

Horndean & District Amateur Radio Club Journal

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Doug G4BEQ at his talk about HMS Belfast

Horndean & District Amateur Radio Club
Founded in 1975

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Articles, letters of interest, photographs are always needed and should be sent to the Editor :- Mike Clark. m0zdz.mike@gmail.com

I use Microsoft Publisher to produce the journal so am happy to accept articles/photographs via email. A Word document or Picture attachment. Just use Journal article or Journal picture as the subject matter.

Opinions expressed in the journal are not necessarily those of the HDARC. The editor has the right to reproduce the articles for our affiliated club journals/newsletters. The Editor decision is always final.

Closing date for next journal is : 3rd November 2019

Editorial



Hi All,

This year seems to be flying past and I can't believe I'm sat at the computer putting together the latest edition of the journal; seems only a couple of weeks ago I was doing the last.

Sadly this edition is on the rather skinny side. Every journal we ask for more articles but we seem to be getting fewer and fewer. It doesn't have to be war and peace, just a single page bulked out with a picture would be a great help. Maybe if everyone sent in a write-up of the shack and a picture of their station?

Let's hope the band conditions improve as we enter autumn through into winter.

Till the next time, good DX

73 de,

Mike. M0ZDZ / G7Y
Journal Editor HDARC

“Against the World”

Marconi vs. Fessenden

Many things we accept as true in amateur radio and electronics were hotly argued over only a century ago.

Here’s one forgotten battle which not only involves two famous names of the early days, also relates to the updated 2019 full licence syllabus.

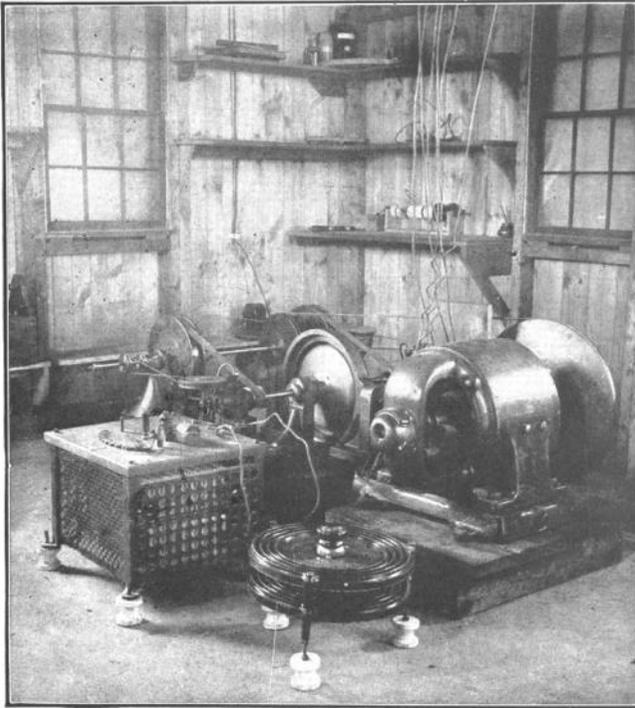
Reginald (never “Reg”) Fessenden is famous for many things; apprentice to Thomas Edison, holding 500 patents, returning an International Radio Union medal because it was gold plated not solid gold, developing the first solar system, being buried in Bermuda. Above all though, he was probably the first person to transmit speech and music over radio—the subject of this article.

Guglielmo Marconi needs little introduction, the first ‘radio amateur’ and of course the first to transmit signals across the English Channel and the Atlantic, although the latter is somewhat suspect. He was a major driver behind the use of radio for communications and made several contributions to early development. His mis-use of research done with UK public money we leave aside.

An argument developed between these two famous men with big egos! Marconi insisted the radio signal was generated by the “snap” of a spark transmitter, Fessenden countered that a continuous (sine) wave will also send a signal, and is more useful.

Around 1900 there was no practical equipment to prove anything but Morse transmission via spark gaps was possible. Complex mathematical theories of J.C Maxwell, Heaviside, Lodge etc. did not indicate either way. What was obvious was spark gap transmitters could not send audio signals, but there was huge potential for doing so.

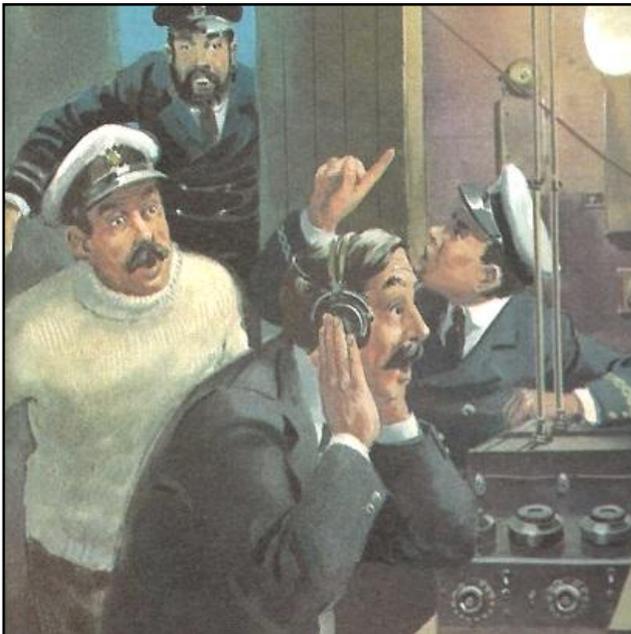




Fessenden was sure a continuous signal and not spark gap was the way forward for radio communication .

He published a paper but 'The World' in the shape of Marconi dismissed the idea completely in the absence of any practical results.

All the textbooks of the time described the "snap" or punch of the spark as creating ripples in the Aether. A continuous sine wave would not do this, said the books.



A skilled (but bloody minded) experimenter, Fessenden built a high frequency alternator. It must have made one hell of a din.

It rotated enough to make high voltages in the 20kHz range, but importantly at a constant frequency.



He amplitude modulated the signal using a carbon granule microphone, similar to early telephone handsets. With the high voltage RF across the microphone and no health and safety in sight, he played a violin and shouted “if anyone hears me please write to doctor Fessenden of Brant Rock”.

This was in 1906, but as stated in Wikipedia there are no third party records of the transmission being heard, as shown in the picture. Whether it happened at all is a similar situation to Marconi’s Atlantic crossing transmission. Neither event has verifiable records that survive. Despite the lack of evidence, Fessenden is credited with making the first voice broadcast with a continuous sine wave transmitter. This proved the “snap” of a spark gap is not the source of a radio signal, so Marconi and the textbooks were wrong, Fessenden was right!

Spark transmission could work over great distances because generating RF sine wave by mechanical means is almost impossible. Spark gaps were used for long range transmissions until the 1920’s when valve transmitters took over.

It’s unclear if Fessenden understood the relationship between time and frequency, as described by the maths of Joseph Fourier. Any connection between Fourier’s French revolution-era work and radio was little known at the time, but is now a cornerstone of electronics and your Full License syllabus.

These two points will help you understand frequency and time domains which is part of the 2019 full License course and a fundamental of digital signal processing (DSP).

1. A smoothly varying sine-wave when looked at in time (as on an oscilloscope) is only present on the one frequency.
2. An impulse or “snap” is the opposite of a smooth sine-wave and is present across a wide band when looked at in terms of frequency.

These are exactly the same signals which were once battled over by such forceful characters as Marconi and Fessenden!

Rob MØRZXF



Twitter

Bill 2EØWGK

I'm going to make an assumption that you are only slightly aware of Twitter, can't think of any conceivable point to it, that it is a complete waste of time and that also, you aren't confident about downloading apps anyway. Sorry if none or only some of this applies to you.

When Twitter first burst upon the Internet in 2006, I am quite happy to admit my first thoughts were along the lines of "How ridiculous, what can people do with 140 characters, and who came up with the name "Twitter" and promptly ignored it as a useless gimmick.

Today, I am an avid Twitter user. Admittedly, its scope has increased to 280 characters, and you can attach up to 4 photos to each tweet. I usually tweet at least once a day, normally at about 6:30 AM Mon-Fri, feel free to follow me at @bill_gk.

OK, so what do I mean you can follow me, and what's with the @bill_gk thing?

Perhaps I need to roll back a bit.

If you only have a computer, then you can still use Twitter. But its main utility comes from being mobile, tablets are fine, but most practically any smart phone will support a Twitter app. Today, the two primary platforms are Android or Apple's ios.

You may not know this, but HDARC has a Twitter account; @HorndeanARC.

Why not @HDARC? Unfortunately, Twitter names are unique to an account, and somebody has already claimed @HDARC – we have been slow off the mark.

Why not @Horndean&DistrictAmateurRadioClub – I'm not even sure if Twitter would support a name that long! Anyhow, the important thing is you want something that is quick and easy to type, and which you (or in this case, the club) can associate with hence @HorndeanARC, once you've typed it a few times, you get used to it.



Right, let's get you involved;

For apple users, go to the app store
For android users go to Google play

If you use another type of phone, go to the respective app store.

Search for Twitter – there are loads of Twitter apps, but the main, easiest and in my opinion the best is the actual Twitter app. You can recognise it by this icon



Any other icon, and it isn't the original Twitter app. Download the app. When you do so, and open the app you will have to sign up for a Twitter account. You need only give minimal information, but it will need either a mobile number, or an email address. You can have more than one account but you need a different user name and mobile number or email address for each account.

As part of the signing up you will have to choose a username, which will automatically be preceded by the @ sign – you don't need to include that as part of your name. You can use letters, numbers and certain special characters such as the underscore _.

When you are done – that's it, you are up and running.

What comes next is finding people to follow, and getting people to follow you. To get people to follow you it's normal to generate interesting content, post frequently about stuff you are interested in. Why don't you make your first tweet a "Hello World"?

If you want to ensure that specific people see your tweet, simply include their Twitter name;

Why don't you make your second tweet @HorndeanARC Hello



When I see your tweet, I will “Follow” you. That means, any tweet you send, will automatically come up in my feed. Likewise, when you see my reply, you can follow me.

Alternatively, you could do a search and look for @HorndeanARC and follow me when I come up on the search.

That’s all very well, but what’s the point of a conversation between the two of us?

The first thing is, that any conversation which isn’t sent as a directed private message (a separate screen view to normal twitter usage) everything is in public – anyone can see it. Our hello conversation above will absolutely be in public.

This is where we start to see the power and speed of Twitter;

The first thing is, I can “like” your tweet – this will immediately tell you that I’ve read it.

I can re-tweet your message, that means I pick it up and send to all of the people that follow me, I can also re-tweet and add a message – everybody in my list of followers is now aware of you (I currently have about 80 followers). If only ten people of that 80 re-tweet your message, and they each have fifty followers, with two clicks of a button your message has reached 580 people, you can see that important, interesting messages can have exponential levels of distribution very quickly, and example of “going viral”

Now, I admit there is an awful lot of rubbish out there. Everybody you follow will receive rubbish, I might say one person’s rubbish is another person’s smile, is another person’s howl of rage. You can’t get rid of the rubbish, but you can reduce it. I’ll cover that in the next article – but feel free to explore the Twitter applications List function if you wish.

If anybody wants to talk to me about Twitter on the club night, or send me an email please feel free to do so – I am very happy to answer questions.



HMS Belfast

(photo of Doug by G3LIK; text from Doug's slides by GØFYX)

Our club President Doug G4BEQ gave a talk to the club on June 21st, about HMS Belfast and Doug's personal experience. The timing of this talk was very appropriate, bearing in mind that June 6th 2019 was the 75th anniversary of the D Day landings.

The reasons that the Belfast is/was so highly regarded were:

She was one of the largest cruisers in the Royal Navy in World War 2; she was the first ship to capture a German prize in WW2 (the German Liner Cape Norte); the first large warship to be immobilised by Hitler's secret weapon, the magnetic mine.

Doug then showed an extract from the ship's log for Tuesday November 21st 1939 about this mine incident. "1037. Alter course to 295. Violent explosion under foremast. All doors, valves etc not already shut promptly closed. Main engines out of action. At 1133 Tug Krooman took ship in tow. At 1302, Tugs Brahman, Grangebourne, Oxcar & Bulgar arrived."

HMS Belfast was one of the most heavily damaged ships to survive and fight again. Belfast spent nearly 3 years undergoing extensive repairs, returning to action in November 1942 with improved fire power, radar equipment and armour.

Belfast saw action escorting Arctic Convoys during 1943 and in December 1943 played an important role in the Battle of North Cape. She engaged in the first and last radar-controlled gun action fought by the Royal Navy between big ships. (North Cape), and she has acted as Flag Ship longer than any other cruiser. She was one of the last cruisers to retain a catapult aircraft. Belfast was the Headquarters & Flagship off Normandy beaches, and spearheaded the attack on D Day, and was also the first Flag Ship of the RN to serve in a World Peace Keeping Force. Also...Doug G4BEQ served on board, so is well-qualified to give this talk.





Doug then said about the Cruiser policies in the 1930's, which were all ignored by Japan and Germany in 1935. He then showed examples of some of the cruisers, and gave their vital statistics. HMS Cumberland, HMS Southampton, Japanese ship Mogami, and German ship Scharnhorst. This latter ship was quite impressive, having 9x28cm (11"), 12x15cm(6"), 14x10.5cm(4"), 16x 3.7cm (1.5"), and 16x2cm (0.75") guns plus 6x21" torpedoes. She had a 14" steel Armour Belt, the deck was 2" thick, and her main armament turrets were protected with over 7" thick plating.

HMS Belfast, launched on March 17th 1938, was 13,175 tons. Length 613', Beam 66', Draught 22'. Armaments: 12 x 6", 12 x 4", 16 x 2" Pdr (2 x 8) PomPoms, 8 x .5" (2 x 8), and 6 x 21" Torpedo Tubes (2 x 3). Also 3 Aircraft, and the ship's complement was 761. Aircraft included Flycatcher with floats, Vickers Walrus, Blackburn Roc, and the legendary Swordfish.

On May 31st 1944, HMS Belfast left Scapa Flow (Orkney Islands) to prepare for D-Day. Doug showed a slide with part of the war diary for Belfast: June 6th-9th Bombardment assault support, 12th Area JUNO bombarding with HMS Diadem, pm Withdrew to sail for Portsmouth, 16th Ammunitioning at Portsmouth, 18th Sail Portsmouth for Juno area. Bombarding, 19th Great Gale, 22nd Overlord threatened. Mulberry harbour justifies itself, 23rd Bombarding, 30th Bombarding with HMS Rodney & Argonaut, July 6th Bombarding with HMS Emerald, Roberts & Danae. Danger from human torpedoes, midget submarines, schnellboots, and explosive motor boats and oyster mines, 8th Montgomery begins offensive and breaks out at Caen. Belfast, Roberts & Rodney bombard in support, 10th At sea, July 12th Arrive back at Scapa Flow.

Doug attended a special veterans reunion in 2014 (70th anniversary of D-Day) at Bayeux, Arromanches and Sword beach, as part of the official UK commemorations. He showed a slide of the beaches locations. The 'UK beaches' were Gold, due North from the town of Bayeux, and further East, Sword, due North of Caen.

HMS *Belfast* is one of only three remaining vessels from the bombardment fleet which supported the Normandy landings on 6 June 1944. The other vessels are the destroyer USS *Laffey*, part of the historic ships at Patriots Point, South Carolina, and the dreadnought battleship USS *Texas* at San Jacinto, Texas.



HMS Belfast at her mooring on the river Thames.
See <https://www.iwm.org.uk/visits/hms-belfast>

HMS *Belfast* was one of the larger warships in the fleet, with a fully equipped sick bay, a surgeon commander and two surgeon lieutenants. At 1300 on 6 June, casualties began to arrive on board. On 25th June, during one of the quiet periods when fighting had largely moved out of range of HMS *Belfast's* guns, some of the unoccupied members of the crew were chosen to form working parties to go ashore and help clear the beaches. In total, HMS *Belfast* spent 33 days in support of the landings and fired over 4,000 6-inch and 1,000 4-inch shells. The invasion of Normandy was the last time HMS *Belfast* fired her guns during the Second World War. In July 1944, she set sail for Plymouth Devonport and a well-earned refit, before being despatched to the Far East. She supported troops in the Korean War 1950-52, before being retired in 1963.

Saved from being scrapped, she was brought to London by IWM (The Imperial War Museum) and opened to the public on Trafalgar Day, 21 October 1971. IWM had been investigating the possibility of preserving a Second World War cruiser from as early as 1967, which led to the formation of a trust headed up by one of HMS *Belfast's* former captains, Rear-Admiral Sir Morgan Morgan-Giles. This trust eventually succeeded in salvaging HMS *Belfast* from the scrapyards, safeguarding her for future generations, and today HMS *Belfast* is the last remaining vessel of her type.

Thank you to IWM website for extra info about the ship.



CHRISTMAS SOCIAL 2019

Christmas is fast approaching and so to advise the membership that this year's Christmas Dinner will be held on Thursday December 12th at The Crofton, in Stubbington.

This venue was used last year with all attending happy with location, food and service. The food will be served at 20.00hrs so guests must NOT arrive before 19.30hrs please. This allows staff to get the room ready for our party's arrival.

The menu for this year has recently been sent to me together with costs. I am very pleased to say that the cost and menu choices for each course have remained the same as last year.

As soon as you can confirm attendance and how many seats are required for family and/or friends I will need the food orders and monies per head ASAP to guarantee reservations.

I was asked by another regular attendee if they could change to a two course this year if this option was available. I am pleased to say the answer is yes. A Two Course is £22.95 per head with the Three course being £26.95 per head.

Stuart the club Secretary will be amending the flyer on the weekly digest he emails out. For those who would like a hard copy please ask me at the next meeting or via email.

I'm sure we will have a great time again. The committee and I would like to see some of the newer members attending with their family etc.

Julia GOIUY
Hon. Soc Sec HDARC





HDARC CHRISTMAS DINNER 2019

THURSDAY 12TH DECEMBER 19.30 FOR 20.00HRS

STARTERS

- (1). ROASTED RED PEPPER & TOMATO SOUP (AND CROUTONS) { }
- (2). DUCK LIVER PATE (SERVED WITH TOASTED BRIOCHE) { }
- (3). SMOKED SALMON & CRAYFISH STACK (GF)(HONEY & MUSTARD DRESSOING) ({ }
- (4.) PARMA HAM, ROASTED FIG & GOATS CHEESE (GF & V (WITHOUT HAM) { }

MAIN

- (1) NORFOLK ROASTED TURKEY BREAST & HAM (WITH ALL THE TRIMMINGS { }
- (2) FILLET OF SALMON (TOPPED WITH LEMON, HERBS) NEW POTATOES { }
- (3.) SLOW COOKED MINTED LAMB SHANK ON BED MASH & MINT GRAVY (GF)({ }
- (4.) VEGETABLE WELLINGTON IN PUFF PASTRY, NEW POTATOES (V) { }

ALL SERVED WITH TRADITIONAL VEGETABLES

DESSERT

- (1) CHRISTMAS PUDDING WITH BRANDY SAUCE { }
- (2.) LEMON TART SERVED WITH ORANGE CREAM { }
- (3) SALTED CARAMEL CREME BRULEE { }
- (4.) DARK CHOCOLATE & GINGER TORTE WITH CHANTILLY CREAM { } (GF)

TEA OR FILTER COFFEE WITH MINCE PIE

TOTAL COST PER HEAD FOR 2X COURSES £22.95

TOTAL COST PER HEAD FOR 3X COURSES £26.95P

NAME & CONTACT

THE CROFTON
48, CROFTON IANE,
STUBBINGTO
FAREHAM, HANTS,
PO14 3QF

TRAINING

The club held examinations in the main hall of our Exam Centre on Friday August 16th starting at 19.00hrs for x7 Intermediate candidate and x1 Advanced (Full) licence. These were all under the old syllabus which has now ceased. I thank Frank and Simon for their help as invigilators throughout.

Congratulations to all who passed and have since obtained a 2E0 call sign. For those candidates that didn't reach the required pass mark, the RSGB have allowed a lap-over period till November 16th for any candidates on any level to apply for and do a re-sit of the old syllabus.

The HDARC will therefore be hosting exams again on two separate dates due to candidates commitments. The first being for Intermediate level on Friday October 4th and the other Advanced level on Friday November 15th. (We wish them well for a good result on these occasions).

The new syllabus came into effect on September 1st. Many exam centres around the country will be busy up-grading all level coursework etc; so it is not known how many will be running courses in the near future. The HDARC will not be running any courses until our syllabus PowerPoint's etc; have been up-graded. There is an awful lot of work to do on the three levels together with building equipment to use in the practical tasks. Because of the introduction of Digital modes at all levels we hope to run an interim course on Digital prior to continuing with a new "Full Licence" course.

I have around eight on my waiting list some of whom sat their Intermediate a few years ago and now feel the time is right to continue on. As with all courses run to date, space in the room upstairs is limited so names from top of waiting list will come first. I have also received several enquiries from Foundation Level candidates who are on a waiting list so it could be another busy 2020 for the club with regards training.

We therefore desperately need the help from other members to help in mentoring candidates please.

Julia G0IUJ
Hon. Exam Sec HDARC



We Need More



Articles!

This edition of the Journal is very skinny. Please if everyone wrote one short article we would have bumper editions throughout the whole year.



Horndean & District A.R.C Information.



Club Call signs **G4FBS (Held by MØKTT); G6RST (Held by G4WQZ)**

Club Website **<http://www.hdarc.co.uk>**
(Maintained by Neil 2EØLNx)

Club Groups.io site *Administrator is Stuart GØFYX*

Club Facebook Page **<https://www.facebook.com/hdarc1975/>**

Club Twitter Account @HorndeanARC

Club Meetings *Held at Deverell Hall, 84 London Rd, Purbrook, Waterloooville, Hants. PO7 5JU, on the 1st and 3rd Friday of each month. Commencing at 1900.*

Club Nets ***All times are local and frequencies plus/minus QRM.***
Sunday *0900 CW until about 0930 then SSB on 1950 kHz.
Net controller:- Stuart GØFYX*

*2000 FM 433.450 MHz
Net controller:- John G4WQZ*

Monday *1930 SSB 1950kHz
Net controller:- Stuart GØFYX*

Wednesday *1930 FM 145.375 MHz
Net controller:- John G4WQZ*

Club Membership

Joining fee £2 . Annual fee £26. Those aged 10-18 pay half this rate, and under 10's have free junior membership. For Europe and rest of the World fees please contact the Membership Secretary. All annual fees payable on November 1st. If fees not paid by January 31st, membership is ended.

Club Awards

Full details from Stuart GØFYX (details on committee page).

News of club members

We welcome Tim G1BCR (Pagham, West Sussex) to the club.

Congratulations to Paul Davies (was M7EMS) now 2EØPOC, Trev Jones (was M7TGJ) now 2EØTGJ. and Mark Reeve (was M7MAR) now 2EØTXZ

Nice to see the article in The News (September 13th) featuring Mick G3LIK.

Diary

Friday October 4th - Club night

Friday October 18th - AGM (see below)

Tuesday October 29th - Visit to Clanfield Observatory 7.30pm

Friday November 1st - Club night

Friday November 15th - Club Members' 10-minute talks. I have 6 willing volunteers (?) ready to entertain you

Friday December 6th - Club night with Mince Pies +

THERE IS NO CLUB MEETING ON DECEMBER 20th

This 'n' that

Congratulations to Nevada Radio, and to Mike G3SED, for their 50th anniversary of the business this year, and thank you to them for supporting the club. Please visit www.nevadaradio.co.uk .

The RSGB Autumn Series of HF contests continues for October and November. October dates are CW on the 14th, Data on the 23rd and SSB on the 31st. November dates are Data on the 11th, SSB on the 20th, and CW on the 28th. Contests are held on 80m 1900-2030utc. Why not have a go for the club? If you need help, please ask me. Full details from the RSGB site

<https://www.rsgbcc.org/hf/rules/2019/rautumn.shtml>

AGM, Friday October 18th. You will have received nomination forms for committee with the hard copy of this journal, or as an attachment to your emailed copy. At the AGM we hear about the club situation from our Club President, Club Chairman and Club Treasurer, and we present awards and trophies. If you have any items for the agenda please let Stuart GØFYX know by October 4th.

The club project for 2019 attracted no entries by the closing date of September 6th. Therefore it has been decided to carry this over to 2020, with the closing date of early September 2020, so you now have plenty of time to build this. A reminder that you need to make an RF Earth Tuner (Artificial Earth).

CW practice? - contact John MØHTE via john.taylor177@ntlworld.com

STOP PRESS

Just as this edition was ready to be printed we heard that club member and tutor Roger MØKWN became a silent key on September 12th.





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- Unique headband tilt-back feature as used on pro broadcast headsets.
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- Light; weighs only 13 ounces. Avoid neck and head fatigue associated with modified aircraft headsets sold by other companies.
- Extra long straight + coiled cable with total length of almost 7 feet. 4 1/2 feet straight + 1 1/2 feet coiled + 1 ft straight. Coiled section can be stretched out an additional 2 feet if desired.
- Optional transceiver mic jack adapters available for 8 pin modern Icom rigs, 8 pin Yaesu / Ten-Tec, 8 pin Kenwood / Elecraft, RJ-45 Yaesu, 3 pin TRS FlexRadio 6400/6600.



• Comfortable over-the-ear earpieces.

Your ear goes inside the cup rather than having earphone padding pushing your ear backward against the head, leading to discomfort after hours of use. Headband fatigue is another potential problem with long-term headset use. Modified aircraft headsets sold by others for ham radio push down on the top of the head because they are heavy and lack adequate padding at the top. We have solved this problem with two features. First, thick rubberized foam padding at the top of the headband that moulds to the head when in use. Second, like broadcast headsets, the W1 has a tilt-and-click headband tilt feature. The headband can be tipped back as far as 30 degrees off vertical without moving the earpieces, in addition to standard up/down movement of the band.

• Receive and transmit audio sound.

Large diaphragm high response speakers provide clear, clean articulation of receive audio. Stereo connector for use with dual receiver transceivers if desired. Transmit audio is from a 600 Ohm dynamic microphone element that's the correct impedance for your HF transceiver and has excellent response from 50 Hz-15 kHz. Sounds great for DXing, contesting, and general on-the-air use.

- **Extra-long straight and coiled cable from the headset to the radio.** 7 ft total length. 4 ft of straight section, followed by 1 1/2 ft coiled for RF suppression, then 1 ft straight to the adapter for the radio mic jack. Connect the 1/8" mono transmit audio jack on the headset to an INRAD M-series mic jack adapter and you're ready to operate.



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