# International Radiotelephony Spelling Alphabet

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> CQ CQ CQ… This is VICTORIA QUEEN THREE VICTORIA QUEEN THREE … CQ CQ CQ
>
> VICTORIA QUEEN THREE VICTORIA QUEEN this is VICTOR KILO THREE SUGAR ITALY EMMA !

Listening this morning (21/5/16) to 7.090 MHz LSB I was hearing quite a number of portable and QRP stations on 20 and 40m trying to get signals out – but readability, due to QSB and noise at my location, was relatively poor. Sometimes stations were as high as 5/9+ - then seconds later the same station could just be heard 2/3 (just above the noise). Variable propagation; callsigns were hard to establish…

Once stations started to use "Phonetics" – a form of communication designed around ease of readability and avoidance of confusion – ta-daa! Callsign recognition was improved and I was able to make contact at my noisy metropolitan Melbourne station.

I realise that the subject of this article will be somewhat controversial as Amateurs do have the tendency to have the attitude "who the hell is he lecturing me on protocol… His is not perfect either". No, I am not perfect and I am sure that anyone could potentially fault my protocol usage – but the focus here is HF – where our signals do extend outside our borders. All of us tend to have a little fun on occasion, on repeaters ;-) Yet I hear all sorts of variations of Amateurs on HF using all forms of twisted, hard to decipher phonetic spelling alphabet. I unfortunately hear non-standard practise constantly extending to new operators and F-callers, which "pricks up my ears". As a trainer and assessor of new Amateurs I have concerns at the example that this sets towards new Amateurs that we are encouraging into Amateur Radio – especially on HF.

The aim of this article to provide a brief history into the International Radiotelephony Spelling Alphabet – commonly known as "NATO Phonetics" – in such a way to explain how it evolved and why we have it. Hopefully this may promote and educate its usage.

## What is The International Radiotelephony Spelling Alphabet?

Wikipedia is often shunned in the Academic community – but in this case it gives an excellent introduction to this subject:

*The International Radiotelephony Spelling Alphabet, commonly known as the NATO phonetic alphabet and also known as the ICAO radiotelephonic, phonetic or spelling alphabet and the ITU radiotelephonic or phonetic alphabet, is the most widely used radiotelephonic spelling alphabet.*

(Source: Wikipedia - 2016)

This scheme assigns code words to the letters of the English alphabet in a standardised fashion. As a result, critical combinations of letters and numbers can be pronounced and understood by those who exchange voice messages by radio or telephone regardless of language barriers or the quality of the communication channel (Wikipedia – 2016). It is designed to work with multiple languages with different verbal inflections (accents). It is designed to be readable under the harshest of phone (voice) reception conditions.

## Development and Evolution

The driver for the development of a standardised way of translating letters of the alphabet into standardised codes that could be broadcast over radio or telephone media was driven by one important factor – the need to decipher information from the surrounding noise. Not only were telephone lines of dubious quality in the early part of the 20th century, but also the battlefield with its multitudes of sounds - guns firing, bombs exploding, soldiers yelling– often made the reception of low-quality voice signals difficult. Aircraft noise was also phenomenally loud. Spelling out individual words improved recognition considerably, but it still had its limitations (Study.com – 2016).

In 1927, the International Telecommunication Union (ITU), created a spelling alphabet that was originally developed as a tool for aviation communications (Twidell – 2010). This version evolved so that in 1932 the ITU had approved the following phonetic mnemonics, based primarily around geographic entities:

*Amsterdam, Baltimore, Casablanca, Denmark, Edison, Florida, Gallipoli, Havana, Italia, Jerusalem, Kilogramme, Liverpool, Madagascar, New_York, Oslo, Paris, Quebec, Roma, Santiago, Tripoli, Upsala, Valencia, Washington, Xanthippe, Yokohama, Zurich (source: Twidell -2010)*

Earlier versions were not global; the U.S.A developed its own military version as early as 1913. The ITU system was used until World War II. Radio was the primary mode of communication in World War II, but given the earlier-mentioned issues, it was not a perfect system.

The U.S. adopted the Joint Army/Navy Phonetic Alphabet during 1941 to standardize systems amongst all branches of its armed forces. This system became known as "Able Baker" after the words for A and B.

*Able, Baker, Charlie, Dog, Easy, Fox, George, How, Intem, Jig, King, Love, Mike, Nan, Oboe, Peter, Queen, Roger, Sugar, Tare, Uncle, Victor, William, X-ray, Yoke, Zebra (source: Wikipedia – 2016)*

Deficiencies were found with this system - especially during WW II and was addressed when the North Atlantic Treaty Organisation (NATO) was formed in 1949. Nations that did not use English as a native language also were required to use these same codes. According to Wikipedia (2016), the languages and speakers of/from 31 nations were analysed in order to come up with a set of words that represent letters of the alphabet that could easily be recognised under adverse conditions with native English-language and non-English languages speakers alike – all with different accents and vocal inflections.

The final version was implemented by the International Civil Aviation Organization (ICAO) in 1956 and subsequently adopted by the ITU. Also according to Wikipedia (2016):  "Because the ITU governs all international radio communications, it was also adopted by all radio operators, whether military, civilian, or amateur. It was finally adopted by the IMO [International Maritime Organization] in 1965." (after Knoji – 2016).

## Phonetics and AR

In the early 20th century there were very few countries in which radio amateurs had been able to organize themselves into national associations. In many countries, Amateur Radio operation was actively discouraged or even illegal. Fortunately, there were far-sighted individuals who understood the problem and were able to find a solution. In 1925 they met in Paris and formally created the International Amateur Radio Union, or IARU (IARU – 2016).

The IARU is recognized by the International Telecommunication Union (ITU) as the representative of the interests of radio amateurs throughout the world. It is the voice of Amateurs in the offices and meeting rooms of the ITU and regional telecommunications organisations, where the decisions affecting our future access to the radio spectrum are made (after IARU – 2016).

# The Official Version

The official version, listed under "Amateur Operating Procedures" by the ACMA (2015), is reproduced below:

## Letters

| Letter | Code words | Spoken as |
|--------|-----------|-----------|
| A | ALFA | AL fah |
| B | BRAVO | BRAH voh |
| C | CHARLIE | CHAR lee or SHAR lee |
| D | DELTA | DELL tah |
| E | ECHO | ECK oh |
| F | FOXTROT | FOKS trot |
| G | GOLF | GOLF |
| H | HOTEL | hoh TEL |
| I | INDIA | IN DEE AH |
| J | JULIETT | JEW lee ETT |
| K | KILO | KEY loh |
| L | LIMA | LEE mah |
| M | MIKE | MIKE |
| N | NOVEMBER | no VEM ber |
| O | OSCAR | OSS cah |
| P | PAPA | pah PAH |
| Q | QUEBEC | keh BECK |
| R | ROMEO | ROW me oh |
| S | SIERRA | see AIR rah |
| T | TANGO | TANG go |
| U | UNIFORM | YOU nee form or OO nee form |
| V | VICTOR | VIC tah |
| W | WHISKY | WISS key |
| X | X-RAY | ECKS ray |
| Y | YANKEE | YANG key |
| Z | ZULU | ZOO loo |

## Numbers

| Number | Spoken as |
|--------|-----------|
| 1 | WUN |
| 2 | TOO |
| 3 | THUH-REE |
| 4 | FO-WER |
| 5 | FI-YIV |
| 6 | SIX |
| 7 | SEVEN |
| 8 | AIT |

| Number | Spoken as |
|--------|-----------|
| 9 | NINER |
| 0 | ZERO |

<div align="right">(Source: ACMA – 2015)</div>

## Pronunciation

The ACMA have provided these tables as a guide for all Amateurs to follow. They have also provided a rough assistance with pronunciation, suggesting that "Emphasis should be placed on the syllable which is shown in capital letters" (ACMA – 2015).

# In Conclusion

Protocol is important in Amateur Radio; without it we would descend into chaos. Amateurs do not want the chaos and abusive nature of the effectively unregulated "Citizen bands". We go through extensive training not only in technical areas but also in regulations and protocol in order to avoid descending into chaos.

The International Radiotelephony Spelling Alphabet (NATO Phonetics), and its usage, are a key part of the on-air protocols that we as Amateurs internationally should adhere to. Therefore, we all must make the effort to use this – not only so that our signals and callsigns can be easily heard, but also so that we do not let standards slip. We must set examples not only for our new operators but also to other operators internationally – some who abuse these protocols considerably and as a result are rather difficult to understand in our part of the world.

Note that this article is only designed as a brief overview – somewhat of a "reminder" to all Amateurs that we do have protocols and conventions that we follow in Amateur radio. I would actively encourage others with a passion for the history of the development of Radio this to expand this article and its concepts further as there is a lot that can be learned from this.

As I state in most articles, the acronym "HAM" can be broken down into the words "Help All Mankind". Perhaps just this simple adherence to an IARU and hence ITU standard is just one way of assisting all in the Amateur Community making better communication with each other?

73

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