The 1921 Transatlantic Tests

Progenitors of Modern Topband Dxing and Contesting
EVERYDAY ENGINEERING MAGAZINE
Sept 1920 Issue Announces the First Transatlantic Test
Experimental Transatlantic Sending Tests

The Next Long Distance Record for a 200-Meter Set Will be Transmitting Across the Atlantic. “Everyday Engineering” is Making Arrangements for the Tests

It is hoped that, during the coming winter, the next transatlantic conquest will be recorded, that is, the transmission, from a 200-meter, 1 k. w. experimental station, of radio messages to England.

The first experimenter to transmit across the Atlantic will set a new standard for 200-meter sets. His name will never be forgotten as long as there are radio experimenters.
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Announcement is made now to give everyone sufficient time to prepare for the tests, which will start on February 1, 1921. The elements of the contest are as follows:

1. Any man, or group of men, can enter. In the latter case, credit will be given to the man who engineers the work. Those connected with radio companies may enter if they carry on as individuals apart from the organizations in which they are employed.

2. The only limits on the transmitter are that the input, measured at the source of power supply, shall not exceed 1 k. w., and the wavelength shall not exceed 200 meters.
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3. Those wishing to enter the contest must communicate with the Radio Editor, Everyday Engineering Magazine, in order to be allotted places in the schedule, the details of which will be announced later.

4. Names for entry in the schedule will be accepted up to November 15, 1920. Suggestions for the method of conducting the tests will be entertained until October 15, 1920. Complete details of the schedule will appear in the January, 1921, issue of Everyday, in circulation on the first of December. This allows two months before the tests are made. News of the preparations will be published as fast as they are completed.

5. Prizes to be awarded by individuals and manufacturers, and the conditions under which they are to be given, will also be published.
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Can You Enter the Competition?

Special efforts of this sort are necessarily expensive. There are experimenters who will not be dismayed by the cost of fitting up and carrying out tests to obtain the high degree of efficiency required. Others may feel that their present equipment is sufficient.

So many times, however, contests are won by those who work with limited facilities, who do their utmost with what they have. There will be some contestants who will apply to friends to help them. In some towns, civic pride will prompt contributions in an effort to bring the honor of achievement to that locality.

As is true in all engineering efforts, the man with the greatest energy and resourcefulness will win.
Everyday Engineering very unfortunately has been obliged to suspend publication, and its radio department editor, Mr. M. B. Sleeper, has asked the A.R.R.L. to take over the tests and see them thru.
May, 1921

Failure of the Transatlantic Tests

Naturally we are disappointed in this outcome—the more so as American ex-amateurs have demonstrated that our amateur signals do get across all right.
Failure of the Transatlantic Tests

Such reception is a new field for British experimenters and they hardly can be expected to show the same performance as an American dyed-in-the-wool ham who has learned how get amateur DX only after years of patient struggle. We have tested most of the circuits used by the Britishers, and find them one and all decidedly inferior to our standard American regenerative circuit using variometer tuning in secondary and tertiary circuits.
May, 1921

Failure of the Transatlantic Tests

We would bet our new spring hat that if a good U.S. amateur with such a set and an Armstrong Super could be sent to England, reception of U.S. amateurs would straightway become commonplace.

This statement was reproduced in the English "Wireless World" and caused considerable commotion.
Mr. M. W. Burnham, of the firm of Burnham & Co., prominent British manufacturers of British apparatus, took up our bet of the “new spring hat”—he bet us that Godley would hear no American amateur signals.
The Second Transatlantic Tests
December 7-16, 1921
Giver th’ Limit!
We Gotta Win this Contest!
Paul Godley, 2ZE
ARRL’s Operator at Androssen, Scotland
Godley’s Tent in Androssen, Scotland
Inspector D.E. Pearson

Witnessed all of Godley’s reception in Androssen
Harold H. Beverage

Godley unexpectedly met Beverage during his voyage to England.
1300 Foot Beverage Antenna
Installed by Godley at Androssen
Nine Tube Armstrong Superhetrodyne Receiver
Godley’s Receiver and Tuner at Androssen
The Armstrong Superhet used at Androssen (top view)
Schematic of the Armstrong Superhet and Beverage Antenna used at Androssen

Beverage Oscillator

Mixer

Five Stage IF Amplifier

Det

AF

BFO

External Heterodyne for CW reception. Weak coupling to main set.

Tuned to 100,000 ± 1000

L_1C_1 - Circuits tuned to beat frequency (100,000 ~)

L_2 - L_3 - Radio Frequency Air Core Transformer tuned to 100,000 ~

L_4 L_5 - Audio Frequency Transformer

80 volts "B"

This circuit tuned to wave frequency ± 100,000 ~

Tuned to wave frequency for regeneration

200 to 400 Ohms

0.1 µH

Earth
Edwin Armstrong
1BCG Hamshack
after it was moved under the antenna
1BCG Cage Aerial
1BCG Cage Aerial
directly above the hamshack
1BCG Counterpoise

108ft. mast

75ft. mast

EAST
1BCG Kilowatt CW Transmitter
The UV204 “250 Watter”
1BCG Kilowatt CW Transmitter

Counter
Poise

Cage Aerial

Kilowatt Amplifier
FSK Master Oscillator

2500 Volt DC Motor Generator
1BCG Receivers
252 Am
"No 1 de 13C4 W-12
New York Date 4/12-21
To Paul Godley
Ardrossan Scotland
Hearty congratulations
Burghard
Emman
Grinan
Armstrong
Army
Crossbrite.“
Rec’d from 13C4 finishing at 3 AM.
Transmitting Godley’s Reports
Marconi’s 250 KW Longwave Radio Station
MUU Cefn Du Mountain, Wales
They Knew They had Won!
The 1BCG Team in Greenwich CT

John Grinan
Ernest Amy 2VK
Edwin Armstrong
George Burghard 2SS
Minton Cronkite 1BCG
Walker Inman 2BGM
TRANSATLANTIC TESTS SUCCEED!

The Atlantic Ocean has been bridged by the signals of American amateur stations—not one but dozens of them! Paul F. Godley, sent overseas with American equipment by the ARRL, set up his station at Ardrossan, Scotland, and there copied the signals of the following stations:

**SPARK**
- IARY Burlington, Vt.
- IAAM Illegal Station, not yet located
- IBT Atlantic, Mass.
- 2BK Yonkers, N.Y.
- 2DN Yonkers, N.Y.
- CAN. 3BP Newmarket, Ont.

**C.W.**
- IRU West Hartford, Conn.
- IRZ Ridgefield, Conn.
- IARY Burlington, Vt.
- IBCG Greenwich, Conn.
- IBT Atlantic, Mass.
- IGF Hartford, Conn.

This accomplishment is epoch-making and opens the door to unguessed possibilities in private radio communication. We will publish the complete story in our next issue—Don't Miss It!

January 1922 20 Cents
1BCG Commemorative Monument
Greenwich, Connecticut
Near this site in December 1921, radio signals transmitted by radio amateurs were first heard across the Atlantic. American engineer Paul F. Godley selected Ardrossan as a quiet spot for radio reception, and spent several long winter nights in a tent with his receiving apparatus. He was rewarded with confirmed reception of more than 30 different amateur radio stations in Canada and the United States, thus proving that vast distances could be spanned by radio without massive commercial installations.

Erected in December 1979 by the Radio Society of Great Britain to commemorate the 75th anniversary of the founding of the American Radio Relay League, sponsor of Godley’s expedition.