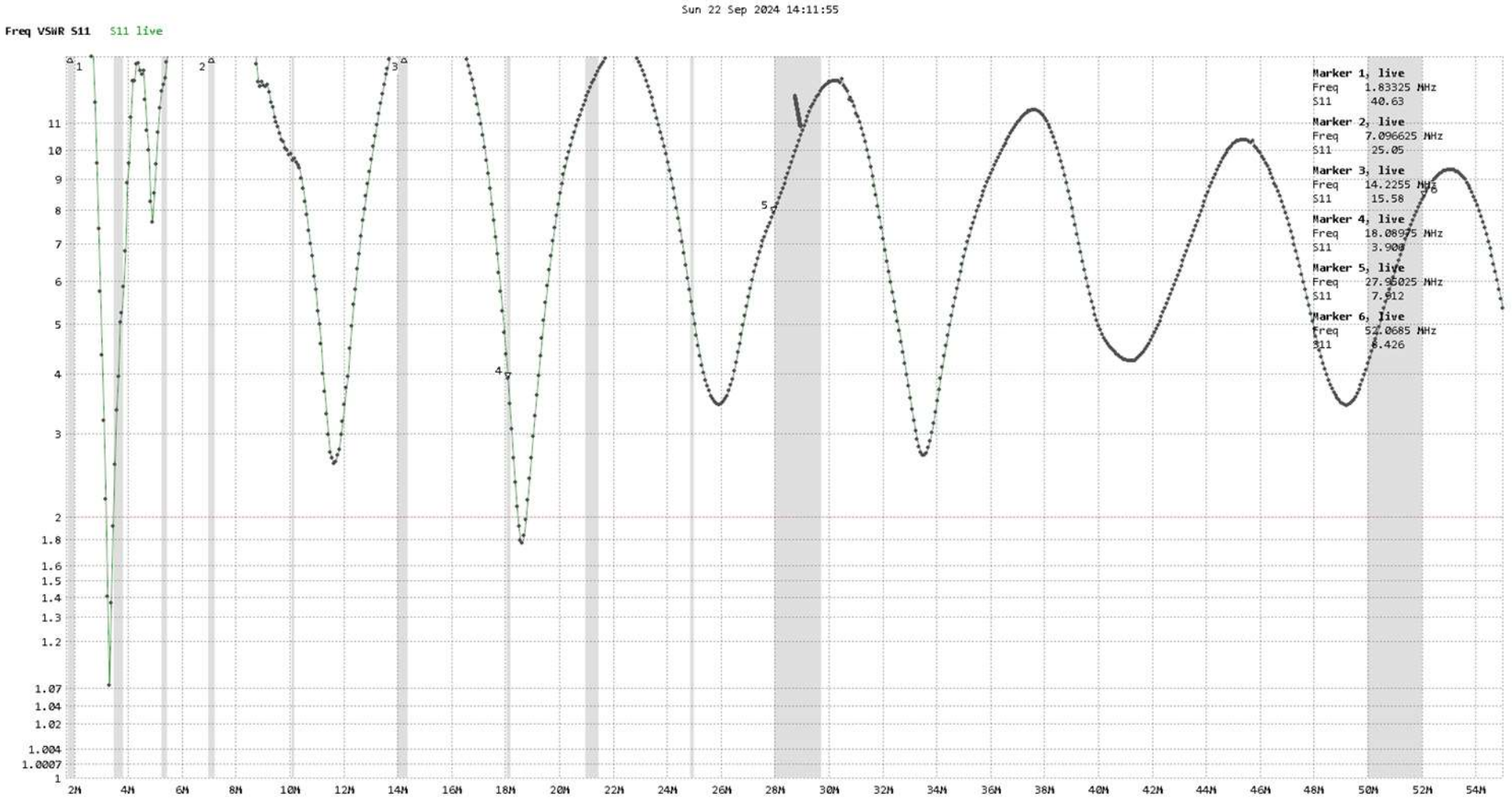
**KC3YFZ >>>> End Feed 18 AWG stranded copper 62.5 FT 12 FT Counterpoise**

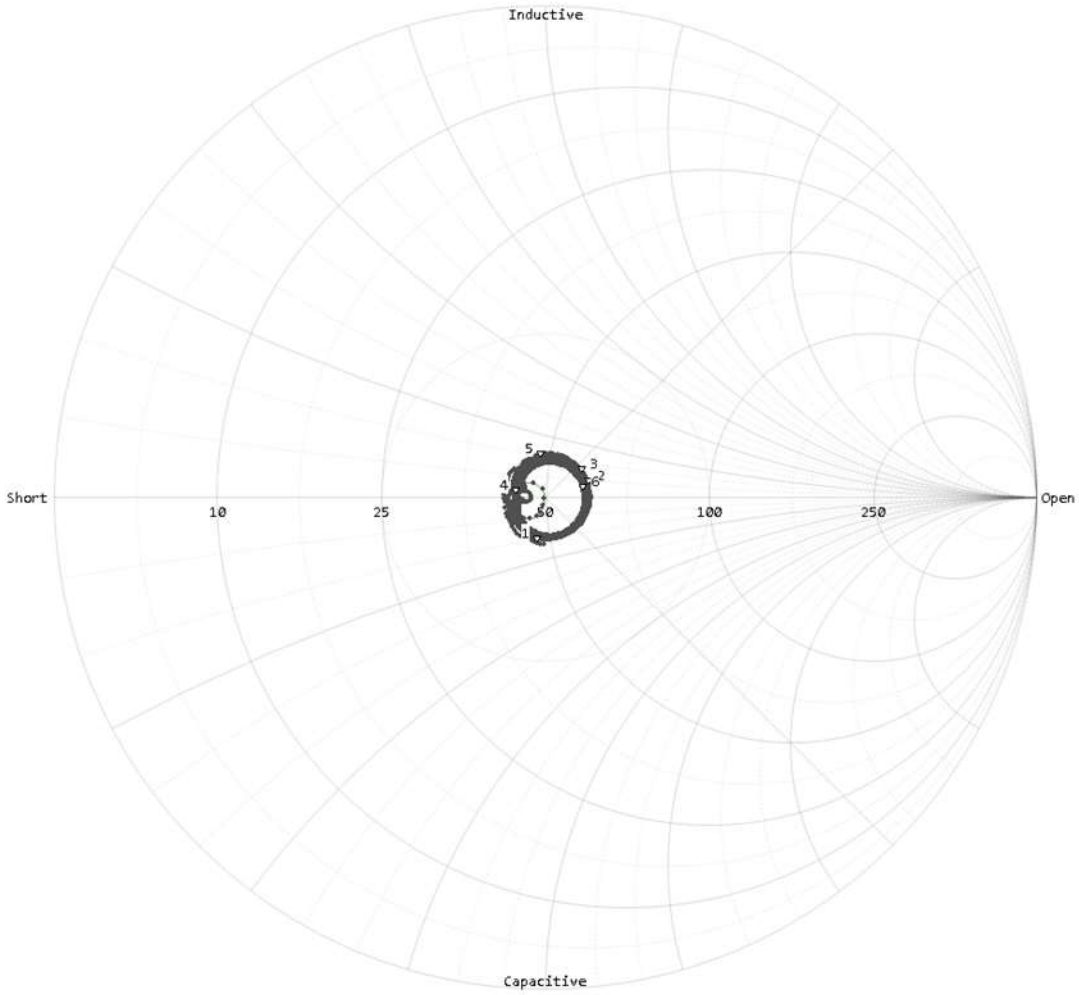
Sweep using nanovna at end of feed line in shack before antenna tuner

VSWR 1.6 MHz (160 M) to 55 MHz (6 M)– no un un.



Freq Smith S11

Sun 22 Sep 2024 14:12:19




**Marker 1 , live**
Freq 1.83325 MHz
re im -0.15853 -0.93829
Rs jX 2.1255 -j42.216
Rs L/C 2.126 2.0565nF
Mag Ang 0.9516 -99.59°
Imp 42.27

**Marker 2 , live**
Freq 7.096625 MHz
re im 0.89271 0.23558
Rs jX 110.12 +j351.57
Rs L/C 110.1 7.8846uH
Mag Ang 0.9233 14.78°
Imp 368.41

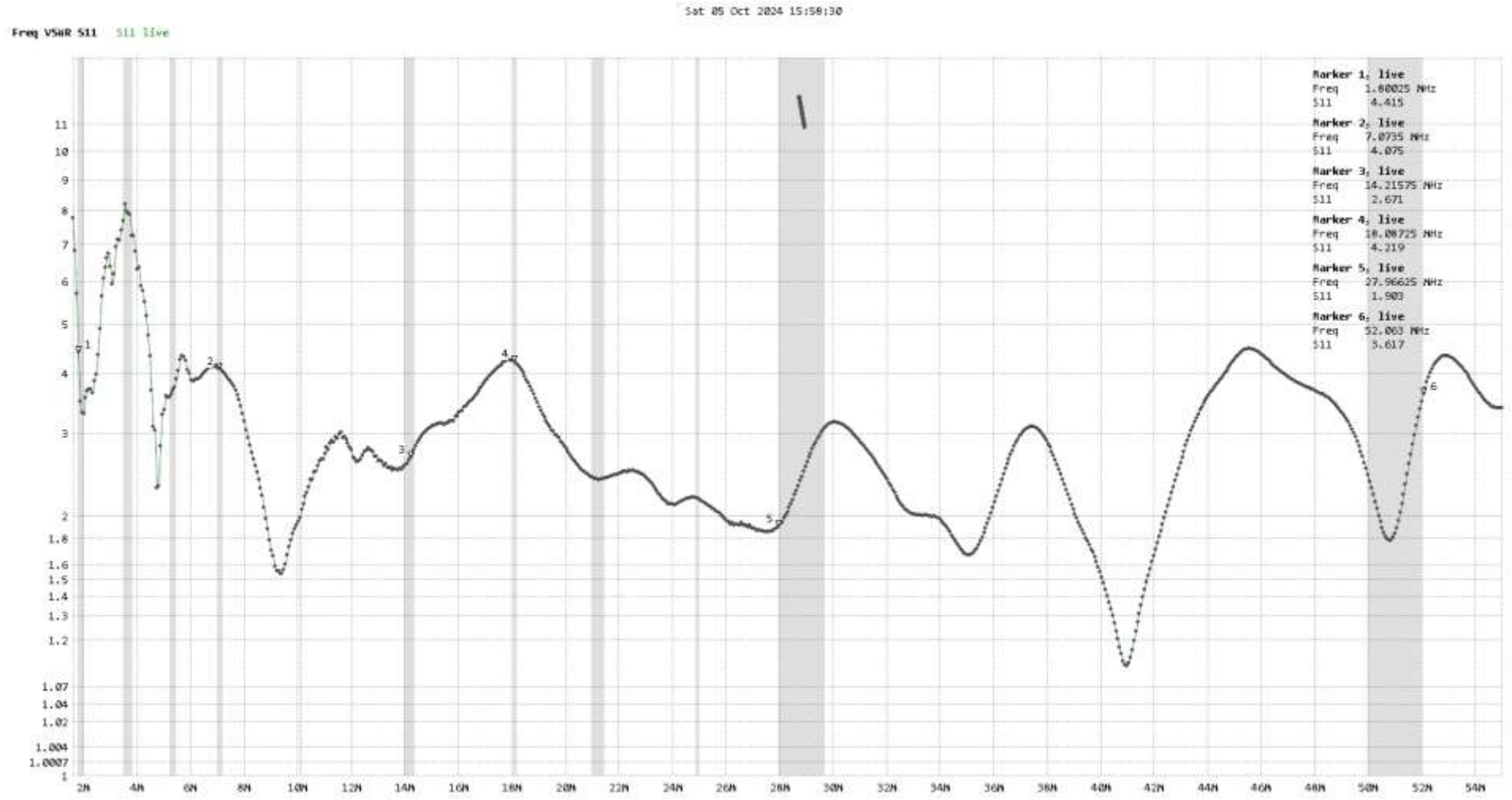
**Marker 3 , live**
Freq 14.2255 MHz
re im 0.74521 0.46661
Rs jX 40.145 +j165.09
Rs L/C 40.14 1.847uH
Mag Ang 0.8792 32.05°
Imp 169.9

**Marker 4 , live**
Freq 18.08975 MHz
re im -0.59132 0.029043
Rs jX 12.82 +j1.1465
Rs L/C 12.82 10.087nH
Mag Ang 0.5920 177.2°
Imp 12.871

**Marker 5 , live**
Freq 27.95025 MHz
re im -0.076655 0.77201
Rs jX 11.341 +j43.985
Rs L/C 11.34 250.46nH
Mag Ang 0.7758 95.67°
Imp 45.423

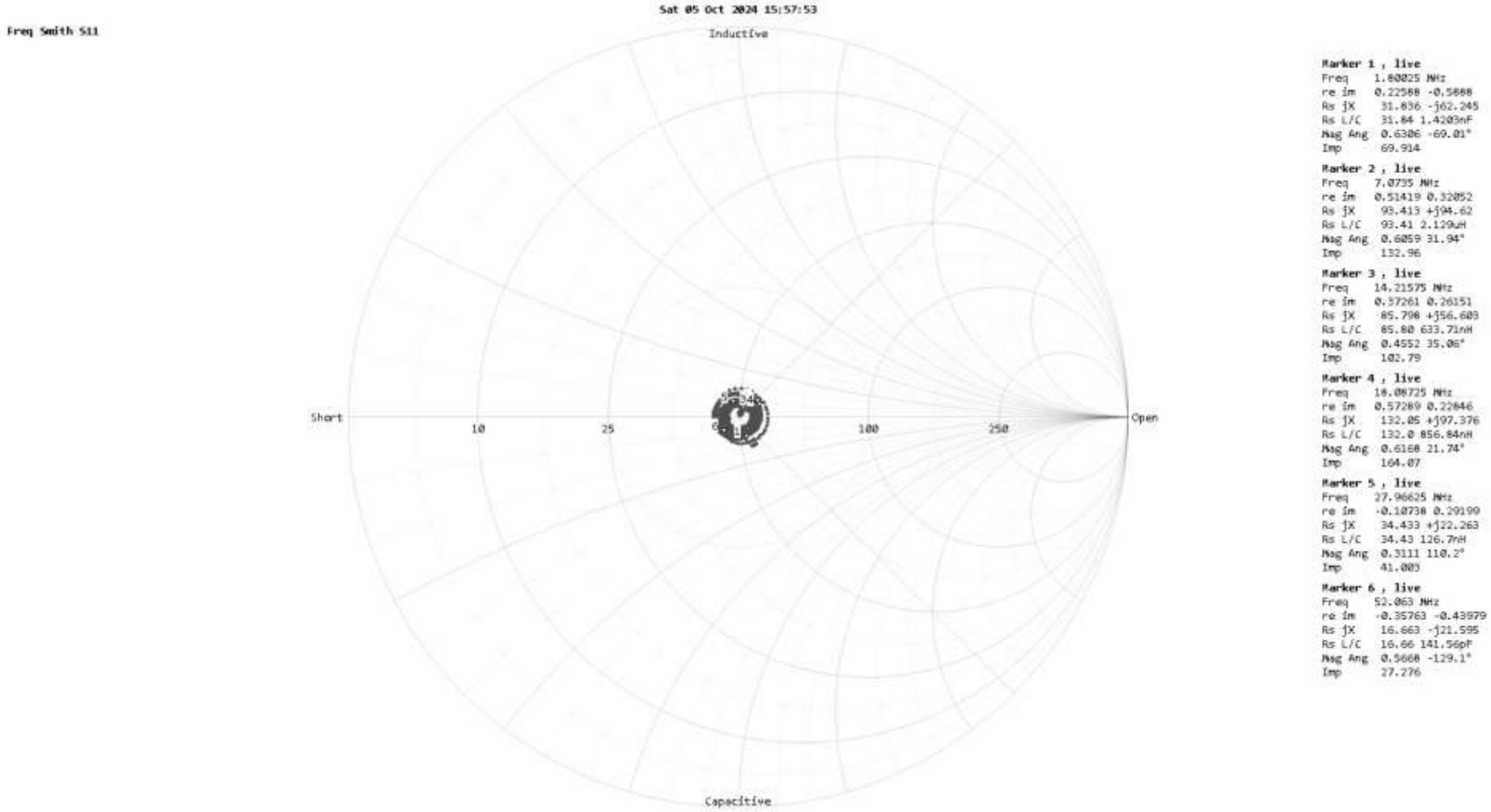
**Marker 6 , live**
Freq 52.0685 MHz
re im 0.77871 0.11943
Rs jX 299.96 +j188.87
Rs L/C 300.0 577.32nH
Mag Ang 0.7878 8.719°
Imp 354.47

## ADDE 9:1 un un at Antenna

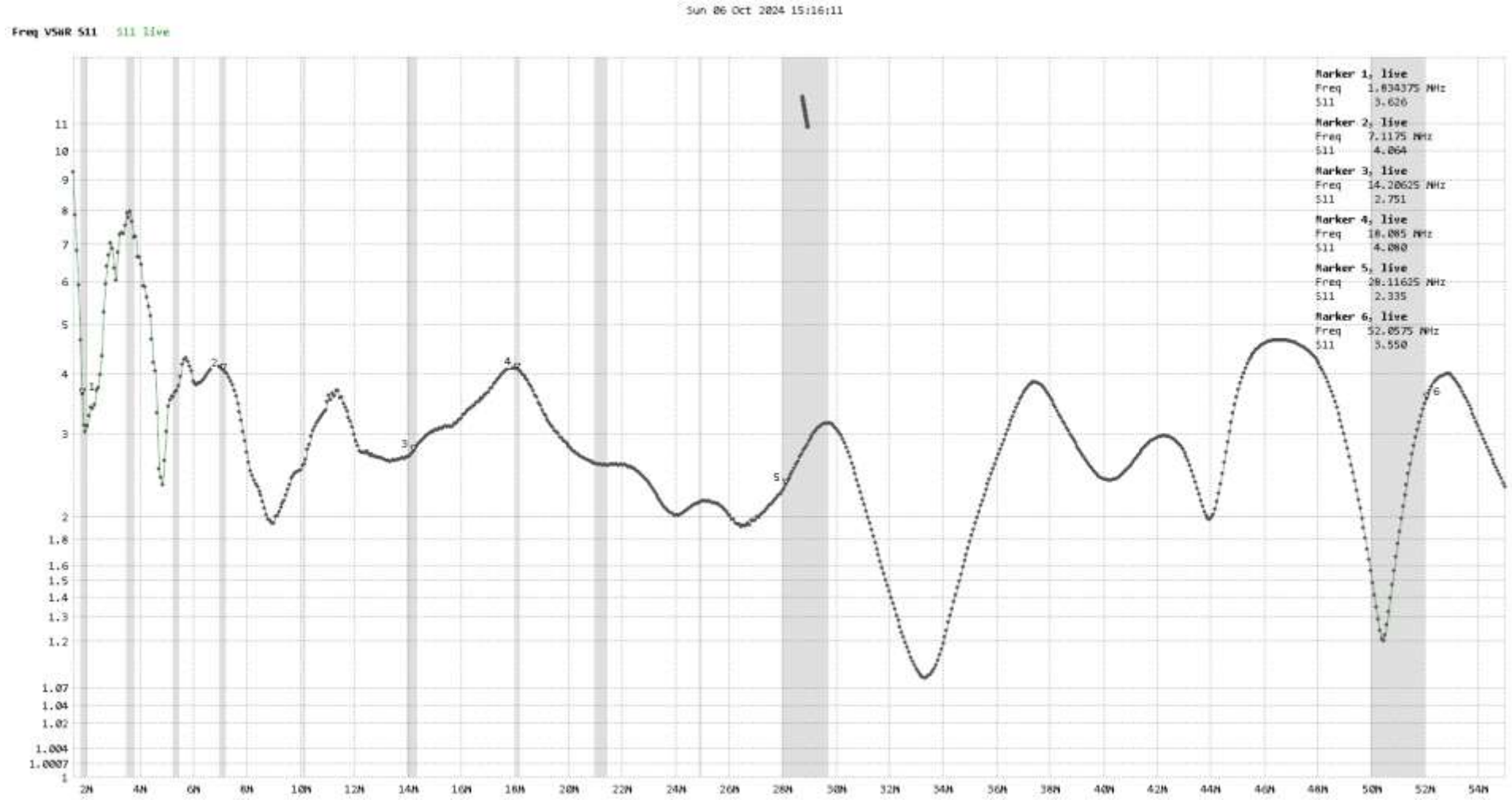



**Before #3 marker swr was 15.58 with 9:1 un un now >> 2.671. nice**

The smith check the #3 Imp before 169.9  now 102.79   # 6 wow 354.57 now 27.27

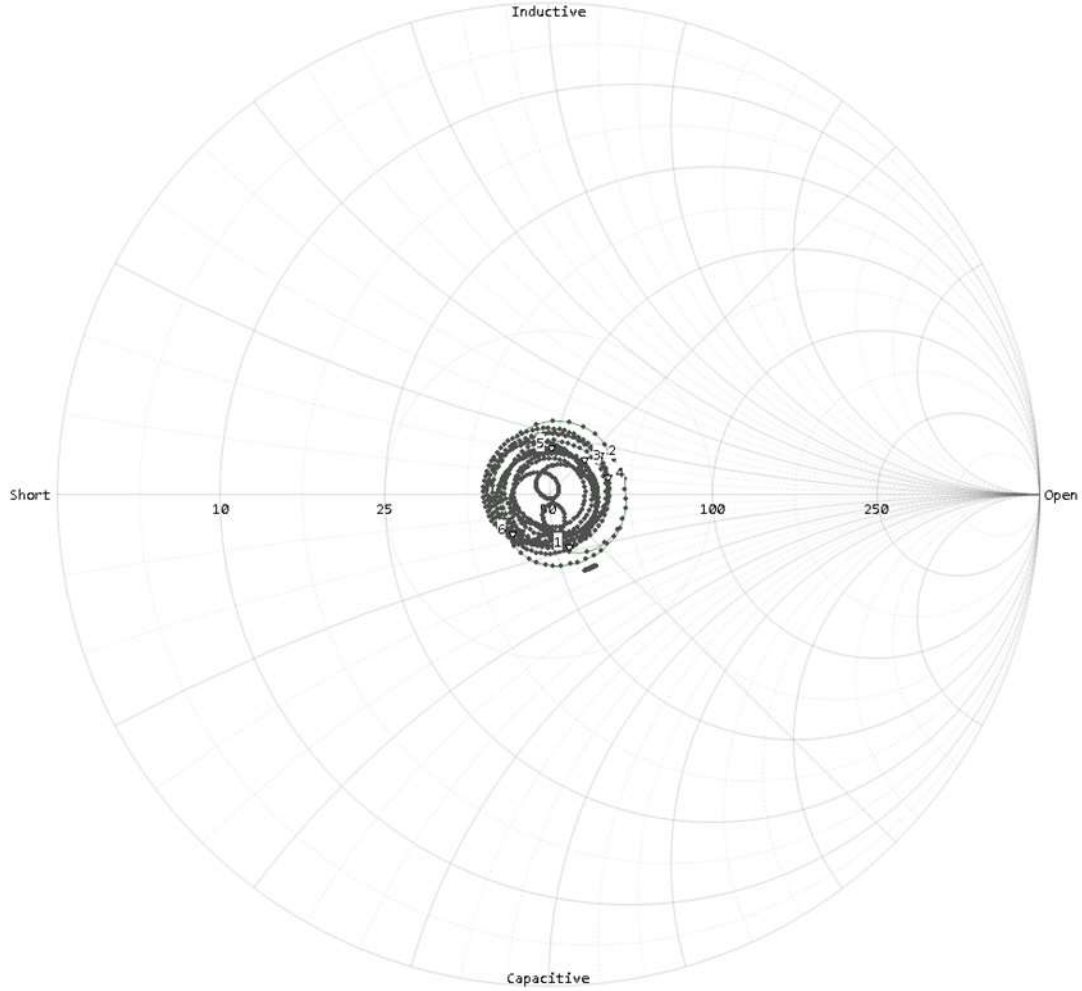


**Now added a 2 turn 2 inch un un with 2 ceramic ferrites needed rg8x to make a 4 turn ¼ in spacing, pvc 4 in choke ugly 1:1**



Freq Smith S11

Sun 06 Oct 2024 15:21:10




**Marker 1 , live**
Freq 1.80025 MHz
re im 0.20863 -0.56706
Rs jX 33.493 -j59.828
Rs L/C 33.49 1.4777nF
Mag Ang 0.6042 -69.80°
Imp 68.565

**Marker 2 , live**
Freq 7.0735 MHz
re im 0.51157 0.32938
Rs jX 90.736 +j94.907
Rs L/C 90.74 2.1354uH
Mag Ang 0.6084 32.78°
Imp 131.3

**Marker 3 , live**
Freq 14.21575 MHz
re im 0.36738 0.28458
Rs jX 81.469 +j59.14
Rs L/C 81.47 662.12nH
Mag Ang 0.4647 37.76°
Imp 100.67

**Marker 4 , live**
Freq 18.08725 MHz
re im 0.59963 0.10572
Rs jX 183.49 +j61.652
Rs L/C 183.5 542.5nH
Mag Ang 0.6089 9.999°
Imp 193.57

**Marker 5 , live**
Freq 28.09975 MHz
re im 0.035801 0.39855
Rs jX 38.579 +j36.614
Rs L/C 38.58 207.38nH
Mag Ang 0.4002 84.87°
Imp 53.187

**Marker 6 , live**
Freq 52.063 MHz
re im -0.33752 -0.44772
Rs jX 17.232 -j22.505
Rs L/C 17.23 135.83pF
Mag Ang 0.5607 -127.0°
Imp 28.345


To be really pretty I will buy a LDG 1:1

I have money. Cheap makes me learn. There is also make vs buy.

9:1 with shipping was 45$. I cannot make one for that in parts.

To save space I will buy next order a LDG 1:!

The result on a sloping 62 ft 6 inch 18 guage speaker wire.

Nice. I made contact BARE, now can tune to 40 M-

10 – 40 M was the goal.

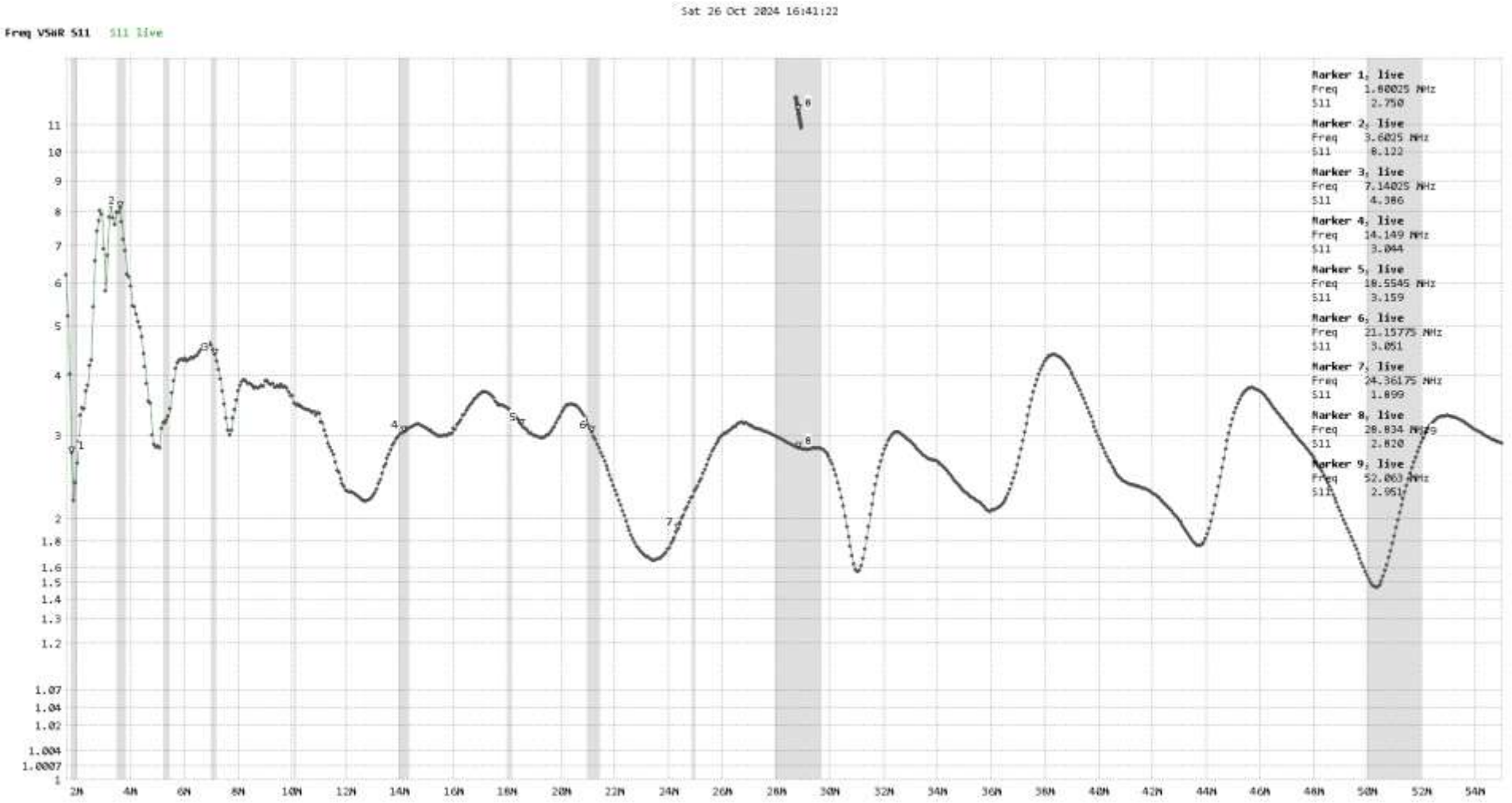
Listening last night – 7200 the cray cray weed dude ???

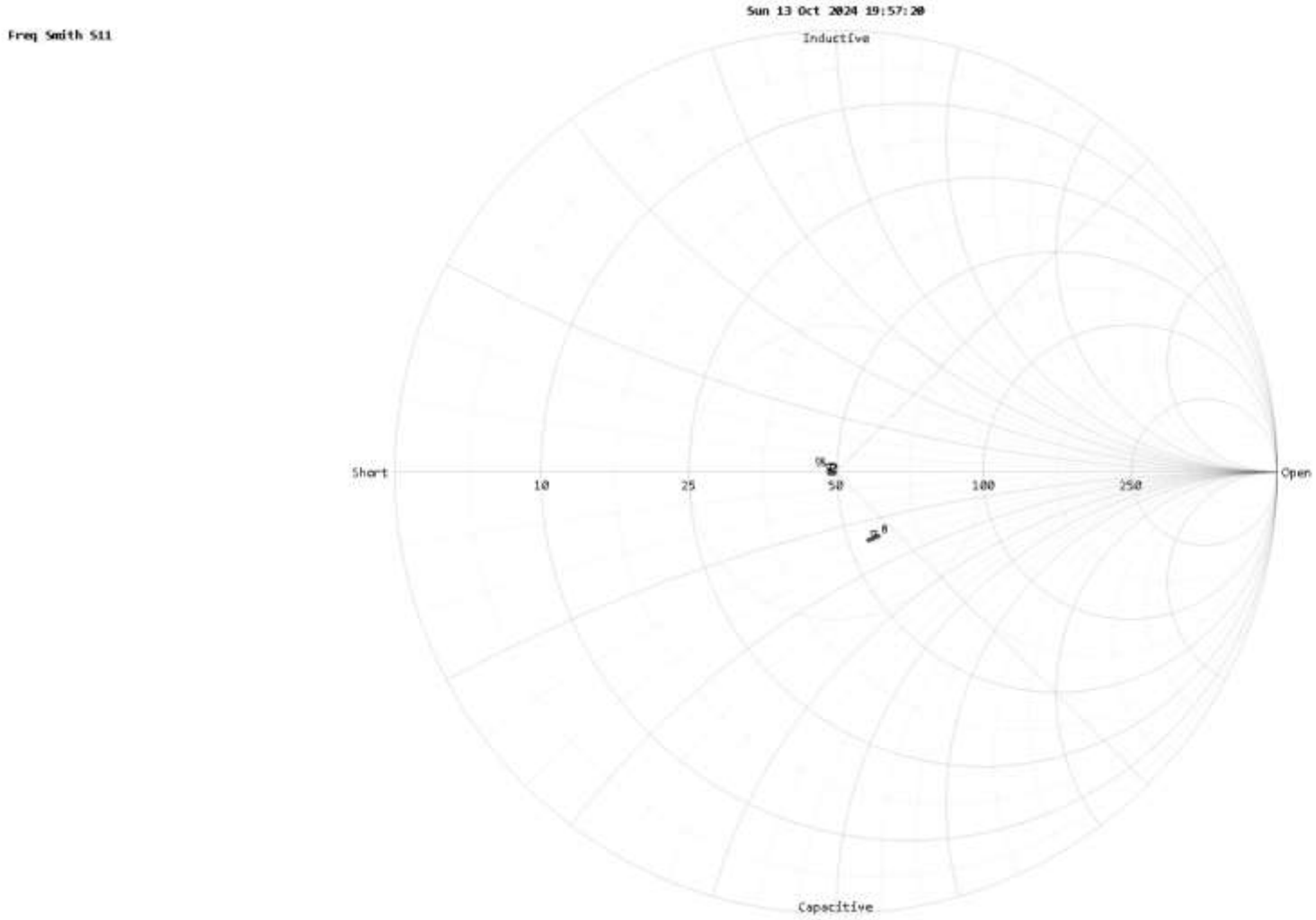
40 meters.

I can tune 80.

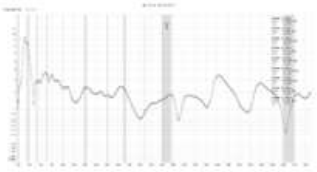
## Final Setup

## Remove 2 turn choke Replace with a 8 turn air coil 4 in choke



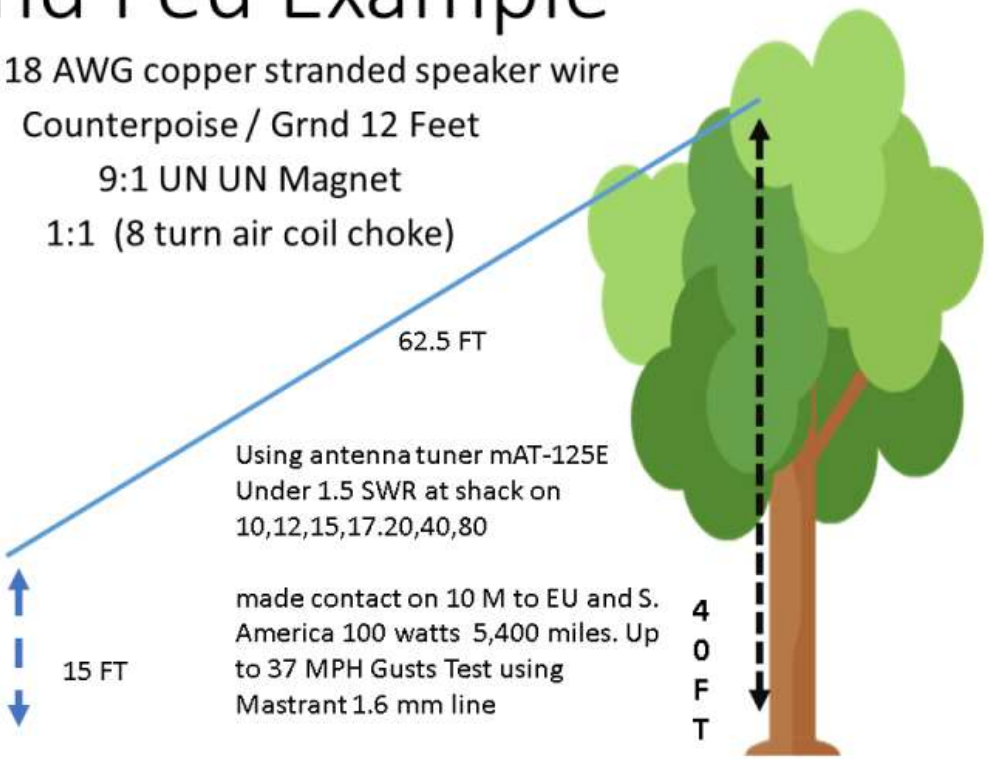

Sun 13 Oct 2024 19:57:20
Freq Smith S11
Inductive
Short
10
25
50
100
250
Open
Capacitive
Marker 1 , live
Freq 1.80025 MHz
re im -0.012495 -0.003672
Rs jX 48.765 -j358.22m
Rs L/C 48.76 246.8nF
Mag Ang 0.0130 -163.6°
Imp 48.766
Marker 2 , live
Freq 3.6025 MHz
re im -0.013012 -0.010995
Rs jX 48.704 -j1.0717
Rs L/C 48.70 41.223nF
Mag Ang 0.0170 -139.8°
Imp 48.716
Marker 3 , live
Freq 7.14025 MHz
re im -0.022448 -0.02281
Rs jX 47.756 -j2.1609
Rs L/C 47.76 10.221nF
Mag Ang 0.0320 -134.5°
Imp 47.806
Marker 4 , live
Freq 14.149 MHz
re im -0.049853 -0.019818
Rs jX 45.217 -j1.7974
Rs L/C 45.22 6.2581nF
Mag Ang 0.0536 -158.3°
Imp 45.253
Marker 5 , live
Freq 18.0205 MHz
re im -0.05596 -0.0064582
Rs jX 44.697 -j579.16m
Rs L/C 44.70 15.249nF
Mag Ang 0.0563 -173.4°
Imp 44.701
Marker 6 , live
Freq 21.15775 MHz
re im -0.052855 0.0044914
Rs jX 44.978 +j405.17m
Rs L/C 44.98 3.0478nH
Mag Ang 0.0530 175.1°
Imp 44.98
Marker 7 , live
Freq 24.9625 MHz
re im -0.041927 0.011567
Rs jX 45.964 +j1.0653
Rs L/C 45.96 6.7922nH
Mag Ang 0.0435 164.6°
Imp 45.977

**IMP = Ohms**



# End Fed Example

62.5 ft 18 AWG copper stranded speaker wire
Counterpoise / Grnd 12 Feet
9:1 UN UN Magnet
1:1 (8 turn air coil choke)


Using antenna tuner mAT-125E
Under 1.5 SWR at shack on
10,12,15,17.20,40,80

made contact on 10 M to EU and S. America 100 watts 5,400 miles. Up to 37 MPH Gusts Test using Mastrant 1.6 mm line

**Goal: 10, 12, 15, 17, 20, 40 meters 80 can hear well**

QRZ.COM

## Latest Contacts for KC3YFZ at QRZ.com

| de | date | band | mode | grid | Country | op |
|---|---|---|---|---|---|---|
| CX2TQ | 2024-10-08 | 10m | SSB | GF15WC | Uruguay | (Paul) JOSE PABLO AM |
| OE3WMS | 2024-09-23 | 10m | SSB | JN88dj | Austria | Wolfgang Mueller |