Female connector @ R195
- RH951S Handheld Dual band Antennas with SMA Male @ R195
- Kenwood TS50 CAT Cable @ R360
- Digital Microscope with LCD Screen & Wi-Fi@ R1200
- Arduino Starter Kits @ R590
- PL259 10mm (RG213) Crimp Type @ R48
- PL259 5mm (RG58) Crimp Type @ R48
- PL259 Screw in Type 5mm and 10mm @ R47
- PL259 Duo 10mm with 5mm adapter (Bakelite) @ R55
- RG213 Mil Spec Coax @ R55 per meter
- RG58 Mil Spec Coax @ R17.80 per meter
- LMR400 Times Microwave @ R48 per meter
- CB Power Cables – 3 Pin, will fit Cobra and many other models @ R120
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Noem dat jy die advertensies hier gesien het asb.

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FT240-61	R322.85
FT240-77	R210.62
FT240-31	R190.00
FT240-43	R212.07
FT140-43sa	R38.00
FT240-43sa	R118.00
Tubular 10 x 6 x 18	R10.00
Tube 14.2 x 6.35 x 28.5	R20.00

FT240-43(sa) toroids
~~R143.21ea~~ R118 + PUDO
FT140-43(sa) toroids
~~R42ea~~ R38ea + PUDO

10m Coax Cable R295 + PUDO

PL259 Fly Lead R135 + PUDO

Hardware

Q40 EFHW antenna R515.00 + PUDO

Radio-Shop is my hobby while I'm still able to work as a Senior Project Manager. I'm thus sharing the information as-is and T&Cs may apply. Orders only valid on acceptance.

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VOORSIENER GIDS / SUPPLIER GUIDE

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.

10W

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

A recommendation for all radio amateurs how to use the bands, as revised at the Virtual General Conference, October 2020

Frequency (kHz)	Max Bandwidth (Hz)	Preferred Mode and Usage
2 200 m Band:		
135.7 – 137.8	200	CW, QRSS and narrow band digital modes
630 m Band:		
472 – 475 **	200	CW See NOTES
475 – 479 **	(#)	CW, digimodes See NOTES

(**) If a frequency is to be selected, particular attention must be paid to still existing Non-Directional Beacons (NDB) of the radio navigation service! (#) maximum bandwidth not specified, 500 Hz suggested.

160 m Band:		
1 810 – 1 838	200	CW, 1 836 kHz – QRP Centre of Activity
1 838 – 1 840	500	Narrow band modes
1 840 – 1 843	2 700	All modes – digimodes, (*)
1 843 – 2 000	2 700	All modes, (*)

Radio Amateurs in countries that have a **SSB allocation ONLY** below 1840 kHz, may continue to use it, but the National Societies in those countries are requested to take all necessary steps with their licence administrations to adjust the phone allocations in accordance with the Region 1 Band plan. (Davos 2005)

80 m Band:		
3 500 – 3 510	200	CW, priority for intercontinental operation
3 510 – 3 560	200	CW, contest preferred, 3 555 kHz – QRS Centre of Activity
3 560 – 3 570	200	CW, 3 560 kHz – QRP Centre of Activity
3 570 – 3 580	200	Narrow band modes – digimodes
3 580 – 3 590	500	Narrow band modes – digimodes
3 590 – 3 600	500	Narrow band modes – digimodes, automatically controlled data stations (unattended)
3 600 – 3 620	2 700	All modes - digimodes, automatically controlled data station (unattended), (*)
3 600 – 3 650	2 700	All modes, SSB contest preferred, 3 630 kHz – Digital Voice Centre of Activity, (*)
3 650 – 3 700	2 700	All modes, 3 690 kHz – SSB QRP Centre of Activity
3 700 – 3 775	2 700	All modes, SSB contest preferred 3 735 kHz – Image Centre of Activity 3 760 kHz – Reg 1 Emergency Centre of Activity
3 775 – 3 800	2 700	All modes, SSB contest preferred, priority for intercontinental operation

Music transmissions are allowed on this band (ICASA Annexure - 2015 Radio Frequency Spectrum Regulations)

60 m Band:

5 351.5 – 5 354.0	500	CW, Narrow band modes – digimodes See NOTES
5 354.0 – 5 366.0	2 700	All modes, USB recommended for voice operation (##) See NOTES
5 366.0 – 5 366.5	20 (!)	Weak signal narrow band modes See NOTES

It is strongly recommended that frequencies within the WRC-15 allocation only be used if there are no other frequencies available at 5 MHz under domestic (ITU-R article 4.4) permissions.

Local nets and long rag chew QSOs should not use the WRC-15 allocation at 5 MHz but should instead make use of the 3,5 MHz, 5 MHz domestic or 7 MHz bands where there is more spectrum available.

40 m Band:

7 000 – 7 040	200	CW, 7 030 kHz – QRP Centre of Activity
7 040 – 7 047	500	Narrow band modes – digimodes
7 047 – 7 050	500	Narrow band modes – digimodes, automatically controlled data stations (unattended)
7 050 – 7 053	2 700	All modes – digimodes, automatically controlled data stations (unattended)
7 053 – 7 060	2 700	All modes – digimodes
7 060 – 7 100	2 700	All modes, SSB contest preferred (*) 7 070 kHz – Digital Voice Centre of Activity 7 090 kHz – SSB QRP Centre of Activity
7 100 – 7 130	2 700	All modes, 7 110 kHz – Reg 1 Emergency Centre of Activity
7 130 – 7 175	2 700	All modes, SSB contest preferred, 7 165 kHz – Image Centre of Activity
7 175 – 7 200	2 700	All modes, SSB contest preferred, priority for intercontinental operation

30 m Band:

10 100 – 10 130	200	CW, 10 116 kHz – QRP Centre of Activity
10 130 – 10 150	500	Narrow band modes – digimodes

SSB may be used during emergencies involving the immediate safety of life and property and only by stations involved in the handling of emergency traffic.

The band segment 10 120 kHz to 10 140 kHz may be used for SSB transmissions in the area of Africa south of the equator during local daylight hours. News bulletins on any mode should not be transmitted on the 10 MHz band.

20 m Band:

14 000 – 14 060	200	CW, contest preferred, 14 055 kHz – QRS Centre of Activity
14 060 – 14 070	200	CW, 14 060 kHz – QRP Centre of Activity
14 070 – 14 089	500	Narrow band modes – digimodes
14 089 – 14 099	500	Narrow band modes - digimodes automatically controlled data stations (unattended)
14 099 – 14 101		IBP, exclusively for beacons
14 101 – 14 112	2 700	All modes – digimodes, automatically controlled data stations (unattended)
14 112 – 14 125	2 700	All modes
14 125 – 14 300	2 700	All modes, SSB contest preferred 14 130 kHz – Digital Voice Centre of Activity 14 195 kHz ± 5 kHz - Priority for DXpeditions 14 230 kHz – Image Centre of Activity 14 285 kHz – SSB QRP Centre of Activity

14 300 – 14 350	2 700	All modes, 14 300 kHz – Global Emergency centre of Activity

17 m Band:

18 068 – 18 095	200	CW, 18 086 kHz – QRP Centre of Activity
18 095 – 18 105	500	Narrow band modes – digimodes
18 105 – 18 109	500	Narrow band modes – digimodes, automatically controlled data stations (unattended)
18 109 – 18 111		IBP, exclusively for beacons
18 111 – 18 120	2 700	All modes – digimodes, automatically controlled data stations (unattended)
18 120 – 18 168	2 700	All modes, 18 130 kHz – SSB QRP Centre of Activity 18 150 kHz – Digital Voice Centre of Activity 18 160 kHz – Global Emergency Centre of Activity

15 m Band:

21 000 – 21 070	200	CW, 21 055 kHz – QRS Centre of Activity 21 060 kHz – QRP Centre of Activity
21 070 – 21 090	500	Narrow band modes, digimodes
21 090 – 21 110	500	Narrow band modes, digimodes, automatically controlled data stations (unattended)
21 110 – 21 120	2 700	All modes (excluding SSB), digimodes, automatically controlled data stations (unattended)
21 120 – 21 149	500	Narrow band modes
21 149 – 21 151		IBP, exclusively for beacons
21 151 – 21 450	2 700	All modes, 21 180 kHz – Digital Voice Centre of Activity 21 285 kHz – SSB QRP Centre of Activity 21 340 kHz – Image Centre of Activity 21 360 kHz – Global Emergency Centre of Activity 21 125 to 21 450 – Amateur satellites on a non-exclusive basis NS20_C4_Rec_08

12 m Band:

24 890 – 24 915	200	CW, 24 906 kHz – QRP centre of activity
24 915 – 24 925	500	Narrow band modes – digimodes
24 925 – 24 929	500	Narrow band modes – digimodes, automatically controlled data stations (unattended)
24 929 – 24 931		IBP, exclusively for beacons
24 931 – 24 940	2 700	All modes – digimodes, automatically controlled data stations (unattended)
24 940 – 24 990	2 700	All modes, 24 950 kHz – SSB QRP Centre of Activity 24 960 kHz – Digital Voice Centre of Activity

10 m Band:

28 000 – 28 070	200	CW 28 055 kHz – QRS Centre of Activity 28 060 kHz – QRP Centre of Activity
28 070 – 28 120	500	Narrow band modes – digimodes
28 120 – 28 150	500	Narrow band modes – digimodes, automatically controlled data stations (unattended)
28 150 – 28 190	500	Narrow band modes
28 190 – 28 199		IBP, regional time-shared beacons
28 199 – 28 201		IBP, worldwide time-shared beacons
28 201 – 28 225		IBP, continuous duty beacons

28 225 – 28 300	2 700 All modes – beacons
28 300 – 28 320	2 700 All modes – digimodes, automatically controlled data stations (unattended)
28 320 – 29 000	2 700 All modes, 28 330 kHz – Digital Voice Centre of Activity 28 360 kHz – SSB QRP Centre of Activity 28 680 kHz – Image Centre of Activity
29 000 – 29 100	All modes (Bandwidth removed 29 000 to 29 510 Recommendation NS20_C4_Rec_04)
29 100 – 29 200	All modes – FM simplex – 10 kHz channels
29 200 – 29 300	All modes – digimodes, automatically controlled data stations (unattended)
29 300 – 29 510	Satellite Links
29 510 – 29 520	Guard channel
29 520 – 29 590	6 000 All modes – FM repeater input (RH1 – RH8)
29 600	6 000 All modes – FM calling channel
29 610	6 000 All modes – FM simplex repeater (parrot - input and output)
29 620 – 29 700	6 000 All modes – FM repeater outputs (RH1 – RH8)

Definitions

All modes - CW, SSB and those modes listed as Centres of Activity, plus AM (Consideration should be given to adjacent channel users)

Image modes - Any analogue or digital image modes within the appropriate bandwidth, for example SSTV and FAX

Narrow band modes - All modes using up to 500 Hz bandwidth, including CW, RTTY, PSK, etc.

Digimodes - Any digital mode used within the appropriate bandwidth, for example RTTY, PSK, MT63, etc.

Notes

The frequencies in the band plan are understood as “transmitted frequencies” (not those of the suppressed carrier!)

To prevent any out of band transmission the maximum dial setting for USB Voice mode should be 3 kHz below upper band edge on bands 20 m to 10 m.

(*) - Lowest dial setting for LSB Voice mode: 1 843, 3 603 and 7 063 kHz

(##) - Highest dial setting for USB Voice mode on the 60-m band: 5 363 kHz

CW QSOs are accepted across all bands, except within beacon segments. (Recommendation DV05_C4_Rec_13)

Amplitude modulation (AM) may be used in the telephony sub-bands providing consideration is given to adjacent channel users. (NRRL Davos 2005).

Sideband Usage

Below 10 MHz lower sideband (LSB) is recommended and above 10 MHz use upper sideband (USB).

The exception to this is on the 5 MHz band where USB is recommended.

630 m band:
Details shown in the band plan above should be understood as “proposed usage.” (VA14_C4_Rec_02)

60 m band:
Details shown in the band plan above should be understood as “proposed usage.” (VIE14_C4_Rec_02)

Contests

Where no DX traffic is involved, the contest segments should not include 3 500 – 3 510 kHz or 3 775 - 3 800 kHz.

Non-contesting radio amateurs are recommended to use the contest-free HF bands (30, 17 and 12 m) during the largest international contests. (DV05_C4_Rec_07)

Contests should be restricted to 160, 80, 40, 20, 15 and 10 m. That is 60, 30, 17, and 12 m bands shall not be used for contests. (VIE16_C4_Rec_06 *) (* to be ratified at General Conference 2017)

For more recommendations about contest segments see the IARU Region 1 HF Manager Handbook.

Unmanned transmitting stations:

The term “automatically controlled data stations” includes Store and Forward stations.

IARU member societies are requested to limit this activity on the HF bands.

It is recommended that any unmanned transmitting stations on HF shall only be activated under operator control except for beacons agreed with the IARU Region 1 beacon coordinator, or specially licensed experimental stations.

Member Societies are reminded of the recommendation in the IARU Region 1 HF Band Plan ‘that any unmanned transmitting stations on HF shall only be activated under operator control, except for beacons agreed with the IARU Region 1 Beacon Coordinator’.

Unmanned transmitting stations, and operation involving unmanned transmitting stations, must adhere to the frequency and bandwidth limits of the band plan.

The operator connecting to an automatically controlled unmanned transmitting station is responsible for not causing interference. This is particularly important in the 30 metre band where the amateur service only has secondary status.

Amateur radio operators may transmit messages via unmanned transmitting stations during coordinated emergency, and disaster preparedness exercises, limited to the duration of such exercises, using a bandwidth not exceeding 2 700 Hz.

Such communication should be announced regularly on the frequency, and radio amateurs not participating in the communication should cooperate by not transmitting on the frequency. (VA14_C4_Rec_06).

Beacons

For information about IARU Region 1 beacon policy see the IARU Region 1 HF Manager Handbook.

Remote controlled operation on HF

Remote controlled operation is defined to mean operation where a licensed operator controls an amateur radio station from a remote-control terminal.

Where a station is operated remotely, the following conditions shall apply:
Remote operation must be permitted, or not objected to, by the Regulatory Authority of the country where the station is located.

1. The call sign to be used should be the call sign issued by the Regulatory Authority of the country in which the station is located. This applies irrespective of the location of the operator.

2. It should be noted that the CEPT T/R 61-01 agreement only applies to people using their own call sign, with the appropriate country prefix, when the operator is actually visiting that country, not for remote operation.

3. Any further requirements regarding the participation of remotely controlled stations in contests or award programs are a matter for the various contest or award program organisers. (SC11_C4_REC_07), (VA14_C4_REC_04)

History

2005 Davos Introduction of band plan by bandwidth Effective 1 January 2006 2008 Cavtat Several modifications Effective 29 March 2009

CW segment extended from 7 000 – 7 035 kHz to 7 000 -7 040 kHz Narrow band modes, digimodes segment moved and extended from 7 035 - 7 038 kHz to 7 040 - 7 047 kHz.

Narrow band modes, digimodes, segment for automatically controlled stations (unattended) moved and extended from 7 038 – 7 040 kHz to 7 047 – 7 050 kHz

All modes, digimodes, segment for automatically controlled stations (unattended) moved from 7 040 – 7 043 kHz to 7 050 – 7 053 kHz

Introduction of SSB preferred contest segments 7 060 – 7 100 kHz and 7 130 – 7 200 kHz

Introduction of Digital Voice Activity Centres

2011 Sun City Several modifications Effective 17 August 2011

CW contest preferred segment 7 000 – 7 025 kHz withdrawn

Segment 29 100 – 29 200 kHz changed from maximum bandwidth of 2 700

		Hz to maximum 6 000 Hz. Introduction of new segment 29100 - 29200 kHz for FM simplex operation (10 kHz channels) Removal of FM simplex channels 29 520 – 29 550 kHz and 29 610 – 29 650 kHz Number of FM Repeater channels increased to eight, former FM simplex channels became new repeater input, respectively repeater output channels FM repeater channels renumbered, RH1 = 29 520 / 29 620 kHz, RH8 = 29 590 / 29 690 kHz Introduction of FM Simplex Repeater 29 610 kHz (parrot, input + output)	
2014	Varna	Several modifications Segment 29 000 – 29 100 kHz: Change from maximum bandwidth of 2 700 Hz to maximum 6 000 Hz Satellite segment 29 300 – 29 510 kHz: Removal of downlink restriction	Effective 26 September 2014
2016	Vienna	Several modifications * (* to be ratified by General Conference 2017) Introduction of narrow bandwidth segment with maximum bandwidth of 200 Hz from 3 570 kHz to 3 580 kHz Narrow bandwidth mode segment with maximum bandwidth of 500 Hz extended by 10 kHz now from 10 130 kHz to 10 150 kHz	Effective 01 June 2016
2020	VGC	a. Recommendation NS20_C4_Rec_04. Document NS20_C4_12. That the 6 kHz maximum bandwidth restriction in the IARU Region 1 10 metre band plan be removed in the segment from 29 000 – 29 510 kHz, noting that any experimental wide bandwidth operation must be on a non-interference basis to other stations, including the amateur satellite service segment at 29 300 – 29 510 kHz. b. Recommendation NS20_C4_Rec_08. Ratification of VIE19_C4_REC_03. To support global frequency harmonisation and given the outcome of the IARU Region 3 General Conference, it is proposed that the 21.125 - 21.450 MHz frequency band be designated for use by amateur satellites on a non-exclusive basis, noting that frequencies above 21.4 MHz are clearly preferred.	

Tot volgende keer!

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73, Marius ZS1ML