POLDHU AMATEUR RADIO CLUB

GB2GM

NEWSLETTER 111 1 MARCH 2022
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Club Nights Every second Tuesday in the month 19:00 – 21:00
Club Net Tuesday 09:00 local time 3715kHz ± QRM

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Contents

Reminder

For those unable to find items in a long newsletter - go straight to required article in the Contents List above (eg "*Committee Matters*"), press Ctrl Key and click. Alternatively press Ctrl G (*go to*) and key in page number.

Committee Matters

New LED Lights

Terry G4CDY and Robin M0RRX have installed new LED lights at the Marconi Centre. They are very much brighter than the old ones and no EMC!

Heating

We now have central heating running and it at least takes the chill off!

Visitors

We have returned to the normal daytime opening for visitors.
Meetings – For the time being we will resume our main monthly meeting at Poldhu on the second Tuesday at 19:30.

Junk Sale

The Committee have decided to clear out all unwanted or unused junk and equipment at Poldhu. We will hold a sale of junk, components and equipment, ie test gear and radios which are unused or donated. Date of sale to be advised.

IMD

GB2GM is registered with CRAC for International Marconi Day on Saturday, 23 April.

Mast Work

By Cliff G3UYN

Late in February, David G3PLE and Bob M0ITR were planning to operate an 80 metre contest. The weather broke just before that contest took place and the trap dipole was broken into little pieces. Terry G4CDY rigged a replacement, which was a bit on the low side because he couldn't use the halyard on the east tower and had to rig new temporary halyard with a spanner tied to some thin Kevlar cord and lobbed up through the lattice tower. Although it was low, it proved to have good performance and was resonant on the CW of the band. The contest went very well for David and Bob (*see Contest Corner page 23*).

We'd been waiting for good weather for some weeks now to repair the halyards on the Eastern mast, (that's the one away from the sea). At short notice, I managed to get a team together on Tuesday afternoon comprising Terry G4CDY, Jim G8GLL, Phil M0DYH, Chris G3NHL, Robin M0RRX and myself. With the number of people there it had to either go very badly wrong or very well. And as it turned out, it all went very well. Everybody had some job to do all of the time, not too much standing around watching others!

It was quite a big job getting our masts down. There are three steel wire guys, but first we have to loosen off those guys, take them off from the anchors and then try to telescope the mast. It is a rugged Strumech Tower, 60 feet high in three sections. At first, we found that we couldn't lift the tower, which has to be done in order to remove the brake, which is really just a steel plate that stops it from dropping. So we grabbed the steel wire guys and gave them a good shake and managed to raise the top and middle section enough to release the brake. Then began lowering down the upper sections. They were a little stiff but we managed. Then we had to luff over the mast to do the work. Straight away, we found that some pulleys were very corroded, we had not

expected that on the eastern mast but had bought some pulleys for the west mast which is close to the sea, which we knew was bad, but we hadn't expected this mast to be the same. It didn't look too bad from the ground anyway. So we had to replace four pulleys, also some bolts, some of which were in a very bad state, one broke quite easily whilst we were trying to remove it. We ended up replacing at least four, maybe half a dozen bolts. However, the weather was very good for the operation, so we managed to work right through the afternoon. We started about 1 pm and finished about 5:30 pm then went in for a coffee. It was pretty hard going all that time. But now that we have new halyards and stand offs for two separate wire aerials, we shouldn't have a problem with the halyards rubbing against or wrapping themselves around the mast in future, which was one of the problems we had before. The weather was good and it provided a lot of exercise and we had fun working together with many a merry quip and lots of leg pulling!

Radio Operators of Cornwall (*see below*)
On Saturday, 19 February we met members of the new Radio Operators of Cornwall (ROC) Club at Poldhu and in the afternoon Tim M0AFJ gave a very interesting talk on VHF contesting and portable operation. Four of the ROC members joined our Poldhu ARC, including Callum G5XDX.

Introduction to ROC

By Callum Macleod G5XDX
ROC Chairman
RSGB DR111 Representative

Hello fellow PARC members! Cliff G3UYN asked me to write a few words of introduction for ROC.

I would like to begin with a thank you. The response to a new regional club (ROC) by PARC is one I am both grateful for and humbled by. We have received a lovely welcome and fantastic hospitality, having already held the talk by Tim Hague M0AFJ at the Marconi Museum and what a fabulous building it is, a thoroughly good talk by Tim as well, enjoyed by both clubs with myself as well as several ROC members becoming PARC members too!

Tim Hague M0AFJ

Audience at Talk by Tim

So, what is the deal with Radio Operators Cornwall (ROC)?

We are an RSGB affiliated club with the callsign of GX8ROC. We are a not for profit club and will be investing all proceeds into providing support and organising activities. We welcome everybody, from all aspects of radio and life and aim to be inclusive not exclusive. We have a committee of 6 and a total membership of 38 and growing steadily. We are focused on promoting activity, positivity and support for all interested in, or already holding an amateur radio licence. Our main aims are to have a busy calendar with talks, events, on air activity, TX hunts, CABO22 (antenna build off) and more. Thursday, 31 March is the first Operators net on 145.375fm±- at 2000hrs local time. All welcome and we usually cover all of Cornwall and into South Devon.

Our website is currently under construction but will direct you to our social media (temporarily) www.g8roc.org.uk We can be contacted by email info@g8roc.org.uk, online: @g8roc, by telephone: 07933 034 528 (Callum G5XDX) and by post c/o membership secretary, Nigel Bennetts, 7 Parkesway, Saltash PL12 4AL. If you have any enquiries or wish to apply for membership, please do not hesitate to contact us.

First Radiotelegraphic Transmission between Air and Ground carried out by Guglielmo Marconi in September 1915

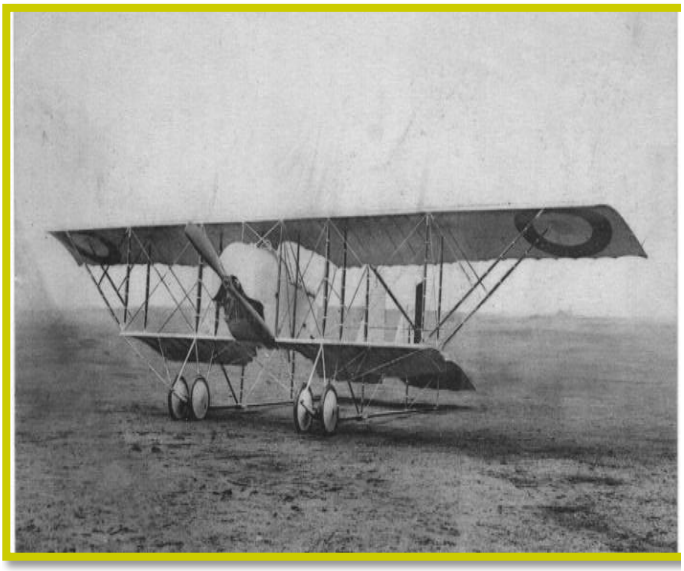
By Alberto Genova I1 VXA
Associazione Italiana per la Radio d'Epoca (Italian Association for Vintage Radio

In May 1915, Italy entered the war and Guglielmo Marconi was commissioned as a Second Lieutenant in the first Regiment of Dirigibles.

During this period, the artillery fired in the direction of the enemy. The observers were on high ground or used dragster balloons as observation points. Communication was by telephone to the artillery command and provided useful information to better direct the blows on the enemy.

Aircraft had only entered the military field for a couple of years but it was immediately recognised as an important means of air warfare.

Military leaders also understood its potential to direct artillery fire. Guglielmo Marconi was requested to create a wireless telegraphy system to be installed on an aircraft. connecting it with departments on the ground.



Biplane Caudron G-3

Marconi accepted the challenge and at the old pier in Genoa he set up his Marconi workshop where the first prototype was built. It was a spark transmitter, with power of about 30 watts, using batteries, enclosed in a small wooden box weighing 16 kg.

When the transmitter was completed, it was presented to the military authorities at the Mirafiori airfield near Turin in September 1915.

The only two-seater plane present on the field was a Caudron G-3 biplane built in the AER workshop in Orbassano close to Turin. The pilot, Corporal De Marco, had not yet completed the training to obtain the pilot's licence!

There was no telegraph operator so Marquis Solari, Marconi's collaborator, volunteered himself!

A small field station was set up on the ground. When everything was ready, Marconi, General Moris and some

Remains of the AER plant in Orbassano

officers of the Military Engineers approached the plane. Marquis Solari placed the batteries on the floor of the plane and placed the transmitter between his legs.

The antenna consisted of a copper wire about 25 metres long dropped outside the cabin after take-off, while the earth was connected to the small metal parts of the biplane's frame.

The biplane took off and flew over the Mirafiori airfield, moving towards Mont Cenis and then reversing its course. The Morse transmission, limited to the letters SSS followed by the letters VVV, was heard from the ground receiver managed by Marconi.

Caudron G-3 and Corporal De Marco at Mirafiori Airfield

The day was rather windy and the small biplane had strong jolts which put Marquis Solari to the test.

The landing was even worse. The inexperienced pilot had the aircraft tilting three times, resulting in a broken wing due to lateral landing but fortunately without damage to the pilot and telegraph operator.

Guglielmo Marconi and Corporal De Marco

The experiment was concluded in a positive way as from that time radio had officially occupied an important role on board aircraft. The prototype was then perfected and the subject of a subsequent field test in November 1915. It was then produced on an industrial scale and due to its small size it was nicknamed Marconcina (little Marconi).

In the following months these transmitters were mounted on various aircraft and used with excellent results to direct artillery fire. However, they were viewed with distrust by pilots because of additional weight on board plus with the presence of gasoline vapours, there was a great danger of fire and explosions.

It is interesting to know that only the transmitter was present on board the aircraft. The receiver could not work, due to the noise of the air draft from the propeller and the engine and electrical interference produced by the engine start. The pilot received the service orders through white sheets, placed on the ground by the military to form various figures according to an agreed code.

Initially when these transmission systems were installed there were not enough radio telegraphers trained to operate using Morse code. This obstacle was circumvented by using a series of points and lines according to an agreed code, eg 5 lines meant lengthening the shot, 5 points shortening the shot and 3 lines and 3 points to shoot to the right etc.

At the end of the First World War, the Mirafiori airfield was named after Second Lieutenant "Gino Lisa", who received a gold medal for military valour. In 1947 the airfield was decommissioned and incorporated in the development of the city of Turin.

Even though the Caudron G-3 biplanes which were built by the AER plant in Orbassano at the rate of 1,000 aircraft in 1,000 days are no longer available.

At the beginning of the 1920s, thanks to the advent of thermionic valves, aircraft was equipped with efficient transmission and reception systems, free from potential dangers for the pilot and for the aircraft.

Historical Re-Enactment of First Radio Transmission from Caudron G-3 Biplane by Guglielmo Marconi – September 2015

Around December 2020, our AIRE President, Andrea Ferrero suggested a historical re-enactment of the first radio

transmission from a Caudron G-3 aircraft made by Marconi in September 1915.
As stated previously, Caudron G-3 biplanes are no longer available but a Tiger Moth biplane could possibly be obtained.

We discussed how to organise the event, particularly which devices to use, how to build the transmitting and receiving antennae and how to bring the transmitter on board etc.

There appeared to be no one enthusiastic about being an aviator telegraph operator. I thought, if it was possible to fill this role, I could satisfy all my passions as follows:

- Participate in the re-enactment of a historical event highly connected to the history of radio communications
- Experience the thrill of flying on a vintage biplane
- Work for the functional recovery of radio equipment rich in historical significance
- Carry out transmission tests with a spark transmitter and reception using a carborundum receiver, both original equipment of that era
- Communicate using telegraphy

I timidly made my proposal and was immediately enlisted as the on-board radio-telegraph operator!

The following months were used for the technical and logistical organisation of the re-enactment.

In practice, the field receiver would have been installed in Orbassano in the courtyard of what remains of the AER factory, while the Tiger Moth biplane with the pilot and radio-telegraph operator on board would have taken off from the Aeritalia "Edoardo Agnelli" airport in Turin.

Equipment used

We chose the Marconcina Transmitter built by the Marconi workshop in Genoa and the Omnibus Receiver produced by Marconi Wireless Telegraph Co Ltd in 1912.

Marconcina Transmitter

Omnibus Receiver

Both devices, are owned by the RAI Museum of Radio and Television in Turin and were entrusted to us as a concession for use at the event.

From the beginning, our intention was to carry out the re-enactment using original equipment of the time, on condition that they were actually functioning. After a period of 100 years and more, there were difficulties encountered in making them operational but they were all overcome and the devices were arranged to work at their best.

The Marconcina could work on a wavelength between 200 and 400 metres but in order to use smaller antennae we chose to work on the wavelength of 200 metres equal to 1.500 kHz.

In the Omnibus Receiver the signals were detected either with a carborundum crystal or with a Fleming diode. In the last decades of the 19th century, technical knowledge had not yet fully demonstrated the superiority of the Fleming diode over the carborundum crystal. For this reason, both systems were installed on this receiver. During this period, what was known was the enormous economic difference between the diode and the carborundum; the diode being very expensive, the cost of carborundum being very low.

In the photographs of the time we often see the Omnibus Receiver used without the Fleming diode. The carborundum crystal was efficient as the diode and therefore we chose this solution.

The Fleming diode visible in the photographs of our Omnibus is a perfectly faithful but non-functional replica, made by the wizard of thermionic valves and AIRE partner Erbea Alberto.

Field tests

Having repaired the transmitter and the receiver, before operating on the biplane, it was necessary to verify whether the receiver was capable of detecting and listening to the signals transmitted by the Marconcina through headphones with field tests.

For this purpose we used an experimentation field located in Valsesia, in a mountain area overlooking the Monte Rosa

The experimentation field in the valley overlooking Monte Rosa

Antennae used for tests

For the receiver we built a 50 metres long wire antenna, equal to ¼λ using 1.5 mm^2 copper wire.

For the transmitter it was necessary to simulate an antenna similar to the one we would later use on the biplane.

In the tests of 1915, the antenna connected to the Marconcina consisted of a copper wire a few tens of metres long that protruded and dangled from the plane. At its end a weight of about 300 grams was used to keep the antenna under tension.
For this purpose, we made another long wire, this time about 25 metres long, supported near the Marconcina by a 6 metre telescopic pole.

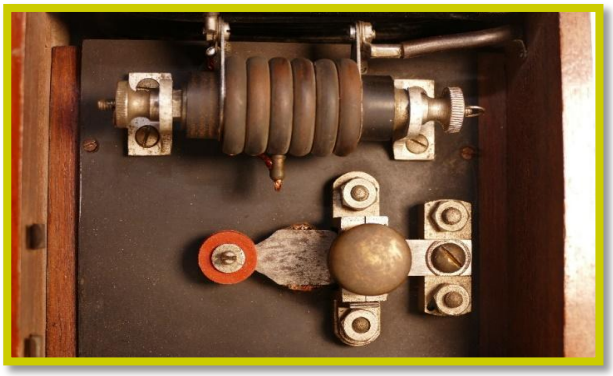
The antennae were deliberately positioned at about 90° from each other in order to verify the efficiency of the system in the most unfavourable condition.

In 1915 the Marconcina earth lead was connected to the metal structure of the biplane. In order to simulate this earth connection, we made a dummy earth. As for the Omnibus Receiver, the earth lead was connected to a sturdy stake firmly driven into the earth near the receiver.

The tests carried out at the distance between transmitter and receiver of 350 metres allowed us to immediately listen to the signal produced by Marconcina on our headphones which was encouraging. Tests at a distance of 1,400 metres gave the same results with a slightly lower but perfectly understandable signal.

La Marconcina has always worked perfectly. Strong sparks were produced in the 6-disc discharger and a current of 0.3 Ampere was reached in the antenna ammeter.

6 disc discharger all connected between 4, or 5, or 6 discs.



By means of the pin it was possible to split the spark between 4, or 5, or 6 discs.

When the spark is discharged between 4 discs the note in the receiver is higher and vice versa when 5 or 6 discs are engaged the note is lower.

The difference in tone in the First World War was used to be able to distinguish one airplane from another. In practice it was possible to identify and separate the messages of only 3 airplanes!!

The Omnibus Receiver adjusted to the best in the primary and secondary circuits, using the carborundum detector, has always allowed us to listen to the signal generated by the Marconcina through headphones.

Headphone listening, however, can only be used by AIRE operators in charge of the work wanting to make the audience present at the re-enactment listen to the Marconcina signal. It was necessary to build an efficient amplification system using a Darlington preamp that drove a power amplifier.

Once the ground tests had been successfully completed, we began to think actively about the tests with the Marconcina installed on the old biplane, of which we provided some features.
The De Havilland DH-82A Tiger Moth is a single-engine, two-seater training biplane with open cockpit, built in England by the De Havilland Company since the early 1930s. Until 1952 all RAF pilots were trained with this aircraft which, as its owner, Gustavo Cappa Bava, explained to me, is quite easy to fly badly, very difficult to fly well!

Here are some technical features:

Engine: De Havilland Gipsy Major, four-cylinder, air-cooled, inverted inline, about 120 Hp at 2350 rpm.

The De Havilland DH-82A Tiger Moth

Length 7.34 m, Wingspan 8.94 m, Height 2,68 m, Wing surface 22.2 m2.
Empty weight 506 kg, Fully loaded weight 828 kg, Cruise speed 130 km/h, Oil consumption kg 1 every 4 hours, Wooden propeller

Saturday, 4 September 2021, at Aeritalia Airport in Turin, we saw the Tiger Moth for the first time

At 11:30 a dull engine noise heralded the arrival of a slender figure, similar to a dragonfly, which rested with great elegance on the grass landing strip. It was our Tiger Moth biplane perfectly on time!! I met the pilot, Gustavo Cappa Bava, owner of the Tiger.

I looked at the biplane with interest. It was made with a steel and wood structure covered with waterproofed canvas. The perfectly restored aircraft had the English cockade DND the original serial number DE-486. It was painted in perfectly original camouflage colours as when it started flying. The pilot's seat was behind that of the observer's, both positions had all the controls completely replicated to allow piloting from both places.

On-board instrumentation

We learned more about the aircraft. Gustavo showed me how to board the Tiger without causing damage, how to fasten the seat belt, the various commands, how to behave during the flight, etc.

Now with Gustavo's help we took all the tests to put the Marconcina on board and place it in the small cockpit, resting on my right leg).

The Marconcina positioned on board

The question of positioning the Marconcina between the legs, on the seat in a central position, as the Marquis Solari did, was not practicable due to the presence of the yoke, which must move throughout its stroke and not in a limited position.

Close to my feet the Tiger a 12 Volt battery could be the power source for our Marconcina. In order to avoid problems with the on-board equipment connected to it, I chose to use an additional battery of reduced dimensions and a weight of 2 kg held around the neck with a sturdy strap).

The Marconcina with 12 Volt battery and telegraph key

12 Volt battery with strap for use over the shoulder

This battery and any other object plus the electrical cables must not fall on the floor of the cockpit, to avoid slipping under the pedal board and hindering movement making it impossible to steer the aircraft.

And now we come to the very critical topic, the antenna

The solution adopted by the Marquis Solari to use a 25-metre wire with a weight of about 300g hanging from the biplane was evaluated but then considered dangerous and therefore discarded.

The 25-metre antenna, with a weight of about 300 g, which comes out of the biplane's cockpit

For this purpose we made small PVC electrical insulators to be attached to the Tiger structure using strong nylon cables. A first insulator was connected to the tail boom, a second insulator connected completely to the right of the upper wing, a last insulator positioned under the upper wing, above the observer's cockpit near the tank of gasoline. The same thing was carried out on the left side of the biplane. Subsequently, a copper electrical cable with a length of about 22 metres, very similar to the length of 25 metres used during the positive tests carried out on the ground, was connected to these electrical insulators. Using an insulating plastic tube, clamped on the interplane strut, the wire was made to enter the observer's cockpit to be then connected to the antenna socket of the Marconcina.

Insulator connected to the tail boom

Interplane strut to allow the antenna cable to enter the observer's cockpit

The wires were well stretched to prevent them from bumping into the canvas of the wings during the flight, causing it to break. Another very critical point is the gasoline tank. Here the cable crossed by high voltage electricity had to stay away from the tank and did not have to change its position when in flight.

At the end, using a short piece of wire, we connected the Marconcina earth socket to the tubular structure of the cockpit using an alligator clip.

Saturday, 18 September 2021 - Aeritalia Airport, Turin

The big day had arrived, the morning to fly!!.

Gustavo explained the flight plan to me. We start from Aeritalia, aim for Rivalta, head for Orbassano. From up there we had to look for the chimney of the AER factory dryer. In the courtyard was the Omnibus Receiver with all the soldiers involved in its operation and Guglielmo Marconi. We would fly a few laps over the AER factory and then return to Aeritalia.

During the journey towards and away from Orbassano with the Marconcina I would transmit a series of signals in Morse code.

Gustavo checked the engine, added 1 kg of oil and then refilled the tank halfway between the two upper wings.

I boarded the biplane. Gustavo helped me to close the seat belt, put the headset on my head, handed me the Marconcina which I connected to the antenna/earth cables. I put the battery around my neck. I was ready.

Gustavo now prepared for the propeller start while I was in charge of the petrol tap and the magneto switches - two small rubber-covered switches positioned outside the cockpit on the left side).

A first swing of the propeller, the second swing of the propeller, finally the third swing and the engine started to crackle and stabilised at 800 rpm. The 4-cylinder begins to make its rumbling sound.

External Magneto Switches

The radio operator and pilot waiting for take-off

Gustavo came on board), adjusted his headset, fastened the seat belts and gently moved the Tiger to the waiting point.

Gustavo contacted the control tower, "**Aeritalia for Tiger Moth we are ready for take-off"** and after a few moments the control tower replied "**Tiger Moth you can take off** ".

The engine started to turn in a sustained way, the Tiger started to run fast on the track, raised its tail and then immediately came off the ground We were in the air, what a thrill!! - even a pinch of fear!!.

Beautiful - the adrenaline was at its peak. We flew over cultivated fields, farmhouses, houses, ring road, roads, waterways travelling at about 1,000 feet.

The Tiger jolted and rocked slightly, Gustavo with the yoke and the pedal board always kept it in perfect position. The engine reached 2,100 rpm. All the tie rods were perfectly taut. In front of my face was a small dashboard protecting me from the air and that produced by the wooden propeller.

I checked the insulators and cables of our antenna/earth system, which were perfectly taut and did not rattle.

When we had arrived in Rivalta I start telegraphing SSS SSS VVV VVV. The antenna ammeter always showed 0.35 Ampere. We approach Orbassano, and began to fly over the first houses, then saw the large complex of houses arranged in a U shape and behind the AER dryer with its red brick chimney. I never stopped telegraphing. I saw with relief that on the ground the soldiers had already arranged the sheets to form a V, so it meant that they had been hearing us for some time. On the ground we also saw the soldiers who greeted us and waved their arms..

It was done, they were receiving us.

AER dryer with red brick chimney, on the ground the sheets arranged in a V shape

The Tiger Moth flew over the AER with turns left and right, the Marconcina was not fixed to the structure. I immobilised it with my right arm as if it were a small creature, the telegraph key was fixed on the upper part of the Marconcina with an elastic belt. When the Tiger turned to the left it was easier for me to use the key with my right hand, vice versa when it turned to the right I use the key with the left.

Every so often I inadvertently touched the plug of the antenna cable with my fingers which we taped quickly and I felt all the electrical charge of the discharger. This confirmed to me that the Marconcina transmitted!!!!!

The noise of the engine was deafening and the air as well and in such conditions the use of an on-board receiver was practically impossible.

Even listening to what I was transmitting in Morse with the noise on board was impossible, the Tiger intercom helped me. In practice I listened to myself with the intercom.

In the courtyard of the AER there were also radio amateurs from the ARI "Italian Radio Amateurs Association" Section of Turin who, using the special call II1TRM, had connected other radio amateurs around the world.

We continued to fly over the AER and I continued to transmit, now with some changes, HELLO AIRE, HELLO ARI, HELLO ALL, etc, etc.

During the return trip I identified myself in the shoes of those soldiers who, after a short training course, were put on Caudron G-3 biplanes and sent to war. Now we were flying at a height of about 300 metres at a speed of 120 km/h, we would have been an easy target for the enemy infantry armed with even a simple rifle.

We were now approaching Aeritalia Airport at the bottom; and I resumed playing my role in the figure of Marquis Solari. The Tiger whirled over the last constructions, veered to the left, lowered gently, the engine decreased the revs and with elegance (contrary to what happened in September 1915) it landed gently on the grass. Guglielmo Marconi and the military approached running, “all right?” “Yes, all right, thank you”, I answered. I quickly learn that the Morse messages had been received with the Omnibus receiver loud and clear.

We had shown that it is possible to transmit telegraph radio signals from an airplane in flight and receive them on the ground with a field receiver, commented Guglielmo Marconi, the military leaders agreed.

Sunday, 19 September 2021, Aeritalia Airport, Turin

As scheduled on this day, we made 3 further flights, the first at 11:00, the second at 15:00 and the last at 16:00 using a formula tested the previous day. In both flights I continued to play the role of radio telegraph operator, while on the ground the military

always arranged the sheets to form a V to confirm the reception of the signals.

The sensation as in the previous flights was difficult to describe. The air caressed my face, when I tried to lean a little to the right of the glass dome, the air definitely hit the face. In any case, the Tiger was piloted with the head always slightly off.

On this day on the biplane, a special camera, the INSTA ONE 360 X2 that allowed one to capture 360° images in high definition was placed. The assembly of the images was then carried out professionally by the AIRE Piemonte member Claudio Girivetto, making videos, visible on the AIRE Piemonte YouTube channel that managed to convey the emotions experienced on the biplane to the reader.

The last flight the day I did was with Gian Luca Perotti as partner. I realised had had an experience that would be unforgettable for me. Despite the turbulence I would have liked to stay in flight again and not disembark the Tiger. I would have liked to continue to feel the air in my face but all good things have an end.

In an era in which technologically we have practically all or almost all, this historical re-enactment was meant to be a tribute and a thank you to all those people, thinkers, aviators, radio telegraphers, engineers who with their a romantic and pioneering spirit have in a heroic way allowed us to achieve today's technological results.

Many thanks to Alberto I1VXA for this wonderful story of early airborne wireless, Cliff G3UYN, Secretary

Contest Corner

By David G3PLE

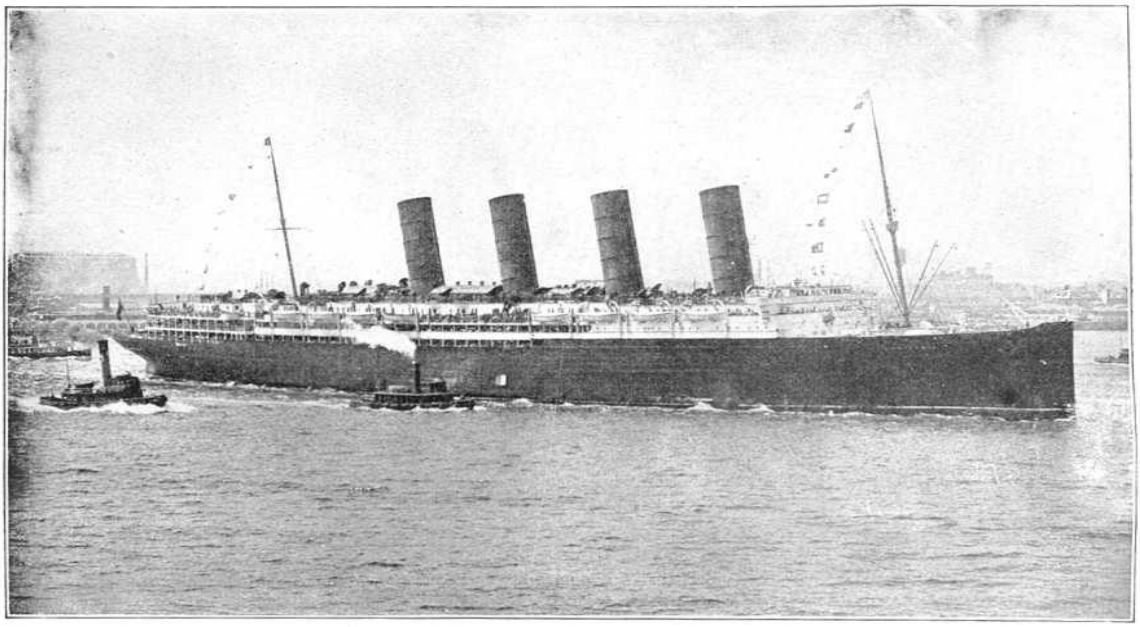
February UKEI results

Thanks to the operators of the bonus stations, Aidan EI8CE (EI5G) and Bob M0ITR (G5GEI).

G5GEI was operated from the Marconi Centre at Poldhu Cornwall, with output at 300w using an Icom 7300 into an 80m dipole up 40ft in the Marconi Wireless Field where the first transatlantic message was sent in 1901.

The Last Voyage of RMS "Lusitania" and the Role of Wireless[1]

By David G3PLE



On 15 April 1915. 29 year old Wireless Operator, Robert Leith joined ***RMS "Lusitania"*** as Senior Wireless Operator and met his Junior Operator, David McCormick. The following morning he was summoned to the Captain's cabin and told that, while he could receive messages for passengers, sending of private messages was forbidden. The ***"Lusitania"*** sailed from Liverpool bound for New York and the two Wireless Operators worked six hour rotating shifts.

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1 *This article is an abridged version of an article written for and published in the March 2015 edition of QSO – the journal of the Radio Officers Association by David G3PLE.*

Specifically rewritten for QST to honour those passengers from the USA who lost their lives when RMS Lusitania was torpedoed and sunk on 7May 1915 having sailed from New York on 1 May1915.

The sinking of RMS Lusitania had a profound influence on the relationship between the USA and the UK, eventually leading to American participation in the Great War.

She arrived safely in New York and prepared for the return

CUNARD

Established 1840

EUROPE VIA LIVERPOOL

LUSITANIA

Fastest and Largest Steamer now in Atlantic Service Sails

SATURDAY, MAY 1, 10 A.M.

Transylvania..Fri., May 7, 5 P.M.
Orduna.....Tues., May 18,10 A.M.
Tuscania.....Fri., May 21, 5 P.M.
LUSITANIA..Sat., May 29, 10 A.M.
Transylvania..Fri., June 4, 5 P.M.

Gibraltar—Genoa—Naples—Piraeus
S.S. Carpathia, Thur., May 13, Noon

ROUND THE WORLD TOURS
Through bookings to all principal Port of the World.
COMPANY'S OFFICE, 21-24 State St., N. Y.

NOTICE!

TRAVELLERS intending to embark on the Atlantic voyage are reminded that a state of war exists between Germany and her allies and Great Britain and her allies; that the zone of war includes the waters adjacent to the British Isles; that, in accordance with formal notice given by the Imperial German Government, vessels flying the flag of Great Britain, or of any of her allies, are liable to destruction in those waters and that travellers sailing in the war zone on ships of Great Britain or her allies do so at their own risk.

IMPERIAL GERMAN EMBASSY

WASHINGTON, D. C., APRIL 22, 1915.

journey 30 April. The day before she sailed, the German Embassy put advertisements in American newspapers which read:

Guglielmo Marconi was in New York at the time and was booked to return to Britain on the ***"Lusitania".*** It is thought that this knowledge had reached the German Embassy and that he would be on board, making the ship a prime target. The business he had was incomplete and he did not board the ship but sailed back to England at a later date. It transpired that Marconi was due to sail on both the **"*Titanic*"** and the **"*Lusitania*"** on their final voyages.

"Lusitania" left New York, 2 hours' late, on 1 May with 1265 passengers and 694 crew on board. Wireless Operators Robert Leith and David McCormick received traffic from American Coast Stations one of which was a warning about submarines off the coast of Ireland. The Wireless Room was located between the second and third funnel on the hurricane deck. Not being able to send private traffic, the crossing must have been a quiet one for the two men, only receiving messages for ships' business and passengers but not having any passengers' messages to send.

On 6 May only three messages were received during the day two of which were for passengers and the other from the Admiralty to the Captain. A further Admiralty message was received by Robert Leith during the evening from the Admiral at Queenstown[2], warning that submarines had been reported near Castlehaven. Shortly afterwards they received their instructions from the owners which read "take Liverpool pilot at bar and avoid headlands. Pass harbours at full speed, steer mid-channel course, submarines at Fastnet". The following morning at 11:30 they received a further Admiralty message stating that submarines were active in the south part of the Irish Channel and had been last sighted 20 miles south of Conningbeg Lighthouse. All these messages were taken on receipt to the Captain.

RMS "Lusitania" Wireless Room

At noon on 7 May the Junior Third Officer, Albert Arthur Bastic came off watch and met Robert Leith on the companionway. They talked about submarines and Leith told him "*We heard one was spotted off Cape Clear at ten o'clock*", Bastic commented that this was aft of their current position. Leith then said "*another was spotted a few miles south of Conningbeg*". Bastic said "*that is 80 miles or four hours ahead of us*".

Brow Head was sighted some 20 miles off their port side; at 12:40 they were at a similar distance from Galley Head. As the ship continued Captain Turner decided to fix his position relative to the Old Head of Kinsale then he received a further message from the Wireless Room that submarines had been sighted two hours earlier off Cape Clear (near Fastnet), the submarines were travelling westwards. The Old Head of Kinsale was sighted at 13.40 some 10 to 15 miles off. Turner had to steer a straight course for about half an hour to ascertain his true position using bearings on the lighthouse.

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2 *Queenstown (now named Cobh) was named after Queen Victoria's visit (lasting 12 minutes) in 1849 following the devastation after the Potato Famine.*

Leith was in the After Dining Saloon on D deck. He had started his lunch when the first torpedo struck at 14:10 between the second and third funnels. He felt the shock and thought it was a boiler explosion. He left his meal and ran down the companionway across the boat deck and the hurricane deck to the wireless room in about 1½ minutes. His colleague, David McCormick was there but as the more experienced man he assumed the operator's chair. He sent an immediate SOS followed by "*come at once, big list*" and the position to the best of his knowledge "*off South Head, Old Kinsale*".

The signals were received and acknowledged by the nearest coast station at Crookhaven. He sent his SOS message "*practically continuously*" (his own words) for 3 minutes and then the ship's power supply gave out. McCormick switched the transmitter over to the emergency supply a bank of accumulators and Leith continued sending the distress call. An officer appeared at the Wireless Room giving a more precise ship's position of Ten miles south of Old Head of Kinsale and this was immediately sent out with great difficulty because of the increasing list of the ship. The SOS was received by 3 ships the tanker ***SS "Narraganset"*** (the same tanker that went to the aid of the ***SS "Volturno"***), the ***SS "Etonian"*** (the same ship whose then Captain took a picture of an iceberg two days before the ***"Titanic"*** hit perhaps the same iceberg) and the ***SS "City of Exeter"***. All the ships changed course and speed to go to the assistance of the ***"Lusitania"***. The other ships did acknowledge his SOS but Leith was unable to recognise their callsigns as the local noise in the Wireless Room and on deck made receiving the signals unintelligible. However he was aware that ships were coming to assist.

Leith remained in the Wireless Room s[i]ending his SOS and was joined there by McCormick and the Chief Electrician, George Hutchinson. A passenger. Oliver Bernard, heard conversation from the Wireless Room and joined them but was told he should abandon ship. He said that he could not swim so Leith stood up while still at the key and said "*Here is a wooden chair you can hang on to, sir*". Bernard declined the offer and despite their precarious situation they all laughed as the chair rolled out of the Wireless Room and smashed against the ship's railings.

Leith stayed at his post until "*a few moments before*" he realised that the ship was sinking, he ran out of the Wireless Room and immediately jumped into a waterlogged boat. There were "3 or 4 with him in that boat. He only remained in it for "*a matter of moments*" as it appeared to him that one of the ships funnels was about to fall on it so he jumped into another passing boat. He was reported as calming a female passenger telling her that he had sent messages for help and that they had been received and help was on its way. Both wireless operators were among the 805 people rescued when the **"*Lusitania*"** sank. Lives that may have been lost but for wireless.

There is no record of what happened to either Robert Leith or David McCormick when they were taken ashore. However details are available from another survivor, bandsman "Harry" Hawkins, who was taken ashore by the tugboat "***Stormrock***" to Queenstown. Co Cork (now called Cobh[3]) and was the last port of call of the **"*Titanic*"**. Even though the Lusitania went down at 14:28 in the afternoon, the survivors did not arrive in Queenstown until 22:00 that evening. They were taken to a hotel and a hall where they received refreshments and Harry recorded that the townspeople were "kindly and sympathetic" and "that nothing was too much trouble for them". Local people in Queenstown opened their homes and even gave up their own beds to enable survivors to sleep for the night. The next afternoon they were put on a train to Dublin and then crossed the Irish Sea to Liverpool overnight by ferry.

Next newsletter June 2022.

[3] *Cobh was the renaming of Queenstown after Irish War of Independence on 2 July 1920. Originally the Cove of Cork it was Gaelicised to "Cobh" and pronounced "Cove" but means nothing in Irish!*

Standing Order 50:50 Club

Anyone wishing to pay for 50:50 Club by bank standing order please complete the following form and send it in to your bank.

To .....(Branch)

On 1 January annually please pay £12 to the account of Poldhu Amateur Radio Club at Lloyds Bank plc, Helston Branch.

Sort Code: 30-94-07 **Account Number: 00460300**

Name of Account.....

Account Number .....

Signature.....

Any overseas members wishing to pay by Bank transfer should give the following payment details to their bank:

BIC: LOYDGB21513 .....

IBAN: GB19 LOYD 3094 0700 4603 00.....

Please ensure your name and callsign with the words "50:50 Club" are quoted on the payment.

POLDHU AMATEUR RADIO CLUB

Membership Application Form

(Please complete in Block Capitals)

NAME .....

ADDRESS .....

.....

POSTCODE..... ☎ .....

CALLSIGN (*if applicable*) ..... DOB (*if under 18)* .....

OVERSEAS CALLSIGN..... RSGB NUMBER YES/NO

EMAIL ADDRESS.....

I, the undersigned) wish to apply for membership of the Poldhu Amateur Radio Club.

I understand that I am responsible for familiarising myself with the Constitution of the Club prior to signing the document.

If accepted as a member, I undertake to abide by the Constitution of the Club, together with any additional rules which the Management Committee may lay down from time to time.[ii]

The Club produces a newsletter and from time to time may wish to contact you about news relating to the Club. The newsletter includes members' callsigns and email addresses. Please indicate below if you wish to receive emails from the Club and if you wish your details to be included in the Club newsletter.[iii]

I would like/not like to receive emails from the Club. .....

I would like/not like to have my callsign (*if any*) to be included in the Club newsletter. .....

SIGNED..... DATE .....

SPONSORED BY .....

SUBSCRIPTIONS Full Member £20 Junior Member £5 Family Membership £24
Associate Member £7 Family Associate Membership £10
Overseas Membership £10 or equivalent

Bank Sort Code: 30-94-07 **Account Number: 00460300**

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ii A copy of the Constitution is available on the website. If unable to access please contact the Club Secretary.

iii Your data is important to us and will not be used for any other purpose than administration of the Club. If you do not agree to this you will not be able to become a member and the Club will be unable to administer your application.