

STARLITE

THE NEWSLETTER FOR THE STOURBRIDGE AND DISTRICT A.R.S.



**G6OI
G6SRS**



ISSUE: AUGUST 2019



G4CVK

**STOURBRIDGE & DISTRICT AMATEUR RADIO SOCIETY
INCORPORATING
OLD SWINFORD HOSPITAL SCHOOL RADIO CLUB**

MEETINGS HELD AT

**OLDSWINFORD HOSPITAL SCHOOL
HEATH LANE
STOURBRIDGE
[8:00 TO 10:00 PM]**

VISITORS ALWAYS WELCOME

**THE SOCIETY HOLDS ITS FULL MEETINGS
ON THE 1ST AND 3RD MONDAYS EACH MONTH**

RSGB AFFILIATED SOCIETY

STARLITE

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www.g6oi.org.uk
<http://g6oi.ross-lewis.co.uk/index.html>

StARS Facebook Page:-
<https://www.facebook.com/groups/stourbridge.ars/>

All correspondence/enquiries should
be addressed to the Hon Secretary at:-

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c/o The Mill House
21 Mill Lane
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Kidderminster
DY10 3ND

Forthcoming Meetings

August 5 th	On Air. Informal. Digi Modes Group.
August 12 th	On Air. Informal. Digi Modes Group.
August 19 th	Main Meeting – Subject t.b.a.
August 26 th	Bank Holiday – No Meeting.
September 2 nd	On Air. Informal. Digi Modes Group.
September 9 th	On Air. Informal. Digi Modes Group.
October 7 th	On Air. Informal. Digi Modes Group.
October 21 st	Main Meeting – Subject t.b.a.
November 4 th	On Air. Informal. Digi Modes Group.
November 18 th	Main Meeting – Subject t.b.a.
December 2 nd	On Air. Informal. Digi Modes Group.
December 16 th	On Air. Informal. Digi Modes Group.
December 23 rd	Main Meeting – Subject t.b.a.
January 6 th 2020	First On Air & Informal Meeting Of 2020

Editor's Comment

The first item featured this month concerns the rather disturbing news that the 2m band is under threat and may be lost to the amateur radio service. It is my opinion that we are all responsible, to some extent, for this situation, as many (most?) of us have 2m rigs, but do not use them very often, if at all!

For many, many years we had two grades of licence, "A" for access to all amateur bands and "B" for access to VHF/UHF and above. In their wisdom, the licensing authority changed the requirements to three grades of licence (upgrading the old "B" licence to "A" status), giving all licensees access to all bands, the majority of whom appear to have a misguided view that HF is the place they must be operating. I really cannot understand this, because VHF can give surprising results, even under what appears to be "flat" conditions.

Most of us learned our operating practices on VHF/UHF, especially on 2m, whereas today some operators have NO idea of how to conduct a QSO, simply due to the fact that they have no experience with someone who can guide them. Personally, I was more than grateful for this guidance from the "Old Timers".

So, given the above comment about the grades of licence, who, in your opinion, would be ultimately responsible for the potential loss of the 2m band; us for the lack of use, or the licensing authority for changing the licence conditions, leading to the much reduced use of this allocation?

There is, also, an article entitled "*Getting Started On 2m SSB*", which I have included to attempt some encouragement to use 2m.

Remember this phrase?

USE IT OR LOSE IT!

Your comments or opinions would be welcomed by the Editor at g4xom@g6oi.org.uk

France proposes 144-146 MHz for Aeronautical Mobile Service

The next meeting of the CEPT WRC-19 Conference Preparatory Group takes place June 17-21 in Prague

France has submitted a paper with the subject Agenda Item 10 revised proposal for an agenda item for new non-safety aeronautical mobile applications.

The paper says:

"The list of bands that are proposed for study of possible new allocations to the aeronautical mobile service on a primary basis is revised by adding the band 144-146 MHz, the bands 5000-5010 MHz and 15.4-15.7 GHz being maintained."

"The decisions of previous conferences have introduced some restrictions to the use and have imposed constraints on the development of aeronautical mobile applications within some existing mobile allocations traditionally used by the aeronautical mobile applications."

At the same time, the number of manned and unmanned aircraft equipped with sensors has grown significantly in the past 20 years together with the need of bidirectional low to high data rate communications."

Aeronautical applications like fire surveillance, border surveillance, air quality and environment monitoring, traffic monitoring, disaster monitoring, terrain modelling, imagery (visible, infrared, radar, meteo), video monitoring require non-safety communications between various types of aeronautical platforms."

Consequently the need of non-safety data communications between various types of aeronautical platforms increases and so the need for new frequency bands."

Download PTA(19)090 France_Proposal on non-safety aeronautical mobile applications at CPG PTA # 7 - 17-21 June - Prague under Meeting Docs

<https://cept.org/ecc/groups/ecc/cpg/cpg-pt-a/client/meeting-documents/?flid=5624>

No Strong Opposition to 144 – 146 MHz Reallocation Proposal at CEPT Meeting

A World Radiocommunication Conference 2023 (WRC-23) agenda item proposing to study a range of frequencies, including potentially reassigning 144 – 146 MHz as a primary Aeronautical Mobile Service allocation, drew little opposition at a meeting of the European Conference of Postal and Telecommunications Administrations (CEPT) Project Team A. The team is responsible for some aspects of CEPT WRC positions, and the meeting was held June 17 – 21 in Prague, Czech Republic. Introduced by France, the proposal targeting 144 – 146 MHz would be part of a broader consideration of spectrum allocated to the Aeronautical Mobile Service. Another issue addressed during the meeting concerned

the sharing of the Amateur Radio 1240 – 1300 MHz band with Europe’s Galileo GPS system.

“We hear only one admin[istration] (Germany) opposed the 144 MHz proposal — no one else,” the UK Microwave Group **tweeted** following the meeting. Otherwise, it has been carried forward to the higher-level CEPT Conference Preparatory Group (CPG) meeting in August.

The International Amateur Radio Union (**IARU**), which was represented at the Prague meeting, expressed “grave concern” to any proposal that would include 144 – 146 MHz in the proposed Aeronautical Mobile Services agenda item. That comprises the entire available 2-meter band in ITU Region 1. IARU has pledged to make every effort to fully protect Amateur Radio interests and seek the support of regulators for their view.

IARU Region 1 President Don Beattie, G3BJ, said prior to the meeting that the IARU would “energetically” promote its opposition in Regional Telecommunications Organizations (RTOs) and the International Telecommunication Union (ITU) “to obtain assurances that the spectrum will remain a primary allocation for the amateur services.”

The 144 – 146 MHz band is allocated globally to the Amateur and Amateur Satellite services on a primary basis, and is the only globally harmonized Amateur Radio VHF band. A widely used segment of the Amateur Radio spectrum, 2 meters supports a broad base of terrestrial users, repeater systems, and satellite stations, including the International Space Station.

According to the meeting minutes, the proposal provides no justification for targeting 144 – 146 MHz, and the IARU believes that sharing with airborne systems likely would be difficult and lead to constraints on the development of the Amateur and Amateur Satellite services there. IARU suggested that alternative proposals might be developed that could provide further spectrum for the aeronautical applications without impacting this Amateur Service spectrum.

IARU is expected to brief member-societies, requesting that they discuss the French proposal with their governments in advance of the August CEPT-CPG meeting. France could seek to introduce the same proposal to study 144 – 146 MHz for aeronautical use into other RTOs.

Meanwhile, further discussion on the 23-centimeter band study proposal is anticipated prior to the Conference Preparatory Group meeting in August. The proposal was raised in the wake of reports of interference to the Galileo navigation system, but IARU has said it’s aware of only “a handful of cases” of reported interference to the Galileo E6 signal on 1278.750 MHz. Work on this issue will continue in other specialized CEPT forums in the interim.

Getting Started On 2m SSB – Try The “Other Mode” On 2 Metres

By An Unknown American Correspondent

In the past decade, a new breed of amateur radio transceiver has hit the marketplace — radios that cover from HF through VHF/UHF frequencies. These radios include the ICOM IC-706, the ICOM IC-9100, the Yaesu FT-100 and the Yaesu FT-991. This is not an exhaustive list since there are new radios being introduced every year with additional capability.

These radios include “all-mode capability” which means that they can operate FM, CW and SSB on the VHF bands. Clearly, FM is the most commonly used mode on VHF and UHF but having SSB opens up a whole new range of operating fun.

Why SSB?

FM is the most popular mode primarily due to the wide availability of FM repeaters. These repeaters extend the operating range on VHF and enable low power handheld transceivers to communicate over 100 miles. FM is also used on simplex to make contacts directly without repeaters. The main disadvantage of FM is relatively poor performance when signals are weak, which is where SSB really shines. A weak FM signal can disappear completely into the noise while a comparable SSB signal is still quite readable. How big of a difference does this really make? Perhaps 10 dB or more, which corresponds to one or two S-units. Put a different way, using SSB instead of FM can be equivalent to having a beam antenna with 10 dB of gain, just by changing modulation types. So, this is a big deal and radio amateurs interested in serious VHF work have naturally chosen SSB as the preferred voice mode. (You will also hear them using Morse code or CW transmissions, which is even more efficient than SSB.)

Just as an example of what is possible on SSB, during one VHF contest I was operating portable on Garden of the Gods Road in Colorado Springs. I had just dismantled my 2m Yagi antenna and was listening to 2m SSB on a short mobile whip antenna.

Suddenly, I heard WA7KYM in Cheyenne, Wyoming calling CQ from about 160 miles away. I figured that with my puny little antenna and only 10 watts of power, there was no way he was going to hear me. But, what the heck, it was a contest and it would be more points, so I gave him a call. To my surprise, WA7KYM heard me and we made the contact without much signal strength to spare. Now, to be accurate, this contact has more to do with WA7KYM’s “big gun” station (linear amplifier, low noise preamp and large antenna array) than it had to do with my 10 watts and a small whip. The key point here is that this contact would not have happened using FM and was only possible because of SSB.

When and Where to Operate

The SSB portion of the band runs from 144.100 MHz to 144.275 MHz and Upper Sideband (USB) is used. The 2m SSB calling frequency is 144.200 MHz, so that is the first place to look for activity or to call CQ. One of the realities of 2 m SSB operation is that many times, no one is on the air. There is just not that much activity out there, compared to 2m FM. Some amateurs get discouraged, turn off the radio and miss the thrill of working distant stations during a band opening. To get started on 2m SSB, the trick is to get on the air at times when you know there will be activity - during VHF nets and VHF contests.

Here in Colorado, the local Rocky Mountain VHF Plus net is on Monday night at 8:00 PM local time on 144.220 MHz (USB). This net is centred in the Denver area, but VHF enthusiasts check in from all around Colorado. It is very common to have stations check in from the bordering states of Wyoming, Nebraska, Kansas, New Mexico or even Oklahoma. More information on the net and other VHF activities can be found at <http://www.rmvhf.org>

VHF Contests

Think of VHF contests as “VHF activity weekend” since they are a great opportunity to just get on the air and work most of the local 2m SSB enthusiasts. The main contests are the ARRL June VHF Contest, the ARRL January VHF Contest, the ARRL September VHF Contest and the CQ

Worldwide VHF Contest in July. For more information, take a look at the article [How to Work a VHF Contest](#).

Equipment

The required equipment for getting started on 2m SSB is pretty basic – a transceiver capable of 2m SSB and a 2m antenna. If you own one of the rigs mentioned above, then you are probably ready to go. The 2m antenna you already have is probably vertically polarized since that is what we use for 2m FM, both mobile and base stations. All of the 1/4-wave and 5/8-wave antennas that are commonly used for 2m mobile work are vertically polarized. Most omni-directional base station antennas such as those made by Cushcraft, Diamond, Comet, etc. are vertical, too. These antennas will work for SSB but most of the really active 2m SSB stations use horizontally-polarized antennas. Vertically-polarized stations can work horizontally-polarized stations but there will be a substantial signal loss (about 20 dB?). If vertical is all you have, then give it a try. If you can get a horizontal antenna, then your results will be much better.

The most common horizontally-polarized antenna on 2 m is a Yagi mounted so that its elements are parallel to the ground. There are a variety of horizontally-polarized, omni-directional mobile antennas, such as the HO antenna made by M2 (see www.m2inc.com).

Get on the Air

This information is intended to get you started on your way to operating 2m on the SSB portion of the band. You will learn more as you get into it and you will find that most of the people hanging out down on side-band are friendly, knowledgeable and helpful. They are always happy to see new call signs on the band.

Some resources available on the web are:

Rocky Mountain VHF Plus web page: <http://www.rmvhf.org>

VHF Operating articles by KØNR (similar to this one) at: <http://www.k0nr.com/>

North East Weak Signal Group web site at: <http://www.newsvhf.com/>



This recently came from John G8UAE and may be of interest to you.

The URL is to a You Tube video of rebuilding the Apollo computer.

<https://www.youtube.com/watch?v=2KSahAoOLdU&t=589s>

This one came from Jim G4WAO and could be of interest to the SSB Field Day team. Of course, it may encourage entries in other contests and events, too.

**THE NEW KENWOOD TS99900
CONTESTING TRANSCEIVER**



The image shows a black Kenwood TS99900 multi-functional device. The top section contains a coffee pot on the left, a microwave in the center, and a refrigerator on the right with its door open, revealing various items like fruit and drinks. The bottom section is a radio transceiver with two digital displays showing frequencies (7,100.000 and 14,200.000) and a spectrum analyzer. The device is presented as a 'contesting transceiver'.

**1500 WATTS (MICROWAVE)
2.3 CU. FT. REFRIGERATOR
10 CUP COFFEE POT
200 WATT PEP SSB***

*ACTUAL OUTPUT MAY VARY DEPENDING ON NUMBER OF APPLIANCES CONCURRENTLY RUNNING

I wonder if the Hon Treasurer would consider authorising ????

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