USA Brings Home Gold at 2011 High Speed Telegraphy World Championships

Back in September 1936, Eugene A. Hubbell, W9ERU, took home the silver trophy at what the **October 1936 issue of *QST*** called the first official "Amateur Code Speed Contest." Only making one error, Hubbell won first prize with his winning speed of receiving 52.2 words per minute. Held at the ARRL Central Division Convention that year, the contest required operators to decipher plain language text at two minute intervals that ranged in speed from 25 to 52.7 words per minute. [*Editor's note: You must be an ARRL member to view the link*]

But things have changed since Hubbell made history. Individuals all over the world compete in High Speed Telegraphy (HST) events where they are challenged to correctly receive and copy Morse code transmissions sent at very high speeds, upwards of 300 characters a minute. HST is very popular in Eastern Europe, but it is gaining ground all over the world, including the US.

International HST competitions are organized under the auspices of the International Amateur Radio Union (**IARU**). Since 1995, HST World Championships take place each odd-numbered year. The Deutscher Amateur Radio Club (DARC) hosted the Ninth High Speed Telegraphy IARU World Championship in Bielefeld, Germany. The five day event -- held October 19-23, 2011 -- featured 22 nations competing for the title of Fastest Fist or Quickest Ear. Of the 22 nations represented, the US was the only country from the Western Hemisphere.

According to Barry Kutner, W2UP, HST has long been considered a sport in Europe, especially Eastern Europe, similar to chess or an Olympic sport. Kutner was the sole US representative at the 2005 HST World Championship in Macedonia. In 2009, he led a team of seven to Bulgaria for the Eighth High Speed Telegraphy IARU World Championship. Kutner said there really isn't much of an interest in HST here in the US, so those who wish to participate in the World Championship must do so at their own expense.

Kutner said that most of the participating IARU Member-Societies hold a national competition in their country, seeking members to field and sponsor a team to the World Championship. "In some of the Eastern European countries, they take HST very seriously, and they have team and individual coaches," he said. Competitors must be licensed Amateur Radio operators, except entrants in the younger categories may be SWLs. The IARU HST World Championships follow **rules** set forth by the IARU Region 1 High Speed Telegraphy Working Group.

This year, Team USA -- consisting of Kutner, Kennan Low, KE3X, and Kody Low, K3ODY -- placed 10th in the competition. Kutner won a Gold Medal -- the first in HST history to a non-European -- in the pileup competition, and a Bronze Medal in the *RUFZ* competition.

The Competition

There are three main competitive events at HST meets: Transmitting, receiving and receiving Amateur Radio call signs via ***RUFZxp***; the sending and receiving portions of the competition are referred to as the Radioamateur Practicing Tests (RPT). There is also a pileup competition.

In the RPT, random letters and numbers are sent via Morse code -- five characters at a time -- at a high speed. Separate competitions are held for the reception of only the 26 letters of the Latin alphabet, only the 10 Arabic numerals or a mixed content of letters, numbers and some punctuation symbols. Competitors may choose to record the text by hand on paper or by typing on a computer keyboard. The competition starts with one minute of transmission sent at an initial speed defined for the entry category (usually 50 letters per minute for juniors and 80 letters per minute for the other age categories). After each test, the competitors' copy is judged for errors. Subsequent tests are each conducted at an increased speed until no competitor remains who can copy the text without excessive error.

The transmission tests require competitors to send five character groups in Morse code as fast as possible. Competitors send a printed message of five character groups at a specific speed that is judged for its accuracy by a panel of referees. Like the receiving tests, there are separate competitions for sending five character groups of only letters, only numbers or a mixed content of letters, numbers and some punctuation symbols.

Kutner noted that 100 letters per minute is equivalent to 25 words per minute and 100 numbers per minute is equal to 36 words per minute. The mixed category of 100 letters, numbers and punctuation is equal to 29 words per minute.

The Amateur Radio Call Sign Receiving Test uses a software program called *RufzXP* that generates a score for each competitor. *Rufz* is the abbreviation of the German word *Rufzeichen-Hören* that means “listening of call signs.” In *RufzXP*, competitors listen to an Amateur Radio call sign sent in Morse code and must enter that call sign with the computer keyboard. If the competitor types in the call sign correctly, their score improves, and the speed at which the program sends subsequent call signs increases. If the competitor types in the call sign incorrectly, the score is penalized and the speed decreases. Only one call sign is sent at a time and the event continues for a fixed number of call signs (usually 50). Competitors can choose the initial speed at which the program sends the Morse code and the winner is the competitor with the highest generated score.

There is also a Pileup Trainer Test that simulates a pileup situation on the air -- numerous stations attempt to establish two-way contact with one particular station at the same time. This competition uses a software program called ***MorseRunner***. In this test, more than one amateur radio call sign is sent at a time via Morse code that is generated at different audio frequencies and speeds, timed to overlap each other. Competitors must record as many of the call signs as they can during a fixed period of time. They may choose to do this either by recording the call signs by hand on paper or by typing them in with a computer keyboard. The winner is the competitor with the most correctly recorded call signs.