POLDHU AMATEUR RADIO CLUB

NEWSLETTER 114 4 DECEMBER 2022

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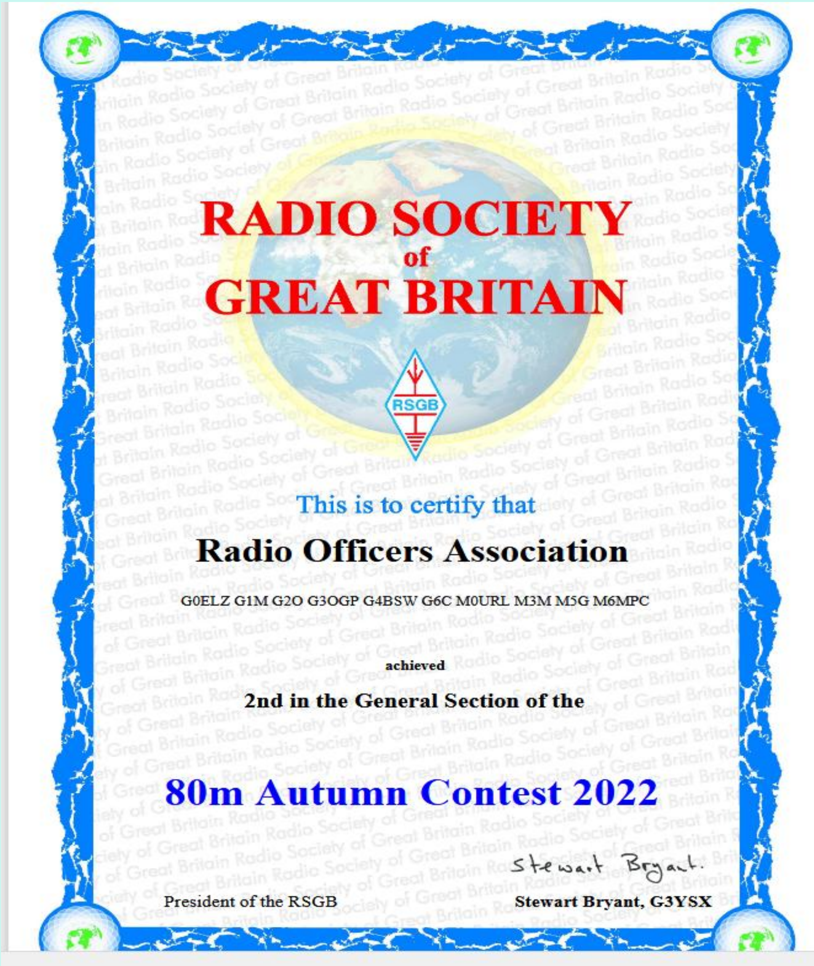

See "Contest Corner", page 35

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If you have recently changed your e-mail address or notice that your given address is wrong, please contact Terry G4CDY.

The Chairman and Committee would like to wish all Members a Merry Christmas and Happy New Year

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A plea to contributors, please insert graphics separately, not in text as it needs to fit in with layout. Also a reminder, as the final newsletter goes out in PDF form, please do not put your article in this form as the only way to insert it will be by way of "cheating". Many thanks.

Carling Black Label - Dambusters (1989, UK):
https://youtube/YyuDUVnePsU

Historical Re-enactment First Radio-Telegraphic Transmission (with a Spark Transmitter from a Hot Air Balloon and Receiver on the Ground)

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

On that occasion, a radio-transmission was performed for the first time using a spark transmitter placed on board a hot air balloon. The receiver, positioned on the ground for the entire period, received the transmitted signals clearly. This event was organised by the members of. Piemonte "Associazione Italiana per la Radio d'Epoca" (AIRE) http://airepiemonte.org/orbassano-2022.html

History

Joseph Michael (26 August 1740 - 16 June 1810) and Étienne Montgolfier (6 January 1745 - 2 August 1799) are respectively the twelfth and the fifteenth of Pierre Montgolfier's 16 sons He was a rich fabric and paper manufacturer. The 300 year old company was located in Vidalon di Annonay near Lyon and usually supplied its products to the court of Louis XVI.

Both brothers were very cultured, Joseph, the eldest, was a brilliant person and dreamer but not very practical in business. In particular he dealt with physics experiences and was very interested in problems related to the flight. The production of hydrogen fascinated him greatly. He made inflated envelopes of cloth or paper with this very light gas on several occasions. Unfortunately, these porous containers were unable to retain hydrogen and the experiments failed.

One evening he stood in front of the fireplace and observed that the sparks and flakes of ashes that rose pushed through the smoke. With some light paper, he produced a "cup" which was able to restrain the smoke. He placed the cup slowly on the fire and left it free to move rose by the hot air produced in the fireplace and held by the cup itself.

The paper envelope used hot air, less dense than the surrounding one, to obtain a force or upward thrust necessary to lift it off the ground according to the well-known Archimedes' principle.

Delighted Montgolfier immediately wrote to his brother, Étienne. instructing him to prepare a large quantity of taffeta and sturdy hemp ropes.

Étienne was also a brilliant inventive man with imagination and fascinated by the scientific discoveries of the times. He had a more regular and business-oriented character than Joseph.

On 6 May 1783 the Montgolfier brothers made a rudimentary silk wrap, held in place by a hemp rope, which they placed over a wood fire. When the rope was loosened, the casing rose for about 20 metres then moved and made a journey lasting about 30 minutes. In a small spacecraft tied to the casing there was a kitten that mewed insistently throughout the journey but when it landed it presented no visible problems.

Encouraged by this experience, the Montgolfier brothers produced other similar devices which they further perfected.

On 4 June 1783 came the fateful day of the presentation to the public of their discovery. Before the Convent des Cordeliers, in the main square of Annonay, a large audience of about 100 people officially attending the event. The Montgolfier brothers had prepared a spherical balloon made of paper and silk of 11 metres in diameter, which they placed over a fire of straw and wool. Two men took care of the bonfire while 8 other men, with great difficulty, held the balloon until Joseph Montgolfier gave the order to let it go. The straw and wool produced a big black and stinking smoke, which however passed almost unnoticed in the face of the experiment. The balloon soared up to 1,000 metres in height, then moved slowly, and landed softly over 2,000 metres away in a vineyard near Annonay.

The experiment aroused great interest throughout France and the Montgolfier brothers were invited to repeat the experiment.

On 19 September 19 1783, in front of the Royal Palace of Versailles, in the presence of the court of the King, Queen Marie Antoinette and of a huge crowd, the Montgolfier brothers presented their latest creation: the Martia balloon (Photo N° 1),.

A rudimentary basket with inside a ram, a duck and a rooster, hangs under the balloon.

Photo N° 1 A 12.5 metre diameter balloon made with cotton and paper elegantly painted and decorated

The balloon with an undulatory movement rose to an altitude of up to 500 metres and then slowly descended and landed 3 km away in the Vaucresson wood. The three animals, the first astronauts in history, were unharmed, alive and well.

The first person who arrived at the landing site was the knight Jean-François Pilâtre de Rozier, a young physicist, a whimsical and original character.

On 15 October Pilâtre contacted the Montgolfier brothers and volunteered for a restricted ascension on the balloon; ascension that took place without problems in 5 minutes up to an altitude of 24 metres.

After this positive experience Pilâtre was a candidate for the following ascents and so on 21November, 1783, at the castle of the Muette, in the Bois de Boulogne a balloon with 14 metres in diameter and 21 metres high made of waterproofed cotton cloth was used. The balloon was a true work of art with gold decorations on a blue background depicting the sun, the insignia of the King, the Zodiac signs and more. The first ascension had to be constrained and had the purpose of verifying the correct distribution of the weights and that everything was working properly. In reality, tears were produced in the canvas which were immediately repaired within about 2 hours.

At around 2 pm the take-off took place for the first free flight. In addition to Pilâtre, in a diametrically opposite position there was the Marquis of Arlandes, an Army Officer invited by the King to support Pilâtre in the enterprise.

In front of a huge crowd estimated at over 500,000 people the balloon rose majestically to an altitude of 900 metres. (Paris at that time had a million inhabitants) After 25 minutes from take-off, about 8 km away, the balloon landed at the Coulebarbe Mill at Butte aux Calles. In present-day Paris, this place is located in Place d'Italie.

The two men went down in history as the first human beings to have flown over and observed the earth from above on a man-made vehicle. Throughout the flight Pilâtre and the Marquis d'Arlandes continued to burn the straw and wool in the brazier suspended in the centre of the entrance in the balloon base. Suddenly there were lacerations caused by the fire which advised the two pilots to be careful and not to overdo the burning of straw and wool.

This latest presentation was a huge success both in France and abroad, so much so that the King conferred the Noble title to Pierre Montgolfier and all his descendants for the production of paper, cloth and for the inventions of the his sons Joseph and Étienne.

Joseph and Étienne were also named extraordinary members of the Paris Academy of Sciences while these flying objects around the world were called "Hot Air Balloon".

It is curious to note that the two Montgolfier brothers throughout their life were always present in all related activities but never travelled on their own balloon!

Photo No 2 Piazza Vittorio Veneto in Turin 1888

The way was now marked; all over Europe. Other hot-air balloons were produced and attempts were made to establish primaries.

In Italy the first flight was made by Cav Landriani in Monza on 15 November 1783.

In photo dating back to 1888 you can see a large hot-air balloon anchored in Piazza Vittorio Veneto in Turin behind the Mole Antonelliana still under construction.

Almost simultaneously, other characters were experimenting with building balloons filled with hydrogen. This solution would have made it possible to create smaller balloons, with higher ascension capacity, but extremely dangerous due to the hydrogen characteristic of easily igniting. In those days, the difficulties were enormous, both for the production of hydrogen impermeable fabrics and for the production of hydrogen itself.

On 27 August 1783 in Paris at the Champs de Mars where the Eiffel Tower stands today, the young physicist, Jacques Charles, poured 250 kg of sulphuric acid over 500 kg of iron granules to obtain the necessary hydrogen. After 3 days, the time needed to prepare the hydrogen, in the presence of 50,000 people, Charles" balloon, with no crew on board rose. to the applause of the crowd. The balloon with a diameter of 4 metres, contained 27 m^3 of hydrogen and rose up to about 900 metres, then landed at 20 km at Gonesse, the area where Charles de Gaulle airport stands today. Later Charles started working on a balloon capable of carrying aeronauts.

On 1 December 11783, after 3 days of inflation, Jacques Charles and Marie-Noel Robert, a manufacturer of special fabrics, took off from the Tuileries Garden using a perfectly spherical balloon with a diameter of about 8 metres inflated with 270 m^3 of hydrogen. The flight lasting 2½ hours reached the altitude of 250 metres and then landed near Nesle, 43 km away.

Jacques Charles had been preceded by the Montgolfier brothers by a few months. Later his invention was carefully examined to evaluate the characteristics of the balloon filled with "flammable air" compared to the balloon filled with "hot air".

The Historical Re-Enactment

At the end of the historical re-enactment carried out last year, Surveyor Carlo Pognante, President of the Orbassano Pro Loco, promised to obtain a hot air balloon for us this year. To tell the truth we all thought that he was joking but in April he began to contact us ensuring our participation which we immediately confirmed.

We began to think about the performance of this re-enactment and to carry out research on hot air balloons and tests of radiotelegraphic transmissions on board these vehicles.

We found very little documentation on this subject and no photographs so here are the facts:

Hot air balloons, balloons, braked balloons, probe balloons - these flying objects did not go unnoticed by the various armies. In particular in England the Royal Engineers (RE) corps "the British Corps of Engineers" in 1892 were involved in the formation of the School of Ballooning near Aldershot. The RE used these balloons for observation beyond enemy lines as early as the second Boer War from 1899 to 1902.

The corps used to experiment and use technologically advanced techniques and materials. The REs were not indifferent to the birth of wireless telegraphy, several tests were carried out and in particular the balloons were used as a support to the experiments.

In the history, the first test of a radio receiver on board a captive balloon was carried out in England in 1907 by Lieutenant C J Aston of the Royal Engineers.

It is also Lieutenant Aston, in 1908, who installed a receiver on board a balloon to pick up the signals of a radio-telegraph transmitter on the ground at a distance of 35 km.

Towards the end of the same year Aston repeated the test, this time with a small spark transmitter on board, which allowed him to send test messages that were correctly received at ground.

In this way, the radio-telegraphic transmission from the balloon to the ground and vice versa is considered to be attributed exclusive to the British.

For our re-enactment we therefore began to work to repeat the experience of Lieutenant Aston when he used the spark transmitter on board the balloon and the receiver positioned on the ground. There was no receiver on the balloon and no transmitter on the ground.

Equipment used

From the very beginning we wanted to carry out the historical re-enactment using original vintage equipment repaired and overhauled to make it actually work. After a period of 100 years and more, the difficulties encountered in making them operational were not indifferent. The satisfaction when we successfully completed the restoration paid off the difficulties encountered.

Medium-sized Ruhmkorff coil (Photo N° 3)

Choice Of Equipment

The transmitter is a generator of sinusoidal damped waves with direct excitation of the antenna/earth and is composed of:

The Ruhmkorff coil is directly connected to the Augusto Righi 4-balls oscillator and to the antenna circuit.

The voltage interruption of the primary circuit is obtained mechanically by means of a vibrating metal sheet. An 8µ F capacitor was connected in parallel to the metal sheet to reduce sparking on the contacts.

The discharge between the spheres is equal to 15 mm which corresponds to a voltage of about 40,000 Volt.

In order to increase the interruption frequency of the primary circuit we wanted to use a mercury switch, but the positioning of the transmitter on the basket of the balloon subjected to probable jolts and sudden movements made us desist from realizing this idea.

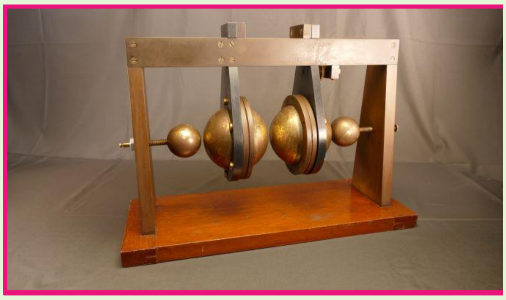


Photo N° 4 type Righi 4 balls oscillator

4 balls (or 3 sparks) oscillator Righi type (Photo N° 4) developed by Augusto Righi (1894), derives from that of Hertz (1886) designed to produce damped

sinusoidal electromagnetic waves but with a shorter wavelength. Used by Marconi to produce oscillations with a higher wavelength.

The oscillator consists of two central balls with a diameter of 102 mm and two lateral balls with a diameter of 52 mm. Discharges occur in the air. The distance between the balls is adjustable. The oscillator is a capacitance/inductance circuit in series with distributed constants. The oscillator structure is made of very thick hard ebonite while the balls are made of solid brass and hence the considerable weight of 14 kg.

Augusto Righi in his study “L’ottica delle Oscillazioni Elettriche” Zanichelli 1897 wrote: *the effect of the oscillator depends enormously on the distance of the two balls that constitute it, but much less on the distance between them and the two balls communicating with the machine. Finally, I still recognised that, if the two balls are hollow, the effectiveness of the oscillator is less than when they are full*.

Vertical morse key (Photo N° 5) with a large ebonite manipulation knob and large electrical contacts, actually a key not that easy to manipulate.

Photo N° 5 Vertical Morse Key

Photo N° 6 Transmitter Components fixed on a Wooden Surface

The transmitter with a total weight of 24 kg, during the re-enactment must be placed in the basket of the balloon which during the ascents could have strong movements and jolts. For this purpose, all the components of the transmitter, ie Ruhmkorff's coil, Righi-type oscillator, batteries and telegraph key were fixed with screws and straps on a wooden surface equipped with 4 legs (Photo N° 6). The table thus obtained was secured with straps to the wicker basket of the balloon ensuring its complete fixing.

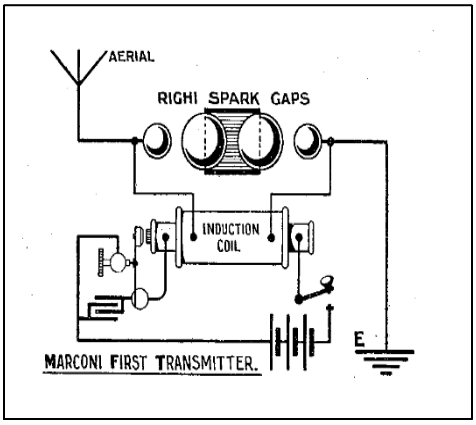
Photo N° 7 Marconi Magnetic Detector

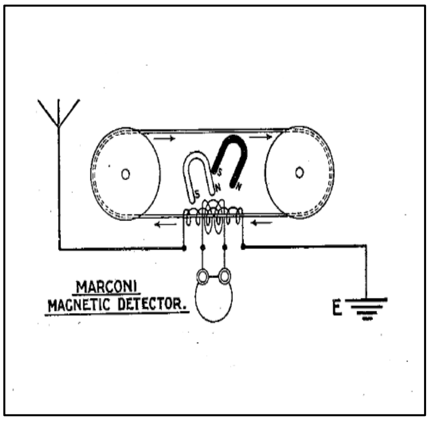
The most suitable receiver for this experience was considered the Marconi Magnetic detector (Photo N° 7) produced by Marconi Wireless Telegraph Co Ltd since 1902.

The magnetic detector was much more sensitive than the coherer receivers commonly used up to that moment but of lower sensitivity than that of the Fleming valve which, starting from 1912, took its place.

Below are the basic diagrams of the transmitter and receiver.

Both devices, owned by the RAI Museum of Radio and Television in Turin, have been given to us in concession for the realisation of the event.





Field Tests

Now after having overhauled the Ruhmkorff coil and the magnetic detector, before operating on the balloon, it was necessary to verify, with field tests whether the magnetic detector could detect and make listenable in the headphones the signals transmitted by the spark transmitter.

Monte Rosa (Photo N° 8) massif 4,634 mas

For this purpose, an experimentation field located at Camasco at 850 masl. was used. This town is located in Valsesia, a mountainous area of the municipality of Varallo Sesia (VC) overlooking Monte Rosa (Photo N° 8).

In these remote valleys, silence and pungent air are ideal ingredients for doing these tests without disturbing any service, while the distance from civilian settlements allows one to do tests without recording disturbances. Only the crackling of our sparks broke this silence.

For the receiving antenna we made a long wire of 50 m in length obtained by a copper cable of 1.5 mm^2, while for the transmitting antenna, we made another long wire of 25m also obtained by a copper cable of 1.5 mm^2.

The Marconi magnetic detector was connected directly to the receiving antenna and to the earth made of a large stake driven into the ground. The transmitter was connected directly to the transmitting antenna while for the earth connection, we simulated an earthing using a cable of about 20 metres slightly above the ground.

On a day in mid-September, with the sun still hot but with a very strong and annoying wind, after connecting everything required, we started to revive Ruhmkorff and Marconi magnetic detector.

Photo N° 9 the magnetic detector in operation

The test was carried out with the devices at a distance of about 350 metres from each other. By convention we have transmitted a series of S and V which were clearly received by the magnetic detector.

Subsequent tests were performed to understand the importance of the connection to the transmitter dummy earth, which proved to be important and strategic for the good reception of Morse signals. Measurements were also made on the radiated spectrum which actually occupied an impressive bandwidth but in the early 1900s this was not a problem. The working frequency of our transmission system was about 1,200 kHz.

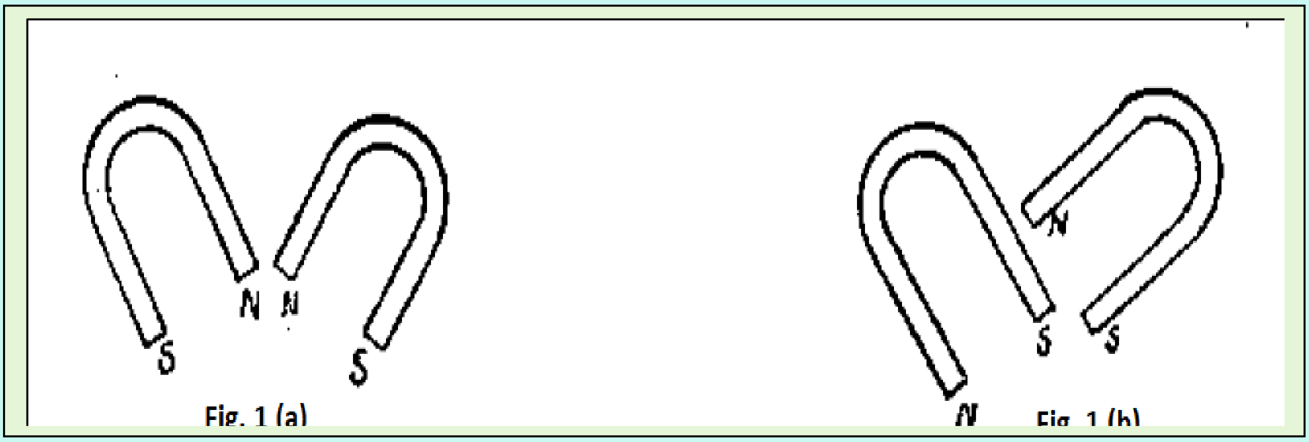
Observing and listening to the magnetic detector in operation was thrilling. Through the clockwork movement system, the band of stranded soft iron wire slowly rotated through the antenna and headphone coil. When the band was set in motion, in the absence of signals, a discrete rustling was heard which then left space to the decoded signals reproduced with a rather low sound.

When the band stopped, the last letter received was decoded, then the detector was finally muted. There are no further regulators and no volume control.

The usual position of the detector magnets with respect to the coils is shown in Fig 1 (a), where it is seen that the like poles are together. This arrangement results in a slight hissing sound being produced in the headset all the time the band is moving.

If the magnets are arranged, as in Fig. 1 (b), this hissing effect is eliminated and at the same time the sensitivity of the receiver is slightly lessened. We chose to use the first solution.

The transmitter is very interesting. In the Ruhmkorff coil, the adjustment of the contact which interrupts the primary is very important, one must try to have a frequency as high as possible compatibly with the characteristics of the coil. To increase the frequency we also inserted a thin layer of plastic material into the hammer which actually worked wonders. The 6 Volt power supply ensured good operation, so it was not necessary to power it with higher voltage.



The 4 balls oscillator Righi type is the object by which the capacity and inductance of the antenna circuit is determined, therefore the transmitting frequency.

Photo N° 10 Powerful Discharge between the Central Balls

The side balls of small diameter have the sole purpose of transmitting the energy to be radiated to the central balls. The diameter of the central balls determines the capacity of the oscillating circuit, so large diameter balls mean high capacity, therefore low oscillation frequency and vice versa. The space between these balls is the dielectric of our capacitor so small dielectric means high capacity and vice versa.
During use, the balls are covered with an oxide layer and consequently, to ensure operation continuity, they must be kept thoroughly clean.

Now that the tests were ended positively we just had to wait for the day of the re-enactment

The Big Day Arrived

16 Sunday, October 16 2022, early in the morning we reached the field where the Sport Paradise Club of Orbassano was reserved for us.

We then begin to place the receiving antenna and the tent under which Captain Llewellyn Evans of the Royal Engineers sets up, on a table, the magnetic detector which he then connects to the antenna/earth (Photo N° 11).

Photo N° 11
Captain Llewellyn Evans

Photo N° 12 the Flag-Wavers' Tent
and Captain Leonard Caster

Further away, we set up another tent where the flag wavers will stand under the orders of Captain Leonard Caster of the Royal Engineers (Photo N° 12).In the field from the Royal Engineers who oversaw all operations.

Photo N° 13

The role of the signalling flags in this hot air balloon transmission - ground reception activity was of primary importance. Lieutenant Aston, aboard the balloon, waved an orange flag when the transmissions begin.
On the ground, Captain Evans in charge

of the magnetic detector observed the balloon with the aid of a telescope. (Photo N° 13).

In case of bad reception he waved the red flag, and only in case of good reception waved the white one. The flag wavers who carefully observed Captain Evans' tent waved their flags to validate the information to the balloon, red flag unacceptable reception or white flag when everything was understandable.

The Radio Amateurs

In the meantime, coordinated by their President, Mirco Gonella I1HNY the Radio Amateurs of the ARI Section of Turin arrived at the camp. For this occasion they used the Marconi Memorial call **IY1TO**.

They began to place a gazebo and then an inverted V to operate in HF and a system of parabolic antenna for transmissions using satellite QO-100 (Photo N° 14).

Photo No 15 **Photo No 16**

At the same time, from the RAI Radio and Television Museum located in Via Verdi in Turin, in front of the Mole Antonelliana, other operators were ready to operate with the special call **II1TRM**. (Photo N° 15).

Meanwhile in Pontecchio Marconi, at the Marconi Foundation, the Radio Amateurs of the **IY4FGM** were already operational. The

IY4FGM station is located at Villa Griffone, paternal house of Guglielmo Marconi. this place in 1895 the young Marconi made the first radio telegraphic connection overcoming the nearby Celestini Hill.

Due to the difference in the time zone, our friends from PARC "Poldhu Amateur Radio Club" were ready to go on air with their permanent call **GB2GM**.

On 12 December 1901 Guglielmo Marconi made the first transatlantic transmission from the super powerful station of Poldhu in Cornwall (England) to the location of Signal Hill near St. John's in Newfoundland (now Canada).

Today the Radio Room and the PARC antennae are located in a building, located in the same Marconi Wireless Field used in 1901. Outside can still be seen the remains of the buildings and the bases of the antenna ties (Photo N° 16).

Given the importance of the participants in this round table, the radio day took place in a **truly exciting way.**

The participants were able to connect with each other, both on 20 and 40 metres in SSB and CW and offered to the Radio Amateurs around the world the possibility of making QSOs with important nominatives. Good guys!

Now everything was ready, only the **main interpreter was missing, the Balloon** which should have arrived at 14:00.

Some Technical **Data**:

- Manufacturer: Camerons Balloons England
- Hot air type
- Diameter 19 m
- Height 24 m
- Volume 3,000 m^3
- Heated with Pure Propane Gas (LPG) by means of 2 high capacity burners
- Wicker basket 130 x 70 cm
- Materials: the first 3 rings Nomex (like the F1 drivers' suits), the next 3 rings and the remaining part are made of special canvas also used to produce parachutes

On time, at 14:00, a large van arrived with Davide Morando, owner and pilot of the balloon.

Inside there was a large wicker basket, a large bag containing the balloon and 4 large LPG bottles.

Davide gave his collaborators a few but peremptory and effective orders.

In a flash all the material was unloaded. Immediately a small balloon was left free to rise in the air, it would be used to understand the direction and intensity of the wind.

The big bag containing the balloon was opened and the canvas was stretched over the field, and here we began to see how big this balloon really was.

Photo No 17 **Photo No 18** **Photo No 19**

Setting up the Hot Air Balloon

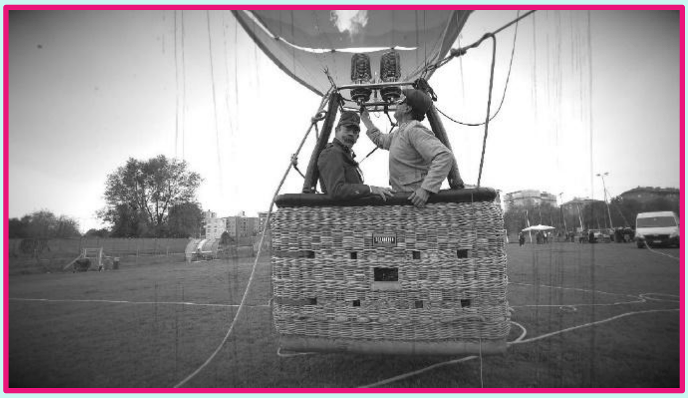
The wicker basket was placed next to the balloon in a lying position. Initially through a large fan, through the opening under the balloon, this was roughly inflated. Then two burners were used in order to heat the air inside the balloon. Almost immediately the big balloon rose up to a vertical position and dragged the wicker basket which was now in a vertical position as well. The balloon could now be used. I played Lieutenant Aston and entered the basket. My collaborators, Captain Evans and Captain Caster were hoisted on board the table with all the transmitter parts on it (Photo N° 20). When everything was correctly positioned in the basket I tied the table with the previously provided straps.

Photo Nº 20 **Photo Nº 21**

We hoist the Transmitter aboard

Photo Nº 22
Arrangement of the Antenna and Earth Cables

Photo Nº 23
Lieutenant Aston a little perplexed!



Now I had to arrange the antenna and earth cables by letting them out from two diametrically opposit holes in the basket (Photo N° 22). For this purpose, I used cardboard tubes to reduce losses and I attached a small weight to each cable to ensure that they remained under tension and didnot affect each other.

We were ready, we could get up Corporal Scott and we could leave. Davide, who played Corporal Scott, started to make the burners work at maximum. I felt gusts of very hot air and was afraid of losing those few hairs left by burning!!.

The balloon began to rise swinging, then lowered and touched the ground, then rose and fell again to the ground. A gust of wind moved the balloon that dragged the basket and turns it over by 90°. I was on the ground with the transmitter those heavy brass balls above my head. Instinctively I tried to support everything. Luckily the fastening straps carried out their duty, nothing moved from its position and everything was in order to resume the adventure.

At this moment, it came back to me that initially we also thought of using a mercury switch to interrupt the primary circuit of the Ruhmkorff and I agreed that the choice not to use it was the most correct and certainly also the one used by Aston in 1908.

Corporal Scott we could leave, the balloon rose quickly with hot air blowing, the hair resisting, the moustache as well ,so everything was going well. When we reached the maximum height of about 40 metres, I tried to use the transmitter which didn't want to work. What could have happened? The antenna and earth wires were twisted on top of each other and we had to go back down.

Captain Evans came to my aid, his support was always providential and of great technical content. He began to untangle the antenna and earth wires but a misunderstanding caused me to put the transmitter into operation when Evans was still holding the cables!!! I heard a scream and a series of curses. Fortunately, everything was resolved only with a fright. Evans passed the high voltage test and gained field experience on insulating materials!!!

Now, with the fault repaired, we could resume navigation. Corporal Scott we left.

We got back up to 40 metres. Immediately I checked the transmitter which was now working correctly.

I began to wave the orange flag (photo Nº 24) which, by our convention means “beginning of transmissions” and then with that big Morse key, I started to irradiate a series of S’s in the ether, then a series of V’s, then the question “Captain Evans copy Aston”.

Photo Nº 24 - beginning of transmissions

The sparks that were produced and discharged on the Righi oscillator WERE powerful and noisy, the crackle heard is only lower than that of the burners.

Captain Evans observed the signals on board the balloon and when he saw the orange flag, he started the magnetic detector. Reception was initially difficult so ther was a waving with red flags, then a waving of white flags both by Evans and Caster which confirmed that the signals were received correctly. In the meantime, other transmissions had beem made.

TEN ASTON ROYAL ENGINEERS CORPS
FIRST TRANSMISSION FROM HOT AIR BALLOON K K K K

All correctly received by Captain Evans and confirmed with the waving of the white flag.

The day came to an end. With the imagination going back in time to the end of 1908, Lieutenant Aston was radiant, the transmission tests provided excellent results.

The air began to moisten and our transmitter which loves dry weather suffered a slight drop in power, the sparks were slightly less full-bodied.

Corporal Scott we can get off, ordered Aston, we have finished the assignment that Colonel Capper gave us, and we have shown that the balloon/ground connection is possible.

All this has been an important piece of the history of radio communications which has advanced in tandem with technological discoveries. In the following years we have seen the application of radiotelegraphy on board of airships and then on airplanes but this is another story.

We too believe that the radio transmission tests were finished, the results obtained confirm that we have repeated, in the best possible way, what was done by Lieutenant Aston.

The balloon slowly descended to the ground, every now and then a tap of hot air to keep the balloon inflated, the photographer and the cameraman awaited us on the field for the photos to be transmitted for posterity.

For those who want to watch the YouTube video of the event, this is the link
https://www.youtube.com/watch?v=f4HcZSZhwIg

The interpreters, from left to right:

Captain Evans (Alberto Erbea), Colonel Capper (Andrea Ferrero), Captain Caster (Leonardo Castro), Lieutenant Aston (Alberto Genova), Serg. Gabriel Birocchs (Gabriele Birocchi)

At the camera Fulvio Birocchs (Fulvio Birocchi)

As the video camera operator of the company “Lumiere brothers”, Mr. Ours John Giaconé (Giovanni Orso Giacone)

Captain Caster (Leonardo Castro), Captain Evans (Alberto Erbea)

Re-enactment finished, **and which re-enactment will we do next year**? Maybe the airship? We'll see, in the meantime hello everyone.

Thanks:

- Municipality of Orbassano
- Surveyor Carlo Pognante President of the Pro Loco of Orbassano for having conceived and realized this re-enactment with Andrea Ferrero
- Andrea Ferrero President of A.I.R.E. for having conceived and carried out this re-enactment with Carlo Pognante
- Museum of Radio and Television of Turin for the concession of use of the transmitter and the Marconi magnetic detector

- Davide Morando of Sport Promotion, owner and pilot of the balloon
- Amateur radio friends, of PARC "Poldhu Amateur Radio Club" with the permanent call GB2GM
- ARI Associazione Radioamatori Italiani Section of Turin for making amateur radio connections using the Marconi Memorial call IY1TO and II1TRM
- Marconi Foundation with the Marconi Memorial call IY4FGM
- Ameria Radio
- The group of figures from the Belle Époque with period costumes
- Me Piemont, for courtesy of photograph N° 2
- Andrea Ferrero and Claudio Girivetto for their competent collaboration
- Claudio Girivetto for his ability as a cameraman
- Alberto Erbea for sharing the technical difficulties
- OGGE Alatel, 296 Model Venaria, Gruppo scuola modellismo Cirié, Piloti Virtuali Italiani
- All members of the AIRE, Piemonte who contributed to the realisation of this re-enactment
- AIRE, Piemonte for the opportunity to cover the role of radiotelegraph operator on the balloon and the trust granted

Contest Corner

David G3PLE, Poldhu ARC Contest Coordinator.

The Radio Officers' Association Radio Society (ROARS) entered the RSGB 80m Autumn Contest 2022 and it was the first such contest that RPARS had entered as a group. We actually achieved 2nd place against 50 of the top contesting Associations in the UK. Not bad for a first attempt and the winner fielded twice as many operators as we did.

I write because for one SSB leg and one Data leg I used G1M the Poldhu Club Special Contest Callsign to keep it active. this can be seen in the certificate shown on ***cover page***.