

A HISTORY OF THE AMATEUR OPERATORS CERTIFICATE & THE MORSE CODE REQUIREMENT

Compiled by Lloyd Butler VK5BR

The Amateur Operators Certificate of Proficiency and its qualification for Morse Code has seen some changes since it was first introduced in 1924. I thought I would track down changes, such as morse speed, which have occurred over the years

The issue of the Amateur Operators Certificate (AOC) is inter weaved with the issue of licences to operate amateur stations. The operating conditions of licences issued have depended on the breadth of qualification in the Certificate and conversely, the curriculum variation for Certificates has varied to suit the variations in licence conditions. Also the encoding of amateur call signs issued has been related to the type of licence issued and hence the type of operating certificate held.

This article is about the amateur certificate and where relevant, mention is made of its connection with the licence and in some cases the call sign. To include the changes in licence conditions and call signs before the introduction of the AOC would be a much larger task and this has not been addressed..

Experimenting with Wireless Communication goes back to the last century with the control of experimental licences to transmit following a variable path. The Australian Government enacted the Wireless Telegraphy Act (October 1905) which placed the control of wireless under the Postmaster Generals' Department (PMG) . This allowed the PMG to issue licences for amateur experimentation.

All wireless experiments ceased in August 1914 because of World War 1 and were not resumed until after June 1919.

Form 14. Certificate No. 1

COMMONWEALTH OF AUSTRALIA.

AMATEUR OPERATOR'S
Certificate of Proficiency in Radio-Telegraphy

GRANTED BY THE POSTMASTER-GENERAL.

This is to certify that, under the provisions of the Regulations of the Wireless Telegraphy Act 1905-1919,
Mr. Henry Kirk Raleigh Thomas
has been examined in Radio-Telegraphy and has passed in:-
(a) transmitting and receiving (by sound) Morse signals at a speed of not less than twelve words a minute;
(b) the adjustment and operation of low-powered apparatus and knowledge of its working; and
(c) knowledge of principal Abbreviations and Regulations laid down by the International Radio-Telegraph Convention;
and is thus qualified to operate an Experimental Station in accordance with the above-mentioned Regulations.
It is also certified hereby that the holder has made a legal declaration that he will preserve the secrecy of commercial and defence wireless communications.

Chief Manager, Telegraphs and Wireless,
Postmaster-General's Department.

Certifying Officer: Thurmeting Date: 22-9- 1924
25, Radio-Inspector, Sydney.

Signature of holder: H K R Thomas
Date and place of birth: 1/2/1902, Camden, N.S.W.

N.B.—This Certificate may be enclosed, or withdrawn, at the direction of the Minister in case of misconduct or breach of the Regulations on the part of the holder. Unless withdrawn it will continue to be valid so long as the Regulations governing its issue under the Wireless Telegraphy Act 1905-1919 remain in force.

Fee for Issue, 2/6

**The First AOC Certificate issued in 1924
(From the WIA History File)**

The Navy took over full control of the airwaves in November 1916 and this continued until September 1920 when it was handed over to the Prime Minister's Department. This remained until 1922 when the PMG took over control of licensing functions. The PMG introduced the first Amateur Operator's Certificate of Proficiency (AOC) in July 1924.

To obtain the AOC, an examination was set to qualify in electrical and radio theory, operating regulations and ability to send and receive morse code at a speed of 12 words per minute (12 wpm). This morse speed was maintained for the certificate until around 1946/1947. (It is interesting to note that even in 1914, well before the introduction of the AOC, the specified Morse code speed was 12 WPM for Experimental stations.)

Whilst the Amateur Operators Certificate has been the minimum qualification to obtain an amateur radio station licence, other certificates which have been accepted are the First and Second Class Commercial Operators Certificate of Proficiency which give qualification at a higher level of radio theory and a higher morse code speed. (Essentially, these certificates are required for the operation of ships stations, and base stations such as aeradio and maritime radio). Later on, students for higher level radio technicians courses and professional radio engineers courses were also exempted from the theory examination.

Licences to operate amateur stations were suspended during World War 2 and were withdrawn on September 1, 1939. Re-issue of old licences and the issue of new licences started to take place around early December 1945 and January 1946.

For amateur station operation, the maximum input power to the final amplifier was 50 watts (and for a pre-WW2 period, 25 watts). A six months probationary period on morse code was enforced and an equipment inspection by a PMG Radio Inspector was carried out before operation on phone was allowed.

Two new classes of certificate were introduced around 1946/1947. The old certificate was to be known as the Second Class Amateur Operators Certificate but its new issue called for an upgraded Morse speed of 14 wpm. A higher level certificate known as the First

Class Amateur Operators Certificate was introduced with a higher knowledge of radio and electrical theory and a Morse speed of 18 wpm.

The new First Class Certificate allowed the operator to increase the maximum input power into the final amplifier to 100 watts.

The two certificate classes lasted barely two years after which the qualification requirement reverted back to a single class certificate with a morse speed of 14 wpm and which allowed operation with a maximum input power of 100 watts for all amateur stations.

Prior to 1947, the amateur licence was defined as the "Amateur Experimental Licence". However in September 1947, advice was received that redefined the licence as the "Amateur Operator's Licence", and replaced the two existing types of licence with a single licence with a maximum operating power of 100 watts. Only one class of operator's certificate would be issued in the future called the "Amateur Operators Certificate of Proficiency".

Commonwealth of Australia,
Postmaster-General's Department,
Wireless Branch,
Treasury Gardens,
MELBOURNE. C.2.

19th September, 1947.

Circular to Holders of Experimental Station Licences.

The conditions relating to the conduct of experiments and transmissions by Experimental Station Licensees, have been varied, as indicated hereunder, by a recent amendment to the Wireless Telegraphy Regulations.

"Experimental Station Licensees" will be officially designated "Amateur Station Licensees" and their Stations will be referred to as "Amateur Stations".

Only one class of licence will be issued instead of two as formerly. Irrespective of the class of licence and certificate now held, power not exceeding 100 watts may now be used by all licensees. It will be unnecessary for the existing Class "B" licences to be amended in this regard.

Only one class of Certificate will be issued instead of two as formerly. It will be known as the "Amateur Operator's Certificate of Proficiency". No amendment to the existing Certificates will be necessary.

(C. O. Kelly)
for Chief Inspector (Wireless)

The 1947 Licence Changes
(From the records held by the WIA Historian)

In June 1954, the Limited Amateur Operators Certificate (LAOCP) was introduced which called for the full theory qualification but exempt for morse code. With this certificate, the limited operation was restricted to the VHF bands of 50 MHz and above. The Limited call sign issued was initially VknZxx, with VknYxx, and VknXxx later added. The significant characters were the "Z", "Y", and "X".

THE WHEELS OF CANBERRA

In May, 1953, we informed you that the Postmaster General's Department had agreed to the issuance of the Technician License, or as it is now known, the "Amateur Operator's Limited Certificate of Proficiency."

In December, 1953, we recorded our disappointment at the delay in completion of machinery necessary to fully implement the scheme.

Now, we are happy to announce that "the wheels of Canberra" have completed their slow revolutions and every last cog has been fitted into its assigned place. The result may be read in "Amendments to the Wireless Telegraphy Regulations CSR 1954 No. 50."

The self same document also requires future applicants for both "A.O.C.P." and "Limited A.O.C.P." to pay one pound examination fee.

An imposition that we know will not in anyway dampen the enthusiasm of the genuine candidate.

To turn to the bright side of the picture, we remind A.O.C.P. candidates who failed in Morse Code **only** since January, 1953, that they are now eligible for Limited A.O.C.P. and should make immediate application.

Many technically capable enthusiasts who lacked morse qualifications now have the opportunity to show their ability and keenness. Undoubtedly in the near future the v.h.f. bands will become densely populated by a new race of keen experimenters. It is from the ranks of these men that the C.D.E.N. will draw most of its personnel in future national emergencies. So give them every encouragement chaps!

FEDERAL EXECUTIVE

**A 1954 Editorial from Amateur Radio advising
of the new Limited Operators Certificate**
(From the records held by the WIA Historian)

In 1958, the maximum power input to the final amplifier was increased to 150W, and this remained the limit until 10 years later, when a maximum RF output power of 400W PEP (relevant to SSB operation) was introduced.

In 1967, the morse speed qualification was reduced from the existing 14 wpm to 10 wpm.

The Novice Amateur Operators Certificate (NAOCP) was introduced in 1975 with a lower theory qualification than the AOCPP and a morse qualification requirement of 5 wpm. With this certificate, the Novice operation was restricted to the 10, 15 and 80 metre HF bands. The Novice call sign issued was VknNxx, the significant character being the "N".

From 1980, operators with both the Novice and Limited certificate accreditations, were issued with the call sign format of VKnJxx and VknKxx, the significant characters being the "J" and "K". This was later called the "Intermediate Licence".

The requirement for a morse code qualification on the amateur bands was removed on January 1, 2004 and the morse qualification to obtain an amateur operators certificate was eliminated.

In October 2005, the new classes of licence, the Foundation Licence, the Standard Licence and the Advanced Licence were introduced. The Advanced Licence allowed operation on all amateur bands with RF power output limited to 120 watts continuous and 400 watts PEP. The Standard Licence had some limitations on what bands were used and power output was limited to 30 watts continuous and 100 watts PEP. The Foundation licence had further band restrictions with power output limited to 10 watts on all permitted modes.

To qualify for these classes of operation, three new levels of operators certificate endorsed Foundation, Standard or Advanced were introduced with three different levels of qualification. The existing Unrestricted (AOCPP) and Limited (AOLCP) certificates were also accepted for all levels of licence. The existing Novice (NAOCP) certificate was also accepted for the Standard or the Foundation licence. The Novice Limited (NLAOCP) certificate was also accepted for the Foundation Licence. The new levels of licence are also defined in the call sign format. Detail of this can be found in later additions of the Call Book under the heading "A Guide to Amateur Licensing and Regulation".

<i>Licensing option</i>	<i>Minimum qualifications required</i>
Advanced	Amateur Operator's Certificate of Proficiency (Advanced) (AOCPP(A)); or Amateur Operator's Certificate of Proficiency (AOCPP); or Amateur Operator's Limited Certificate of Proficiency (AOLCP).
Standard	Amateur Operator's Certificate of Proficiency (Standard) (AOCPP(S)); or Novice Amateur Operator's Certificate of Proficiency (NAOCP); or Novice Limited Amateur Operator's Certificate of Proficiency (NLAOCP).
Foundation	Amateur Operator's Certificate of Proficiency (Foundation) (AOCPP(F)); Amateur Operator's Certificate of Proficiency (Advanced) (AOCPP(A)); or Amateur Operator's Certificate of Proficiency (AOCPP); or Amateur Operator's Limited Certificate of Proficiency (AOLCP); or
Repeater and Beacon	Amateur Operator's Certificate of Proficiency (Standard) (AOCPP(S)); or Novice Amateur Operator's Certificate of Proficiency (NAOCP); or Novice Limited Amateur Operator's Certificate of Proficiency (NLAOCP).

**Certificate Qualifications for the various classes of Licence commencing October 2005
(Chart from the WIA 2009 CallBook)**

As the one time controller of telecommunications in Australia and the manager of licences issued for the radio spectrum, the PMG controlled the issue of amateur radio licences and operators certificates for many years. The controlling agency is now the Australian Communications and Media Authority and examination for Certificates is now greatly assisted by appointed members of the WIA.

Supervision of examinations for the Amateur Certificate was originally carried out by Radio Inspectors in the Radio Branch of the PMG. However I can quote my own case where I was supervised by the Postmaster at Murray Bridge, including the examination for morse code. In those days the postal staff were very efficient in operating the telegraph and reading the "click-clack" of the telegraph sounder. The Postmaster could only read the sounder and I had learned to read keyed tone. I brought along a buzzer connected to a morse key which he used to send morse to me and he opened up the telegraph line for me to send morse to him.

Acknowledgement

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