

80 to 10 meter short TV Twin-led dipole

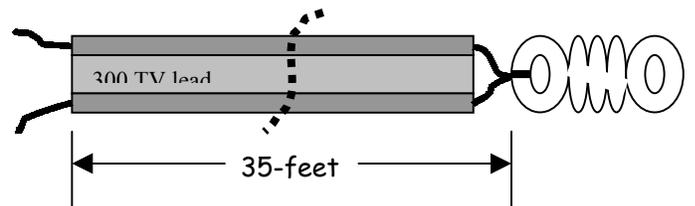
By Bruce Randall, W1ZE

In last month's issue of Squelch Tales I described two short dipoles (Doublets) that work on the 160 to 10 and 80 to 10 meter bands with the use of an antenna tuner with a balanced output. This month I am describing a takeoff on the same idea. This antenna is designed to work on 80 to 10 meters with the antenna elements and the lead-in (tuned feeders) made from 300-ohm TV twin-lead. This antenna could be used on 160 through 10 meters if the length was 140 feet long, but 300-ohm twin lead is not as rugged as rotor cable wire and a bit of a strain on the end and center insulators.

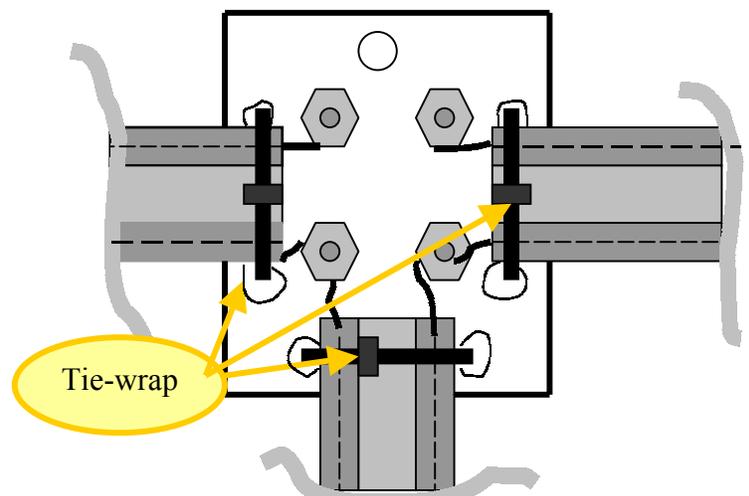
When built, this antenna looks like a 40 meter folded dipole, but the top wire in the two elements are not joined at the center. What we have is what is called linear loading. An 80-meter quarter-wave wire element folded back on its self. So rather than the element being 66-foot long it is only 35-foot. And there are no lossy traps to contend with.

Building materials consist of two end insulators, one center insulator and inexpensive 300-ohm TV twin lead available at Radio Shack, Wal-Mart, Home Depot and other hardware emporiums.

To build this antenna, cut two equal lengths of 300-ohm TV lead 35-feet in length. At each end of the two lengths strip out about two inches of bare copper wire and solder tin them. Now at one end of each length twist the two wires together and solder. You may want to add a few more inches of bare copper wire long enough to connect to the end insulator.

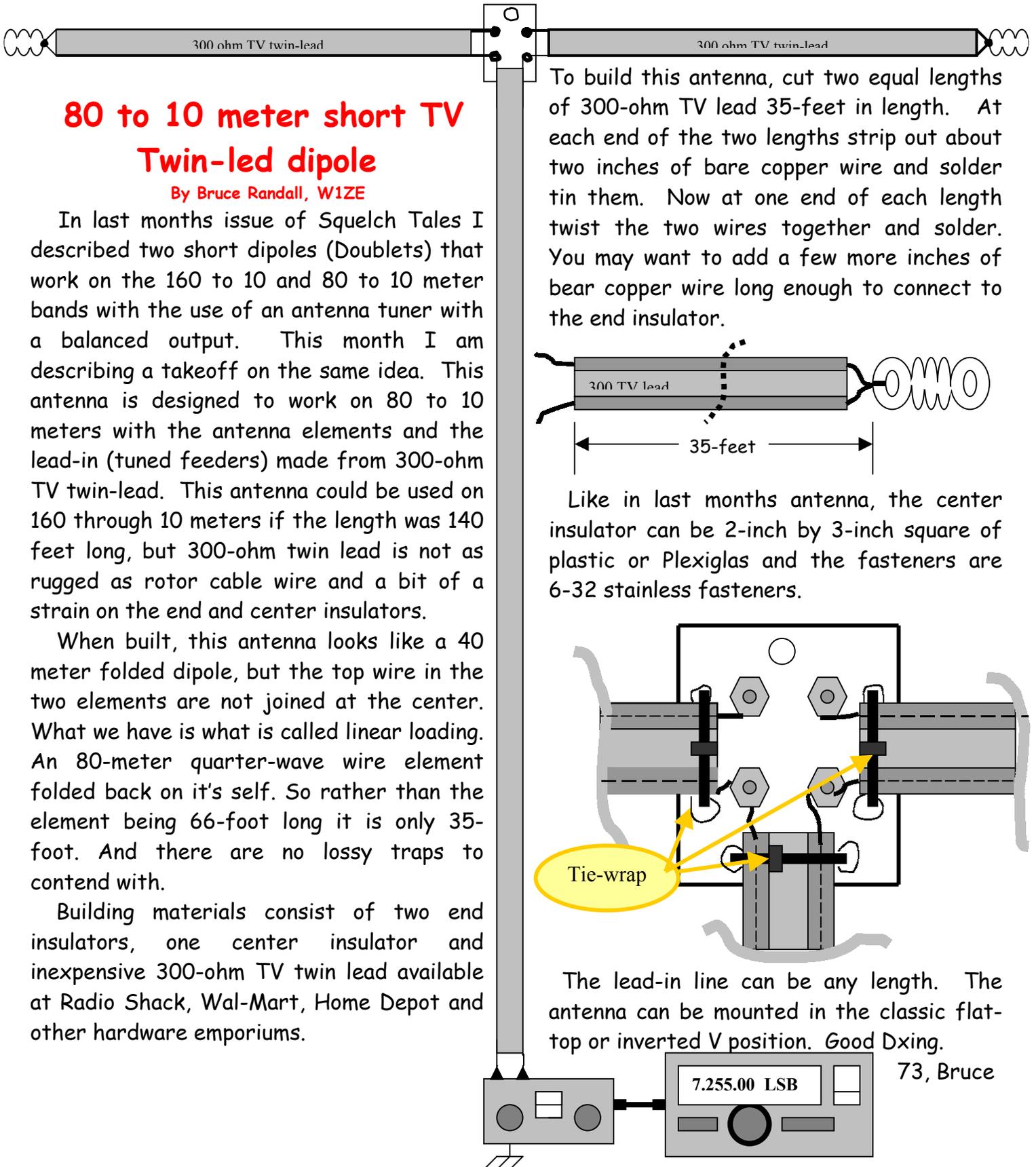


Like in last month's antenna, the center insulator can be 2-inch by 3-inch square of plastic or Plexiglas and the fasteners are 6-32 stainless fasteners.

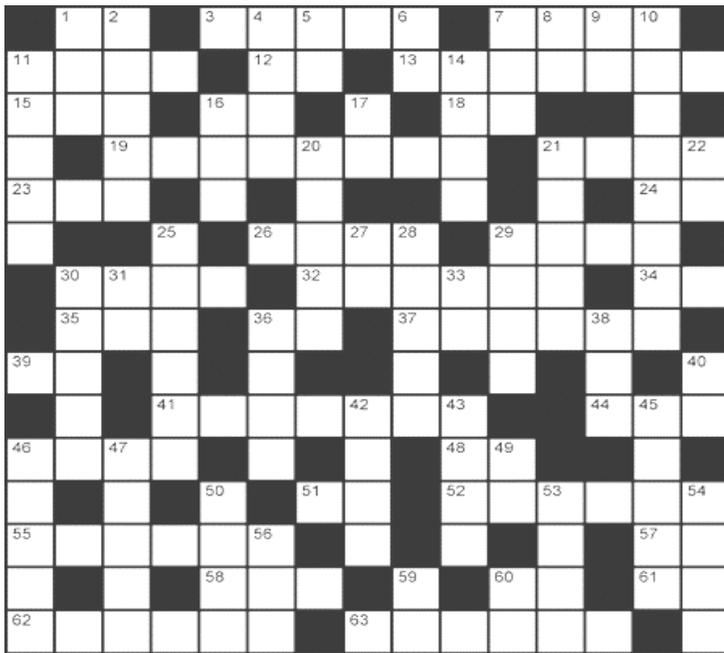


The lead-in line can be any length. The antenna can be mounted in the classic flat-top or inverted V position. Good Dxing.

73, Bruce



Ham crossword from of the ARRL



*Across *

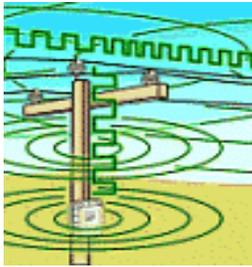
1. Vertical's counterpoise (abbr.)
3. Following
7. Dry lubricant powder
11. Worn for safety
12. ARRL observer (abbr.)
13. Force in a cable
15. QRV and QRT can use this same abbreviation
16. Ham radio (abbr.)
18. Impedance matcher (abbr.)
19. Used to form an end on guy cable
21. Certification that you passed a test (abbr.)
23. Protected by steel in your shoe
24. Controlled by radio (abbr.)
26. Deliver concrete
29. Speed of work
30. Line that carries antennas over guys
32. What you feel like after a boo-boo
34. The mode that uses RY for tuning
35. Workplace (abbr.)
36. Mark, as used in model names (abbr.)
37. Tightens with a turn
39. All is right (abbr.)
41. Short safety line
44. Stabilizing line
46. Where the concrete goes
48. As an example (abbr.)
51. Number (abbr.)

52. Holds the end of 45 Across
55. Sections inside each other
57. Prefix for Zone 13 entity
58. Type of microwave feedpoint amplifier (abbr.)
60. End of message (CW abbr.)
61. Home state of Ten-Tec (abbr.)
62. List of errors
63. Wheel and hook used for pulling with a rope

*Down *

1. Retrieve
2. Flat piece of metal
4. Wooden structure to hold concrete
5. Take off (abbr.)
6. Right (abbr.)
7. Makes 47 Across in a hurry!
8. Stand by (CW abbr.)
9. Light metal used in batteries (Chemical symbol)
10. Mixture that becomes a solid mass
11. Threaded connector
14. Not hard
16. Strike
17. Product safety test organization (abbr.)
20. Prevent from sliding
21. Offset handle to turn a shaft
22. Local ARES leader
25. Goes with block
27. Your (CW abbr.)
28. Metal rods used for strengthening
29. Select
30. Hi-Power Labs
31. Causes burns on the microphone
33. Appreciation (CW abbr.)
36. These hands make light work
38. What hold the tower up
40. Adjacent to
42. Unit of land area
43. The side of a cable loop not saddled
45. Double-threaded, holds round things to flat things
46. Linear pivot
47. Coherent light source used for surveying
49. Good night (CW abbr.)
50. Bump left after a blow
53. The process of 10 Down becoming solid
54. Cross-piece
56. Carries the genetic code
59. Pick up (abbr.)
60. Most common antenna material

News From Newington



FCC Adopts New BPL Rules

Meeting October 14 in open session, the FCC adopted revised Part 15 (unlicensed services) rules to specifically regulate broadband overpower line (BPL) systems. Specifics of the new rules in a Report and Order in ET Docket 04-37 won't be known for a few weeks. In comments before voting, three members of the Commission, including Chairman Michael K. Powell, specifically mentioned the concerns of Amateur Radio operators and expressed either assurances or hope that the new BPL rules will adequately address interference to licensed services. Republican FCC Commissioner Kevin Martin addressed Amateur Radio's and broadcasters' interference concerns in his written statement. ARRL President Jim Haynie, W5JBP, said he was encouraged to see the Commission acknowledge interference to Amateur Radio as a genuine issue in the BPL proceeding.

"What the League has done in the last year and a half on this issue showed in the Commission's public meeting today," Haynie said. He cited the FCC's approval of three major points that the League had been pushing for: Certification of BPL equipment instead of verification, a requirement for a public BPL database--something the BPL industry did not want--and mechanisms to deal swiftly with interference complaints.

Anh Wride of the FCC Office of Engineering and Technology (OET), outlined the draft R&O and acknowledged that Access BPL devices "pose a somewhat higher potential for

interference to licensed radio services than typical Part 15 devices." But, Wride went on to say, "we believe the specific benefits of BPL warrant acceptance of a small degree of additional risk, and that this interference potential can be satisfactorily managed."

Commissioner Michael Copps, a Democrat, said he remains concerned about interference to Amateur Radio users. "I take the concerns of this community very seriously and believe that the FCC has an obligation to work hard to monitor, investigate and take quick action, where appropriate, to resolve harmful interference."

Copps said if interference occurs, "we must have a system in place to resolve it immediately," and he expressed the hope that the new rules would include such "rapid turnaround" provisions. Copps, who dissented in part with the R&O, raised the question of whether utility ratepayers should have to "subsidize an electric power company's foray into broadband."

The Commission's other Democrat, Jonathan S. Adelstein, said the interference question made the proceeding a challenging one because it had to accommodate concerns raised by Public Safety licensees, federal government users and Amateur Radio operators. "These are important services that we need to protect from harmful interference," Adelstein said.

Adelstein also said that while it's clear that some BPL systems can co-exist with existing licensees, others "haven't fared so well." He said those systems shouldn't be deployed commercially until it's assured that they won't cause harmful interference.

Commissioner Kathleen Abernathy, a Republican, said the FCC had to "make some hard compromises" to deal with questions about interference. But she expressed confidence in "technical solutions."

Chairman Powell called it "a banner day" for communications in the US because, he said, BPL promises "ubiquitous service to all Americans at affordable rates." The chairman, a Republican,

conceded that BPL will affect some spectrum users--including "all those wonderful Amateur Radio operators out there." Powell said the FCC has taken Amateur Radio interference concerns seriously from the start and has taken care to ensure that protections are in place "to allow that service to continue." At the same time, Powell implied that the FCC must balance the benefits of BPL against the relative value of other licensed services.

"But let me underscore the potential for the American economy is too great, too enormous, too potentially groundbreaking to sit idly by and allow any claim or any possible speculative fear keep us from driving this technology and drive America into the broadband future."

ARRL CEO David Sumner, K1ZZ, suggested that Powell was overstating the necessity of yet another broadband pipeline. "It's astonishing to me that the chairman of the FCC can talk about needing a 'third way' to provide broadband to consumers when multiple technologies already are available, including wireless broadband," he said.

For more information on BPL, visit the "Broadband Over Power Line (BPL) and Amateur Radio" page on the ARRL Web site, www.arrl.org/bpl.

ARRL ASKS FCC TO SHUT DOWN NEW YORK BPL FIELD TRIAL

The ARRL this week asked the FCC to shut down a BPL field trial system in Briarcliff Manor, New York, that has been the subject of past interference complaints. The ARRL says the system, operated by Ambient Corporation under an FCC Experimental license, continues to cause "harmful interference" to amateur stations and that the FCC must require it to cease operation immediately.

"The operator of the system has attempted what it referred to as 'adjustments' in this system in order to reduce the severe interference potential to licensed radio services such as the Amateur Service," said ARRL

General Counsel Chris Imlay, W3KD. "These 'adjustments' have come to be inaccurately referred to as 'notching' of certain bands, and as a solution to interference to Amateur Service stations, they are incomplete and inadequate."

The ARRL's October 8 letter of complaint asserts that the Briarcliff Manor system not only is currently causing interference but fails to comply with either applicable FCC Part 15 regulations or with the terms of its FCC experimental authorization.

ARRL said the BPL facility at Briarcliff Manor should not be permitted to resume operation until it can demonstrate "full compliance" with FCC rules. The League also called on the FCC to impose "appropriate monetary forfeitures" against Ambient.

Accompanying the League's complaint were technical exhibits substantiating the degree of interference the League alleges. One exhibit shows the results of frequency-shifting adjustments Ambient made to the system in the wake of "multiple interference complaints from licensed radio amateurs." The complaint maintains that the adjustments failed to reduce interference on "a substantial portion" of the HF amateur allocations. The ARRL study says Ambient has been trying for more than a year to mitigate interference by using "notching" techniques, "but to no avail."

The ARRL said measurements taken at 14.3 MHz at one point in the system "revealed 30 to 40dB of degradation to Amateur Radio operations along a stretch of road over a kilometer in length." A sweep at another location showed that BPL signals occupying the entire 15-meter band remained strong more than a quarter mile from the BPL injector.

"The levels of interfering BPL signals are sufficient to obscure virtually all Amateur Radio received signals and preclude Amateur Radio communications in the areas and on the bands identified in the report," the ARRL concluded.

ARRL member Alan Crosswell, N2YGK, a resident of the community, has documented

interference, complaints and related information on his "BPL in Briarcliff Manor" Web site <<http://www.columbia.edu/~alan/bpl/>>.

The Briarcliff Manor BPL system, which is operated by the electric utility Consolidated Edison, was the focus of a March 2004 front-page Wall Street Journal article, "In This Power Play, High-Wire Act Riles Ham-Radio Fans," by technology writer Ken Brown. ARRL staff members accompanied Brown to the BPL site so he could hear the interference firsthand.

VE Test Schedule for 04/05

Bryce Rumery (K1GAX), MARA ARRL VE Coordinator has firmed up the following ham exam dates for the remainder of 2005 and 2005.

MARA VE schedule 2004 - 2005

December 11, 2005 10 AM Patten Free Library, Bath
February 19, 2005 10 AM Patten Free Library, Bath
March 26, 2005 12:30 PM Lewiston, Ramada Inn. Registration at 10:00 AM
April 23, 2005 10 AM Patten Free Library, Bath
June 18, 2005 10 AM Patten Free Library, Bath
October 15, 2005 10 AM Patten Free Library, Bath
December 10, 2005 10:00 AM Patten Free Library, Bath

For additional information about MARA sponsored exams contact:
Bryce, K1GAX, MARA VE Liaison
(207) 799-1116

October 16 Test Session Report

- Date: October 16, 2005
- Time: 1330 Local
- Location: Patten Free Library, Bath
- Applicants served: 1
- Licenses earned: 1 (Technician with HF)

Congratulations to Richard Dugas (no call) of Yarmouth for earning his Technician with HF at the test session.

Attending VEs: Bryce, K1GAX (Liaison), Bernie, NX1A, Bob, W1IF, Bruce, W1ZE and Abe, KC1W Thanks to all VEs that helped with the test session! Although not a large turnout, another ham was licensed!

73, Bryce, K1GAX, MARA VE Liaison

ARES Emergency Communications Training, 2004

Sagadahoc County ARES is offering emergency communications training at Midcoast Hospital in Brunswick on Saturday November 13, starting at 9:00 AM in the Executive Conference room. Topics to be covered are:

- Basic first aid
- Assembling a first aid jump-kit.
- Assembling a Communications jump-kit
- Maine ARES communications Certification by Bryce, K1GAX.
- Cost of the training "FREE"

We encourage all local ham club members to attend, but this course is open to ALL Maine HAMS and folks considering becoming a ham. Let your friends know of the available training. Please sign-up with Sagadahoc County AEC Lee Tribou, N1HOC at sionaann@gwi.net or AEC Bruce Randall, W1ZE at w1ze@arrl.net.

Upon completion of the day training you will receive Maine Emergency Communications Training certificate which is necessary to help you become an effective communications volunteer.

For additional information about this training, contact Lee, Bruce or Sag. EC DR. Allen Kuong (akuong@pol.net).