History of Amateur Radio Q Codes

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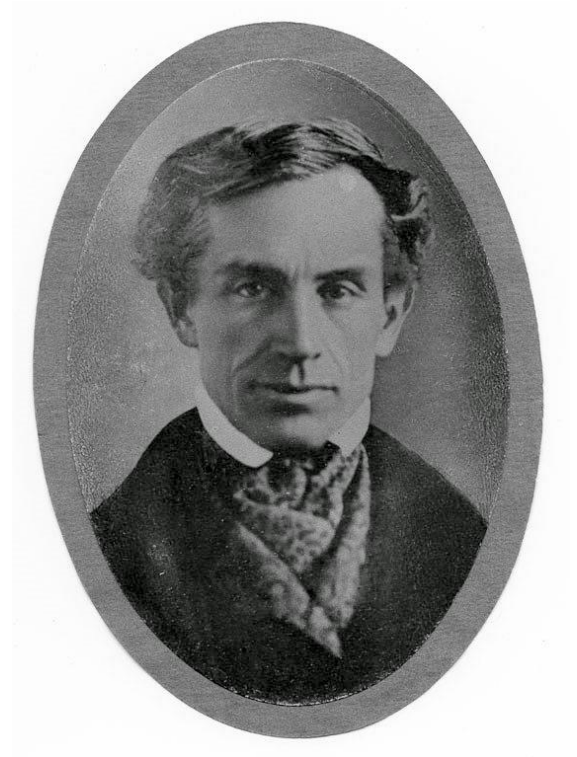
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In the beginning…

- Samuel Morse and the telegraph
- His telegraph introduced 1836
- Single wire
- Repeaters!
- Code introduced in 1844
- Became widespread 1840's-50's
- Closely tied to Railroads

The other man…

- Who was the second operator to use Morse code?
- Alfred Vail
- Worked with Morse on the code
- Made technical improvements to telegraph
- Built & managed early telegraph lines 1845-48

The first message…

- "What hath God wrought"
- Not so much.
- Used to open line from Supreme Court to US Capitol on May 24, 1844
- The first instance of Morse was between Morse and Vail Jan 11, 1838
- "A patient waiter is no loser"

What'd he say?

- Problem: All operators heard all transmissions
- Lots of interference
- Time is money
- Q Codes introduced to keep it brief
- QRA-QRZ & QSA-QSZ following the R & S rail codes

GOTA

- 1896 Marconi gets on the air with Morse Code
- He adopted some of the codes used in telegraph
- New codes were needed for new uses
- Codes related to radio operation
- Ship to shore, ship to ship

Mr. Bond, meet Q

- Needs of shipping industry impelled British Gov't to create standardized Q Codes in 1909
- Facilitated communication across languages
- Formally adopted by the ITU in 1912
- Effective July 1, 1913

Divided by Q…

- Q Codes are divided into ranges by service
- QAA to QNZ – International Civil Aviation Organization
- QOA to QQZ – Maritime Mobile Service
- QRA to QUZ – International Telecommunications Union (ITU)
- QN-   – ARRL specifically for net traffic

I'll take a dozen please…

Code	Question	Answer or Notice
QRA	What ship or coast station is that?	This is ____.
QRB	What is your distance?	My distance is ____.
QRC	What is your true bearing?	My true bearing is ____ degrees.
QRD	Where are you bound for?	I am bound for ____.
QRF	Where are you bound from?	I am bound from ____.
QRG	What line do you belong to?	I belong to the ____ Line.
QRH	What is your wavelength in meters?	My wavelength is ____ meters.
QRJ	How many words have you to send?	I have ____ words to send.
QRK	How do you receive me?	I am receiving (1–5) where 1 is unreadable and 5 is perfect.
QRL	Are you busy?	I am busy.
QRM	Are you being interfered with?	I am being interfered with.
QRN	Are the atmospherics strong?	Atmospherics are very strong.

Let's play Twenty Questions

- Each Q code can have two meanings
- Comes in as a question or an answer
- QTH
  - What is your position (lat/long)?
  - My position is (lat/long)
- Many codes have gained informal meanings
  - My radio only works well with the antenna at my QTH

QST

- Broadcast to all amateurs
- QST for emergency information

- Informal: A cool ham magazine

QSO

- Conversation
- Thanks for the great QSO

QSL

- Please acknowledge receipt / I acknowledge receipt

- My call N4IXT QSL?

- QSL your last transmission

- Informal
  - Cards used to confirm an exchange

QRM

- Man made interference
- Another QSO causing us lots of QRM

QRN

- Natural interference
- Band is noisy today, lots of QRN

QRP

- Decrease Power
- QRP to 5 watts

- Informally, I am operating a station with a power of 5 watts or less

QRO

- More power

- QRO please (i.e. Turn up the power, I can't hear you, propagation is poor, etc)

QSB

- Fading of signal
- Your signal is QSB

QSD

- Your keying is defective
- QSD check your key

- Informal: You can't send with a dang

Man shall not live by Q alone…

- Other codes used by hams
- CQ
- 92 Codes
- SOS

CQ

- Calling all stations
- Can be combined with specifics
  - CQ DX (Calling long distance stations)
  - CQ VK (Calling Australia)
  - CQ KA4VCA (Calling a specific ham)
- Seek you?
- Not so much.
- Derived from first two syllables of the French word *sécurité*
- Meant pay attention
- Used by radio ops in WW 1 in France

The 92 Code

- Created by Western Union Company in 1859
- Most codes used in controlling of railroad traffic
- A few codes were used to represent common phrases
- What is the one code still used today?
- 73
- Originally "accept my compliments", by 1908 became "best regards"
- Some QRP operators send 72
- Meaning "I don't have enough power to send 73"

SOS

- Original distress call was QRR, used by the railroads
- ARRL changed to QRRR to avoid confusion with the international version of QRR which simply meant "please wait"
- England began using CQD (CQ Distress) for it's version of help
- Germany used SOE
- 1906 radio conference decided on SOE, but due to the chance of a Morse E being lost in static changed it to SOS
- Contrary to belief, SOS does NOT stand for "Save Our Ship"
- Titanic radio operators used both SOS and CQD

Radio Heroes

- John (Jack) G. Phillips – 25 years old, Sr. Operator RMS Titanic
- Harold Bride – 21 years old, Jr. Operator RMS Titanic
- Employed by Marconi Company, not White Star Lines
- Operated until 3 minutes before the ship went under
- Phillips passed away in the water
- Bride was rescued.
- On the Carpathia, Bride finds out it's operator Harold Cottam had been working nonstop. Bride gets out of his sickbed (frostbite and sprained ankle) and begins assisting Cottam.
- Greeted in NY by Marconi himself.
- NYT paid him $1,000 for story ($24,297 in today's value)

Summary

- Telegraph
- Morse
- Marconi
- Evolution of Q codes from telegraph to airwaves
- Other codes

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