

ABOUT THE AUTHORS
(In order of Appearance)

Jim Westbrook

Biography unavailable.

Vadim Demidov was born in a small town situated in Ural Mountains, Russia, in 1962. During his last years in school he joined the UK9FFO club station. Then, being a student of a former Leningrad Electrical Engineering Institute, he was an active operator of its UK1ADR club station.



Vadim Demidov

Often Vadim joined a local mountain hiking club as a radio operator of their rescue team, once operating UK1CAC/U6E in West Caucasus mountains (3000 meters above sea level).

After graduating from the Institute as a Radio Engineer, Vadim worked mostly in digital circuit design, embedded systems programming, then also in analog and high-speed digital design.

Now, Vadim is looking for a piece of real estate suitable for not-so-small antennas.

Mel Murphy, W6VEJ was licensed in 1946 as W6VEJ and over those years has been active on HF and in the last 10 years on VHF. He holds a commercial phone license and was also licensed by the State of California as a Professional Electrical Engineer (Retired).



Mel Murphy, W6VEJ

From 1947 - 1952, Mel studied at Marin Junior College and the University of California, receiving an MS Degree in Electrical Engineering.

From 1952 through 1972, he worked in what became the Aero Space Industry. The last Aero Space Company Mel worked for was TRW.

From 1972 until 1978 Mel was the Director of Engineering for The Bay Area Rapid Transit District (BART).

From 1978 - 1982, (when he retired) Mel had an Engineering Consulting business.

Bob Lanning, W6OPO became interested in radio in 1959 probably from watching too many TV episodes of Outer Limits. He was first licensed as KN5MYM during the summer of 1961 between 8th grade and high school. Within a year Bob upgraded to K5MYM, then left for the Ryukyu Islands finishing high school there and operated using KR6GJ. In 1965 Bob returned to the USA for college and was issued W6OPO. He completed a business degree at the University of Texas in 1970.



Bob Lanning, W6OPO

Bob's 30-year professional career was with Hewlett-Packard in Palo Alto. During that career at HP, he held a number of positions related to supporting the company's internal technical needs.

Bob's passion is shortwave radio including using and maintaining his two Collins stations and his more contemporary station. Recently Mel has become driven to better understand the principals of how amplifiers are matched to loads and why.

Fred M. Griffiee, N4FG (EE Ret) After graduating from the Orono, Maine High School, Fred joined the Navy for a three-year tour to get my service requirements completed. He was extended one year due to the Korean situation near the end of his three-year tour of duty. His service time was then nearly four years or from 1948 to 1952. Fred served as a Radio Operator for the Navy during the entire tour of duty.



Fred M. Griffiee, N4FG

After leaving the Navy, Fred went back to school at the University of Maine and received an engineering degree in

Electrical Engineering in 1956, with a minor in power distribution and mathematics. From that point on, he worked with various companies as electronics engineer, specializing in navigational aids, communications, and computer systems at various levels of responsibility until retiring in 1988.

Fred's amateur radio interests started in 1945 and got his first license in 1948 as W1QWV. At that time, the FCC required issuance of a new call sign when moving to new districts. So he received K2UUU when moving to New Jersey in 1956, and then W4IYB when moving to Virginia in 1965. His present call was issued after application in 1968. Fred's interests in amateur radio have been experimental projects but more specifically in the antenna and transmission systems. However, he did design and build a complete amateur radio station in 1967, which was a very interesting project, especially regarding the receiver and transmitter.

To date, Fred's interests are still primarily antenna systems, which include antenna tuners (impedance matching networks), antennas, and transmission line characteristics. Primary amateur radio mode of interest is still CW.



Igor Grigorov has a first class radioamateur license with the callsign RK3ZK. He has published more than 300 articles and eight books for professional and amateur radio. He has received more than 100 radioamateur awards and is an active participant in many QRP contests. Each summer since 1986, he operates either from mountains or from kayaks or simply from various campaigns. For example, in 1991, Igor took part on a radioamateur expedition at Kizhi Island. On the expeditions he tries out different antennas and radio equipment. As his primary interest, Igor conducts experiments with "invisible and substitute antennas" which enable him to work from what would seem as impossible places. After a resolution by Russia to use WARC bands and bands 136kHz, CB – band 27 MHz, Igor is one of first to actively work on them.



Igor was born in 1962 in Belgorod, Russia and finished high school there in 1979. After high school, from 1979 to 1980 he worked in the factory Energomash in Belgorod as a mechanical worker.

In 1980, Igor entered Kharkov Institute of Radioelectronics, where he studied until 1984. Having completed his main body of higher education, during 1984 through 1985 he worked as an assistant engineer in the factory "Sokol" on the assignment of "Signal" and computer management by radio-transmitting equipment of aerial services of aerodromes in the Special Designer Bureau of the factory. In 1985 Igor resumed studies at Kharkov Institute of Radioelectronics, and completed graduate studies in 1987 as a radio engineer-specialist on subjects of radio-transmitting devices and antenna-feeder systems. After graduating from the Institute, Igor was trained as a Military Specialist for signal intelligence. He then worked as an engineer in the Special Designer Bureau of Factory "Sokol" concentrating on development of digital telephone stations.

In 1990, Igor worked as an engineer at the joint-stock company Progress on development of transmitter-receiver devices and antenna-feeder systems for 27-100 MHz. In 1992, he worked for the police on control, repair service, maintenance of radio receiving-transmitting devices and antenna-feeder systems for 1-180 MHz bands. At the time Igor was an operator of an emergency service communication station on HF and VHF bands. Since 1998 he has worked in the Customs Committee of Russian Federation as an engineer on repair, maintenance, installation of transmitting-receiving devices and antenna-feeder systems for 140-180 MHz bands. From the beginning of the year 2000 to the present time, he works in the joint-stock company Specradio in Belgorod as an engineer for antenna-feeder systems for range 0.2-18 GHz at signal intelligence stations.

Igor is married to Alise (Olesya) Kotko who attended Belgorod University with post-graduate studies at the Moscow Institute of Pedagogical, followed by scientific work in the shaping of ecological culture of junior school boys in educational activities. She now lectures at Belgorod University.

RICHARD MORROW, K5CNF has an Associate Degree In Electronic Engineering, attended many classes and seminars conducted by Motorola, RCA, General Electric, Furuno. Has been a licensed radio amateur since September 1955 and holds an Advanced Class. Held license as a 2nd Class Commercial Radio Telephone operator w/ shipboard Radar endorsement since 1957, upgraded to



1st Class radiotelephone operator in 1960. Has been a broadcast engineer for AM, FM and TV. Was a electronics instructor for United Electronic Institute in Dallas, Texas, Over 100 published articles in 73 Amateur Radio, Radioscan, and of course, *antenneX* where he has been an associate since its creation in 1988.

Spent three years as a radio operator (1962-1965) in the US Army, assigned to Headquarters Company, 1st Battalion, 23rd Infantry, 2nd Inf. Div., Ft. Benning, Georgia. Worked in two-way radio industry as field technician for years. Previous jobs include Texas Instruments, Collins, Dresser Atlas, S.W. Bell Telephone, and several broadcast stations as chief engineer.

Has three patents issued on electronic devices and is an eternal experimenter. Built many transmitters, amplifiers, and numerous other ham devices as needed. Work DX when it shows up. Best DX, Pitcarin Island on 10 meters with the HTX-100 and a converted Cushcraft 1/2 wave CB vertical propped up against the garage. Other DX includes ZL on 75 meter SSB with 60 watts, Senegal on 75 meters SSB, 60 watts again, antenna was a dipole at 35 ft. Current activity is on 160 meters sometimes, 40 meters, two meters and 440 MHz. Favorite antennas are: Phased arrays, magnetic antennas, directional arrays, and anything that radiates well.

Current rigs are TS-430S, TS-700 multi-mode, Kenwood two FM meter rig, Icom 440 ht. Radio Shack HTX-100, Radio Shack 440 ht, 2 Atlas 210x, Johnson 275 watt Matchbox, Johnson Thunderbolt, several older SGC SSB marine rigs, three Heathkits.

Interests include; antennas, astronomy, music, both radio and optical, reading, photography, motorcycles, archeology, cars, Cosmology, Science in general, Nature, animals and aviation.

L. B. Cebik, W4RNL, has written extensively about antennas and antenna modeling (as well as other electronics subjects) in most of the U.S. ham journals, including *QST*, *CQ*, *Communications Quarterly*, *QEX*, *Ham Radio*, *73*, *QRP Quarterly*, *Radio-Electronics*, and *QRPP*. Besides the continuing series of antenna modeling columns he does for *antenneX*, he also



writes a column for *10-10 News* (An-Ten-Ten-nas) and another for *Low Down* (Antennas From the Ground Up). A life member of *ARRL*, he serves as both Technical and Educational Advisor. Several years ago, LB joined the position as Technical Editor for **antenneX**.

L. B. has published over a dozen books, with works on antennas for both the beginner and the advanced student. Among his books are a basic tutorial in the use of NEC antenna modeling software and compilations of his many shorter pieces. 18 of his books have been published by **antenneX** and listed in the BookShelf at our website.

He has been a ham since 1954 and is also a life member of *QCWA* and of *10-10 International*, for which he maintains an extensive web site. He also maintains a web site of his own (<http://www.cebik.com>) on which he has placed a large collection of entries from his notebooks. A teacher for over 30 years, he is retired and professor emeritus of philosophy at the *University of Tennessee*, Knoxville. **antenneX** is very fortunate, indeed, to have LB as a member of its writing team and Tech Editor.

David J Jefferies, PhD was born in England in the 1940s. He was educated at Taunton School, Somerset, St Catherine's College, Oxford, and Stanford University.



He is a sometime Scholar of St Catherine's. There are some pictures "Nova et Vetera" of St Catherine's in the 1990s and the 1960s.

He holds the following degrees:

BA:- Physics, 1965 Oxford (MA 1973).

MS, PhD:- Applied Physics, Stanford 1968, 1979.

He has worked for Oxford, Stanford, Aberdeen, Nottingham and Surrey Universities, and has been an attached staff member of the Materials Physics Division, AERE, Harwell, Oxon.

He did his postgraduate studies at the Microwave Lab, Stanford, in the late 1960s, working on Office of Naval Research and US Army Electronics Command contracts to support himself, aided by Stanford's generous tuition scholarship scheme at that time. He then worked for Aberdeen University in the early 70s on X ray scattering from phonons; and moved from there to Nottingham University in the late 70s working on phonon frequency-crossing spectrometry and neutron scattering experiments which were performed at AERE Harwell and the ILL in Grenoble. In 1979 he moved back to Oxford to a University Lectureship in the Physics department, Clarendon Laboratory. In the early 80s he ran the Oxford Physics Department's electronics option course and developed his research into non-linear properties of ferroelectrics, started at Stanford, and developed into an interest in electronic chaos and complex systems. He moved to Surrey in 1983 where he has been since. At Surrey he has taught in the areas of microwave engineering, mathematics for telecoms, and antennas.

He was Editor of the International Journal of Electronics (Taylor and Francis Ltd) from 1988 to 1996.

He is a member of the Institute of Physics, the Institution of Electrical Engineers, and the Audio Engineering Society. In 1969 he was elected to Sigma Xi of which organisation he is currently a "Member At Large".

Ralph B. Holland, VK1BRH



My interest in electronics and science was kindled at the age of three when my father taught me to solder. My father was a country clergyman so I grew up in several small country towns and took my experiments to school to amaze my friends.

I still recall my first soldering iron which was constructed from a scope barrel, a piece of wood wrapped with electrical tape, held like a gun with a big knob to operate the push-rod, rubber coated wire with crocodile clips, a rewound transformer—and the smell of

burning flesh. I also remember the seemingly endless supply of electronic components I could procure from my father and now appreciate the burden of their cost.

Because my father (VK2ZAD) has been a ham radio operator since 1954, I was in his shack as soon as I could walk. I think I even inadvertently climbed his tower at the age of five. (It was a wooden windmill tower—not one of those big ones!) I remember asking questions and pestering dad to the point of danger. On one occasion, dad was constructing an oscilloscope and debugging it. I kept trying to touch the interesting parts. He stopped working many times and asked me not to touch, which I tended to ignore. I was pretty persistent so he grabbed my finger and showed me how the 300 volt B+ supply felt. This completely cured me of this behaviour. This action has probably saved my life as I now have a healthy respect for all valve equipment!

My interests were inclined to electronics, particularly radio, but I also developed keen interests in chemistry, physics and astronomy. I really wanted to be a theoretical astronomer but couldn't afford to go to ANU. Before I matriculated from high school (college), I obtained pre-selection to the University of New England (UNE), Armidale, (Australia) and to the Australian National University (ANU) Canberra (Australia). Being a country lad, from a family of lesser means, I applied for a teacher's scholarship and was accepted into a training program at UNE where I enrolled in a Bachelor of Science double major in Physics and Chemistry and the obligatory Diploma in Education. The double major was somewhat difficult because the Physics and Chemistry lectures were held at the same time—no one did both!

I was also absent from laboratory sessions for long periods because I had to do six-week block "practice" teaching sessions, so I was later found doing lab work on my own in order to catch up. The physics lecturers soon noticed my proficiency in electronics and prohibited me from doing the "easy" lab sessions involving rf. I was often kept late with the burden of debugging other students' designs and experiments well after mine were complete.

I completed a Diploma in Education concurrently with the Bachelor of Science and enrolled in a Post Graduate Diploma in Computing Science, whilst still an undergraduate, just to fill in time. I lived in the Mathematics and Computer Science building, or so it seemed, and I completed that two-year Computing diploma

in just two terms and was the only one to pass that year. This is how I became very interested in the young yet-to-be discipline of Computing Science. In those days we used paper card punches and desk-checked our code several times before compiling and running. Now we hit it with the compiler and runtime debugger and remove bugs after we have written and sometimes released it!

When I graduated from all three courses, and after three stints of practice teaching, I decided I didn't want to teach High School students, and applied for one year's leave of absence so I could learn to teach teachers about computers. My letter went to the wrong committee for a vote, and unfortunately, I received a letter typed in red ink (just like school teachers and letters of warning from the tax office) stating no! So I decided to relinquish my right of employment and was released from the scholarship bond as they had a shortage of teaching positions. This saved me lots of money and I have been greatly appreciative ever since.

I met my wife-to-be, who is a school teacher, in my later University years. She encouraged me to apply for a job as a tutor in Computing Science at the then New South Wales Institute of Technology, Broadway, Sydney (now University of Technology). After about three weeks they sent me a return ticket so I could fly the 500 odd miles to appear for an interview. After I returned home, I had almost given up on the interview but it turned out to be my first real job and the first time on my own in the big smoke. I don't think I could read the train platform signs back then!

After about a year I married my wife Liz, who fortunately for me was a local Sydney person who just happened to be studying in Armidale. I managed to stay at the Institute for a total of nearly 5 years whilst Liz taught in the NSW department of education.

Liz earned more than I did for those five years and took pleasure in playfully teasing me about it. We eventually decided we were going to save for a house, so I accepted a private enterprise programming position with Prime R&D Australia in Canberra (the parent company was Prime R&D Inc Framingham, MAS). We both moved down south to the relative cold and Liz managed to obtain a transfer to a NSW school just across the border (about 1/2 an hours drive in peak traffic).

I worked for Prime for several years and was transferred to Framingham to work at head office for almost a year. We resided in a quaint yuppie apartment block called Deerfield Forest. None of residents had children, there were tennis courts, swimming pools and turbo-charged Volvos and Mercedes everywhere. It was an interesting time for us as we had never seen such large shopping malls and so many people before. We managed to lose our car in the parking lots at malls many times until we learned to count the rows to some landmark. We did enjoy our stay in North America, but it was cold in winter and too humid for two weeks of the year in summer. My next-door neighbour was forever pulling down my long wire antenna that I used to listen to Radio Australia. When they left they asked if we were Russian spies because we had Morse code and time-pips emanating from our apartment - Liz and I looked at each other and couldn't stop laughing. We were quite amused!

When we returned to Canberra we bought our first house, had our first child, and 18 months later our second. We have been living here ever since and have been in Canberra a total of more than 15 years.

I was later retrenched from Prime, along with 75 other people, so I joined a small fun software company that grew to 90 people and was involved in the defense industry. I left six years later to join an "electronics" firm that grew to 120 people, also involved in the defense industry, where I got to play with GPS sets, model and design antennas and do other fun things like my hobby. The hardware engineers were fascinated by my mobile HF equipment and other toys. They were very helpful and taught me how to drive Antenna Analysers and other beautiful equipment that I had never seen before. The boss used to follow me around because I was always enjoying myself. He eventually ensured I did my paper work as a Senior Systems Engineer and assigned me as a Project Manager for a software development project. This was easy because I was the Project Manager, Senior Designer and a Developer for the software that we were interfacing to from the other company (I guess that may have been why I got the job).

After a couple of years, I found the company management style stressful so I became my own boss. I started my own company and provided my services as a Computer Consultant. I have now been in that position for two years and am thoroughly enjoying it, although I am sometimes concerned about the unknown job that must be around the corner and I never seem to have much spare time.

I obtained my restricted Amateur Radio license in 1975 (original call VK2ZZB, later VK1ZRH) and very much later in November 1990, I obtained my unrestricted license (call VK1BRH), a major breakthrough in my Morse technology. I then developed a keen interest in 160 m, finding it a challenge to construct antennas and operate mobile.

I have published several articles in the Wireless Institute of Australia magazine "Amateur Radio" and currently have one publication in one of the Applied Computation Electromagnetic Society's (ACES) newsletter and a publication in a commercial magazine.

L. Harold Allen, W4MMC



My amateur background started as a youth. I built my first transmitter at age twelve and I have enjoyed science, electronics and amateur radio ever since. I got my First Phone Commercial license at age 16. W4IZH was my first call, followed by W6IRI when I joined the staff of Cal Tech's Jet Propulsion Lab in Pasadena, CA, as a Senior Scientist and Senior Research Engineer where I was the Cognizant Engineer of the Lunar Lander Surveyor Television System and some other space experiments. While there I developed many state-of-the-art items and was able to shoot the moon with a laser, which created a lot of publicity for NASA.

Later, because the Lunar Lander Television Experiment was so successful, NASA asked me to head the Mars Viking Lander Imaging Experiment, plus other experiments, to go to Mars, which required a move to the Denver, Colorado area where I was issued the call W0OLI. Then my work took me to Florida to work on the manned Space Shuttle Program, where I was issued W4MMC (Mickey Mouse Club). The hectic pace of the space work did not allow me a lot of time to do much hamming, but I enjoyed it when I could. I became known as "Captain Video" on the Space Shuttle program.

My work at the Kennedy Space Center, Cape Canaveral, and at the nearby Guided Missile Plant (where, among other things, the Cruise Missiles were designed and made) in addition to television, included, among other things, space experiments, rocket motor evaluations, fiber optics experiments, communication

experiments, ice studies, Shuttle Spacecraft thermal tile studies, training astronauts, thermal imaging evaluations, mission on-orbit operations support, shuttle engine tests, weapons systems design and analysis, bear tracking, navigation systems evaluations, plus working in NASA's Toxic Vapor Lab evaluating and experimenting with new chemical analysis techniques and instrumentation.

My professional background includes, among other things:

Broadcasting [radio and TV; station installation, operations, supervision, TV station trouble shooter for RCA]

Teaching [college level (and astronauts): science, electronics, math, and special space scientific instrumentation]

Military, on active duty (six invasions and two sea battles {including the largest one ever fought, the battle of "Leyte Gulf"}) [electronics, communications, navigation, ECM, aircraft {both manned and unmanned}, avionics, radar, teaching]

Military, as a consultant, designer, and global trouble shooter [electronics, communications, ECM, avionics, radar, weapons systems, guided missile systems, jet aircraft redesign, co-authored pilots' handbooks for two types of jet aircraft], space science research and design [participating in space craft program operations and scientific analysis, plus doing some designing for the Space Station and a Lunar base station.

Helped design a 500-KW ampliphase modulated AM transmitter prototype model for RCA. The first one went to Mexico.

Prior to retirement, had been in contact with HCJB, Trans World Radio (TWR), and Wycliff's Jungle and Aviation Radio (JAARS), as well as the Toccoa Falls College Radio Network (TFCRN). After retirement, joined TFC Radio Network. In addition to engineering, I give station breaks and announcements from time to time on the air.

