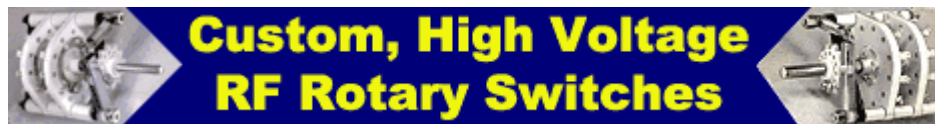


Warning: session_start(): The session id contains invalid characters, valid characters are only a-z, A-Z and 0-9 in /hub-cvs/lib/session.inc on line 46



eHam.net Home | [FAQ](#) | [Log In Help!](#) | [Please Subscribe!](#)

Welcome Anonymous [Become a member! or Login!](#)

Call Search

[\[Articles Home\]](#) [\[Add Article\]](#)

Articles by Category



W3LPL on Beverages

from [Frank Donovan, W3LPL](#) on February 28, 2000
[View comments about this article!](#)

W3LPL on Beverages



Email Subscription

You are not subscribed to discussions on this article.

[Subscribe!](#)
[My Subscriptions](#)
[Subscriptions Help](#)

Related News & Articles

- [Two Element Yagi Ideas for 12&17M](#)
- [Mobile Antenna Notes](#)
- [Keeping Good Neighbors -- With A Vertical:](#)
- [Mobile Ham Help for 5th Wheel RVers](#)
- [HF Reel Type Portable Antenna for QRP](#)

[New to Ham Radio? My Profile](#)

Community

[Articles](#)
[Forums](#)
[News](#)
[Reviews](#)
[Friends Remembered](#)
[Speak Out](#)
[Strays](#)
[Survey Question](#)

Operating

[Contesting](#)
[DX Cluster Spots](#)
[Propagation](#)

Resources

[Calendar](#)
[Classifieds](#)
[Ham Exams](#)
[Ham Links](#)
[List Archives](#)
[News Articles](#)
[Product Reviews](#)
[QSL Managers](#)

Site Info

[eHam Help \(FAQ\)](#)
[Support the site](#)
[The eHam Team](#)
[Advertising Info](#)
[Vision Statement](#)
[About eHam.net](#)

[Frank Donovan, W3LPL](#), discusses beverages on the CQ-Contest reflector. This is a reprint of Frank's message.

I use separate phased Beverage (note the capitalization, this is a man's name!) arrays on 160M, 80M and 40M. (hey... why do u refer to 80M as 75M??? 300 divided by 3.75 = 80 !!! Or have ur SS interests caused to to forget about (80M!) freqs below 3900 kHz?) If u are planning to use a simple Beverage antenna, as opposed to phased Beverages, u can certainly use a 580 foot Beverage on both 80 and 160. A 580 foot Beverage antenna works very well on 80M although a 580 foot Beverage antenna (not array) isn't long enuf to work particularly well on 160M... A pair of phased 580 foot Beverages with 270 spacing makes a fabulous 160M receiving antenna however, likewise a pair of 295 or 440 foot Beverages with 135 foot spacing on 80M! N2RM uses a pair of phased

Other Antennas Articles

- [Dual-Z0 Shortened Stubs](#)
- [6 Band Wire Antenna](#)
- [Capacitive Grounding Mobile Antennas](#)
- [Getting on 160 Meters on a Budget](#)
- [The Loop Revisited](#)



QSL Managers

Ham Links

Beverages with compromise spacing that work well on both 80 and 160. Here are some factors to keep in mind when selecting Beverage antenna length:

1. As W1WCR points out in his Beverage Antenna Handbook (results easily confirmable with EZNEC), certain preferred lengths produce a very desirable "cone of silence" off the back of the antenna. The preferred cone of silence lengths are (it is NOT necessary to use precision lengths, furthermore, ideal Beverage antenna length is somewhat affected by local ground conditions!)



Ideal Beverage Antenna Lengths

160M	290 Feet	585 Feet	880 Feet	1160 Feet
80M	150 Feet	295 Feet	440 Feet	580 Feet
40M	75 Feet	150 Feet	225 Feet	295 Feet


2. Longer Beverage antennas produce POORER front-to-back ratios! Beyond the minimum useful Beverage length (the first length in 1 above), about 3 to 4 dB of front-to-back is lost each time the length of the Beverage is doubled! As a result, the first two "cone of silence" lengths would be preferred if (but only if!) front-to-back were the primary design factor...

3. Short Beverage antennas have a very broad main lobe, poorer response to low angle signals and lower sensitivity... Of the four lengths listed under number 1 above, the shortest length has a 3 dB beamwidth of almost 180 degrees, not very desirable! The second length has a 110 degree beamwidth (better, but still not good...), the third length has an 80 degree beamwidth and the longest length has very desirable 50 degree beamwidth (but only 17-18 dB front-to-back ratio...).

The clear advantage of phased half-wavelength-spaced pairs of Beverages is that you get the front-to-back ratio advantage of short Beverages, the narrow beamwidth and sensitivity of long Beverages, and the fantastic front-to-side ratio resulting from the phased pairs that is unavailable with any single Beverage antenna length!

In summary: On 160M I'd suggest phased 585 or 880 foot Beverages spaced 270 ft. On 80M the preferred phased Beverage lengths are 295 or 440 feet, spaced 135 ft On 40M the preferred phased Beverage lengths are 150 ft or 225 ft spaced 70 ft. N2RM's compromise of two 580 foot Beverages spaced 200 feet is a proven performer on both 80 and 160.

73!

Ads by Google [Frank W3LPL](#)**[Data Recovery Download...](#)**

Most

Recommended
Recovery Software
100% Guaranteed
Free Download!www.DataRecoveryDowr**[Undelete and Recover Data](#)**Recover Deleted
Files with this Easy
to use software -
Download Nowwww.pctools.com**[Undelete - Free Download](#)**Recover any
deleted file.
Undelete critical
data. Free
download.Undelete-All.com**[\\$129 Hard Drive Recovery](#)**#1 Professional
Data Recovery No
Data No Pay Free
Return Shippingsfbayarealowcostdatarec

Member Comments:

This article has expired. No more comments may be added.**Beverage wire:**by [N3FNF](#) on April 23, 2000[Mail this to a friend!](#)

Steel, galvanized wire for Beverage. Electric fence wire used by cattle farmers. #18-#19 size, galvanized, solid steel, 1,000 pound strength. About \$8.00 per quarter mile.

W3LPL on Beveragesby [K8UR](#) on February 21, 2006[Mail this to a friend!](#)In my experience, there is NO COMPARISON between a Beverage and a 4-Square. 4-Squares were always better.
K8UR

Copyright 2000-2008 eHam.net, LLC
eHam.net is a community web site for amateur (ham) radio operators around the world.
Contact the site with comments or questions.

WEBMASTER@EHAM.NET[Site Privacy Statement](#)

Warning: Unknown(): The session id contains invalid characters, valid characters are only a-z, A-Z and 0-9 in **Unknown** on line 0

Warning: Unknown(): Failed to write session data (files). Please verify that the current setting of session.save_path is correct (/tmp) in **Unknown** on line 0