



OXTALES

First published 1980

Club Nets on VK2RPM
146.700MHz
(CTCSS 91.5Hz)
Sundays
(during EADST at 0900)
(during EAST at 0830)
Every Thursday at 1930

Newsletter of the Oxley Region Amateur Radio Club Inc.,

PO Box 712 Port Macquarie 2444

Club e-mail address: vk2bor@orarc.org

Club Website: <http://www.orarc.org>

ORARC's Forty-fifth Anniversary Year

March 2016

Compiled by VK2AYQ & VK2TT

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TREASURER: Larry Lindsay	VK2CLL	6587 1155
SECRETARY: Henry Lundell	VK2ZHE	6582 0534

President's Report

January's Monthly meeting was busy with discussions on repeaters, masts and maintenance. Two sub-committees were formed, one to look into the repairs to VK2RCN's mast including



replacement of the guy wires and turnbuckles, relocation of the existing antenna, installation of the new 6 metre antenna and installation of the new equipment for the linking of our repeaters.

The second sub-committee was tasked with the linking process between VK2RPM, VK2RCN, and a gateway to the internet for the Echolink hardware to be located directly at Middle Brother reducing the lag we currently experience with the radio link. Both these sub-committees will report back to the Club with time and cost details including the legal requirements we need to follow. This is a fairly major project not only with money but time and resources so if you want to be involved please be ready to contribute.

ORARC VHF/UHF Repeaters

MIDDLE BROTHER
VK2RPM 2 metre (Voice - CTCSS 91.5Hz)
O/P 146.700MHz - I/P 146.100MHz

VK2RPM 70 cm (Voice - CTCSS 123Hz)
O/P 438.525MHz - I/P 433.525MHz
C4FM digital mode capability

VK2RPM-1 (APRS Digipeater)
SX 145.175MHz 1200bps

TELEGRAPH POINT
VK2RCN 2 metre (Voice)
O/P 147.000 MHz - I/P 146.400 MHz
VK2RCN 70 cm (Voice - CTCSS 123 Hz)
O/P 438.425MHz - I/P 433.425MHz

VK2RCN-1 (APRS Digipeater)
SX 145.175MHz 1200bps

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Down The Coax

ORARC meetings held in the SES Building
Central Road, Port Macquarie.

Monthly General Meeting
Saturday 5 March 2016 2:00 pm

Sydney Amateur Radio Ferry Contest
Sunday 13 March 2016 10am – 4pm

Friday Night Get-Together
Friday 18 March 2016 7.00 pm

John Moyle Memorial Field Day
Saturday 19 & Sunday 20 March 2016

Urunga Convention
Saturday 26 and Sunday 27 March 2015

Monthly General Meeting
Saturday 2 April 2016 2:00 pm

Friday Night Get-Together
Friday 15 April 2016 7.00 pm

ANZAC Day AX prefix permitted by ACMA
Monday 25 April 2016

Monthly General Meeting
Saturday 7 May 2016 2:00 pm

World Telecommunications Day
Tuesday 17 May 2016. AX prefix permitted

Friday Night Get-Together
Friday 20 May 2016 7.00 pm

Monthly General Meeting
Saturday 4 June 2016 2:00 pm

ORARC Field Day
Saturday 11 and Sunday 12 June 2016

Net Controllers' Roster

Nets on Voice Repeater VK2RPM 146.700 MHz

Sundays (00900 AEDST) VK2RCW 147.00MHz
Thursdays (1930 AEDST) VK2RPM 146.7 MHz

March 2016

VK2CHC	Mar - 06	VK2ICQ	Mar - 03
VK2TT	Mar - 13	VK2EM	Mar - 10
VK2CHC	Mar - 20	VK2ZHE	Mar - 17
VK2TT	Mar - 27	VK2ICQ	Mar - 24
		VK2EM	Mar - 31

April 2016 (* See Note P45 Re end AEDST)

VK2CHC	Apr - 03	VK2ZHE	Apr - 07
VK2TT	Apr - 10	VK2ICQ	Apr - 14
VK2CHC	Apr - 17	VK2EM	Apr - 21
VK2TT	Apr - 24	VK2ZHE	Apr - 28

May 2016

VK2CHC	May - 01	VK2ICQ	May - 05
VK2TT	May - 08	VK2EM	May - 12
VK2CHC	May - 15	VK2ZHE	May - 19
VK2TT	May - 22	VK2ICQ	May - 26
VK2CHC	May 29		

(Cont'd from front cover)

Although the fox hunting practice day was to be located at Sancrox reserve it was decided at the January meeting to move it to John Downes Park so we can participate in the Summer VHF/UHF Field Day, my apologies for the confusion this change caused.

A “collection plate” was passed around figuratively speaking to cover the last two un-financial members for the 2015-2016 year. We are hoping that these members will return to the fold when health/other commitments allow and rejoin in the activities we enjoy. When these members pay their fees it will be treated as a donation to the Club.

The Summer VHF/UHF Field Day was on the 9th January and as usual the Clubs Communications Caravan was setup at John Downes Park, towed by Barry VK2LBG. I arrived shortly before the van after picking up antennae from Bill VK2ZCV's QTH to be used for the day. As usual we set up 3 antennae for 2 and 6 metre and 70cm's for the Field Day and several contacts were made prior to the start time while we enjoyed bacon and egg rolls cooked on the BBQ by Richard VK2CHC with the assistance of several members. 11 contacts were made for a total of 8646 points and as of this time of writing we are third in our division. Members attending were Henry VK2ZHE, Mark VK2FMGM, Arthur VK2ATM, Bill VK2ZCV, Rob VK2CRF, John VK2AYQ, Peter VK2MPK, Craig VK2ZCM, Jim VK2FJKD, John VK2KC, Paul VK2ICQ, Stuart VK2FSTU, Paul VK2UPR. (Photographs on Page 7)

VK2RCN went off the air (again) on the 25th of January. A phone call from Henry VK2ZHE alerted me to the repeater failure at Telegraph Point on Australia Day so I headed up there to check it out and what I found was the circuit breaker to the repeaters had dropped out. After speaking to Geoff the resident on site it was established that on Monday afternoon there was a near lightning strike and although they did not

lose power they did get a few “tingles” from electrical devices they were using and promptly disconnected the items. ORARC on the other hand was not in the position to disconnect and reconnect until after the storm had passed so it was done a day later when the batteries on the 2 metre repeater had expired. With the power restored and checks made to make sure the repeaters were back on-line or should that be on-air (too much time spent on computers me thinks) and back to my QTH I went. I would like to thank Henry for his constant vigilance to the status of the Clubs repeaters and here's hoping it is a long time before next visit at VK2RCN.

February's Monthly meeting decided to continue with the trial of Sundays net on the Telegraph Point repeater VK2RCN until the weather permits work to continue on VK2RPM for those gremlins. There was some lively discussions over the plan to link VK2RPM and VK2RCN as to whether it should be permanent, the costs, why we are doing it and how much it was going to cost but the decision was made in a 2015 meeting to link the repeaters as part of the upgrade to be digital ready and the report distributed at the January meeting was to keep everyone informed of the “New” Committees progress to meet that challenge. It is proposed to start the linking in stages to reduce the impact of financial drain all at once.

The Committee for the VK2RCN tower work advised that although the idea of replacing the guy wire at the mast with stainless steel was best the cost of around \$2000 for materials was out of budget and therefore galvanised steel would be used, a list of materials and a schedule of work will be forth coming.

VK2RCN 70cm will receive an upgrade to a Yaesu C4FM repeater due to a decision made at this meeting as Yaesu are offering a hard to beat rebate of \$900 making the upgrade cost of the repeater purchase only \$850.

The Antenna Shootout held on the 14th of February was attended by 11 members but only 7 antennae were submitted for the

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shootout. The Clubs Communications Caravan arrived a bit after 8:30 towed by Peter VK2MPK giving us a place to setup our receiving station consisting of a spectrum analyser supplied by Arthur VK2ATM, logging computer and software by Lyle VK2SMI and John VK2KC's purpose built antennae setup, the transmitter was setup in a portable gazebo supplied by Henry VK2ZHE 100 metres across the sports field with transmitters, batteries, mast and all the other gear required. While all this was being setup Richard VK2CHC was busy cooking bacon and eggs for the breakfast component on the event, timed nicely with the finalisation of the setup we enjoyed our breakfast and with that out of the way around 9:30am we started testing one antenna after another. 90 minutes later the results were in and these can be seen immediately below.

ORARC Antenna Shootout			14-Feb-16		2 Metre	
Name	Callsign	Antenna Type (Yagi/Vertical/desc)	H V	Results	Position	
ORARC BENCHMARK	VK2BOR	Dipole	V	-30	1	
Arthur	VK2ATM	5/8 vert	V	0	2	
Larry	VK2CLL	jpole	V	-3	3	
Lyle	VK2SMI	dualband small	V	-7	4	
Lyle	VK2SMI	mobile whip	V	-2.5	5	
John	VK2KC	1/4 ground plane	V	-1	6	

ORARC Antenna Shootout			14-Feb-16		70 cm	
Name	Callsign	Antenna Type (Yagi/Vertical/other)	H V	Results	Position	
ORARC BENCHMARK	VK2BOR	Dipole	V	-42.5	27	
Lyle	Vk2SMI	dualband small	V	-30	28	
Lyle	Vk2SMI	6 el yagi	V	4.5	29	
John	VK2KC	1/4 ground plane	V	-1.5	30	

Lunch followed and we continued onto the Fox Hunting exercise, unfortunately I was called to a fire out past Long Flat and was not able to participate in the fox hunting or report on the activity but I was informed that the Clubs van was packed up late in the afternoon and the fox hunting went well. Members attending the day were Paul VK2ICQ, Paul VK2UPR, Larry VK2CLL, Mark VK2FMGM, Craig VK2ZCM.

ORARC participates in many contests, displays, and other activities throughout the year, many of the members put a good effort into these activities before, during and after these activities and I would like to thank them for their effort and commitment to have these activities run so well.

On a note from the President I would like to thank Paul VK2ICQ for his quick, descriptive and well maintained running of the Club's web site as it is great to see information appear in such an informative and professional manner.

Lyle VK2SMI.

Antenna Shoot Out Photographs



The Club's Communication Caravan in position with receiving antennae



John VK2KC setting up the "firing" antennae (continues on next page)

Antenna Shoot Out Photographs Continued

The "Shooting Range approximately 100 metres between transmitters and receivers"



Paul VK2UPR and Larry VK2CLL watch the incoming results with interest.



John VK2KC in action on the shooting end



The A team Craig VK2ZCM, Larry VK2CLL, Lyle VK2SMI, Richard VK2CHC, Paul VK2UPR, Arthur VK2ATM, John VK2KC and Peter VK2MPK.



Lyle VK2SMI and Arthur VK2ATM at the receiving end. Checking performance with Arthur's spectrum analyser.

Daylight Saving Ends 3rd April 2016

The current period of Daylight Saving ends in NSW on Sunday, 3 April 2016 when clocks go back one hour at 3:00am.

The ORARC VHF NET ON SUNDAYS will revert to the starting time of 8.30am Australian Eastern Standard Time on 3rd April 2016

A Challenge

COMPUTER JUNK TO GOOD USE.

As technology progresses so does our “junk” piles. I am sure, like me, many of you have old computers sculling around that are due to be buried. In the days gone by we would often strip the insides of an ancient desk top. Remove its Hard Drive and then keep it on the shelf as nostalgia for five years and then wonder why you kept it in the first place. I have found a few uses for the old parts and wondered if you have ?

So let’s have a competition.

Who can make the most useful widget from an old computer?

If you haven’t got an old desk top computer, talk to your grandson. I’ll bet he has one, waiting for Dad to take it to the tip.

YES, you need to get your idea/entry in by the ORARC Field Day in June.

There will be a special trophy awarded to the best proposal.

What did I do with my old desk top?

Firstly the Key Board. If you pull an old one apart you will find it has three membranes inside. I took them out and joined up all the connections together (The electronic interface, case and keys discarded). At the new membrane connections I fitted a simple button transmitter (range about 5 metres).

This was interfaced with a small receiver/ amplifier to be located in a remote position. The membranes were tacked together and placed under the mat at my back door. Anyone treading on the mat will activate the transmitter and the amplifier will come to life and say something like “Move and I’ll shoot!” For my first attempt I used an APR9600 voice recorder IC using a circuit from Oatley electronics. It was rather over-doing the idea but you have to start somewhere. If you have mini cable you can do away with the transmitter and receiver and run a pair of wires to the amplifier and remote locate the speaker(s).

Another idea you can use are the various ancient multi-pin plugs and sockets. Memories of serial ports. Open them up. Discard



the hardware and turn it into a feed junction for a dipole. For VHF you could probably fit a balun.

SO COME ON. Have a go. So you made a Gyro out of the beautifully balanced inside of a hard drive. You recovered the gold on the various contacts and had an Eternity Ring made for you partner. You turned the computer case into a vault and stuffed it with \$100 notes. Oh so many things to do with “Junk”.

Good luck de David VK2AYD



Wondering what do on a Wednesday Morning? Why not come along to Henry’s VK2HZE place for the weekly “Working Bee”. All welcome.



Mark VK2FMGM, Craig VK2ZCM, Arthur VK2ATM, Steve VK2ZSW, John Winchester VK2NJJ Henry ZHE and Dennis Meade VK2DAM.

The Summer VHF/UHF Field Day



Antennae and Club's Communication's caravan set up for the event.



Richard VK2CHC Chief cook in a familiar pose.

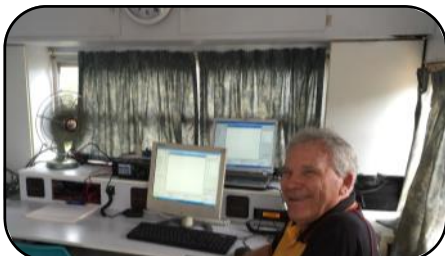


*Part of the crew enjoy a chat and break
Lyle VK2SMI, Barry VK2LBG, Mark VK2FMGM
and Peter VK2MPK*



*Above Henry
VK2ZHE regaling
the crew
with an interesting
anecdote.*

*Arthur VK2ATM
operating*

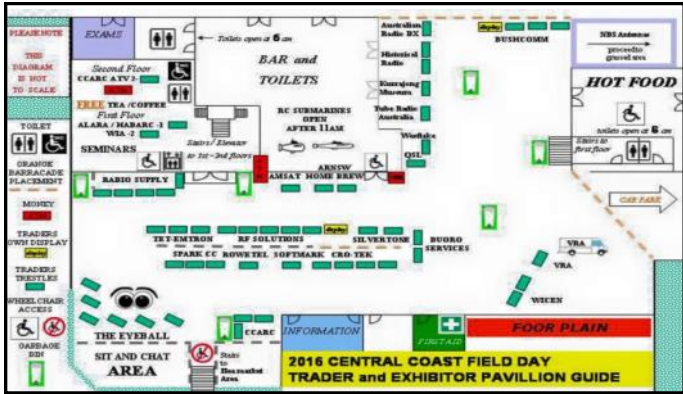


*Right Craig
VK2ZCM drops
in to lend a
hand.*



Central Coast NSW Field Day 2016

Photographs of some aspects of the Wyong Field day. The field day was attended by quite a number of our club members. The following photographs were kindly provided by Gary VK2ZKT thank you Gary.



The 'flea' market was as popular as ever



Quite a few 'familiar faces' of equipment for sale.



Home Brew 80 and 40 metre Direct Conversion SSB and CW phasing receiver.

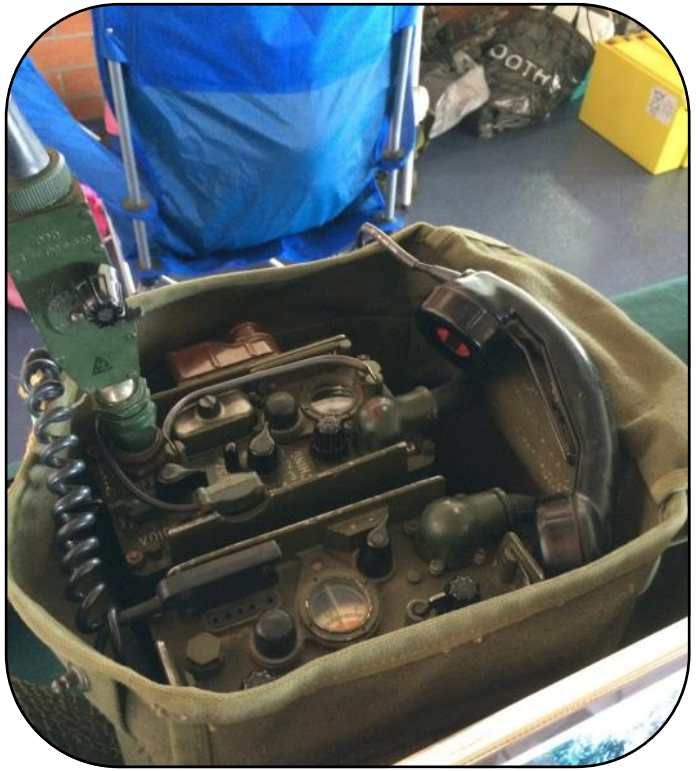


Home Brew MDT 40 M DSB Transceiver built from OzQRP Kit details at <http://www.ozqrp.com/MDTindex.html>

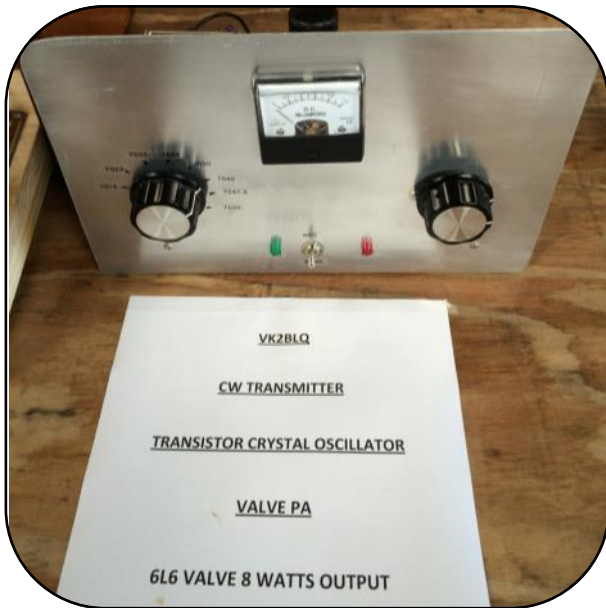


Above, Home Brew Tuning Loop.

Below Single valve CW transmitter



Above Kurrajong Radio Museum Display transceiver backpack.



Below inside view of above transmitter.



The two units could be carried outside the back pack in two pouches on a web belt. These units were used by school cadet units in the 1960's. Almost cadet proof they were heavy to carry on route marches!



Above a BC 348 Receiver also on display from the Kurrajong Radio Museum. These receivers were first built in 1936 and variants were in use until the 1970's. Future Oxtales will carry a feature about these receivers and the part they played military history.



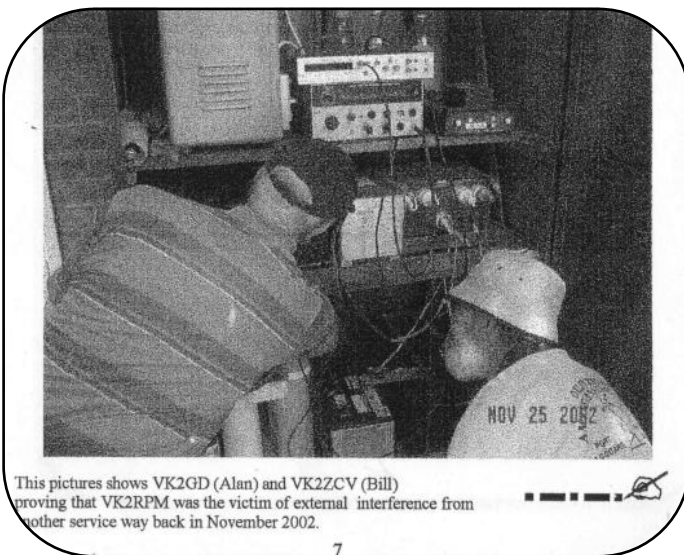
Right: Military radios including a BC611 Hand held HF Transceiver.

Blast from the Past

This Month's Blast from the Past is taken from the March 2003 issue of Oxtales.

Paul VK2ICQ has done a remarkable job of archiving most of the old Oxtales issues and putting them on the club's website www.orarc.org. They make fascinating reading about the development of our club.

Whilst reading some of the back issues I came across reference to problems of interference with the club's repeater VK2RPM from external interference in November 2002.



This picture shows VK2GD (Alan) and VK2ZCV (Bill) proving that VK2RPM was the victim of external interference from another service way back in November 2002.

From the same issue I found the following fascinating story about The Paulson Arc Transmitter which was used on some ships at that time.

The Paulson Arc Transmitter by Ernie VK2BUE.

In 1929 I was a Boy Telegraphist on a country class cruiser and at the time of this "anecdotal" situation, the location was Hong Kong. The main transmitter on the cruiser was a 60 Kw CQ "Monster". It was enclosed in a safety cage that had a door with contacts what made sure the gear was immobilised when it was "open".

The auxiliary circuits had huge relays and when CW was in use it was "bang-tiddy-bang-bang"... very loud in fact.

There were five cruisers in the squadron. They visited such places as Shanghai and Hankow, 600 miles up the Yangtze River and Wei-Hai-Wei off North China. Quite some distances apart

Their 60W CW transmitters had a nice mellow tone. However, in the early part of the day when the QRN was at its lowest during the summer months, they could QSO with base on about 129 KHz. (Short wave was still experimental in those days) but at night time the QRN/Static was so intense, that the mellow tone of those water-cooled valves was unable to cope.

Hong Kong was our main base and there was always a large part of the China fleet there. There was a W?Y guard on duty all the time. But during the summer months, the W?T guard wasn't much use at nights. Also there was a system of W/T intercom using a low power transmitter on most of the ships. The ships in Hong Kong usually consisted of a couple of cruiser, a destroyer flotilla, frigates, sloops, and submarines, plus supply vessels—boilers etc.

However this story is about a sloop called HMS Clematis and was the oldest type of vessel in the fleet.

The power supply in the old sloop was direct current, whereas the modern cruisers and frigates had powerful alternators to supply the necessary "juice" to run their W/T equipment.

I'll reminisce a little here. I remember when we approached the city of Hankow, which was also a port (a long way up the Yangtze River). We contacted the port radio station its call sign XGS—and it was fitted with a Spark Transmitter and it penetrated all "bands" and it was powerful too. I mention this because I want to talk about the gear that followed the spark transmitters. It was the Paulsen Arc Transmitter, and remember, I was only 16 years old in those days. It's a long time ago but I'm sure the readers will be quite surprised about what happened.

It all developed when for some reason an urgent situation arose to do with river gunboats up the West River at Canton. What ensured was due to the night time static, the message failed to get through on the W/T guard's transmitter. Someone suggested try the sloop's transmitter, its got a very high pitched note and might get through, so the message was broadcast several times and actually was received by the gunboat. The result of this was the sloop became the W/T guard during the night time.

So lets talk about this gear, "The Paulsen Arc". I have previously remarked about the sloops DC supply in those days. Getting a higher voltage from a DC supply means using a vibrator. That's OK for a receiver, but a vibrator's power is very limited indeed. So forget the vibrator.

So how did they get enough power to run the Paulsen "Arc Transmitter? The sloop's power is DC— you can use a lot of amperes, but not get high voltage.

The oscillator in the transmitter is powered by striking an arc across electrodes in the actual oscillator circuit. Just like a search-light system. It produces a lot of power which is inductively coupled to the aerial system.

Unfortunately there's a few problems
(i)How are they going to "key" the transmitter. The oscillator can't be keyed because the "arc" cannot be instantaneous. The oscillator must be kept running during transmission and reception.

(ii) In those days a transmitter and receiver were completely separate.

(iii) The oscillator must be screeded

(iv)You can't "listen through".

The only solution is to key the aerial system. That was done by using a small relay to operate a monster of a contactor. This limited the speed at which the operator could send. Yet the transmitter had an advantage over the valve transmitters. It had a very high pitched penetrate note that enabled reception to be possible. This situation was short

lived, however, The ships were soon fitted with short wave gear, So the Paulsen Arc Transmitter disappeared in to the misty past and was only heard of as a museum piece, and in the modern sloops (if any) the lights no longer dim when the transmitter is switched on.

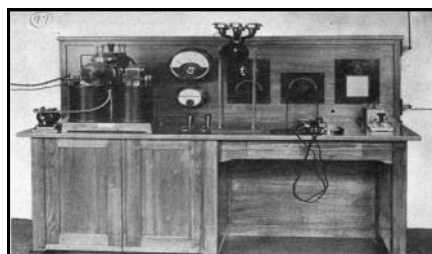
Editors note: What a fascinating story it has it all, Spark Transmitter, Gunboats, Sloops Yangtze River what an experienced for a 16 year old.

The Poulson arc transmitter consisted of an arc across which was placed a tuned circuit.

The arc converter itself consisted of a closed chamber in which the arc burned in hydrogen gas between a carbon cathode and a water-cooled copper anode. The arc was subjected to a strong magnetic field that was typically provided by two series field coils above and below the chamber that surrounded and energised the two poles of the magnetic circuit. These poles projected into the chamber, one on each side of the arc to provide a magnetic field. An antenna tuning section was needed to suppress the harmonic output of the arc converter.

The Poulson arc transmitter was typically a very low frequency form of transmitter, which was most effective between frequencies of few kilohertz up to a few tens of kilohertz. The arc transmitter could be adaptable and could be used for designs of one to five kilowatts for ship-based transmitters up to shore stations that could be up to several hundred kilowatts.

The Poulson arc transmitter was used in the USA where despite the frequency limitations, the improved transmission reliability enabled high speed Morse code transmissions to be made.



A 1913 Poulson Arc ship radio telegraph station.

Tecsun PL365 Hand Held Portable Radio Receiver



Review by Henry VK2ZHE

The Tecsun PL365 radio is a recently released compact hand held multiband radio receiver covering 150 kHz to 30 MHz plus the FM broadcast band from 76 to 108 MHz. Like many modern radios the PL-365 uses DSP technology to achieve state of the art performance. Of interest to Radio Amateurs is the excellent SSB reception with selectable upper and lower sideband. The frequency stability is outstanding as the radio uses DDS to provide 1 kHz tuning steps on the HF bands. In the SSB mode it has fine tuning in 10 Hz steps to enable transmissions to be perfectly resolved even if they are not on an exact kilohertz frequency.

The AM reception is excellent. On the FM broadcast band the FM quality is very good

on the internal speaker in mono but excellent FM stereo may be heard by plugging in the supplied external earphones.

The Tecsun PL365 is very sensitive with surprising HF reception using just the in-built short telescopic whip antenna. The radio is supplied with a 5 metre long wire antenna which may be clipped onto the telescopic whip to improve reception when signals are weak. The receiver has a 3.5 mm phono external antenna socket on its top panel so an external antenna can easily be connected. I have used a 3.5 mm phono plug to BNC socket adaptor to connect the radio to my HF station antennas. The PL-365 could hear any signal that could be heard on my station receivers. The adaptor is not supplied with the receiver but are readily available. It is a suggested accessory available from Tecsun Australia.

Reception in the AM mode is excellent with particularly good quality. However, it is the outstanding SSB reception capability that sets the PL-365 apart from other portable receivers. The PL-365 has selectable USB and LSB modes with fine tuning in 10 Hz steps to enable transmissions to be perfectly resolved even if they are not on an exact kilohertz frequency. The DDS tuning accuracy and stability is outstanding. I found that SSB stations which are on an exact kilohertz step are perfectly resolved without having to be fine tuned. This is the case with marine and aviation transmissions. These days, most Amateur stations operate on exact kilohertz steps so most stations encountered when tuning the bands will be perfectly resolved without having to be fine tuned. Being a DSP radio the SSB bandwidth is automatically set. While not as selective as the receivers in good quality Amateur transceivers, the PL-365 acquits itself very well on busy Amateur bands. The quality of the recovered audio is very acceptable with a noticeable absence of the “pumping” effects exhibited by most analogue portable radios.

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I regularly listen the VK2WI Sunday evening broadcasts from Dural on 3595 kHz LSB on my PL-365 receiver using just its telescopic whip. It is very comfortable listening and the drift-free SSB reception is definitely state of the art for such a compact portable receiver.

The longwave and AM medium wave broadcast band sensitivity is very good without connecting an external antenna. The receiver has a 3.5 mm phono external antenna socket on its top panel. Supplied with the radio is a ferrite rod antenna for the AM medium wave band. Plugging this antenna into the receiver provides a very worthwhile improvement. At Port Macquarie reception of the Kempsey 684 and 531 kHz AM broadcast stations is very good on the PL-365 on the radio alone. Plugging in the external ferrite rod enables the Sydney ABC station at Liverpool on 702 kHz to be heard during daylight hours. To further enhance long distance AM medium wave reception Tecsun offer an optional AN-100 AM Loop Antenna. The Loop Antenna is tuneable to the desired frequency. It does not have to be physically connected to the PL-365 as it will couple directly into the radio's antenna just by being placed in close proximity. However, the AN-100 has a 3.5 mm phono coupling socket so a jumper lead with a 3.5 mm plug at each end can be used to connect the loop antenna to the radio via the external antenna socket on the radio. A lead with mono plugs should be used but many stereo leads will work. The advantage of using the connection lead is that the loop antenna can be more easily placed and oriented for best reception. With this arrangement it is possible to comfortably listen to the Sydney ABC station at Liverpool on 702 kHz during daylight hours at Port Macquarie.

The PL-365 receiver utilises the SiLabs Si 4735 chipset. This is the same chipset that Tecsun uses in its top end portable receivers. The audio clarity of received signals is improved by utilising Digital Signal Processing (DSP) technology to process the received audio and cancel out any background

and RF noise. This gives the radio a distinctive sound when it is receiving just noise. Unlike many earlier generation DSP implementations, the audio quality of received signals is excellent.

Amongst the many features supported by the Si 4735 chipset is the display of signal strength in dBuV and display of signal to noise ratio in dB. A nice touch is the option to alternatively display the air temperature or the time. There is an alarm facility and a selectable sleep timer. The state of the battery is displayed via a battery symbol.

One side benefit of the Si 4735 chipset is the remarkable battery life of the Tecsun PL365. It will operate for a maximum of 225 hours on a set of three Alkaline AA cells! The PL365 may be optionally operated from three rechargeable AA cells. It has internal charging capabilities to recharge the AA cells via the radio's USB connection port. Rechargeable cells are not provided as most users will find the radio economical to operate on alkaline cells.

The PL365 receiver supports the Tecsun patented Easy Tune Method (ETM) which is a one touch automatic scan and memorise feature that scans the selected band and stores received signals in a temporary memory allowing for quick selection between stored signals. This feature is particularly useful when travelling, or if wanting to find out the state of HF propagation at any time. Using this feature is much quicker than manually checking each band for signals.

The PL365 has 450 memory channels so favourite frequencies can be stored for instant recall without having to manually tune them. One of the few omissions from the radio's many features is the absence of the ability to directly enter frequencies. All the memory channels are tuneable though so this is less of a problem if a memory channel is available close in frequency to a wanted new frequency.

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Despite the relatively small 40 mm diameter speaker the available sound level is very good with 0.5 Watts of audio available. Plugging in an external stereo headset enables FM stereo transmissions to be heard in full stereo. The headphone audio quality in all modes is excellent.

The dimensions of the PL365 radio is 53 x 159 x 26mm. The form factor as a tall narrow and thin radio makes it very ergonomic to hold and use. It is pocketable in a deep pocket but it also has a belt clip. The supplied good quality soft case has a Velcro top flap to securely hold the radio when it is closed. The soft case also has a belt loop.

The PL365 receiver is available from Tecsun Australia for only \$88.00 plus postage. <https://tecsunradios.com.au/store/product/tecsun-pl365-radio/> It comes with a 12 month Australian warranty.

I knew I wanted a Tecsun PL365 radio receiver the moment I saw its specifications on line. The nicest surprise was they very reasonable price, and the fact that it was available locally with an Australian warranty. I placed my order on line and paid the extra for Express Post delivery as I couldn't wait to get it. To say that I am impressed with the radio is an understatement! Now, if only it had keypad entry of frequency, it would be absolutely perfect!

Henry Lundell VK2ZHE

Loop Antenna accessory

The Tecsun AN100 AM Loop Antenna is designed to increase the reception of weak AM radio signals. The Tecsun AN100 AM Loop Antenna acts as a high Q pre-selector which can be tuned to the desired frequency/station. The Tecsun AN100 AM Loop Antenna will increase the audio quality and clarity when compared with the internal antenna. Additionally, the Tecsun AN100 loop

antenna helps to reject adjacent frequencies/broadcasts that interfere with reception.

To operate the Tecsun AN100 Loop Antenna simply place the antenna in close proximity to the radio and adjust the tuning knob slowly on the antenna until you hear the radios audio begin to change. Then experiment with slightly different orientations of the antenna and position of the tuning knob to achieve the optimum results. The Tecsun AN100 Loop Antenna doesn't require any batteries or power source making it ideal for travellers.

The AN100 loop antenna is also supplied with a 3.5mm Stereo plug facilitating connection between the antenna and radios with a fixed AM antenna input.

Requires no batteries!

Specifications

Frequency	Band	AM
Frequency Coverage	520 – 1710 kHz	



Picture of the loop antenna and below an insert of the tuner for the loop.



Amateur Radio Equipment from the Past

Hallicrafters HT-44 Transmitter and matching SX-117 Receiver



HT-44 Transmitter

The HT-44 is a 10 to 80 meter ham-bands transmitter which sold for \$379.50 in 1962. It is usually accompanied by the PS-150-120 power supply which sold for \$99.95. Rated at 100 watts input on SSB or CW and 24 watts AM from a pair of 6DQ5 tubes.

The power supply includes a matching speaker for a receiver. The SX-117 is the matching receiver and has crystal oscillator and VFO outputs allowing the HT-44 to operate in transceiver configuration.

SX-117 Receiver



Hallicrafters triple conversion receiver designed for the 10 to 80 meter ham-bands. Has a bandswitch setting for picking up WWV on 10 MHz. The first and third conversion oscillators are crystal-controlled. The second is variable from 6 to 6.5 MHz.

Introduced in 1962 at a price of \$379.95, it has a product detector for SSB, a notch filter, and selectable bandwidth of 0.5, 2.5, and 5 KHz. In addition to the ham bands, general coverage is possible for most frequencies in 500 KHz segments from 85 KHz to 30 MHz with appropriate crystals. For frequencies below 3 MHz, the HA-10 LF/MF converter, shown with the receiver, was an optional accessory costing \$24.95. The receiver uses 13 tubes plus solid state rectifiers and noise limiter.

This equipment was considered to be the basis of a very desirable Station in the 1960's and early 1970's. However the total cost of the station could easily be in excess of \$1,000 which was a considerable amount of money in the 1960's which could be a years salary).

The Halligen family that produced the Hallicrafters range of equipment sold the company to the [Northrop Corporation](#) and Halligan family involvement ended. Northrop ran the company until the early 1970s, but by this time, fierce Japanese competition was putting pressure on the US domestic electronics market. The boom years for Hallicrafters were from 1945 to 1963, during which the company produced equipment considered by many to be superbly designed, including the famous S-38 receiver, which received a cosmetic "makeover" by industrial designer [Raymond Loewy](#). Much Hallicrafters equipment is still in common use by collectors and [vintage amateur radio](#) enthusiasts, and widely available on the used market. Due to the transformerless design of many tube radios of this period, an isolation transformer should be used with any radio that has not had safety wiring modifications

Noel Walker VK2ZNS Silent Key

Noel passed away on the 4th of February 2016 at Taree aged 86 years. He was the only Life Member of the Taree and District Amateur Radio Club, and was a Life Member of the Blue Mountains Amateur Radio Club. He had been a licenced Amateur for 55 years.

Vale Noel Walker VK2ZNS

Submitted by Henry Lundell VK2ZHE