

There is Windom in being Off-Center?

FRRL Program

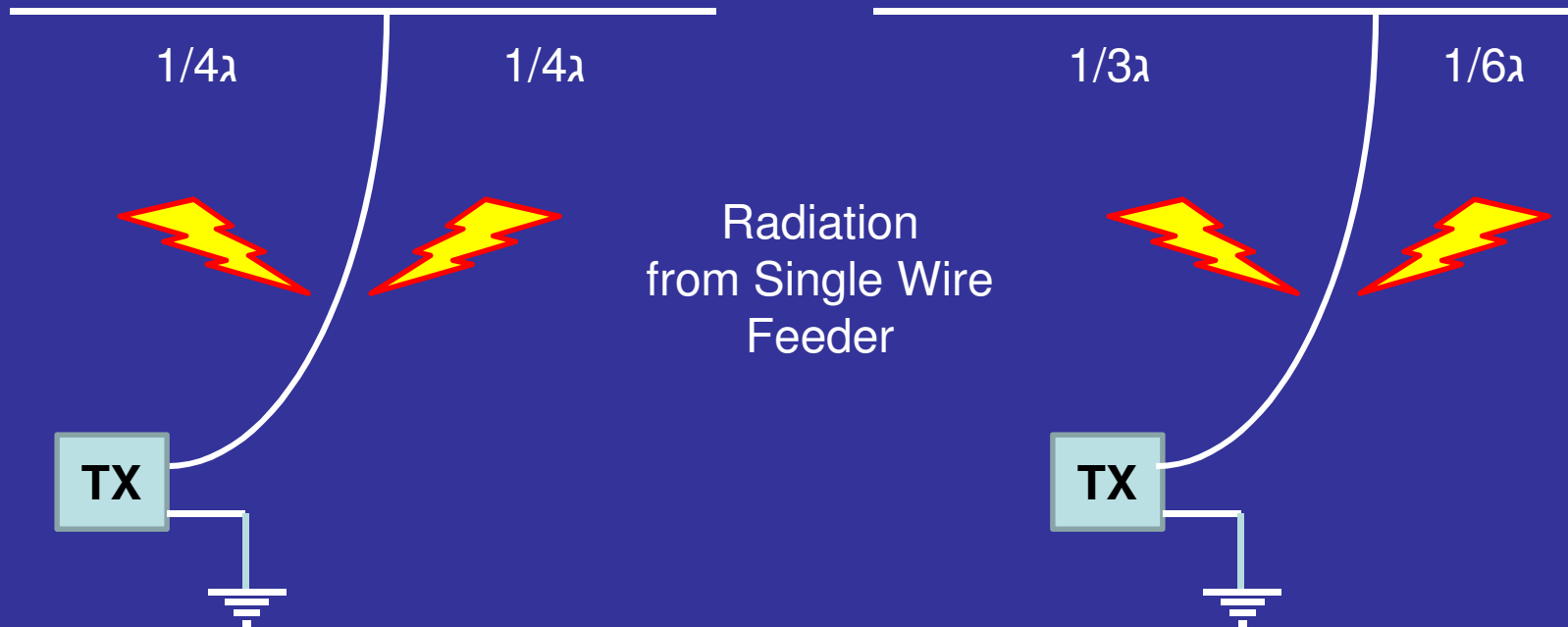
August 2013

AH6EZ

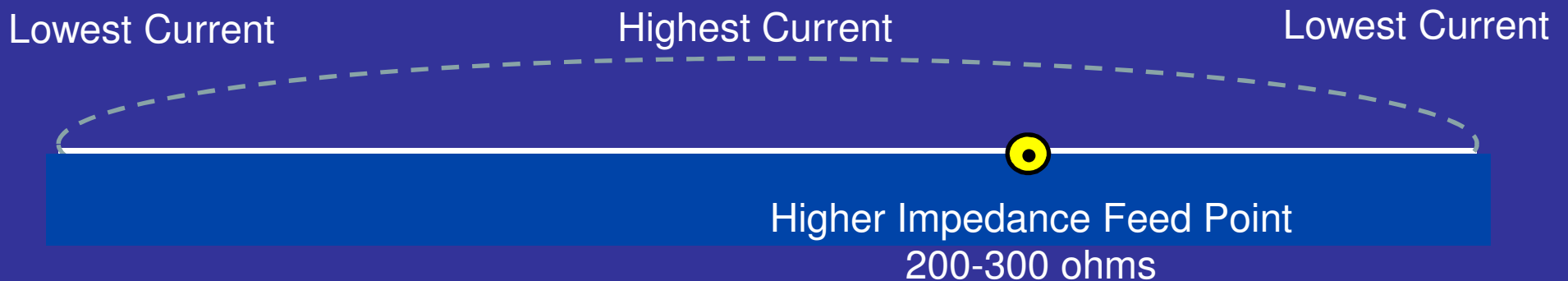
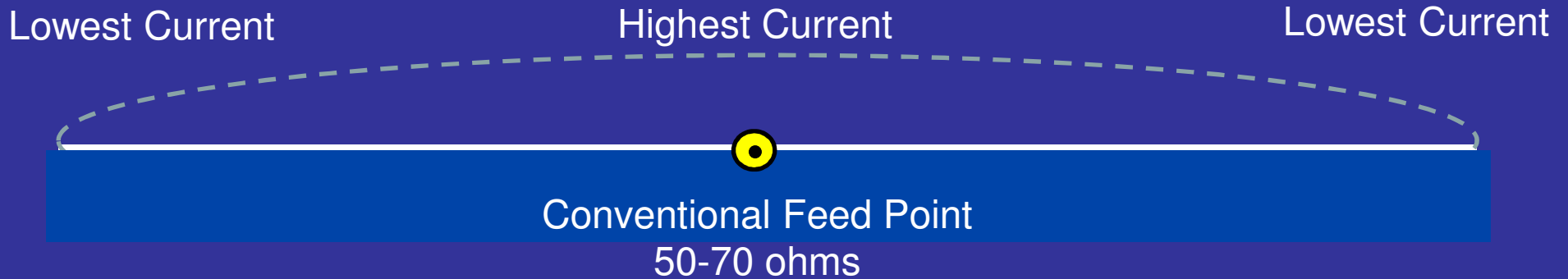
Off Center Fed Dipole

- Derived from the Windom antenna
 - Invented by W8GZ in 1929
 - Ham bands were harmonically related (160-80-40-20-10M)
 - Off-center provided higher impedance feed
 - Originally single wire feeder (not coax)
- Provides multiband (harmonic) operation
 - Remember more lobes (nulls) on upper bands
- Available commercially
- Possible to build but touchy upper band tuning
 - You may want to buy a good current balun
 - Otherwise you may experience RFI in your shack

Original Hertz and Windom Antennas



Current and Impedance on $\frac{1}{2}\lambda$ Antenna



Operating at antenna harmonics

Fundamental (7 MHz?)



Higher Impedance Feed Point
200-300 ohms

2x Fundamental (14 MHz)



Lower Impedance Feed Point
100-200 ohms

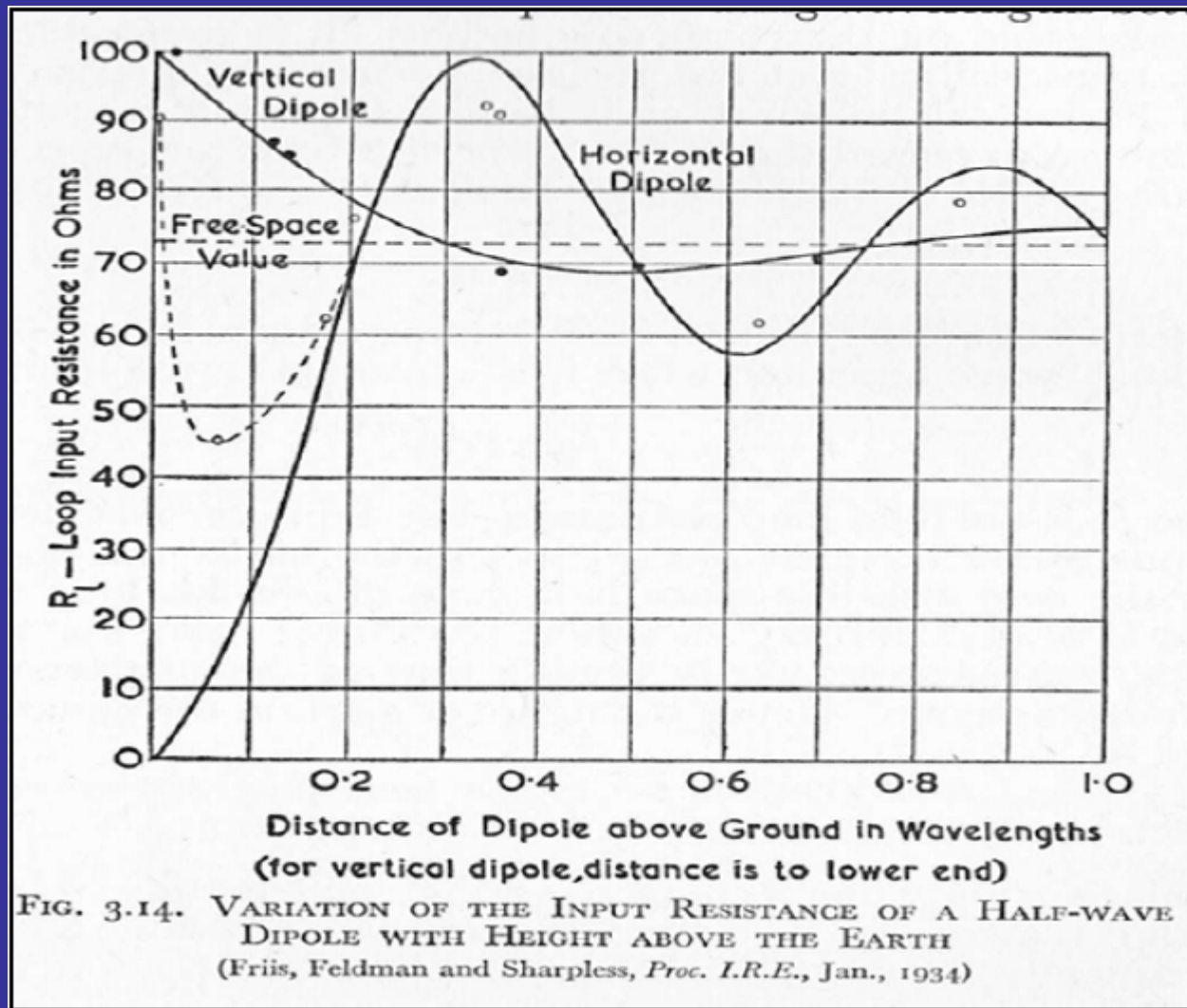
4x Fundamental (28 MHz)



Higher Impedance Feed Point
300-500 ohms

Having a single feed point on multiple bands creates compromises someplace

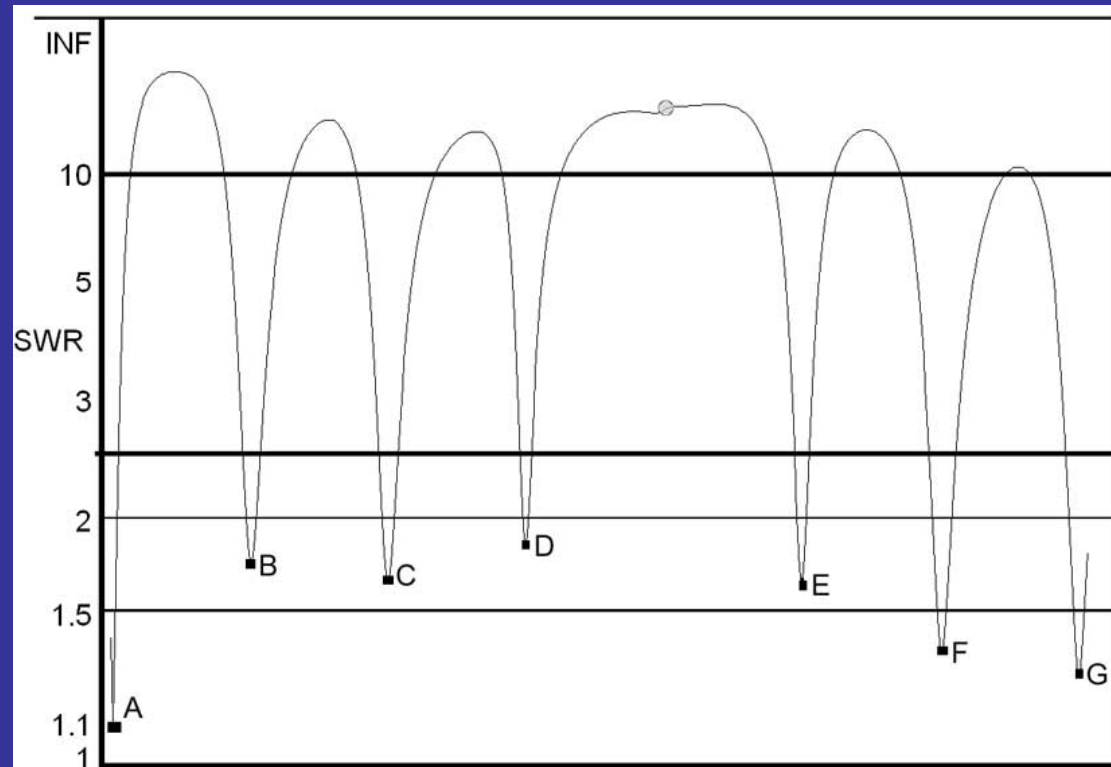
Antenna Height Affects Feed Impedance



Antenna height and nearby objects cause critical tuning of OCF compromises to change

W8JI.com Windom (OCF Dipole)

- Length: 137 feet of bare #14 to 16 AWG wire
- Height: As high and clear as possible
- Feedpoint: 80/20% 109.6/27.4 ft from one end



200 Ohm SWR Plot W8JI Windom

Graph Point	A	B	C	D	E	F	G
Freq MHz	3.55	7.15	10.7	14.25	21.4	25.0	28.6
SWR 200-ohm	1.1	1.7	1.6	1.9	1.7	1.4	1.3
Imp ohms	218	118	121	360	320	152	160

<http://www.balundesigns.com/servlet/the-110/current-balun-4-cln-1-designs/Detail>



Model 4114ocf

4:1 Current Balun 1.5 - 54 Mhz for OCF Dipole - 5kW #4114ocf

Manufacturer: Balun Designs

SKU: 4114ocf

Price: **\$82.95**

<http://hamcall.net/7bandocf.html>

Buckmaster World wide DX, multi-band, no tuner required, Off-Center-Fed (OCF) Dipole Antennas



- 4-Band: 40, 20, 10, & 6 meters. 68 feet (23+45) long.
- 7-Band: 75/80, 40, 20, 17, 12, 10, & 6 meters. 135 feet (45+90) long.
- 8-Band: 160, 75/80, 40, 20, 17, 12, 10, & 6 meters. 270 feet (90+180) long.

300W	3KW
\$203	\$294
\$209	\$299
\$272	\$362

<http://www.radioworks.com/OCFD%20MAX%2040.htm>

New! **RADIO WORKS™ OCFD MAX™**
The Off-Center-Fed Dipole that WORKS!

The diagram shows a horizontal antenna structure. A central vertical line is labeled "50Ω Coaxial Feedline". To the left of the feedline, a horizontal line is labeled "Matching Unit". The distance from the feedline to the left end of the antenna is 22', and the distance to the right end is 45'. The total length is 67'. The antenna consists of two elements: a left element of 9' .05 Kevlar® and a right element of 13' .05 Kevlar®. The distance between the two elements is 8'. The distance from the feedline to the center of the left element is 14', and the distance from the feedline to the center of the right element is 25'. Two "Optional 15 m element" kits are shown as curved lines extending from the main elements. The text "Not drawn to scale" is present.

A High Performance, Efficient, Multiband Antenna.

OCFD MAX™ 40
The optional 15 m element kit is available for \$20 or factory installed for \$20, see OCFD MAX™ 40 + 15

Bands: 40, 20, 17, 15*, 12, 10, 6 meters
Optimized for the major DX bands 40, 20, 15* and 10 m
Overall Length: 67' Antenna can be shortened by bending elements
Power: 1500 watts on SSB and CW 6m 200 w
*Power rating is for normal SSB/CW duty-cycles. Not rated for high duty-cycle modes
PSK 31 is OK at 100 watt level*
SWR < 3:1 across all covered bands. Use your rig's tuner
Designed for installation between 30' and 50'
Will work at heights from 20' and higher
Feedlines: 50Ω coax RG-8X or Super 240 is recommended
*** 15m coverage requires the special 15m element kit**

RADIO WORKS™ OCFD MAX™ 40
40, 20, 17, 12, 10, 6 meters
Lower cost by eliminating the 15 meter element
All of the features of the OCFD MAX™ 40 + 15 but no 15meter coverage

\$125

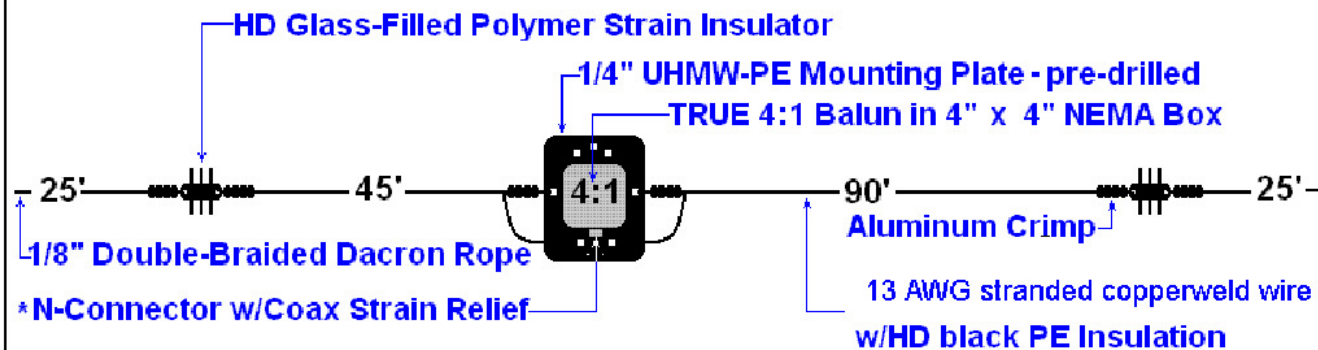
http://www.arrayolutions.com/Products/ocf_dipole.htm#top%20of%20page

Array Solutions OCF Dipoles

Built to Military Standards just like the rest of our commercial products!

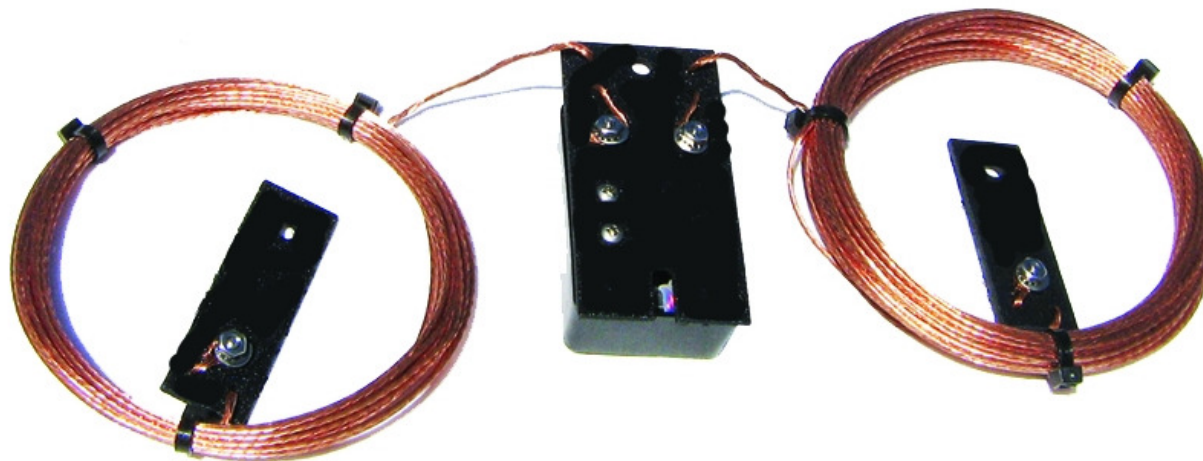


*** All Supplied hardware is Stainless Steel**



\$259

MFJ-2010
300w
\$60



MFJ-2010

