

## HF vertical ground bibliography

- [1] R. Severns, N6LF, "Verticals, Ground Systems and Some History," *QST*, Jul 2000, pp 38-44.
- [2] J. Stanley, "Optimum Ground Systems for Vertical Antennas," *QST*, Dec 1976.
- [3] "The ARRL Antenna Book", ARRL, 20th edition, 2003, Chapter 3
- [4] G. Brown, "The Phase And Magnitude Of Earth Currents Near Radio Transmitting Antennas," *Proc. IRE*, Feb 1935, pp 168-182.
- [5] Brown, Lewis and Epstein, "Ground Systems as a Factor in Antenna Efficiency," *Proc. IRE* , Jun 1937.
- [6] R. Collin and F. Zucker, *Antenna Theory*, Chap 23 by J. Wait, Inter-University Electronics Series (New York: McGraw-Hill, 1969), Vol 7, pp 414-424.
- [7] T. Larsen, "The E-Field and H-Field Losses Around Antennas With a Radial Ground Wire System," *Journal of Research of the National Bureau of Standards*, D. Radio Propagation, Vol 66D, No. 2, Mar-Apr 1962, pp 189-204.
- [8] *Radio Broadcast Ground Systems*, available from Smith Electronics, Inc, 8200 Snowville Rd, Cleveland, OH 44141.
- [9] G.D. Monteath, "The Effect Of The Ground Constants, and of an Earth System, on The Performance Of A Vertical Medium-Wave Aerial", IEE Proceedings, Monograph No. 279R, January 1958, pp. 292-306
- [10] K. A. Norton, "The Propagation Of Radio Waves Over The Surface Of The Earth And In The Upper Atmosphere", IRE Proceedings, Part I- October 1936, Vol. 24, No. 10, pp. 1367-1387, Part II - September 1937, Vol. 25, No. 9, pp. 1203-1236
- [12] A. Sommerfeld, "Uber die Ausbreitung der Wellen in der Draghtlosen Telegraphie", *Ann. Physick*, Vol. 81, 1926, pp. 1135-1153
- [13] A. R. von Hippel, "Dielectric Materials and Applications", MIT Press, Cambridge, MA, 1954, page 314
- [14] M. A. Rupar, " Theoretical and Experimental Investigation of the Impedance of a Vertical Monopole over Perfect, Imperfect and Enhanced Ground Planes", Naval Research Laboratory, Washington, DC, April 1997, NRL/MR/5550--97-7941, Appendix B
- [15] R. H. Barfield, "Some Measurements of the Electrical Constants of the Ground at Short Wavelengths by the Wave-Tilt Method", IEE proceedings, Vol. 75, July-Dec 1934, pp. 214-220

- [16] R. L. Smith-Rose, "Electrical Measurements on Soil With Alternating Currents", IEE proceedings, Vol. 75, July-Dec 1934, pp. 221-237
- [17] E. J. Kirkscether, "Ground Constant Measurements Using a Section of Balanced Two-Wire Transmission Line", IRE Transactions on Antennas and Propagation, May 1960, pp. 307-312
- [18] R. N. Grubb, "In Situ Measurements of the Complex Propagation Constant in Rocks for Frequencies From 1 MHz to 10 MHz", Electronic Letters, 26 August 1971, pp. 506-507
- [19] F. R. Abbott, "Design of Optimum Buried-Conductor RF Ground System", IRE Proceedings, July 1952, pp. 846-852
- [20] J. O. Stanley, K4ERO "Optimum Ground Systems for Vertical Antennas", QST December 1976, pp. 13-15
- [21] R. Sommer, N4UU, "Optimum Radial Ground Systems", QST August 2003, pp. 39-43
- [22] J. Devoldere, ON4UN, "Low-Band Dxing", ARRL, 3rd edition, 1999, table 9-1, page 9-10
- [23] G. Monteath, "The Effect of the Ground Constants, and of an Earth System, on the Performance of a Vertical Medium-Wave Aerial", IEE Journal, January 1958, Monograph No. 279R, pp. 292-306, See page 304, top of column 2
- [24] Hansen and Beckerley, "Concerning New Methods of Calculating Radiation Resistance, Either With or Without Ground", IRE proceedings, Vol. 24, No. 12, December 1936, pp. 1594-1621, see table III, page 1617
- [25] Al Christman, Maximum-Gain Radial Ground Systems For Vertical Antennas, NCJ magazine, March/April 2004, pp. 5-10
- [26] A. Leitner and R.D. Spence, Effect of a Circular Groundplane on Antenna Radiation, Journal of Applied Physics, October 1950, Vo.. 21, pp. 1001-1006