

BRASSPOUNDER



June 2009

Greetings once again from MOBPT.

So, here we are again, I'm hoping that my return to normality continues with the internet. I'm not going to tempt fate once again by going into detail of my tale of woe.

As I'm sure many of you are aware, June saw the final month of operation with the WARC Band challenge.. And words received via email by members indicate a sadness of its withdrawal from the activity calendar. I think, in summing up the activity and its conception, it was an exercise to make members aware of the potential of the WARC Band allocation. And it seems to have done just that! Many have said to me over the years while its been active that they didn't realise the potential of WARC until they've actually used it in earnest. Many of you I hope will continue to use these bands in the future, knowing the enjoyment and rewarding contacts that can be made on there.

Lets look at the final results table

CALL	JAN	FEB	MAR	APR	MAY	JUN	TOTALS	MULTI	MASTER	PWR
K4UK	41	160	67	59	44	56	427	82	35014	QRO
IK2RMZ	37	50	37	77	109	43	353	26	9178	QRO
OH7QR	31	25	41	26	66	107	296	8	2368	QRO
W4YE	41	48	15	15	20	7	146	16	2336	QRO
G3ZOD	100	59	10	16	5	18	208	7	1456	QRP
G8XGQ	15	10	4	0	0	0	29	4	116	QRO
W4FCR(C)	4	13	0	1	2	2	22	5	110	QRO
DL1GBZ	0	0	0	2	0	0	2	0	2	QRO

K4UK you really pulled the stops out with an excellent multi score to achieve a final points total of 35014 and 1st place. IK2RMZ too made an impressive multi score with 26 multi's to achieve a final points score of 9178. And a very impressive final charge by OH7QR with a

score of 107 points put him into 3rd place, overhauling W4YE by the narrowest of margins. G3ZOD also made a excellent effort with his QRP entry. Thanks to you all for your support.

Just a few comments from activity entrants this month. Bill GOBAK with his ladder entry told me

"I have just finished constructing a LCK qrp Transceiver for 80 metres. So far I have only managed 2 qso's with the radio. I have changed the output stage to incorporate an IRF510 Mosfet in the PA, however I am only managing just under 2 watts out. At the moment I am sticking with my FT817 at 5 watts for the Ladder. If things change and I can get 5 watts out of the Homebrew then I may give that a go."

Good news on the QRP radio Bill, why not send an article to M0BMN on your experience of constructing the transceiver, with images if you have any? I'm sure Paul would be pleased to have it for inclusion in Keynote!

And from Graham G3ZOD with a comprehensive report of his months activities;

Hi Rob. Whew, who turned the temperature up? Radio is a bit of a challenge in this weather, what with sweaty fingers sticking to paddles and the risk of dripping all over everything when trying to use the soldering iron!

Ladder

I was only able to join in on the 14th June due to another commitment. Just for once I'd like to start off with something other than a whinge about the 80m conditions, but it's not to be. Again they were very poor, with Peter G4LHI peaking at S2 and then going down into the noise for much of the time.

I was very pleased to be called by Alan G4GLV FISTS #1131. It turns out that Alan is the son of Fred G4AMA, a friend back in my teenage radio days in the 1970s. Fred was an extremely nice person and I was sad to hear that Fred became a silent key very many years ago, but good to hear that Alan is keeping up the hobby.

WARC Challenge

I'm glad to report that I'm going out on a high! At long, long last, some QSOs on 12m - these are the first since I joined in the WARC Challenge last year. So for the very first time, I'm submitting QSOs on all three WARC bands.

Also, two new locator squares!

On one day on 30m I was attempting to call what I thought originally was a local G station with an S9+ 20dB signal but turned out in to be a couple of hundred miles away. However

he went QRT unexpectedly but even better, I was then called by Peter G3JFS FISTS #8985 who was also S9 at a distance of 224 miles.

There seem to have been a number of days recently when it's been possible to work stations at shorter distances on 30m. I was also delighted at long last to work Fred PA0FAW operating as PA0SHAPE. Earlier this year I tried a number of skeds with Fred, but it wasn't to be - PA is just too close for my normal minimum 30m distance of about 500 miles.

So, it's goodbye to the WARC Challenge. I was something of latecomer, joining it and the Ladder last October. Although it's been great fun, in one sense it will be nice to be able to go on the other bands without wondering if I might be missing out on a QSO on the WARC bands HI HI! I've gained a lot of respect for 17m and especially 30m, which turned out to be the perfect band for QRP and a limited antenna, particularly during daylight hours.

73 de Graham (Gra) G3ZOD FISTS #8385

A pleasure to receive your final report on the WARC Activity Gra. At Last! the elusive QSO(s) on 12m have happened! I'm really pleased... I hope (As I've mentioned earlier) That many of you will continue to use the WARC's As, if nothng else, as haven away from the "599 TU" contests that proliferate the bands.

I'd noticed from the log of OH7QR that 17m had yielded some interesting contacts Especially his multiple contacts with FISTS EA members and non members.

From Stan K4UK

Rob - M0BPT:

Enjoyed a QSO with K8JPM / M on 30 Meters with my little KX1 at our club Field Day site. Antenna I used was a full wave 80 Meter dipole hung from some trees up about 50 feet.

I'm really sorry to see the end of the WARC Band Challenge I have really enjoyed participating in it.

73, Stan - K4UK .

Always a pleasure to hear from you Stan, Thanks for your kind words.

On to the ladder results

CALL	JAN	FEB	MAR	APR	MAY	JUNE	TOTALS
G4LHI	29	40	44	30	27	7	177
M5ABN	27	40	27	21	0	0	115
IK2RMZ	7	12	20	0	43	10	92
G4CMZ	0	21	26	22	5	4	78
M0DRK	10	22	15	15	8	3	73
G0BAK	6	8	16	14	12	4	60
2E0TEK	18	20	14	0	0	0	52
G3ZOD	8	12	11	7	7	4	49
OH7QR	15	4	5	5	12	3	44
G8XGQ	2	10	0	0	0	0	12

Whilst doing a little research on the history of the telegraph. I came across this information. Claude Chappe is known to many telegraphy enthusiasts, as being hailed as the first person to invent and demonstrate a form of optical telegraph, In March 1791 to be precise. I then decided to find out what I could about Claude Chappe.



Claude Chappe was born on Christmas day 1763, in a little town called Brûlon, about 200km (130 miles) southwest of Paris, in what is today called the Sarthe Department. Some say that even before 1789 Claude had started performing experiments with telegraphy, attempting to communicate with his brother Ignace who attended a seminary school in Angers, southwest of La Flèche. No record to substantiate that claim can be found today, though. It seems improbable, given that the distance between La Flèche and Angers is about 48 km (30 miles). The various optical telegraph designs developed later by Chappe and others could not have covered that distance. In a book published in 1824, Ignace Chappe recalls that The Chappes corresponded routinely with each other, using this device (the synchronized system), at a distance of 3 leagues.

The 3 leagues (14.5 km) would clearly not have covered the distance from LaFlèche to Angers, but it is approximately the distance from Brûlon to Parcé, a small town near La

Flèche. Brûlon and Parcé were the two sites used in the first reliably documented experiments.

The First Experiments

On 14 July 1789 the French Revolution began in earnest with the storming of the Bastille in Paris, and the rules of life changed. In the next few months, Louis XVI and Marie Antoinette were evicted from the Palace in Versailles and moved to Paris. on the 2nd November 1789, and had to return to Brûlon newly unemployed. In the turmoil of the revolution, Claude's brothers had also lost their jobs and had returned home to Brûlon.

Together they decided to set up a shop to work on telegraphs.

This decision to start working on telegraphs was not as unusual as it may seem. Proposals for telegraphs of all different kinds, ranging from the most frivolous and impractical to serious precursors of the later electrical telegraphs, were being pursued by many.

One of the more practical proposals came from De Courrejolles, a captain in the French navy. In February 1783, De Courrejolles was engaged in battle with the English fleet, at what is described as the Turkish or Ionic Isles, about 145 km (90 miles) northeast of Cap Francois. He found himself surrounded by an English squadron commanded by Admiral Hood. De Courrejolles had a simple optical telegraph erected at a mountain top on the coast

of one of the islands, and used it to monitor the enemy's movements. Every change in position was reported by the telegraph. Using this information DeCourrejolles was able to overrun a squadron commanded by the then Captain(later Admiral) Nelson, and force the English fleet to retreat. Inspired by this success, De Courrejolles submitted a proposal to the French Minister of War to have the army adopt optical telegraphs for signalling purposes.

Though De Courrejolles was unsuccessful at that time, he may well have paved

the way for Chappe. No precise information has survived on the type of semaphore used by Courrejolles. An indication that it may have resembled one of Chappe's later designs is that Courrejolles later accused Chappe of plagiarism.

THE SYNCHRONIZED SYSTEM

The brothers Chappe spent the winter of 1790-1791 experimenting with telegraph designs. In March 1791, they were ready for a first public demonstration of the telegraph they had constructed. The telegraph design used in this first experiment was described by the Chappes as a "pendulum system." It is usually referred to as the *Synchronized System*.

For the first experiments, two telegraphs were used, possibly merely two modified pendulum clocks. One was placed on a terrace at the former location of a castle in Chappe's hometown Brûlon, and the other at the window of a private house in Parcé, a little town at a distance of roughly 16 km (10 miles), and about halfway between Brûlon and La Flèche. The Brûlon location, referred to in most documents as "the castle," was in reality a regular house, built on the spot where a larger castle used to stand. The castle was destroyed in 1774. The house that replaced it, and where the experiment took place, was itself also destroyed by fire in 1793.



Dubious Representation of the Synchronized System .

(Source: Figuier 1868)

There is no accurate description of the working of the pendulums that were used in the first experiment, and the information leaves many questions unanswered. The most reliable record that has survived is a description given by Ignace Chappe, which reads as follows. The first telegraphic correspondence that we performed was done with two pendulum clocks, that were kept in perfect synchrony; the face of the clocks was divided into ten parts, each part designating a different numeral. When the pointer of one clock passed over the number one wanted to indicate, a sound was made, announcing to the correspondent that the number which also his pointer indicated at the moment that the sound was heard, was significant. By representing the words in a dictionary with successive numbers one could thus transmit any thought.

An illustration of the telegraph that was supposedly used in this first experiment is reproduced in virtually every source, with the notable exception of Chappe's book. Ignace

Chappe does not present drawings for any of the early designs, and it appears that his verbal description is at odds with the ones that others used. The most popular illustration shows not 10 but 16 divisions of the clock face, each one indicated not with a number but with a symbolic code that very closely resembles the symbols used by Robert Hooke in his experiments in 1684. Probably based on this Chappe illustration, many later writers have suggested that Chappe borrowed some of his ideas from Hooke. It is not known with certainty where the dubious illustration first originated.

As Chappe indicated, to operate correctly, the hands of the clocks of neighbouring stations had to be synchronized. The Chappes had an original solution to this problem: To transmit a phrase, the two clocks (separated by 400 meters in the first experiments) were set in motion, at the same instant. A sound was made, by striking a casserole [stew pan], at the moment that the pointer was over that part of the clock face that corresponded with the number of the code one wished to signal. The two pointers rotated by the pull of falling weights. We can imagine that a first sound signal at the sending station was used to indicate to the telegraph operators at what precise moment the weights had to be released to start the pointers rotating. Each new signal could then be used to transmit a single code symbol, until either the message was completed or the weights would hit the floor and the pointers stopped.

The initial experiments were held over distances up to 400 meters (1300 feet), behind the parental house in Brûlon. At this distance, the sound signals could still easily be heard, but it was clear also at that time that it would eventually have to be replaced if longer distances were to be covered. Abraham Chappe later wrote that Claude performed many experiments to find a good alternative, including the use of electrical signals travelling through conducting wires. He records that an optical method was only chosen. after having tried, unsuccessfully, electricity, various acoustical methods, the use of smoke produced by different types of combustible materials, etc.

The idea to use an electrical signal had to be abandoned when no adequate insulators could be found for the wires. Ignace Chappe wrote in 1824 that the signals could also be given visually, with the help of large black and white surfaces that could be flipped at the moment that otherwise the sound signal would have been given. Of course, a proper application of any of these alternative synchronization methods could have replaced the whole telegraph, but the Chappes did not realize it at the time.

On the second of March 1791 a team of local municipal officers were invited to see a demonstration of the new invention.

Quote

At the invitation of Mr. Claude Chappe, we have gone to the house of Mr.

Ambroise Perrotin, in the aforementioned city of Parcé, to observe the result of an invention intended to communicate and correspond in the shortest amount of time. First, we were led into a room of the said house, by the said Mr. Claude Chappe, and we found

there a pendulum clock, and a telescope pointing in the direction of Brûlon, 4 leagues distant from Parc .

Next, the said Mr. Claude Chappe aimed the telescope directly at Br lon,

announcing that even though the weather was rainy, his correspondent at Br lon would proceed by initiating a transmission that would be dictated to him by the municipal officers at that site; and while continuously keeping his eye at the telescope, he successively, within the space of four minutes, dictated to Mr. Pierre Francois Chappe, his brother, various characters, unknown to us. By translating these characters, the following phrase was produced: Si vous r ussissez vous serez bient t couvert de gloire [If you succeed you will soon bask in glory].

Done and attested to in Parc , at the house of the said Mr. Perrotin, before midday, at said day and year.

Unquote.

The Chappe invention gained great popularity and lines were erected in France and allegedly copied throughout Europe. His rivals contested the originality of his invention, sadly in a fit of depression, he committed suicide in 1805.

So there you have it! A potted history of Claude Chappe.

I make no claim to the originality of this article.

Thats all from me for another month. Till next time;

"Keep pounding the brass"

73. MOBPT



[back to homepage](#)