

MARS NEWSLETTER

(STRICTLY FOR PRIVATE CIRCULATION AMONG MEMBERS ONLY)



Regd.no.: 346/2023 | Regd.Office: Plot #85, Part-1, 1st Main Road, Golden Sea View Layout, Palavakkam, Chennai 600041

Executive Committee

President:

P.Thyagarajan - VU2PTR

Vice President:

K.Rajesh - VU2OW

Secretary:

N.Deepan - VU2DPN

Joint Secretary:

U.Balashanmugham - VU3UBS

Treasurer:

C.D.Vivekanandan - VU3CDV

Committee members

C.Shanmugham - VU2CSM

Sutharshan Kumar - VU2RZN

N.Arun Kumar - VU2BBF

D.N.Ramachandran - VU2AB

Abid Ansari - VU2AIV

Editorial team

C.Shanmugham - VU2CSM

Arun Kumar - VU2BBF

Abid Ansari - VU2AIV



The Editor's note

Hello fellow HAMs.

Amateur Radio is made up of many special interest groups (SIGs) such as, CW, AM, SSB, FM, HF, VHF, UHF, microwave, contesting, DX'ing, public service, ARES, RACES, repeaters, education, clubs, fox hunting, RTTY, Packet, APRS, Satellite, SDR, D-StarTM, P25, DMR, NXDN, kit building and Elmering, just to name a few.

There will always be something new that generates interest in our hobby!

In this newsletter, we focus on the DMR. As with other modes, in DMR too there are three levels of involvement. The first is as a **User**, where you begin with a single radio, and later, possibly you'll add a second or third. The next level is as a **Repeater operator** and the third level is as a **Network Operator**. OM Divakar, VU2FFW, tells us how to onboard the DMR wagon by configuring your digital handy.

Many HAMs in our club are getting older and are more accustomed to older technologies. Going digital is a means to connect the old with the new. At the same time we need to bring more youth and young adults into our hobby; they can relate to the newer technologies in a far better way.

Content sourced from: Amateur Radio Guide to Digital Mobile Radio (DMR)

John S. Burningham, D.I.T. - w2xab@arri.net

Contents

The Editor's note -

Hello from the newsletter team
- page 1

Table of Contents -

What will you find in this issue
- page 2

From the President's desk -

A summary of events by VU2PTR
- page 2

Net Check-in Contest -

Results declared
- page 4

AGM 2024 -

Annual General body meeting -
- page 5

Radio knowledge -

Aviation Digital Communication
- page 7

Members Eyeball QSO -

Quarterly meeting of members
- page 9

Know your rig -

Configure your DMR handy
- page 10

Celebrations -

Birthdays & Anniversaries -
page 14

Ragchew -

Let's talk
- page 16

From the President's desk



Dear members and friends,

Let me begin by thanking all of you for your kind support and continued encouragement. My colleagues on the Committee and I consider it a privilege that you have thought fit to repose faith and trust in us. Our committee has been regularly organising many events for the members of the society.

On 31st August we had our first general body meeting which was well attended by the members. Hope my tech talk on HF RF linear amplifiers was informative to all.

OM Sampath presented an excellent power point on "Understanding Air band Radio terminologies" on 28th September 2024. His presentation gave members a clear picture on Air band radio communication and the hardware installation. The audio clippings were quite interesting to listen. OM Sampath clarified the members doubts to the satisfaction of all.

The committee is planning for a field day. Scouting for a good location is in progress. Also, plans are in the pipeline for the conduct of a workshop on home brewing a Ham related gadget.

I am sure members will engage whole-heartedly in these events, extending their support. I request members to participate in large numbers for the meetings and other programmes.

I would like to congratulate all the prize winners of the August net check-in contest.

I wish all members and their family happy Dasara and Deepavali.

73s

P.Thyagarajan

VU2PTR



BOB SIMPLETON'S GUIDE TO QUARTER WAVE ANTENNAS

brought to you by
**Amateur
Radio
Trader**

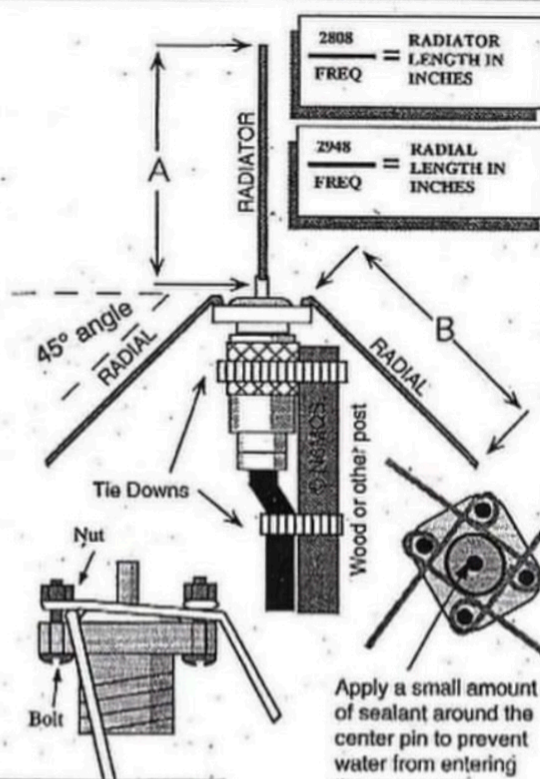
One of the simplest antennas you can build is a quarterwave ground plane antenna. It is small in size and is inexpensive.

The only part you will need to buy is a SO-239 panel mount connector. You can use an old wire hanger for the radiator and radials.

You will need to use your soldering iron or gun to attach the radiator to the center post of the SO-239. File any paint or coating from the radiator wire before soldering. Cut the radiator to the proper length before soldering it. If you can find a short copper tube to help secure the radiator to the SO-239, your antenna will stand up to high winds.

The radials may be soldered or attached with screws. Screws are the easier method if you take the time to overlap them as shown in the diagram. Cutting the radials may be done after the construction is complete.

The radials should be bent to an angle of 45 degrees for 52 ohm base impedance. If the radials are perpendicular to the radiator, the base impedance is approx. 36 ohms. Radials parallel to the radiator have an impedance of approx 75 ohms.



FREQUENCY CUTTING CHART

RADIATOR FREQ	RADIALS	RADIATOR FREQ	RADIALS	RADIATOR FREQ	RADIALS
28.1	99.93	104.93	144.0	19.50	20.48
28.2	99.57	104.55	144.5	19.43	20.40
28.3	99.22	104.18	145.0	19.37	20.33
28.4	98.87	103.82	145.5	19.30	20.26
28.5	98.53	103.45	146.0	19.23	20.19
28.6	98.18	103.09	146.5	19.17	20.13
28.7	97.84	102.73	147.0	19.10	20.06
28.8	97.50	102.38	147.5	19.04	19.99
28.9	97.16	102.02	148.0	18.97	19.92
29.0	96.83	101.67			
29.1	96.49	101.32	220.0	12.76	13.40
29.2	96.16	100.97	220.5	12.73	13.37
29.3	95.84	100.63	221.0	12.71	13.34
29.4	95.51	100.29	221.5	12.68	13.31
29.5	95.19	99.95	222.0	12.65	13.28
29.6	94.86	99.61	222.5	12.62	13.25
29.7	94.55	99.27	223.0	12.59	13.22
29.8	94.23	98.94	223.5	12.56	13.19
29.9	93.91	98.61	224.0	12.54	13.16
50.0	56.16	58.97			
50.5	55.60	58.38			
51.0	55.06	57.81			
51.5	54.52	57.25			
52.0	54.00	56.70			
52.5	53.49	56.16			
53.0	52.98	55.63			
53.5	52.49	55.11			
54.0	52.00	54.60			
			423.0	6.64	6.97
			424.0	6.62	6.95
			425.0	6.61	6.94
			426.0	6.59	6.92
			427.0	6.58	6.90
			428.0	6.56	6.89
			429.0	6.55	6.87
			430.0	6.53	6.86
			431.0	6.52	6.84
			432.0	6.50	6.83
			433.0	6.48	6.81
			434.0	6.47	6.79
			435.0	6.46	6.78
			436.0	6.44	6.76
			437.0	6.43	6.75
			438.0	6.41	6.73
			439.0	6.40	6.72
			440.0	6.38	6.70
			441.0	6.37	6.69
			442.0	6.35	6.67
			443.0	6.34	6.66
			444.0	6.32	6.64
			445.0	6.31	6.63
			446.0	6.30	6.61
			447.0	6.28	6.60
			448.0	6.27	6.58
			449.0	6.25	6.57
			450.0	6.24	6.55

About Rubber Ducks

The rubber duck antenna on your handheld is not a very efficient antenna. The typical 2 meter rubber duck has a 5 db loss. If you have a 3 watt radio, your rubber duck will only radiate less than 1 watt!! A quarterwave antenna has 0 db loss and will allow all 3 watts to be radiated!!

Did you know...

Why we use 52 ohm coax ?

During world war II it was discovered that the minimum amount of material was needed to make a 52 ohm cable. It conserved critical war materials and increased profits for the manufactures!

Thanks to W3JIW for the info

artsci - http://home.earthlink.net/~artsci - all rights reserved (818) 843-4080 URL -

VHF Net check-in Contest

Overall 1st prize winners:

- VU3FTN
- VU2JA
- VU2PTR
- VU3RWQ
- VU3UKN
- VU3USI

Overall 2nd prize winners:

- VU2BBF
- VU3GGK
- VU2IKK
- VU2RDX
- VU3EYD
- VU3HXI
- VU2SDU
- VU3TBR
- VU3VWR

Morning 1st prize winners:

- VU2AB
- VU2DNY
- VU2FFW
- VU3JJT
- VU2JKX
- VU2LF
- VU3MOA
- VU2OW
- VU2VAU

Morning 2nd prize winners:

- VU2DH
- VU2DJR
- VU2DRK
- VU2GMN
- VU2GPS
- VU3MES
- VU2RJV
- VU3VVS
- VU3WAW
- VU2BOA
- VU3CUT
- VU2CWO

Evening 1st prize winners:

- VU2MTS

Evening 2nd prize winners:

- VU2INA
- VU3KVB
- VU2EMB
- VU2YNT

VHF Net Check-in Contest

We started off this quarter July-Sep'24 with a key event in the month of August - the VHF Net Check-in Contest. The contest was ably managed by our omnipresent VU2DPN and assisted by the evergreen VU2JSM.

An overwhelming number of stations actively participated and checked in with competitive spirit every morning and evening.

Six stations bagged the overall 1st prize and nine bagged the overall 2nd prize. The number of winners this year increased greatly as compared to the previous year. Bravo!

In the morning check-in 9 stations carried home the 1st prize and 12 stations took the 2nd.

The evening check-in saw just one station take the 1st prize whereas 4 stations were awarded the 2nd prize.

Hearty Congratulations to all the prize winners!

...and many thanks to VU2DPN & VU2JSM

Annual General Body Meeting

The 1st AGM of the MARS Amateur Radio Society was held on Saturday, 31st Aug, 2024 at 6.30 pm IST (1830hrs) in the "Tulip Hall" of the Cosmopolitan Club, Mount Road, Chennai.



The meeting began with the members paying their respects to VU2PGM, OM Ashok Kumar, who became Silent Key on 22nd May 2024.



Then the Secretary VU2DPN, OM Deepan, requested the President OM P.Thyagarajan, VU2PTR, to welcome the members and conduct the AGM.



The President then called the meeting to order and welcomed the gathering. This was followed up by a detailed report on the formation of our club by the President. Thanks to the fervent efforts of the office bearers, our club - the MARS Amateur Radio Society - has finally got established.



He then invited the secretary to present the activity

report for the year 2023-2024 which was duly presented.

Subsequently, the Treasurer, VU3CDV, OM C.D.Vivekanandan, presented the audited accounts and addressed the queries raised by the members. The auditing firm of M/s.Guru & Co., Chartered Accountants, was appointed for the forthcoming financial year. Both these resolutions were unanimously adopted by the General body.





The highlight of meeting was the launch of our website <https://mars-ars.org/>. The Vice President, OM Rajesh, VU2OW, presented the website pages and the proposed enhancements. Members were encouraged to submit their ideas for bringing up the website for wider acceptance.

Then, OM Shanmugham, VU2CSM, introduced the speaker of the tech talk - VU2PTR.

The President then took us down memory lane, reliving his journey in the world of Amateur Radio. He then projected a Technical presentation on 'Construction and Testing of RF Linear Amplifier'. This was a very informative and well received presentation. He also demonstrated the Linear Amplifier that he had built recently.

Finally, the Secretary proposed a Vote of Thanks and members were served with a sumptuous Dinner.



Aviation Digital Communications - ACARS

Wing Commander V.R.Sampath, was a transport pilot in the Indian Air Force. He has about 20000 flying hours to his credit. He has flown the AVRO and the IL76 aircraft. From 2004, he has been a commander on the ATR42 and the Airbus A 320. His tired wings are now grounded.

Amateur Radio enthusiasts however, know him better as an active HAM and a home brewer since 1979 with the familiar call sign - VU2SAA.

Here he is, giving us a insight into the world of Aviation Digital Communications!



ACARS is Aircraft Communications Addressing and Reporting System. It is a digital communication system used by airlines to communicate with ATC or with the company operations control. It is a system very similar to SMS.

History of ACARS:

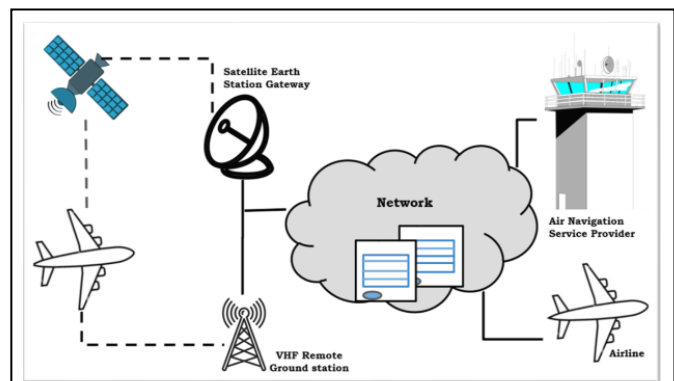
Before the introduction of ACARS all communication between the aircraft and the ground station was by voice, over VHF or HF. With the rapid expansion of aviation, a need was felt to reduce the use of Radio telephony. A digital transmission similar to telex or SMS would relieve the crew of repeated voice transmission and help in accurate record keeping. There was also a controversial requirement to pay pilots as per the hours flown. There was a prevalent belief that pilots increased the flying hours to earn a higher salary. In fact, this was one of the main aims of this system - to record the take-off and landing times. ACARS was first introduced in Jul 1978 by ARINC who developed the protocol and provide the ground station. Later another organisation which was a consortium of airlines called SITA also started providing ground stations.

Frequency of Use:

VHF in the air band from 118MHz to 136MHz is the main operating frequency. There is a standby HF frequency also but with limited HF ground stations, it has become obsolete. In India only two frequencies are used - 131.825MHz is used by Bird Consultation services (Collins Aerospace, earlier ARINC) & 131.725MHz is used by Société International de Télécommunications Aéronautique (SITA). These companies are the service providers. There is a parallel satellite network also but we will not discuss in this simple introduction

Cockpit equipment:

Cockpit equipment consists of a VHF transceiver, an interface unit, a printer and an alerting chime with light. The control display unit (CDU) of the flight management system (FMS) normally doubles as the interface unit.



SIMPLE ACARS NETWORK

Modulation Type:

Amplitude modulation is used in the ACARS Transmission. If you tune any air band receiver to one of the designated frequencies, you will hear the typical KHSSSS sound of low speed packet transmission. Ground stations are located near most civil airports. If you live near an airport you would hear the transmission from ground stations. The aircraft transmission would be heard much stronger if there is an air route nearby.

Decoding:

For decoding the ACARS transmission you would need an air band Receiver(RX) with an external antenna - normal 2m antenna should be more than enough. A lap top is needed for running the decoding software. The headphone jack of your RX needs to be connected to the 'mic in' jack of the laptop. Caution: keep all volumes at minimum - both, Rx volume and mike volume on the lap top before you start. On Windows 10, I have been using the Japanese language software KG-ACARS, which is very robust and gives 100% decode. Unfortunately, there seem to be no links for download. I have the Zip file for KG-ACARS _110, which can be extracted into a folder and used. When you try to download the file from my mail etc., Windows Defender is likely to block it. You have to click 'keep it' before it is deleted! It's very safe and I have been using it from 2014 on Windows XP and now on Windows 10.

In case you want to use RPi and RTL SDR, then there are more options. The simplest is to use SDR sharp and ACARSD. The instructions for download and installation are pretty straight forward and are there on the RTL-SDR pages.

Message type and what to expect:

From Aircraft:

1. 'OOOI' message indicates the airborne and landing time. 'O' - out of gate, 'O' - off ground, 'O' - on ground, 'I' - in gate. Time is in UTC with aircraft Call Sign and registration marking.
2. Plain text messages, position reports, Wx updates or route changes are some of the messages that can be found. Sometimes, you might see crew request for special handling like pax medical emergency, etc.
3. Encoded telemetry messages showing system status or data dumps.
4. Automated ping messages at predetermined times.

From ATC:

1. DCL messages Departure Clearances
2. D ATIS which is the Wx report with additional information about the runway in use etc.

First the Aircraft sends a request for ATIS or DCL and the ATC responds with the above messages.

Eyeball QSO - Members' Meeting

On 28th September 2024, the MARS Amateur Radio Society members' meeting was held at 'Hall no.1960 of the Dept. of Chemistry, College of Engineering, Guindy, Anna University.

After the members assembled in the hall, OM Deepan - secretary of MARS Amateur Radio Society - introduced the speaker, OM Sampath - VU2SAA who gave us a tech talk on "Understanding Air band Radio terminology".

He started with the over view of Radios on modern aircrafts and then he touched upon frequencies used in VHF/HF modes such as AM/SSB and Data mode using VHF and Satcom. He explained about ATIS, Towers, Radar and emergency frequencies in different ground stations like Chennai, Mumbai, Kolkata etc. He also exhibited layouts of controls in A320 cockpit. He enlightened the audience about the types of antennae used and their locations in the aircraft. He also spoke about the effect of lightning, static electricity and associated problems. The presentation highlighted the communications between the aircraft, towers and other stations during approach, landing and taxiing of the aircraft. All the slides were very informative and the participants enjoyed the presentation. Finally, the President, OM Thyagu, presented a memento to OM Sampath.

After the conclusion of the tech talk, the August VHF Net check-in contest prizes were distributed to all the winners of various categories.

The meeting concluded with a Vote of Thanks by the secretary, OM Deepan.



Know your Rig

From Valve tubes to semi-conductors to microprocessors - the Radio technology has undergone many transformations. And the latest is 'DMR'.

DMR or Digital Mobile Radio has got all the HAMs excited. Who better to guide us than our in-house expert Om Divakar, VU2FFW.

Read on to know how to make a lateral entry into the DMR world!



Digital Mobile Radio or more simply DMR is one of the many digital technologies initially created by Motorola for commercial use but later was adopted by Amateur Operators. This is a proprietary technology and hence only a few devices support it. Similar to DMR, other companies have their own digital formats; YAESU has YSF-Wires /C4FM and ICOM has D-Star. To operate these varied technologies we will need the specific brand of radios due to the proprietary nature. This is similar to the Video formats like MP4, BlueRay, AVI, etc., that was followed by different video majors, a couple decades back.

There are multiple ways we can latch on to the Digital Networks; I have listed them below:

- Using a Public repeater connected to Specific Network like BrandMeister (Like our Chennai DMR Repeater)
- Using a Personal Hotspot , this uses a Single Board Computer like RPi 3, 4, Pi Zero etc., with a RF Hat - this works like a simplex repeater in a shack and pushes your QSO to the internet.
- Using free mobile apps - by far the most cheapest option as there is no investment on radio or any other hardware.

Let's look at 'The Good, Bad and Ugly' of the above options.

- **Public Repeater:** Operators are locked to a single network in case of a public repeater, the repeater is mostly connected to a single DMR network / technology, with no ways to connect to others, e.g.: Chennai DMR Repeater is connected to Brandmeister network and one cannot use other DMR networks like TGIF, FreeDMR, DMR+, etc., Also, one needs to be within range of the repeater to trigger it.
- **Personal Hotspot:** Using a personal hotspot gives you the advantage of using multiple Digital technologies like D-STAR, Fusion, C4FM, etc., and the added benefit is that it can be carried wherever you go as a mobile repeater and you are connected to the entire world. But the catch is, you will need multiple radios for the multiple technologies that you enable in the hotspot.
- **Free mobile App:** This is for those who do not want to invest on hardwares and is also open to multiple digital technologies and networks. One has to only register one's callsign on the various networks and you are good to go anywhere; the (DMR) network follows. On the ugly side - you may not get the feel of a handy/base operation.

Given below are the setup instructions for the 'DroidStar' - a free DMR app for Android devices. Please follow the instructions to install and to explore DMR Dxing at your finger tips.

Know your Rig

DroidStar Setup for Chennai DMR Repeater -VU2MWG

DROIDSTAR Setup for BrandMeister Network Chennai DMR Repeater

Singara Chennai DMR Talkgroup 4040454 ColorCode :1 Timeslot 2

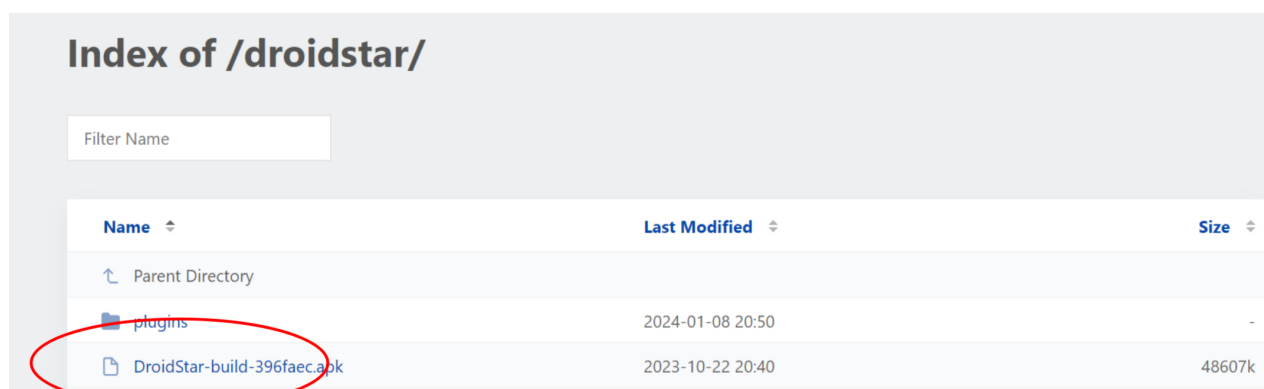
STEP 1: Creating DMR id (if you do not have already)

Skip this step if you already have DMR id like : 4040xxx

- Go to <https://radioid.net/>. Register yourself with Callsign and new password
- Upload a soft copy of your Licence and wait for ID to be shared to your mail id
(This may take 1 -2 days)
- Note down your DMR ID and the Login/Password created

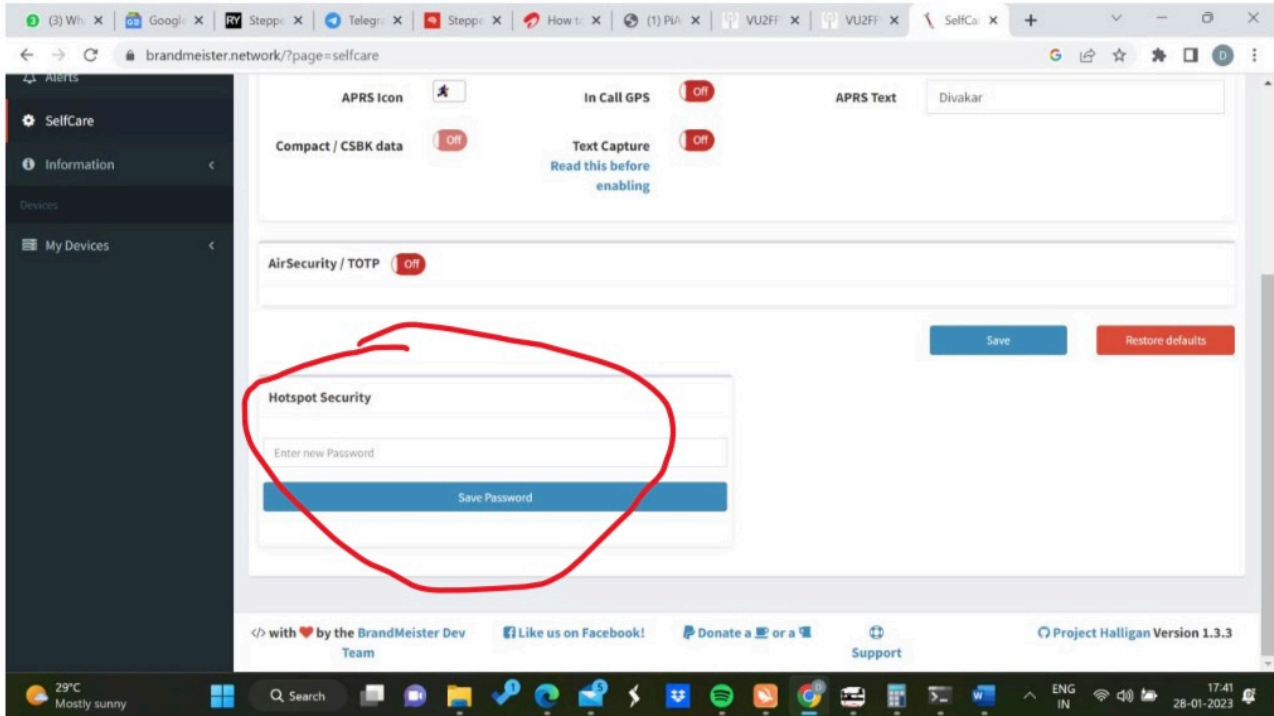
STEP 2: Download Droidstar App for Android

- Download Droidstar from <http://pizzanbeer.net/droidstar/> (Open this URL in your mobile)
- Click on the first link directly from mobile (in red circle)
- Modify security settings to allow unknown app installation
- Open Droidstar app after installation is complete



STEP 3: BrandMeister Network Connection Setup

- Register and Create Login/Password <https://brandmeister.network/> with your Callsign as login id
- Login with newly created username/password
- On the Left hand side, click on 'Selfcare'
- Ignore the top portion with APRS entries and scroll down to 'Hotspot Security'
- Create a Hotspot Security Password (New Password here different from your login password). This password should be given in BM Pass Box in Settings tab of Droidstar.



STEP 4: DroidStar Settings for BrandMeister Network

- Open the settings tab (2nd Tab)
- Enter your callsign as shown in screen
- Enter your DMR ID as shown in screen
- Choose any number in ESSID

BM Pass: BM Password is the hotspot security key that you have given in brandmeister login (this is the password from Section 3 step 5 above)

- Enter your Latitude and Longitude
- Enter your grid id
- You can get your grid locator from the link below (Give your call sign)

https://www.levinecentral.com/ham/grid_square.php?_cf_chl_tk=olsD2ltUXzEcCfa1mvB_EW4MEyn4eQhTV1pqlRqzXYY-1718855617-0.0.101-4308

- Update all other common settings as per the screen below
- Your BrandMeister setting is done

j. Press Update ID and Update Hosts button after all the settings are completed (This needs to be done every time something is changed in settings tab)

STEP 5: Select Main Tab

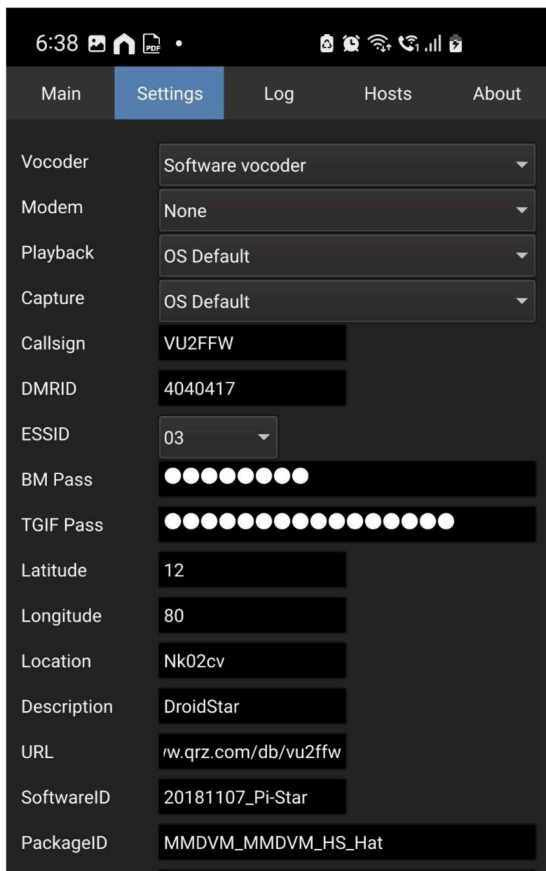
- In the Main tab, Choose any BrandMeister server that starts with "BM_NNNN_Country" (Norway, Netherlands, United Kingdom...etc)
- Enter TGID "4040454"
- Click Connect
- Press PTT once and you will get Rx if there are active stations/qso's.
- Leave vocoder empty (this version of Droidstar does not require vocoder)

STEP 6: How to Connect to Bangalore Repeater

1. Just Change TGID to 40480 in the Main Tab
2. Press Tx once
3. You will start getting Rx if there are active stations/qso's

STEP 7: How to Connect to Bangalore Repeater

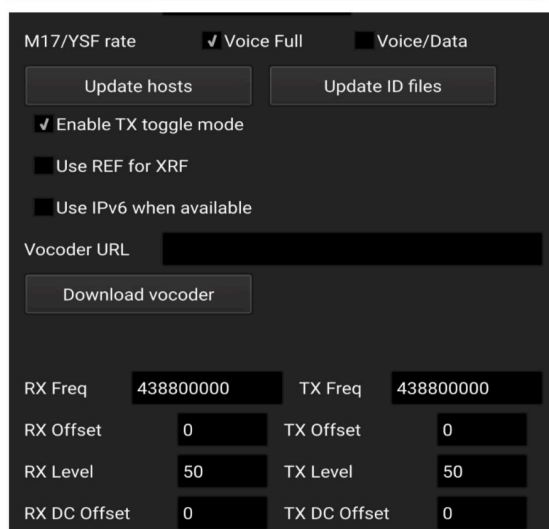
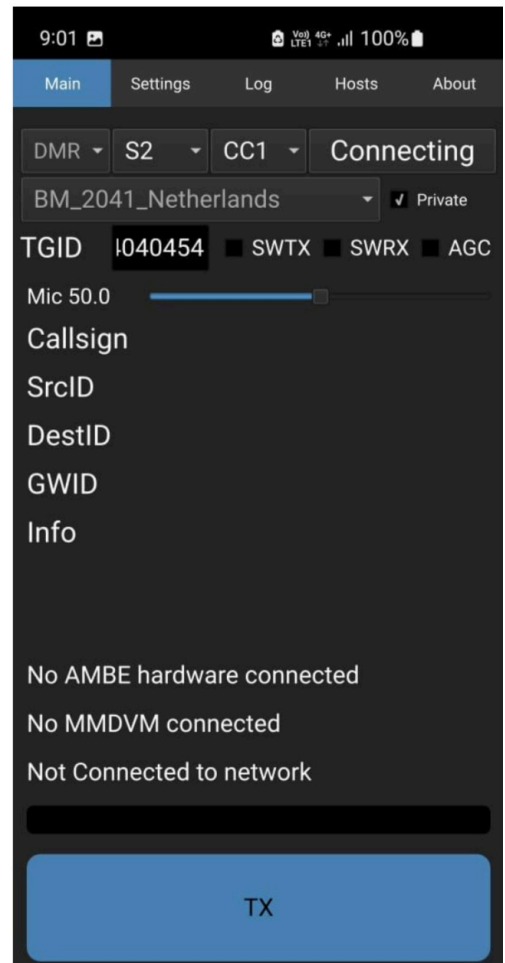
1. Just Change TGID to 40480 in the Main Tab
2. Press Tx once
3. You will start getting Rx if there are active stations/QSOs



CLICK
CONNECT

YOU SHOULD
BE
CONNECTED
NOW.

BY CHANGING
THE
TALKGROUP
ID, IT WILL
NOW BE
POSSIBLE TO
CONNECT TO
OTHER
TALKGROUPS
FOR Rx/Tx.


In this quarter, we celebrated many birthdays and wedding anniversaries. Our best wishes to all. May they continue to celebrate many more years of happiness.



Birthdays

JULY - 2024

1st July - VU2JSO
3rd July - VU2JFR
5th July - VU3VVS
6th July - VU2KLS
7th July - VU2CNM
11th July - VU2OVK
11th July - VU3TM
14th July - VU2DIV
15th July - VU3UKN
15th July - VU2BB
15th July - VU2KLG
17th July - VU3VEE
20th July - VU3CUT
23rd July - VU2SDU
25th July - VU2ZUB

AUGUST - 2024

2nd Aug - VU2MLS
4th Aug - VU2BOA
6th Aug - VU3WAW
7th Aug - VU2KNG
8th Aug - VU3JSH
8th Aug - VU2SAA
11th Aug - VU3UKT
12th Aug - VU3LBN
15th Aug - VU3VRP
15th Aug - VU3ASI
17th Aug - VU3LEN
21st Aug - VU2DPE
21st Aug - VU2YNT
22nd Aug - VU3GGNQ
22nd Aug - VU3KVQ
22nd Aug - VU2RKS
24th Aug - VU3GSK
25th Aug - VU2GHA
26th Aug - VU2SAY
26th Aug - VU3USI
27th Aug - VU2SBU
31st Aug - VU2RVK



SEPTEMBER - 2024

1st Sep - VU2RAI
2nd Sep - VU2OW
3rd Sep - VU2GGN
3rd Sep - VU3KTO
5th Sep - VU2GRM
8th Sep - VU3GTU
9th Sep - VU2TNS
11th Sep - VU2NCH
14th Sep - VU2DA
16th Sep - VU2SRA
18th Sep - VU2XSK
19th Sep - VU2PTR
19th Sep - VU2DRP
26th Sep - VU2GSG
27th Sep - VU3NKQ
29th Sep - VU2TSJ



Wedding Anniversaries

JULY - 2024

1st July - VU3STA
 2nd July - VU3TAB
 7th July - VU2SCB +
 VU2GRB
 11th July - VU2UMT
 13th July - VU2KLS
 13th July - VU2VRI

AUGUST - 2024

6th Aug - VU3VRN
 6th Aug - VU2SJP
 6th Aug - VUWSDJ
 16th Aug - VU3RMR
 17th Aug - VUWDA +
 VU2PVD
 20th Aug - VU2SEK
 20th Aug - VU3AVR +
 VU2MLI
 23rd Aug - VU2PTR +
 VU2PTV
 25th Aug - VU2SIG
 26th Aug - VU2YFS +
 VU2PMI
 28th Aug - VU2DRK +
 VU2MRK
 28th Aug - VU3UKN
 29th Aug - VU2RKS



SEPTEMBER - 2024

2nd Sep - VU2SCU +
 VU2KUM
 3rd Sep - VU2VMK
 6th Sep - VU2SJD
 7th Sep - VU2KND
 7th Sep - VU2GPS
 9th Sep - VU3VRV
 11th Sep - VU3ASB
 11th Sep - VU3GGK
 12th Sep - VU2DJR +
 VU3RDK
 14th Sep - VU3KMR
 15th Sep - VU2EMB

Over the Radio waves

VHF nets

Frequency:

145.775 MHz -ve 0.6 MHz shift

Morning net:

07:00 AM to 07:15 AM

Goodnight net:

21:00 PM to 21:15 PM

Vandu net:

145.550 MHz -ve 0.6 MHz shift

21:15 PM to 21:30 PM

DMR UHF net

Activity: Singara Chennai

Location: Chennai

Frequency:

435.800 MHz -ve 1.7 MHz shift

Time Slot: TS2

Colour Code: 2

Channel number on Chennai

CodePlug: CH-37

Morning net:

06:45 AM to 06:55 AM



Website:

<https://mars-ars.org/>



Email :

info@mars-ars.org



Image sourced from: newhams.info

Ragchew -

MARS newsletter would be happy to publish articles written by Amateur Radio enthusiasts in its forthcoming issues. We invite all HAMs to send in their manuscripts in Word format to the email id mentioned below. Please also send photos if possible in jpeg or png format.

Additionally, we invite your comments and critiques on the new look and feel of the MARS newsletter. We are open to suggestions for improvements.

In keeping with the times, this newsletter shall be available as an e-magazine only. We shall endeavour to provide future issues in a mobile friendly format too.

For sponsorship and advertisements please contact the President.

Any HAM interested in conducting workshops in Amateur Radio technology or communications related matters may contact the Executive committee for assistance.

If you want to demonstrate your homebrew kits or present a technical seminar on your experiments and expertise, you are most welcome.

We welcome HAMs who are interested in volunteering for the various activities that the club intends to conduct in future.



Image sourced from: [spreadshirt](#)