

AUSTRALIAN AMATEUR RADIO CALL SIGNS

A HISTORY OVERVIEW

The current series of Australian Amateur Radio Call Signs may seem a little baffling but looking back at the way in which our call signs have evolved shows that it has been much more confusing in the past.

We know that there were wireless experimenters in most states of Australia from about 1897, very soon after Marconi's demonstrations in London. Engineers from the Post & Telegraph Dept., University researchers and a few individuals duplicated Marconi's wireless system in the period 1900-1904, with varying degrees of success. There were no call signs at that time, and operators simply used their station location or their names or initials as identifiers. Experimenters were supposed to obtain permission from the Royal Navy on Australian Station, ie before the formation of the Australian Navy, but most didn't bother and the Navy had no wireless to hear them anyway, although occasionally visiting Navy ships were equipped with wireless equipment.

The PMG's department was launched in Federation in 1901, but was not involved at this point in time.

By 1904 the Australian Navy (actually the Royal Navy on Australian Station) did have several ships equipped with wireless and used the ship's names or initials as identification. For example the RNS "St George" was just "SG". The Navy was keen to restrict wireless to military purposes only, but wireless manufacturers saw Australia as a lucrative commercial market and demanded access. The Australian Government therefore enacted The Wireless Telegraphy Act of 1905 (October 1905) to place control of wireless under the PMG's Department. The W.T. Act did provide for private experimenters but because of the high fees (£3) and severe penalties (£500 fine or 5 years imprisonment for offences) very few licences were issued.

A Mr H.G. Robinson obtained what was probably the first experimental licence issued, in November 1905 for "experiments in halls for lecture purposes", while the Marconi Co. (NZ) obtained a licence in 1906 for trials of communication between Victoria and Tasmania. Also in 1906 E.F.G. Jolley of Maryborough, Victoria, had stations in two houses about a mile apart. These licences all expired after 1 year. By 1908 the only experimental licence current in Australia was held by the engineer for the Victorian PMG, H.W. Jenvey, who built two stations early in 1908, one at St. Kilda and another 65 miles away at Queenscliff, Melbourne. In 1909 there were only two licences on issue, held by Henry Sutton at 290-292 Bourke St. Melbourne, with apparatus capable of a 250 mile range, and C.P. Bartholomew at Mosman, NSW, with a range of 1/2 mile.

In 1910 the Australasian Wireless Company was licensed with the call sign ATY, and then it obtained AAA when a new station was erected at the 6th floor of the Hotel Australia, Sydney in 1911, with 2 masts on the roof. This was the first commercial license in Australia.

The PMG discouraged experimenters but after representations by the newly formed Wireless Institute of Australia in April 1910 it adopted a more liberal attitude to

licensing so that by August 1911 there was a total of 27 authorised "experimental" stations, 22 in Sydney, 3 in Melbourne, 1 in SA and 1 on King Island off Tasmania.

Beginning mid-1910 the PMG Dept. issued the experimental stations with 2 letter call signs prefixed by "X" for experimental, with no distinction between states, or between private and commercial operators. For instance XAA was J.Y. Nelson (the Senior Electrical Engineer of the Sydney PMG Dept. and also the local radio inspector), F. Leverrier, a leading Sydney experimenter, was XEN, N.S. Gilmour, of St. Kilda, was XNG, Father A. Shaw of the Maritime Wireless Company had XPO and so on. By the way, the experimental licence consisted of 6 foolscap pages of regulations and restrictions and sketches of the equipment. None of the equipment could be altered without approval of the local PMG authority, who could make inspections at any time.

Experimental Licences current at August 1911. ¹

LICENCE NO.	CALL SIGN	NAME	LOCATION
1	XBM	C.P. Bartholomew	Mosman, Sydney
2		Henry Sutton	Malvern, Melbourne
3	XJQ	W.T. Appleton	Malvern, Melbourne
4a	XJP	J.H.A. Pike	Arncliffe, Sydney
4b		A.V. Robb	Arncliffe, Sydney
5	XEN	F. Leverrier	Waverley, Sydney
6		W.H. Hannam	Darling Point, Sydney
7	XPO	Rev. A. Shaw	Randwick, Sydney
8		G.C. Hamilton	Woollahra, Sydney
9		Royal Yacht Squadron	Sydney
10	XDM	Maclurcan & Lane	Hotel Wentworth, Sydney
11		E. Reeve	Rozelle, Sydney
12		A. Mcardle	Kilkenny and Enfield, S.A.
13	XAA	J.Y. Nelson PMG Dept.	McMahons Point., Sydney
14		H. Leverrier	Gordon, Sydney
15	XCP	M.C. Perry	Randwick, Sydney
16	XAB	A.S. Arnold	Ashfield, Sydney
17		A.H. King	Marrickville, Sydney
18		F.H. Day	C of E. Grammar School, Sydney
19		J.S. Nolan	Waverley, Sydney

¹ The callsign list is incomplete, any help to expand it would be very welcome.

20	XCA	R.C. Alsop	Randwick, Sydney
21		H.A. Stowe	Drummoyne, Sydney
22		A. Goodwin	Hamilton, Melbourne
23		C.N. Allen	Chatswood, Sydney
24		H.J.B. Foley	Randwick, Sydney
25	XPO	Rev. A. Shaw	King Island, Tasmania (Maritime Wireless Co. of Australia)
26	AAA	Australasian Wireless Ltd.	Hotel Australia, Sydney - previously
27	ATY	Australasian Wireless Ltd.	Underwood St., Sydney

There are indications that a number of experimenters of the time did not apply for licences, either through ignorance of the requirements or deliberately, hoping not to be caught.

When the government wireless stations at Sydney and Applecross (WA) commenced operations in 1912 they were allocated callsigns POS, for Post Office Sydney, and POP for Perth, but following an international wireless convention which allocated prefixes on a world wide basis the PO was changed to a VI, hence VIS and VIP. The government established 22 coastal stations all with VI prefixes.

In 1912 the callsign prefix letter V was a commemoration of the recent death of Queen Victoria and was used as a prefix in many Commonwealth countries from 1912. Australia was allocated the prefix group VH~VK, but these prefixes were not assigned to radio amateurs until 1928.

In August 1912, as more and more people showed interest in experimental operation and applied for licences, the PMG Department decided it should identify each state by changing the call sign sequence as follows:

NSW	XAA	to	XIZ
VICTORIA	XJA	to	XPZ
QUEENSLAND	XQA	to	XUZ
SOUTH AUSTRALIA	XVA	to	XXZ
WEST AUSTRALIA	XYA	to	XYZ
TASMANIA	XZA	to	XZZ

This meant that several call signs had to be altered to comply with the new series. For example in NSW, J.H. Pike who had been XJP received a new call of XDY, and C.S. Crouch XRT, became XCC. This change explains the discrepancy in early lists which show different call signs for the same person.

When the initial series was filled an extra letter was added. In NSW, for instance, the block of XAA to XIZ allowed for 234 licences, and when they were used up the series was continued as XAAA - XIZZ. At the time an experimental licence cost £1/1/-. The

Wireless Institute of Victoria printed a call book in about June 1914 listing every known amateur and commercial & shipping station, with information from PMG records.

The XAAA type call identification became a little cumbersome so in July /August 1914 the calls were altered to X with a number to identify the state, then 2 letters, eg the PMG Radio Inspector's call in NSW became X2AA. Not many licensees had the chance to use the new calls before the declaration of World War 1 and all wireless experiments ceased in August 1914. Several people and organisations did obtain special permission to continue operations, such as the Perth Wireless Club, as a listening post only, for suspected spies in W.A. and Ernest Fisk, Manager of AWA, who could both transmit and receive. The Government wireless stations continued in operation but in November 1916 the Navy again took control of all wireless, including the commercial and government stations.

After WW1 the Navy still controlled the airwaves and was reluctant to allow wireless experiments but following extended negotiations between the WIA and the Navy, Radio Commander Creswell agreed in June 1919 to issue Temporary Permits to experiment in Wireless telegraphy. These were for receiving only but permits to transmit and receive were issued to the WIA, a couple of Universities and one or two prominent experimenters. There were added restrictions to be observed if the licensee wished to use a valve (usually in a regenerative circuit which could perhaps cause interference to Navy wireless). At this time the Naval Director of Radio Services instigated a new call sign system consisting simply of the sequential licence number, prefixed by the state initial. For instance R.H. Davies of Melbourne obtained licence number 237 so his call sign was V.237 whilst the next applicant, A.B. Cummings in Queensland was call sign Q.238. By February 1920 more than 600 permits had been issued. In April 1920 the Government took charge and re-introduced regulations allowing experimental and instructional licences. An experimental licence cost £2/-/-.

In September 1920, the Government amended the Wireless Telegraphy regulations to remove all wartime restrictions and placed the control of wireless under the "Director of Radio Telegraphy, Prime Minister's Department, Melbourne". The Prime Minister was in discussion with AWA over a UK/Australia communications link and wanted to keep close control of wireless, and the PMG was reluctant to take back responsibility for commercial wireless anyway because it was a money losing situation. When the new Director took over from the Navy in early 1921 he changed back to the pre-war call system of X2AA etc. Some "transmitters", as they were called, requested specific call signs, so for example one leading transmitter, Charles D. Maclurcan, obtained X2CM.

Other less prominent experimenters who wished to transmit were discouraged until 3rd November 1922, when further new regulations were released, allowing experimental wireless in 2 categories:-

- a) transmit and receive and b) receive only.

The receive only licence was further split into:

- i) crystal receiver and ii) valve receiver.

The cost of a licence became £1/-/- for the full licence and 10/- for the receive only licence.

If a licensee had a valve receiver he had to be able to read morse code at 12 WPM, the reasoning being that if the valve broke into oscillation (as was likely with the unstable circuits or regeneration commonly used) and was interfering with one of the navy or commercial stations, which were still using morse, they could come back and tell the offender(s) to close down.

The PMG's Department reluctantly took over the control and licensing functions from the Prime Minister's Dept. at this time, and the call signs were altered yet again, to XA2AA, XA3AA etc where "X" was for experimental and the "A" identified Australia on an international prefix system.

Note that licences and call signs were issued for receiving purposes too, and in fact very few licensed experimenters actually had transmitting equipment. Up to this time there were only about 60 genuine amateur transmitters in all Australia. The other approx. 650 licensees were in fact "listeners" ie. they had receivers only and most had little technical interest or expertise, BUT they did have valid call signs.

The Experimental Licence that was issued during this period was endorsed with either:

T -- to signify approval to Transmit and Receive

R -- to indicate Receive only and then **C** -- crystal or **V** -- valve

The regulations also provided for a Broadcast Licence which allowed an experimenter to transmit news and entertainment, but no advertising or payment was permitted. Other restrictions were the same as for the experimental Transmit Licence. As it cost £5, few experimenters took up this licence but a few did set up broadcast facilities and some went on to become prominent broadcasters.

Although the regulations did not come into effect officially till 1 December 1922, experimental licences were issued from October 1922 with both transmitters and listeners receiving call signs. By mid-1923 around 700 call signs had been issued and NSW had used up all its 2 letter allocation and was about to issue 3 letter calls. However, in May 1923 the PMG decided to hold all further applications pending the release of new regulations which would include commercial broadcasting. There was growing public and industry agitation for broadcasting, so a conference of all interested parties was held in May 1923 to organise and regulate public broadcast operations.

The 1923 Broadcasting Conference included representatives from all groups interested in wireless, who framed regulations to introduce and control public broadcasting. The conference was dominated by Ernest T. Fisk of AWA, who pushed through his proposal for the infamous "Sealed Set" system, whereby listeners could use a receiver tuned and sealed to receive one station only for a fee of up £4/4/- per year, with additional costs if one wanted to listen to another station. Experimenters lost some privileges to commercial interests and were misled by certain delegates. The new regulations were delayed so the PMG started to issue experimental licences once again, but this time only genuine transmitters received a call sign.

When the new broadcast regulations finally became effective in August 1923 a new class of licence was issued, a "Broadcast Listener's Licence", costing 10/-. However, it was obvious that obtaining a receive only experimental licence for 20/-, with no restrictions on tuning, was cheaper than the broadcast listener's licence plus the station fee of £2/2/- to £4/4/-, and so somewhere around 1000 "listeners" applied for experimenter's licences. The broadcast stations soon complained that they were not receiving their expected fees so the PMG sent out letters to people who had receive only experimental licences, cancelling those licences and call signs and telling them to apply for a broadcast listener's licence. Many licences were in fact cancelled, but someone objected in early 1924 and the government found that as the licence was validly issued, it could not be cancelled, even though the licensee was not in all fairness a wireless "experimenter".

To solve that problem, as each licence came up for renewal after 12 months, the licensee had to demonstrate that he was actually competent to experiment with wireless and was not just a "listener". Previously, any exam or morse test was at the discretion of the radio inspector and it appears very few previous applicants had to prove they knew anything about wireless. With the new approach, the number of experimental licences in the period 1924-1925 dropped significantly from the 1923 level and many names and call signs vanished. It was estimated in early 1925 that there were about 1200 experimental licensees in Australia, of which less than 90 were transmitters and the rest, even though they held call signs, should have been reclassified as Broadcast Listeners. Deleting all these listeners from the call sign lists left many gaps in the sequence up till the mid-'40s when growth in numbers finally made the 3 letter call sequence necessary.

This practice of issuing call signs to listeners with no real technical expertise raises a problem concerning claims by some old timers' to precedence in amateur activities. For instance Miss F. Violet Wallace (later Mrs. McKenzie), is regarded as the first Australian female amateur, but the records show that there were four ladies, all listeners only but with valid call signs, before Miss Wallace obtained her licence.

During the 1922-25 period experimenters were blamed for interference with other stations, and the Wireless Institute was keen to make a distinction between true "experimenters" who were engaged in research and wireless construction, and those who they called "amateurs", who were only listeners, using store bought or simple kit-built crystal or 1 valve sets. The amateurs were to blame for interference with broadcasts, but of course experimenters were more proficient!

The Fisk "sealed set" scheme mentioned above was a failure and less than 12 months later another Broadcast Conference convened and new regulations closer to the present broadcast rules were issued by the PMG in July 1924. At this second conference the experimenters came under further pressure and lost more band space and privileges.

One recommendation of the conference was to revoke all experimental licences and instead issue no more than 980 "Expert Experimental Licences" Australia wide to genuine experimenters, to be approved by the WIA.

The proposed allocation per state was to be:

NSW	VICTORIA	SOUTH AUST.	WEST AUST.	QLD	TAS.
300	300	100	100	150	30

Fortunately the PMG rejected this proposal, and when it issued new Statutory Regulations in July 1924 it clarified the Experimental Licence and Broadcast Listeners Licence and at this time introduced formal examinations for the Amateur Operators Certificate of Proficiency (AOCP). The morse code requirement was 12 words per minute (WPM) and the exam cost 5/- whilst issue of a certificate cost another 2/6.

A further change in the call sign identifier occurred in 1927 when another international radio conference decreed that Australia should use the prefix OA effective from 1 February 1927, so we then had calls such as OA3BM, Howard Kingsley Love. "O" was for Oceania and "A" for Australia.

Only a couple of years later yet another international agreement saw the calls changed to the current VK plus a number prefix, for instance VK2JP (J.H. Pike again). That change came into force at midnight of 31 December 1928, but the PMG Chief Radio Inspector, Mr. Jim Malone, decided that VK call signs would be used from 8 December 1928 so that the change would be fully implemented by 1 January 1929, which explains why some contacts and QSL cards seem to have jumped the gun by quoting "VK" calls prior to January 1929.

There does not seem to be any official declaration of the call sign format so many experimenters used their own interpretation by adding a hyphen or a full stop to their call signs as printed on QSL cards, such as XA-4CD, OA2-BH, VK.2AK and VK-4SU. There was even VK3D.L. and VK3--H--W. Some, perhaps speculating on further changes, abbreviated their QSL cards to show just the number and letters, such as 4WK and 5BJ. Magazines of the era often left the prefix off the calls when reporting experimenters' activities anyway.

Amateur Licences in Australia were withdrawn on 31 August 1939².

Previous external Australian territories callsign prefix history was:

- Christmas Island – ZC3 (pre-1940), Japan (1940 to 1944), 9V (1945 to 1958), VK9X (from 1958).
- Cocos Keeling island – ZC2 (pre-1940), VK9Y (1955 to 1992), VK9C (from 1992).
- Papua New Guinea – VK4 / VK9 / P29 (from 1972).
- Nauru – VK9 then C2 (since 31 January 1968).

Finally, the PMG recognised a changing understanding of the terminology and "Experimental Station Licensees" officially became "Amateur Station Licensees" from 19 September 1947.

² Confirmation of this date is desired.

Callsigns subsequently were issued as a 2 by 2 callsign, ie VK_nXX and VK_nA_{XX} formats. Licensees also were able to obtain a callsign for “Mobile” station operation.

The Limited Amateur Operators Certificate was introduced in 1954 and issued to applicants who were restricted to using the VHF bands and above and without morse code privileges (CW). The limited licence callsigns were issued using the Z suffix, eg VK_nZ_{XX}. The 3rd LAOCP licence in Australia was issued to Mr Frank (Mick) Pettiford in Queensland, VK4ZAA.

VK0 callsigns only came about (around 1955 ??)³, keyed around the Antarctic treaties at the time. Until that time, Macquarie Island and Antarctic area ? callsigns were known as VK1.

In 1975, a Novice licence was introduced using the callsign format VK_nN_{XX}. From 1995 those with both restricted and limited accreditations, the callsign format of VK_nJ_{XX} and VK_nK_{XX} was used, and was called the Intermediate licence.

The Novice Limited callsign was introduced later as used the VK_nH_{XX} format for novice stations without CW privileges.

The Papua New Guinea callsign prefix was know as VK9 (and VK4 for a period) until 1972 when it became a United Nations Trust Territory and was assigned the P29 callsign prefix.

The VK_nAA series callsigns were reserved for use by the Commonwealth and only released for general use during 2001 & 2002. The Australian Communications Authority required a written proposal in addition to the standard forms by VK_nAA applicants prior to the issue of these callsigns.

The Australian callsign prefixes AX, VL, VM, VN and VZ were added in ????⁴, but only the VI and AX prefixes are ever issued (with usage restrictions) to amateur operators in Australia since 1979⁵.

When the Australian Communications and Media Authority (ACMA) dropped morse code from Amateur licensing exams on 1 Jan 2004, only the VK_nXX series callsigns were being re-issued to previous holders of morse accreditation, and were not available to new applicants. Shortly afterwards, no further VK_nXX series were being allocated. From October 2005 licences were consolidated into 2 classes, Advanced and Standard.

On 1 Jan 2006, the ACMA introduced a 3rd class foundation license using the general callsign format VK_NF_{XXX}, and in the external territories eg VK9FX_{XX} for Christmas Island, VK9FN_{XX} for Norfolk Island etc.

The external territories callsign prefixes are known as:

- Christmas Island VK9X_x, VK9X_{xx} and VK9FX_{xx}

³ Help to identify the correct date would be very much appreciated.

⁴ Information regarding these prefixes is needed here.

⁵ Confirmation of a start year is desired, this is an estimate only based on published journals.

- Cocos Keeling Island VK9Y_x changing to VK9C_x, VK9C_{xx} in 1992 and then VK9FC_{xx} in 2006
- Lord Howe Island VK9H changed to VK9L in 1992 and VK9FH_{xx} in 2006
- Norfolk Island VK9N and VK9FN_{xx} in 2006
- Willis Island VK9W and VK9FW_{xx} in 2006
- Mellish Reef – VK9M and VK9FM_{xx} in 2006
- Macquarie Island – VK0M changed from VK1 circa 1955.

REFERENCES

- Australian Archives;
- Mitchell Library;
- Amateur Radio magazine;
- ARRL QST;
- ACMA;
- Manly Warringah Radio Society;
- Mr Ian Hermann VK3YDY
- Mr (Mick) Francis Pettiford VK4ZAA
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COMMONWEALTH OF AUSTRALIA.

POSTMASTER-GENERAL'S DEPARTMENT.

Wireless Telegraphy Act, 1905-1936.

Limited
No 10755

Class A.

B.

~~EXPERIMENTAL LICENCE~~
AMATEUR STATION LICENCE

In pursuance and exercise of the powers and authority conferred upon the Postmaster-General by Section 5 of the Wireless Telegraphy Act, 1905-1936, and by the Wireless Telegraphy Regulations, a licence is granted to Mr. Francis John Pettiford,

to erect an Experimental Wireless Station at 7 Fraser Street,

Sandgate, N.E.7., Q'ld.

and to operate the said station for a period of twelve calendar months ending 13th June, 1955. The erection and operation of the said station shall be carried out in accordance with the provisions of the said Regulations, as amended from time to time during the currency of this licence, and shall be subject to such further restrictions and conditions as are from time to time notified by the Postmaster-General or by any officer thereto authorised in writing by the Postmaster-General.

By direction of the Postmaster-General,

[Signature]
Date 14th June, 1954.

SCHEDULE OF THE AUTHORISED STATION.

1. Authorised Transmitting Power 100 Watts.
2. Authorised Transmitting Frequency Bands As per attached annexure
3. Authorised Types of Emission Radiotelephony
4. Call Sign. V.K. 4ZAA
5. Special Conditions

This Licence must be exhibited wherever the station is located.

Fee £1.

17 JUN 1964

Dear Sir,

With reference to your recent application for an Amateur Operator's Limited Certificate of Proficiency, it is regretted that due to printing difficulties, some delay will occur before the relative certificate is forwarded to you.

In the meantime this communication may be used as evidence that you have satisfied the Postmaster-General that you possess the knowledge and qualifications specified hereunder, and will be issued with certificate No. 3 in due course.

- (a) A knowledge of wireless telephony and electrical principles.
- (b) A knowledge of such of the Radiocommunication Regulations for the time being in force under the Telecommunications Convention, and of such of the Wireless Telegraphy Regulations, as relate to the operation of Amateur stations using Wireless Telephony.

Your application for a licence to establish and operate a radiotelephone amateur station for operation on amateur frequency bands from 144 Mc/s upwards has been approved and licence No. 10755 in respect of your proposed station is enclosed herewith, ~~together with receipt No. for the licensing fee of £1 forwarded by you.~~

The call sign VK 4ZAA has been allotted to your station.

Yours faithfully,

Mr. F. J. Pettiford,
7 Fraser Street,
SANDGATE. N.E.7. Q'ld.

L. F. Pearson
(L. F. Pearson)
for Assistant Director-General
(Wireless) *M.*

COMMONWEALTH  OF AUSTRALIA

Wireless Telegraphy Regulations

AMATEUR OPERATOR'S
Limited
Certificate of Proficiency

This is to certify that Francis John PETTIFORD
has satisfied me that he possesses the knowledge and qualifications specified
hereunder, namely:—

- (a) A knowledge of wireless telephony and electrical principles; and
- (b) A knowledge of such of the Radiocommunication Regulations annexed to the Telecommuni-
cation Convention and the Wireless Telegraphy Regulations as relate to the operation of
amateur stations using Wireless Telephony.

Dated this Eighteenth day of June, 1954.

By direction of the Postmaster-General,


for Director-General, Posts and Telegraphs.

Certifying Officer—


for Senior Radio Inspector

Date 18.6.54

Signature of holder F. J. Pettiford

Date of Birth 29th August, 1923

Place of Birth Stanthorpe, Qld.

N.B.—This Certificate may be cancelled or suspended, at the discretion of the Postmaster-General, in case of misconduct, incompetence or breach of the Regulations on the part of the holder. Unless so cancelled or suspended, it will continue to be valid so long as the Regulations governing its issue under the *Wireless Telegraphy Act 1905-1950* remain in force.