

# **A Complete History of ATV in Brisbane (or what I can remember)**

## **Introduction**

In 1934 television was first seen from experiments from the old Tower Windmill in Wickham Terrace, Brisbane. Also the first television transmission took place in Melbourne, both these systems used the mechanical system developed by John Logie Baird. National and Commercial television began in Sydney during 1956 with Channel 9 in September and followed by ABC in November and ATN 7 in December. Brisbane started in 1959 and further information can be found on the web via Goggle search etc.

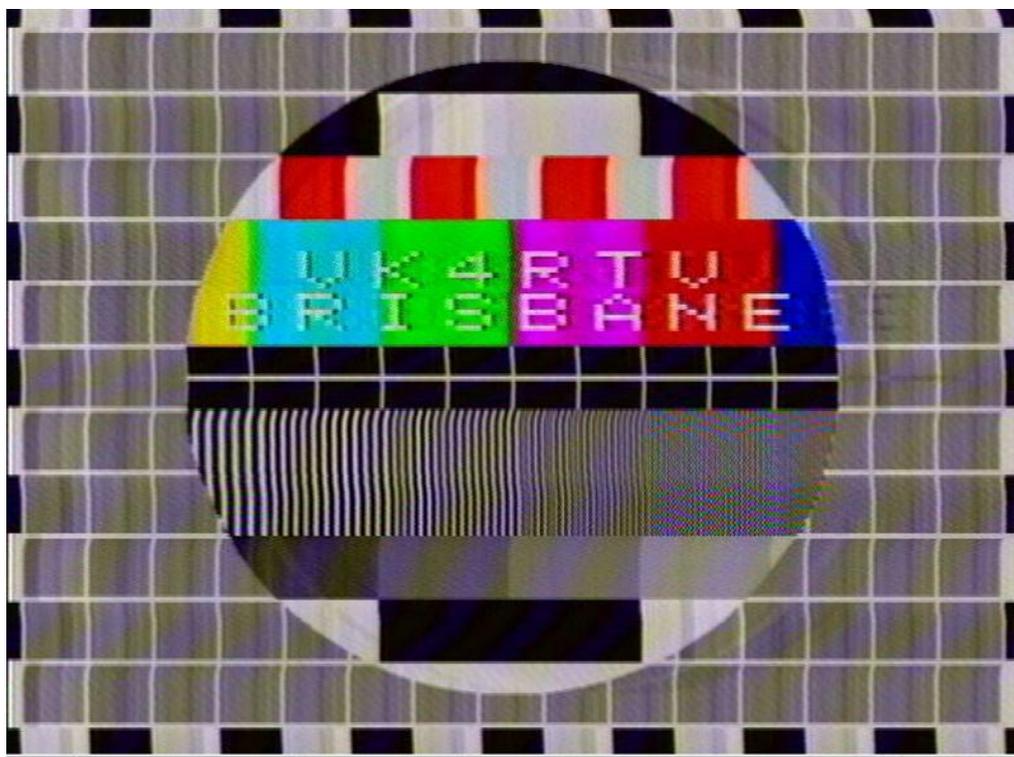


ATV has been around for quite some time now in most States. Adelaide was very into the ATV scene with all equipment been built and shown at the Adelaide show. I meet up with them in 1966 (Alan Nation and John Ingham). The first article I read on ATV was in Amateur Radio Action March 1958 in a nine part series on 'Amateur Television' by E. E. Cornelius VK6EC/T. Notice the /T which was required when working ATV Mode also the frequency used was 288 - 296mhz.

In Queensland VK4 an article appeared in Amateur Radio Action Vol 2 No.9 (1979/1980) where mention was made of Peter Williamson-**VK4ZWP/AWP** (deceased). Peter and Graham Castledine (VK4KCE) decided to rekindle the interest in ATV after a visit to Bill Donovan's (VK4ZBD) shack in Chermside. A subsequent meeting between Peter Williamson, Graham Castledine and Tom Ivens was held to discuss ATV in Brisbane.

In Victoria the 'Road Gang' Ron Harrison-VK3AHJ and Ian Davis-VK3ATY (plus one other I have forgotten) had many articles and videos on ATV. A lot of people would remember the series by DJ4LB 'A Modular ATV TX'.

## ATV Queensland



ATV in Brisbane Queensland started operations in the late 1970 early 1980's when a group of Ham Radio operators in the Brisbane area wanted to set up a television repeater (see above). Before then all transmissions were of a simplex nature, but due to people not been able to view these transmissions a better system was needed. Due to the line-of-sight nature of UHF signals used a repeater would be a suitable way to achieve this.

By the early 80's a repeater was in action. At first it was a low power operation from a house in Wavell Heights in the northern suburbs. After a few years permission was granted to transmit from the Mains Road building at the inner city suburb of Spring Hill. The output frequency was in the 50 cm amateur band on 579.25 MHz vision with an audio carrier 5.5 MHz above that - in accordance with normal television procedure. Output power was around 40 watts with vertical polarisation. It was later decided to changeover to horizontal polarization as per the normal TV transmissions and the power was increased to around 100 watts ERP in later years. A test pattern was transmitted from 0800 to 2400 hours when not in repeat mode. Input to the repeater was on 444.25 MHz and reports were received over a wide area from amateurs including numerous non-amateurs tuning in as well, with many joining the club. Different antenna systems were tried to improve the performance and a Double Alford Slot antenna was constructed by club members (our thanks to VK5KTV for his

input during that time) which provided Omni direction to improve the signal to all suburbs. Later a group of Hills Yagi antennas were used to provide better coverage, however these were later removed. During the late 80s and 1990s the club expanded to more than 64 members, with members from New Zealand, America, and most states here in Australia. With help from the technical group and especially to VK4BDB a large number of projects were available to members placing the club in a very good financial position. The first ever VSB transmitter was available for the first time in Australia and the club also produced a kit for a 23cm transmitter amongst other projects.

In '84 a special function was held to mark the 50th anniversary of the late Thomas Elliott's first experimental TV transmissions from the historic Tower Mill Observatory in Wickham Terrace. An interview by Tom Ives was made to highlight this occasion. Also the Golden Television Award was also made available to members for their contribution to the excellence in television experimentation.

In 1990 the group took part in providing communications for the 75th anniversary of Lamington National Park. This involved the first use of 1250 MHz-FM using two-way video and audio links between O'Reilly's Guest House and Binna Burra. The 1250 MHz-FM was the first use of the 23cm for ATV and also the Mitsubishi power module which was used from Binna Burra to O'Reilly's and integrated into the overall event with direct linking to the ATV Brisbane repeater almost 100 km away. The FM transmitter was made a kit for the group by VK4XRL, VK4ADN and VK4BDB.

Other activities have included a 40 km hook-up between Brisbane and Ipswich for the Engineers Society's Hawken Address, a link between schools on Moreton and Bribie islands with special thanks to VK4ADN, VK4BOB and VK4XRL. Also provided have

been many displays at various Hamfests here in Brisbane and on the Gold Coast. Jamboree of the Air was a major journey involving a repeater site on Camp Mountain with special thanks to Parks and Wildlife for allowing us to be there. In October 1990 the group took part in the historic satellite relay (with thanks to VK4BDB) throughout Australia from the



Gladesville ATV club in Sydney. A special video was supplied by VK4BOB and VK4XRL to mark the occasion and still can be seen on YouTube (<http://www.youtube.com/watch?v=MMBpCEGpxOI>).

The 50 cm band which we were using was also used for UHF television therefore the frequency was adjusted to 576.25 MHz (channel 35) to fit in with the band plan for mainstream UHF TV, as directed by the Department of Communications. During the early 2000's the group had to relinquish the 50 cm band altogether and moved to an output frequency of 444.25 MHz in the 70 cm band. The input frequency was changed to 1283 MHz FM in the 23 cm band for better quality. The repeater eventually had a call sign change to VK4RMG and was temporarily located at Mt Glorious to the west of Brisbane and then to Wamuran in the north. It did currently sit at Ocean View, however it only transmitted on demand and on Wednesday for Club Call back. (See under Digital for latest information).

Also during the 1990's the group was involved with ATV hook-ups between schools in the rural area west of Brisbane, however and unfortunately due to difference of opinions the group broke up into two ATV groups and another repeater VK4RKC was born and brought into operation at Ocean View. This group wanted to see changes made, keeping up with new technology and not be tied to the same old system.

### **The start of digital transmissions.**

In 2002 digital was transmitted by this group by VK4KI and VK4XRL on 1250-MHz using the DVB-S system from SR-System with thanks from Stefan of SR-Systems. This was later added as a repeater input. In 2005 it was then decided to go digital as an output from the repeater using DVB-T as per the commercial and National specifications, allowing P5 pictures to all that could see the repeater. This was added with great enthusiasm as now all could see what can be achieved by going digital. Since then all members of the Brisbane Digital ATV Group have gone digital on 1250-Mhz. A number of clubs also use the repeater for their club activities using FM and therefore we have a lot more viewers watching the transmissions from VK4RKC. The audio sub-carrier has also been changed to 6mhz which reduces the beat pattern between it and the colour sub-carrier.



Now with the advent of losing the lower end of the 70cm band the digital repeater was to cease transmission on 428.5 MHz at midnight on the 31<sup>st</sup> December 2012. Negotiations with the SEQATV group on three occasions for joint co-operation had failed where we offered them the use of the second transport stream on our repeater with a view of changing the output frequency to 446.5 MHz. This was rejected and they decided to provide a digital system of their own at considerable cost.

Since then members of the Digital group have since combined with the SEQATV group in a view of promoting the ATV hobby as it was before the split and a new executive committee was elected at the last AGM.

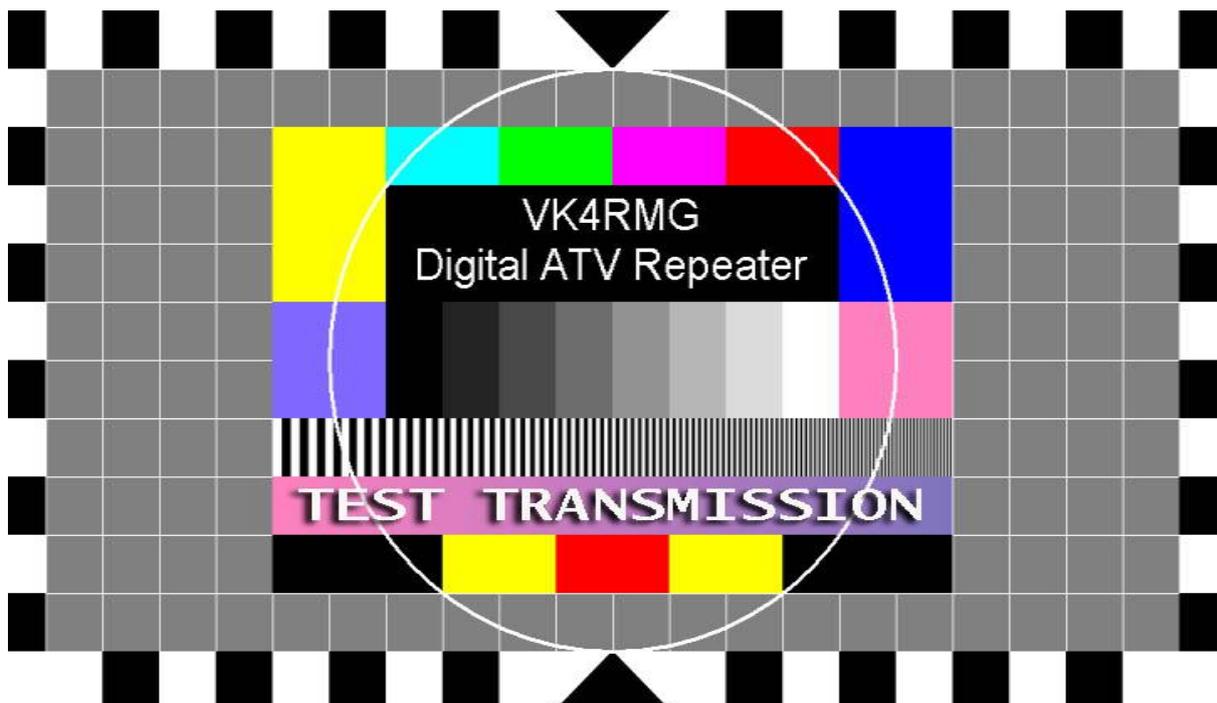
Three questions now being address are;

1. What's good for the Club?
2. What's the best for the mode (ATV)?
3. What's best for the hobby?

The club had voted to buy the digital repeater from those that built it, however that hasn't happened as the costs were too high and no money was forth coming? The group has plans to interlink certain repeaters from around the South East Queensland area using 5.8 GHz. The two web sites are as follows;

Brisbane Digital ATV Group;  
<http://members.optusnet.com.au/~cardenrj/>

SEQATV CLUB (needs updating);  
<http://www.qdg.org.au/seqatv.htm>



Please contact the club at [bdatvg@people.net.au](mailto:bdatvg@people.net.au) for further information or photos that reflect early ATV activities or if you require help with this exciting aspect of Amateur Radio.

Thanks to Graham Castledine (VK4KCE) for his input from those early days of ATV in Brisbane.

Further interesting reading can be found in the following books;

50 Years of ABC Technical Services 'Alright Leaving Here' by Doug Grant

and

'SPINNING DISCS, MIRRORS AND ELECTRONS' by Robert Forster, and Douglas Grant