

The Radio amateurs in the beginning of the spanish Broadcasting

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Abstract — A lot of people were attracted by the news received about the first radio experiments. Around the success of Marconi, some amateurs started to produce sparks with old bells or inductors willing to reach as much distance as possible. The transmission of such signals in Morse code was what is known as wireless telegraphy.

With the evolution of radio electricity science, and especially with the discovery of the triode by Lee de Forest in 1906, not only the transmission systems in the long waves were refined but also the modalities of emission, as it was the case for telephony. So ended the Great War of 1914 some fans decided to try the transmission of recorded music in their gramophone records through a microphone connected to the transmitter.

From the development of this subject, initially led by amateurs, the first broadcast stations came up.

Index Terms — Wireless Telegraphy, Ham radio, Broadcast

I. INTRODUCTION

The work of amateurs experimenting with electricity in the nineteenth century played a decisive role in what would become the invention of the Radio and with it the development of the Radio Science.

Apart from the important work in this branch of science done by Spaniard Julio Cervera, William Marconi has traditionally been regarded as the father of the Radio. He always recognized himself as a true amateur. At first, the activity of all those who worked in this area focused on transmit information through the wireless telegraph between specific points located on land or sea, because there was a real need, not only for armies and governments, but also for safety in navigation. In the amateur field in Spain it was in 1903 when Matías Balsera managed to communicate from his amateur station with the two official stations located near the Bay of Cadiz.

In 1906 Lee de Forest invented the audion or triode lamp in the U.S. Their application in the field of radio involved many improvements also for the fans. Given that the amateurs caused interference with their spark transmitters in official communications, in 1912 they were prohibited to experiment with waves of less than 200 meters. The early researchers considered that this area of the spectrum was absolutely no good at all. However, with the "Aladdin's lamp", the amateurs managed to cross the Pacific and Atlantic oceans at the end of November 1923 with extremely low power compared to the large official installations of wireless telegraphy previously used in long waves.

Apart from the first stations of Europe and America that began broadcasting in the second decade of the twentieth century,



frequently managed by amateur hands, it has to be noted that in Spain it could not be possible because any test with Wireless Telegraphy was forbidden

since 1908. Nevertheless, some fans continued to conduct trials of both reception and transmission with the utmost secrecy. Sadly, that fact has made that no documentary evidence have survived. However, from papers written many years after, we have learned that in Barcelona the doctor Luis Cirera Terré, having contacted in 1911 with Valencia from his *LCT* spark station, conducted some other radio tests with José María García Guillén and other friends before the "Great War."

II. FIRST EXPERIENCES OF BROADCASTING IN SPAIN

Following the news that appeared in the Spanish press regarding broadcasting emissions in other countries, it began a progressive increase in the number of fans who soon started, given the prohibition on the subject, "semi-underground" meetings in various cities. In those that took place in Madrid in 1922, it was germinating the establishment of a radio club which was formally established on 1 October that year with the name of *Radio Club de España* (Radio Club of Spain).



Meanwhile, on that summer, the Telegraph Officer Matías Balsera made the first "phonographic broadcasts" from the station that was installed in the newly built "Palace of Communications" in Madrid. He made it requesting a gramophone and records to his more enthusiastic teammates. Thus, "the first Spanish radio experimenter", as he was considered, put all their hopes in the new broadcasting service. Later on, he broadcasts music from the "Parque del Retiro" and the "Teatro Real". These emissions, together with the new transmitter of the Spanish Navy in Ciudad Lineal, Madrid and the news concerning the reception of English stations, made that many radio amateurs started the construction of their own galena receivers and also of "lamps", while, progressively, the sales of foreign receivers increased.

Because of the boom that began to experiment the Radio Club of Spain, soon its managers decided to work in order to establish

in our country a broadcasting service similar to the already existing in North America and England. Thus, the work made by many fans through the Radio Club of Spain and the *Radio Club de Cataluña* (Radio Club of Catalonia), together with the work of the other mentioned people, the February 27, 1923 a law was issued that became the starting of the Spanish Radio including the radio amateurs.

By then, one of the leading amateur and manufacturer of receivers, Carlos De la Riva, felt that putting on the air their own signals, the customers who buy their equipment would have another station to listen. Therefore, he built and installed a 25 watt transmitter with excellent modulation and heating system in her small shop located in Alcalá Street 69, and so began an almost daily broadcast made late in the afternoon with spoken programs and gramophone records. Such broadcasts ceased shortly thereafter when Carlos De la Riva and his brother Adolfo occupied the *Radio Ibérica* technical direction, a strong entity that would build their own receivers. *Radio Ibérica* was the merger of the *Compañía Ibérica de Radiocomunicación* and the *Sociedad de Radiotelefonía Española*.



Carlos de La Riva.

But the music and speech transmission was initiated not only in Madrid for an amateur station, as this was also true, for example, in Santiago de Compostela by the experiences made by who later on organized the broadcasting service of the *Guardia Civil*, José Blanco Novo, EAR-28. At the opposite end of the peninsula, in Alcoy (Alicante), such tests were developed by Vicente Albors, EAR-99, who did some auditions that were heard by the few owners of galena receivers existing there.

The interest for everything related to wireless telegraphy made that the amateur Emilio Cañete (years later with the callsign EAR-3 for his amateur station) issued during the summer of 1923 in Madrid the *Radio Sport* magazine claiming itself to be "the oldest radio magazine in Spain". Roughly around the same time, in July 1923 it also appeared the first issue of *Tele-Radio*, Official Magazine of the Radio Club of Spain, while in Barcelona, José María García Guillén founded the magazine *Radiosola* together with the printer and radio amateur Eduardo Sola.

III. THE GREAT DISCOVERY BY AMATEURS

Meanwhile, in countries from different parts of the world numerous people interested in the shortwave broadcast continued their experiments with the hope and dream to cross the great oceans by wireless telegraphy. Finally, on November 26, 1923 the Pacific was linked coast to coast and two days later, the Frenchman Léon Deloy, f8AB, in Nice, and Fred H. Schnell, u1MO in the U.S. state of Connecticut, managed to link Europe and America in about 100 meters wavelength. The achievement

of such exploits by low power transmitters built by amateurs showed the world the unknown and immense possibilities of shortwave. Thereafter, the assigned radio spectrum in 1912 to amateurs were gradually being usurped from international organizations for the purpose of distribution among the different telecommunications services.

IV. APPROVAL OF THERADIO IN SPAIN

Fruit of the union which was also emerging in Barcelona among the many fans of Catalonia, the February 19, 1924 the *Ràdio Associació de Catalunya* (*Asociación Nacional de Radiodifusión - ANR*) was founded, aimed to bring together manufacturers, representatives and dealers engaged in the construction and sale of radio equipment, as well as with the idea of installing a broadcasting station in Barcelona.

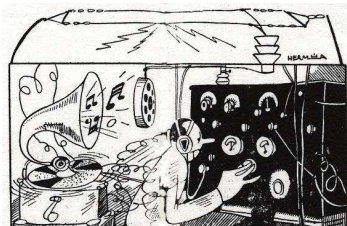
The great expansion of the radio that began to develop in some areas of our country made that specialized articles and columns continuously appear in the newspapers. Thus, Arturo Pérez Camarero started the initiative by signing under the pseudonym of "Micrófono" in *La Libertad*. Also on 1 April 1924 Miguel Moya Gastón de Iriarte, the great promoter of amateur radio in Spain and who shortly afterwards got the callsign EAR-1 for his amateur station, began to wrote daily columns called *TSH* in the newspaper *El Sol* under the pseudonym "G. Rid".



When at the end of March 1924 the official broadcast station of Carabanchel in Madrid started to be listened only during short periods of the day, it began to be heard some amateur transmitting "radioconcertos" issued by gramophone records. So, Vicente G. Camba, later on the operator of the EAR-4, who was in Madrid, and also Rafael Pacios Vera, who had the EARLB callsign many years later.

Given the relentless number of radio amateurs who were emerging in Madrid, the newspaper *La Libertad*, founder of the "Campañas de Radiotelefonía", called on May 18, 1924, a meeting in order to establish the Federation of Spanish Radio-amateurs, also known then as *Federación Nacional de Aficionados* (Federation National Radio-amateurs), Spanish Radio Association, or Spanish Amateur Radio Association, with the primary objective of ensuring the broadcast in Spain and also to help in various ways to its associates. Six days later the first issue of the weekly magazine *T.S.H.* conducted by Arturo Pérez Camarero went out. It appeared as the official *Radio Madrid* Magazine and the spokesman for the *Federación Nacional de Aficionados*.

The two above mentioned amateurs broadcasted their signals in Madrid with radio concerts. On May 31, 1924 Miguel Moya joined them after completing the emission of *Radio Ibérica*. From his own station "IRA" (**I** Radio Amateur) put on the air for a few days the music of his gramophone records, and also delivered the first "radiotelephone bullfighting magazine". On



the other hand, the engineer Antonio Ochoa, one of the founders of the Spanish Radio Association, began, soon after, to broadcast from his own radio transmitter.

In those moments that the "fever of Radio" had invaded the Spanish society reaching the level of national disease known as "radiomanía", the *Gaceta de Madrid* (which is now the *Boletín Oficial del Estado*) published a Royal Order of June 14, 1924 on private radio stations scheme by which it was authorized the broadcasting and the amateur radio in our country.

If, until then, the radio had advanced rapidly in Spain despite the ban, after the publication of the Royal Order a lot of new radio clubs were created throughout our geography, not only to guide the growing number of local radio amateurs, but also with the vision to have a broadcast station in every city. One example is the Radio Club of Valencia formed on June 23, 1924 by a member of parliament and three lawyers, including Enrique Valor (after on, EAR-4), and chaired by José Colvée (years later, EAR-100).

V. NEW EXPERIENCES IN BROADCASTING BY AMATEURS

Also in the Spanish Levant area it is necessary to mention other fans, telegraph officials by profession, who began to broadcast radioconcerts with their transmitters. An activity that was not authorized by the Regulation, as its Rule 34 stated: *It is absolutely forbidden that amateur stations are used for the transmission of international communications on behalf of interested third parties and also it is prohibited any use of them as broadcasting stations for any other purpose or in any other manner contrary to the provisions of the international or the national law.*

Nevertheless, in Madrid the engineer Ochoa continued broadcasting real radio programs from the radio station *Onda Olímpica* or *Radio Olímpica* situated on the Ronda de Atocha, and also it was possible to hear a new station in Madrid transmitting from Zuazo Garages in the Rodriguez San Pedro street. For his part, Emilio Cañete, editor of the *Radio Sport* magazine, also put in the air the signals of *Radiomiero*. For all these, Miguel Moya, shortly after EAR-1, left us his comments in his *TSH* section in the newspaper *El Sol*:

Almost saturated the hobby of receivers, the active radio fever starts.

To the work of these amateurs in Madrid we have to add Fernando Castaño Escalante, shortly after EAR-2, who began to experiment with shortwaves achieving two-way communication with colleagues from different European countries using the provisional callsign 3XY. All fans of the radio transmission gathered regularly at the "Ferretería Vdª e Hijos de Igartúa" in

Montera Street, where Carlos Igartúa (later on, EAR-57) set up his own transmitter with which he broadcasted as *Radio Micro*.

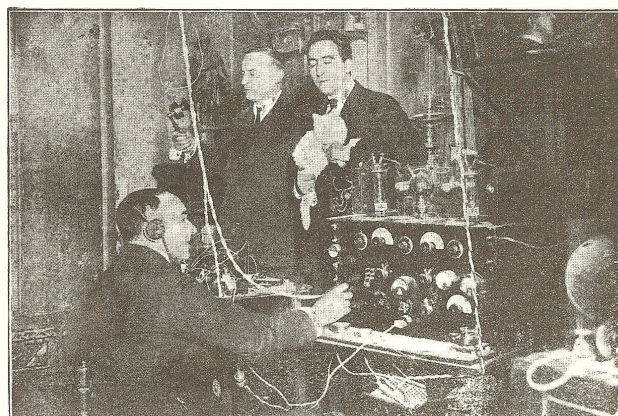
As happened in Madrid, there were also radio amateurs in different provinces emitting radioconcerts: In Marquina (Vizcaya) Juan Arrillaga, who later had the callsign EAR-42, did; in Cadiz the radio station *Radiofón* could be heard; also Ildefonso Montero, belonging to the Radio Club of Sevilla, setup in his home a transmitter with the technical assistance of Rafael A. de Terry. They began broadcasting music concerts with the provisional callsign "4XX". Later on that station became *Radio Sevilla*.

In July 14, 1924 the Administration began issuing the first callsigns to radio stations, both amateurs and broadcastings. The "EAJ-1" were issued to *Radio Barcelona*, not yet operational, the "EAR-1" was given in Madrid to Miguel Moya Gastón de Iriarte. Perhaps the same day or immediately after, the callsign "EAR-2" was also granted to Fernando Castaño which, until then, had been provisionally identified as "3XY".



Over the time the station initially installed in the Zuazo Garages in Madrid became *Radio España*, which had already been granted the callsign "EAJ-2" and whose official opening took place on November 10, 1924 with poor emissions. Four days later it also started to broadcast *Radio Barcelona*, EAJ-1, and with it the increase in the number of radio amateurs all over Catalonia was evident.

Also in Madrid, once the evening concert from *Radio Ibérica* finished on November 19, 1924, the station of the "radiopita Antonio Prieto", later on EAR-7, was heard through the whole



El radioaficionado Antonio Prieto con los señores Marcellán y «Micrófono» en el momento de dar comienzo a una emisión de su estación.

city and even, in the following days, in Santiago de Compostela, broadcasting scientific programs along with enjoyable concerts based not only on playing gramophone records but also on music from paper rolls for player pianos encoded by drilling.

It was in December 1924 when it was created the first broadcasting station in Almería, the EAJ-18 as a result of the illusion and efforts made for a year by the members of the Radio Club of Almería among which it was the banker José Romero Balmás, who also had the EAR-44 callsign for his amateur station.

Days later in such event, at the beginning of Christmas, 1924, the radio amateurs Fernando Castaño, EAR-2, in Madrid, and Genaro Ruiz de Arcaute, EAR-6 in Tolosa (Guipúzcoa), got the first radio-telegraphic communications with North America at wavelengths close to 100 meters.

And while emissions in different points on the peninsula were starting, in the Canary Islands, specifically in Las Palmas, in the first weeks of 1925 a few enthusiasts met in order to request the authorization to install an experimental radio station. Given the strong desire of all of them to get their signals in the air and without waiting for the arrival of the precious document, Arturo Gebauer, then operator of the amateur station with the provisional callsign FR-EAR-B, began broadcasting from his home with a simple circuit that he had built up with a receiving lamp and powered exclusively by dry batteries. Two or three friends initially received the experimental transmissions with its radio galena and at the end of each trial they all gathered as an evidence of the success.

As a result of the furor that was causing the radio throughout Spain, some fans decided to startup in his own cities a broadcasting station and they chose to join forces. Such was the case of Valencia, where in January 27, 1925 a small group of amateurs, among whom Enrique Valor, EAR-4, Mariano Cuber, later on EAR-79, and Ernesto Costa, who would become EAR-95, held a meeting to organize themselves with the idea of enhancing the broadcasting in the area. They founded the *Peña Radio Valencia*.

In Las Palmas, meanwhile, it was decided to move the station of Arturo Gebauer to the attic of "Bazar Londres", a storehouse located on the main street of the city, and through the waves they made a call to radio amateurs attended by eleven fans who decided to create the Radio Canarias Club.

With the advance of the radio in Las Palmas, the amateurs in the other province of the Canary Islands, Tenerife, did not want to be left behind and so to such dates, Juan N. Meinke, later on EAR-F, Pedro Padrón, EA8AS some years later and Manuel Ramos Vela, among others, started to build a radio station in Meinke's house located in Cuesta de Piedra street. From there, they began the first tests that were heard by other fans in the islands and, once the station was properly adjusted, they began to broadcast daily on the basis of gramophone concerts. This small group of enthusiasts was the same that later on initiated the efforts to create the *Radio Club de Tenerife*.

On the Peninsula as well as in the Canary Islands, fans began broadcasting from more and more cities their own recorded music with gramophone records. Luciano García, EAR-11 later on, was transmitting from Guadalajara but he could not be heard in Madrid with her ten-watt transmitter. In Almansa (Albacete), Carlos Salvador Salcedo, later on EAR-36, was the only resident that had a receiver and he started to broadcast without exceeding

the wavelength authorized to amateur stations of 5th category.

Carlos set up a small studio and he started to experiment with the difficulties of being isolated from other colleagues. In the end he succeeded in being heard perfectly by a friend. Two years later, in 1927, there were about three hundred galena receivers in Almansa that were tuned to the EAR-36 wavelength of sixty meters. Because of this, the city was considered the "town of the short waves."



D. Carlos Salcedo

Other people interested in experimenting with the music and speech transmission followed him, even just with the intention of being heard by their close neighbors. Such was the case in Madrid in May 1925 of *Radio Pardiñas*, which despite having an "acceptable" and "relatively strong" modulation, "the inconstancy of its wavelength prevented it from being received regularly."

Also in Madrid new "local radio-stations" (as they were called) continued emerging sporadically, and one of them was the one that began broadcasting close to the Glorieta de Bilbao, despite the orders that began to be sent from the Department of Communications with the purpose of the suspension of such emissions. This affected precisely the aforementioned *Radio Pardiñas* who was forced to cease their tests until the appropriate license was granted.

Another of those fans in Madrid, Antonio Prieto, EAR-7, was broadcasting in the wavelength of 85 meters according to their amateur license. He began to put on the air, on Tuesdays and Fridays from 12 to 2 am, several programs based on recorded music from gramophone records and piano rolls, which alternated with Esperanto courses, conferences and a diversity of enjoyable and interesting sketches.

On December 11, 1925 it took place in Bilbao an event that marked another historic date in the Spanish Radio: the first bilateral radio communication with our antipodes. Such encounter in the ether was led by Ramón de Lili Galdames, EAR-21, at the wavelength of 33-34 meters. Five days later Miguel Moya, EAR-1 got the same achievement.

In Barcelona, at the end of that same month, the Radio Club of Catalonia, which had been granted a concession of "second category" began on Monday and Friday night weekly broadcasts aimed at the fans in the wavelength 280 meters to announce the immediate release of well calibrated waves in 42 meters aimed to technicians and experimenters in order to adjust their receivers.

On January 26, 1926 the *Dirección General de Seguridad* had approved the Regulations of the Association "EAR" - Spanish



Association of Amateur Radio with Miguel Moya, EAR-1, who channeled in this way and for several years the activities of amateurs.

While some amateurs put all their interest in promoting and disseminating the knowledge of radio Morse, Lorenzo Navarro, EAR-38, made his debut in Valencia during the summer of 1927 broadcasting the music, not only of their own gramophone records, but also records lent by people hearing him.

Meanwhile in Madrid, following the meetings between the head of the National Weather Service forecast, Colonel Enrique Meseguer, and the President of the "EAR", Miguel Moya, in February 6, 1928 he began to render, from the EAR-1 station, a service of genuine public interest and of particular importance to farmers and sailors. On that date, Miguel Moya began broadcasting at 22:15 a daily weather forecasting called *Meteo-EAR*, which was issued by the National Service in order to be received by amateurs all over Spain and then broadcasted by Radio or any other mean within their reach.

Continuing with their project, the friends at *Peña Radio Valencia*, mounted with dignity the broadcast studios, every one contributing to his best. The station started to broadcast on behalf of Manuel Herrero who got the callsign EAR-93. They began to broadcast music and speech convinced that they were heard even with galena receptors.

Not far from Valencia, in Gandía, also an amateur, José Maylin, EA5AQ years later, built in 1928 a small and simple transmitter which was in the air from his home identified as "EP-19", *Emisora Particular Radio Gandía*, on the wavelength of 200 meters. The entertaining serenades that Maylin initially organized with his friends in the "studio", that was just the living room of their parents where they had a piano, soon started to be heard by relatives. Later on, the broadcasting of the most interesting events, concerts, cultural lectures, literary readings and news of the city, were heard by the receivers of the entire town.

During the first months of 1929 the radio station EAR-25 of the Radio Club of Catalonia and the EAR-93, *Peña Radio de Valencia* joined the amateur activity, broadcasting from the *Ateneo Mercantil* some conferences. Meanwhile in Barcelona, Carlos Trillas, EAR-119, during the week of carnival started to test broadcasting several masked dance organized by a private society that were heard in this city in the wavelength of 50 meters. Also at that time in Madrid, Julián Tejeiro, EAR-98, entertained with his amateur team during the evenings broadcasting music with extraordinary quality.

During the month of August 1929 the shortwave station *Radio Club Tarrasa*, EAR-156, started their testing, broadcasting music, conferences and sports events in a wavelength range of 30 to 50 meters.

Among the dwindling number of radio amateurs who made compatible the broadcast of music with the purely amateur activity, it has to be mentioned Luis de la Tapia, EAR-117, who, when finalized the preparations for the International Exposition of Barcelona in the summer of 1929, presented to his listeners the recordings of gramophone records and band music together with his repeated call "CQ". This important event was also

attended by amateurs, not only in the large stand of the Association "EAR" in which it was installed the station EAR-104, but also during the month of November with the celebration of the Days of Shortwave. In order to disclose such event, the amateurs took advantage of the kindness and neighborliness of the American company "RCA", installed in the booth next door, to issue from its studio a few calls "CQ" and improvised concerts with the broadcasting transmitter of 5 kW. This made that certain people were interested in our hobby.

As it was the case with certain radio clubs, in late 1929 the National Association of Broadcasters was authorized by the Technical Board of Radio to broadcast in 45 meters its programs through the EAR-157 station which was installed in their premises in Fontanella street of Barcelona. The transmitter of the *Radio Asociación* was designed and built by the technical vocal of "ANR", the engineer Alfonso Lagoma, EAR-29, Juan Vidal Prat, EAR-165, and Vicente Guñau, EAR-33.

The chronicles of the time also mentioned that it were heard during the month of December 1929 in Barcelona and Madrid the *Estación Zeppelin*, the *Estación GM*, and the *Estación Receptora de Ondas Cortas E-118* operated by the Spaniard José María de la Puente, who had got the callsign EAR-168. Also this month, Luis de Estefanía from Bilbao made their station EAR-132 available to the *Radio Club de Vizcaya* to broadcast religious services and sermons by prominent preachers during the nine days of Christmas.

VI. PROHIBITION OF EXPERIENCES OF BROADCASTING TO AMATEURS

Because five years after the publication of the Royal Order of June 24, 1924 authorizing the Amateur Radio and Broadcasting in Spain, some fans continued violating the aforementioned Article 34 that imposed the ban on using the amateur stations as broadcast stations, the Director General of Communications, José Tafur, was forced to notify the President of "EAR" by letter dated December 19, 1929 with the aim distributing it among all the fans transmitting. This request led to cease thereafter any music transmission from amateur stations.

On March 1930, the *Radio Club de Manresa* was authorized to install the shortwave radio station with the callsign EAR-175, maybe of 2nd category. Also the station of the Radio Club of Catalonia was authorized. Its transmitter of 20W conducted some musical performances of two hours daily in which they radiated mainly records that were lent by their listeners in Manresa.



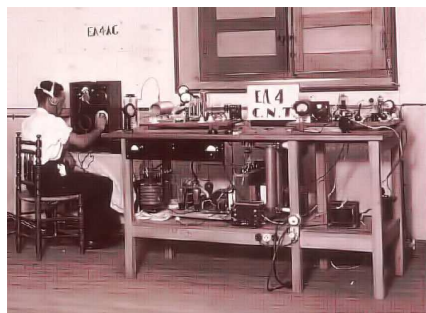
The *Gaceta* of April 2, 1930 issued a Royal Order which amended the mentioned Article 34 of the “Reglamento para establecimiento y regimen de estaciones radioeléctricas particulares” (Regulations for establishment and governance of private radio stations), according to the provisions of the previous September in The Hague by the *Comité Consultivo Técnico Internacional de las Comunicaciones radioeléctricas* (Consultative Committee for International Telegraphy and Telephony, CCITT). This provision established that amateurs no longer can transmit or exchange more than communications relating to testing, trials or adjustments of devices, with absolute exclusion of any other kind of messages.

Meanwhile, in the late summer of 1930, the attorney Enrique Valor, EAR-4, very interested since several years ago in the development of broadcasting in Valencia, chaired at the *Ateneo Mercantil* a meeting with the purpose of requesting the installation of a radio station.

The first of January 1934 it started the replacement of the call signs previously assigned to the amateurs for new ones, in compliance with the Radio Regulations annexed to the International Telecommunications Convention agreed at the Madrid conference of 1932. Days later, on January 13, Martin Hernandez, EA1AX and ex EAR-256, published under his direction the bulletin *Altavoz* as the official newsletter of *Radio-Castilla-Valladolid* which was devoted especially to the new commercial station EAJ-47 in Valladolid. This station was set up by the great technician Francisco Roldán, EA4AB and previously EAR-10, with the help of Esteban Muñoz, EA4AV also ex EAR-136, and Enrique Castaño, EA4BJ and ex EAR-259.

VII. BROADCASTING STATIONS FROM AMATEURS DURING THE SPANISH CIVIL WAR

After bursting in Melilla the military rebellion on July 17, 1936 some army officers, with radio stations “of 5th category” (amateurs), immediately began to use their own stations to broadcast information about what was happening in their cities, as did some radio stations located in the Spanish cities of North Africa that began to give information about the real situation they were living.



Being known by certain authorities the ability of amateur radio communications and knowing that their stations were more dependent on the skills of the operator than on the scrapping elements that they have been made, they soon began house searches and seizures of radio amateur stations to be used as official service communications for the political parties, as well as for

propaganda missions. This was because the majority of radio receivers available at the time had a switch to tune the shortwave broadcast or the radio spectrum bands allocated to amateurs. In certain cases not only it was requisitioned all amateur equipment but also the operator was requested to provide his valuable assistance to maintain the radio station working at his home with a continuous monitoring service. Such situations occurred since the beginning of the war on both sides, as if in Madrid, the Republican zone, the station of Diego Garcia, EA4BW, was at the government service and it was visited daily by Indalecio Prieto, in Jaca (Huesca), an area "liberated", the army seized the station EA2BH because its operator José María Borau was in the military service with his brother in the Signal Corps.

Some of these stations and also certain radio amateurs officers of the Army under the command of General Franco, started to make real programs on shortwave radio trying to counteract the propaganda and official government information to the nation which controlled almost all of the big broadcasters of the, at the beginning of the war, extensive Republican areas in Spain. Thus arose the Radio as a weapon of counter-propaganda from the station in Melilla, EA9AI, from the Captain Doctor Angel Mora,



which was broadcasting a program with a lot of audience called “Poca gracia y mucha justicia” (Little Grace and many justice”. Meanwhile, in Jaca, after the EA2BH microphone was “Asuara” who continuously satirized the events in the area of government of the Republic. A similar case also occurred in Rio Martin, Tetouan, North Africa, where emerged shortly after the EA9AH emissions, from the retired captain Fernando Díaz Gómez, which later on became in Radio Tetuan. Of great importance for the entire race was the *Radio AZ* which was established in La Coruña by decision of the commander of Engineering Arias Paz, Head of Transmission of the 8th Division, with the help of Ramon Alonso, EA1AZ, ex EAR-286, and Agustín Folla, EA1BU.

Given the emissions of all above mentioned and others from around the same band of 40 meters from the area covered by General Franco, it came the Republican contra-propaganda from the telegraph station EA5AD managed by the radio amateur of Torrente (Valencia), Francisco Cano, from whose microphone started a real war of words against the comments made by the aforementioned and also to the speeches that, usually led by General Queipo de Llano, broadcasted *Union Radio Sevilla* on medium wave.

Apart from this, from July 20, 1936 amateur activity began to be prohibited in parts of our country. A ban was generalized

from 28 July with the signing of the proclamation of a state of war that considered that the communications traffic exchanged among the amateurs of both areas could send coded messages.

VIII. CONCLUSIÓN

The information given in this paper has tried to give a vision of the relationship that existed initially between the world of amateur radio and broadcasting and thus confirming the comment made in 2007 by Professor Ángel Faus, of the University of Navarra, in his book *The Radio in Spain (1896-1977)* on page 442 which stated: *Radio amateurs are not part of the Spanish radio, they are the same Spanish radio.*

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