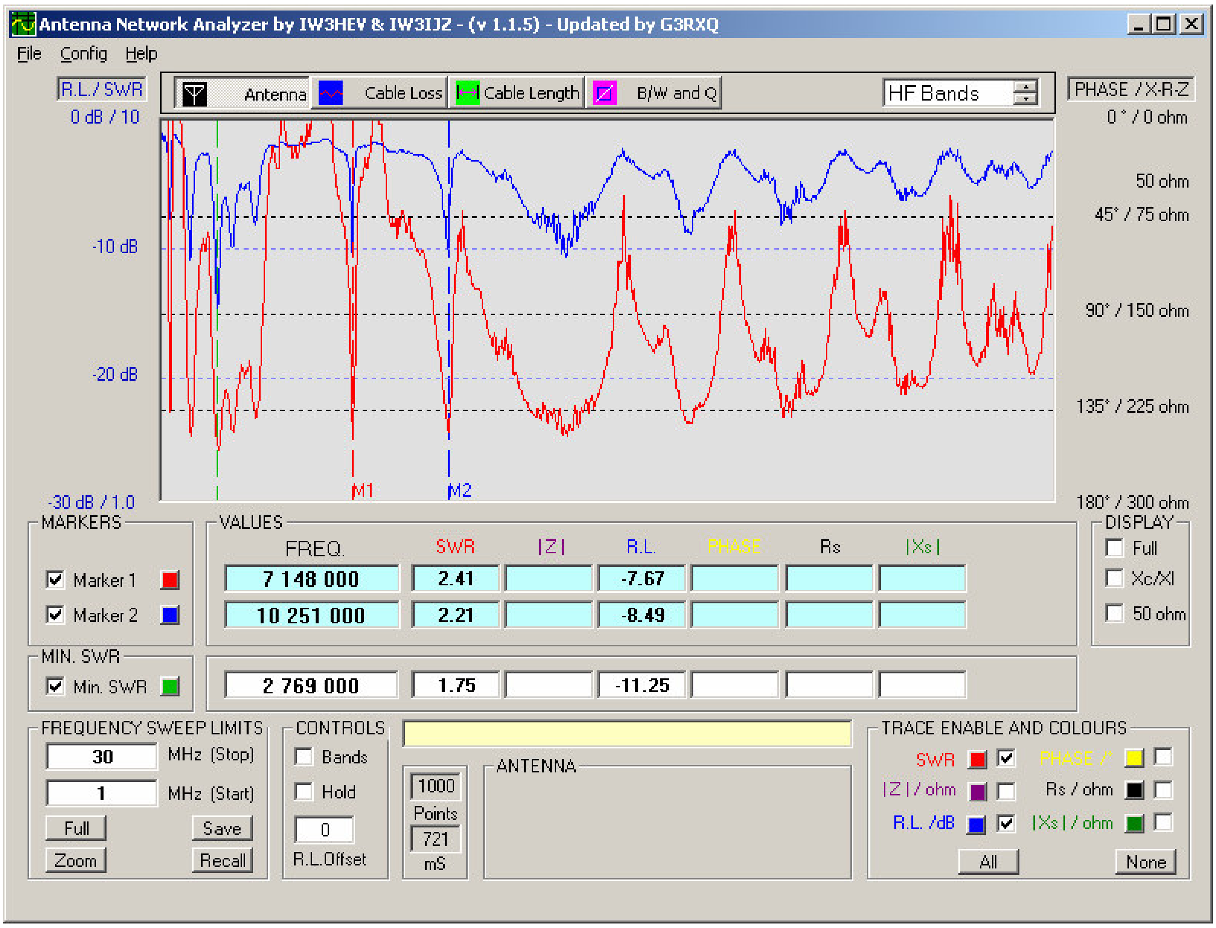
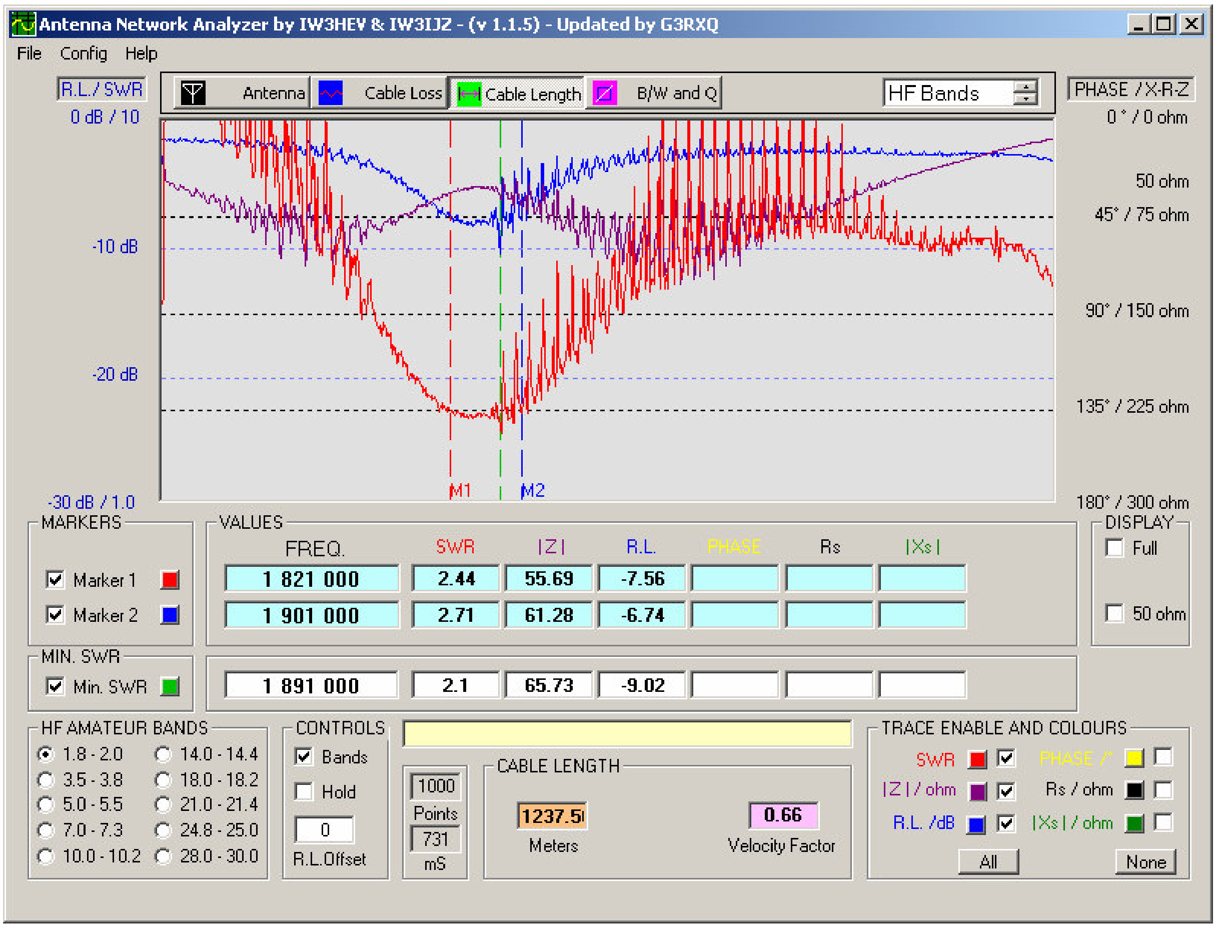
Pomiar anten Marcina SP3OS

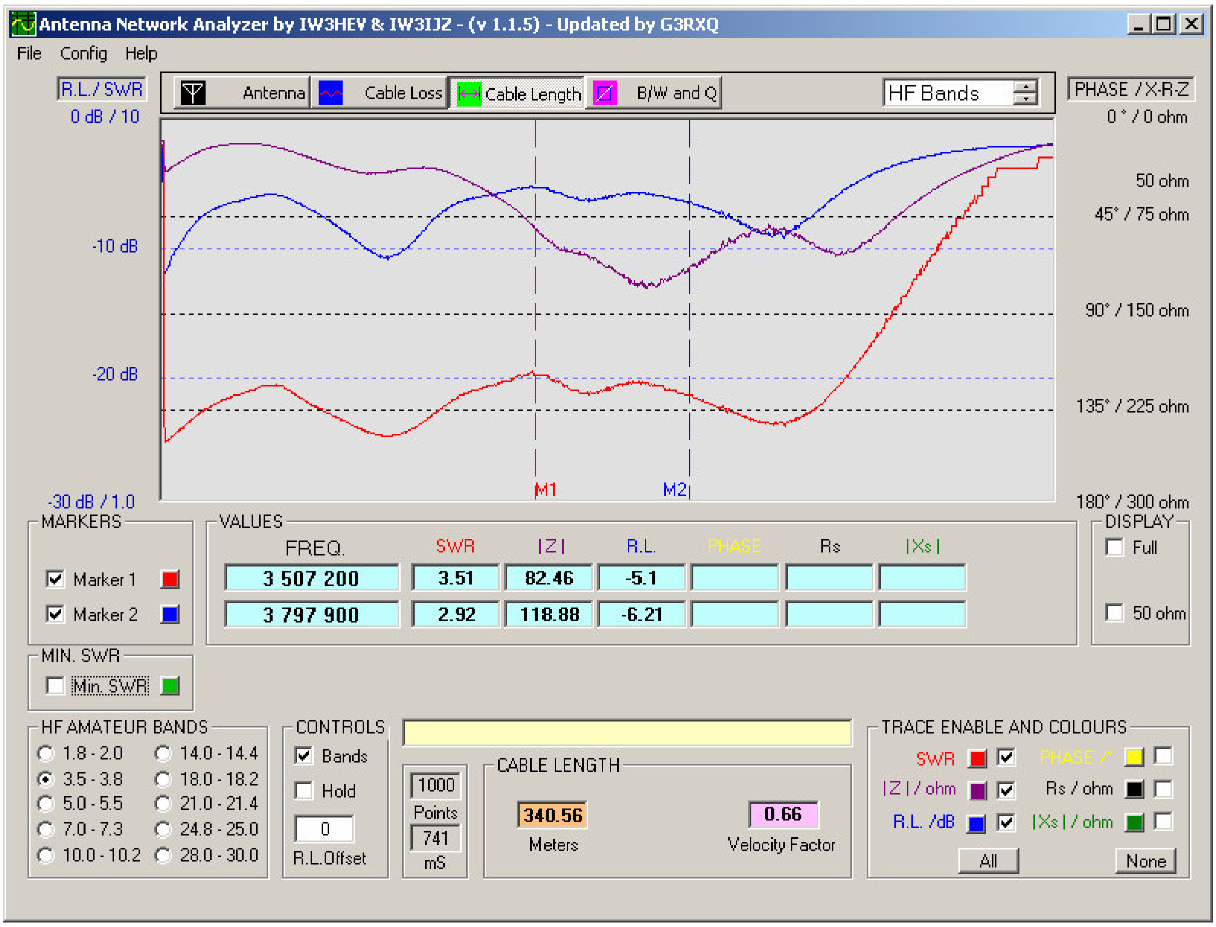
Ważna uwaga - Marcina anteny są zainstalowane na wieżowcu na 11 piętrze a w pobliżu jest stacja BTS telefonii komórkowej która bardzo nam utrudniała pomiary - ciągle pojawiały się zewnętrzne śmieci (te szumy na pomiarach)

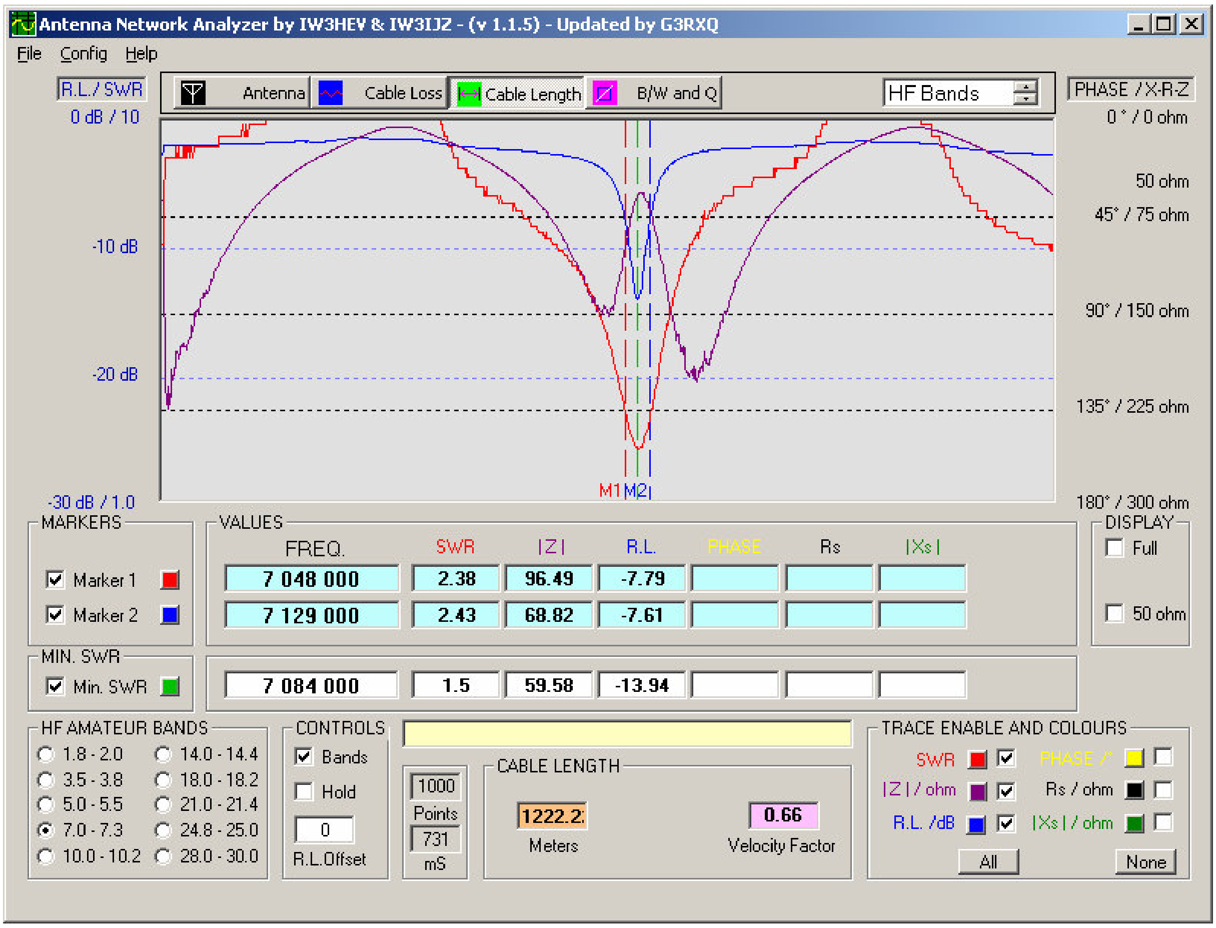
GP7DX

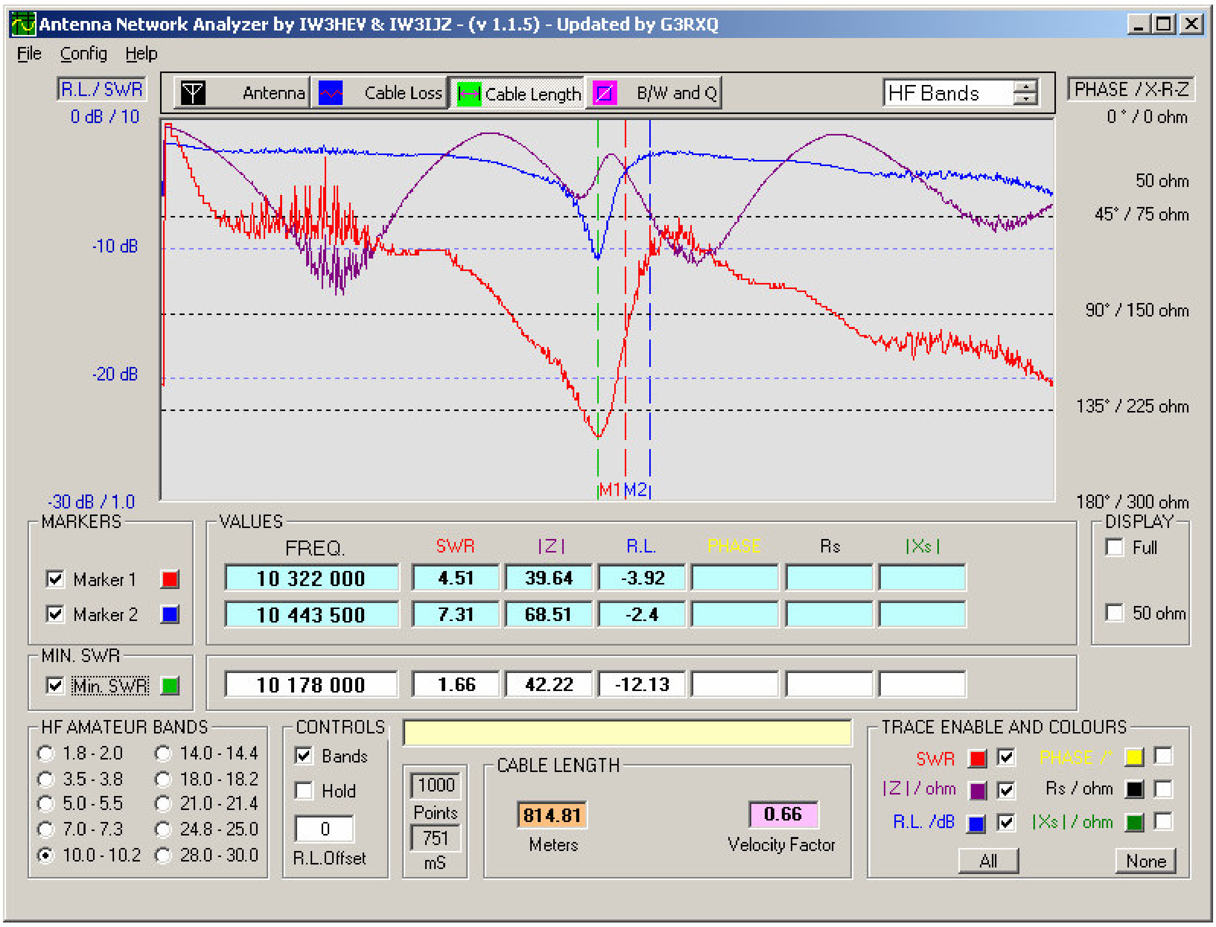


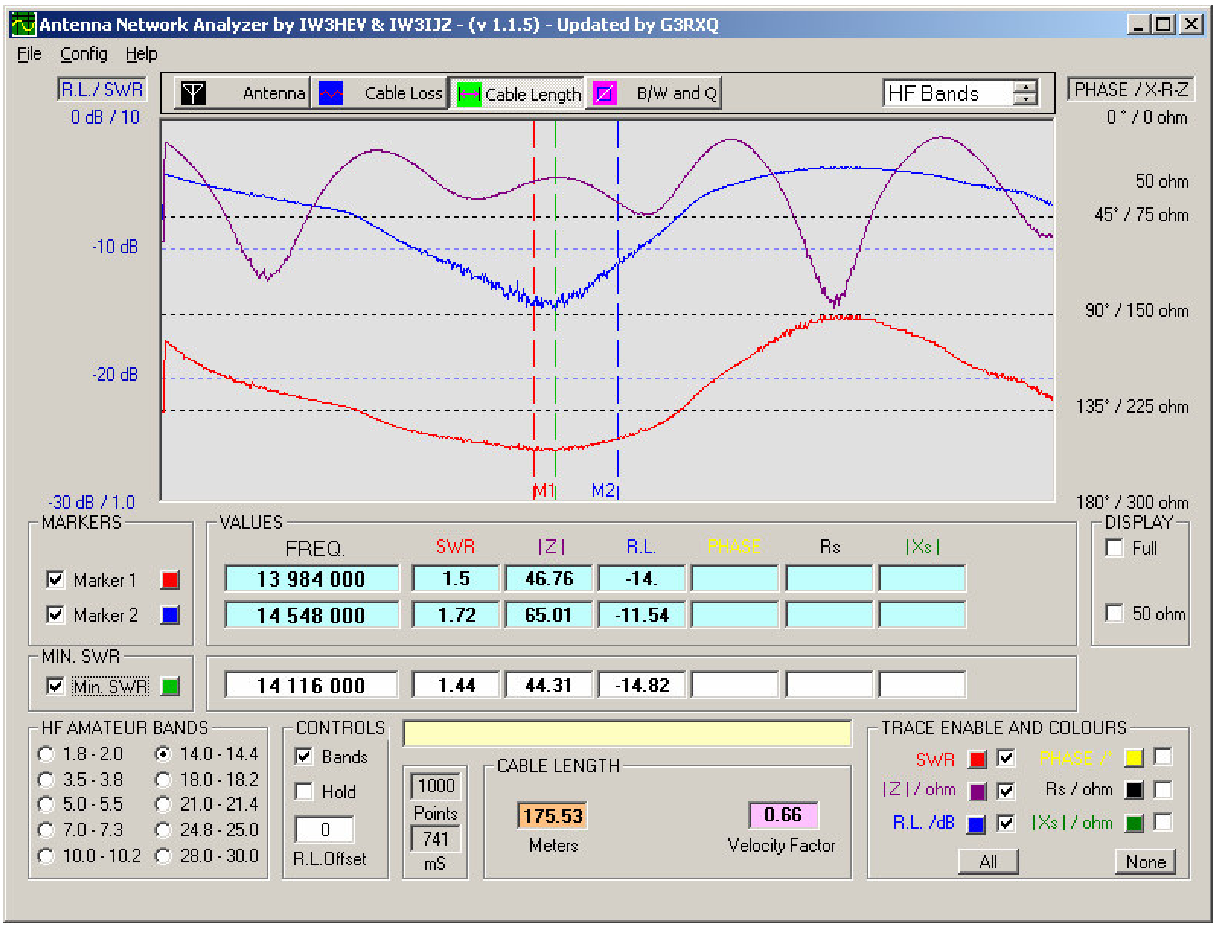
ciekawostka - Marcina antena nawet trochę „stroi” w paśmie 160 i 80 metrów

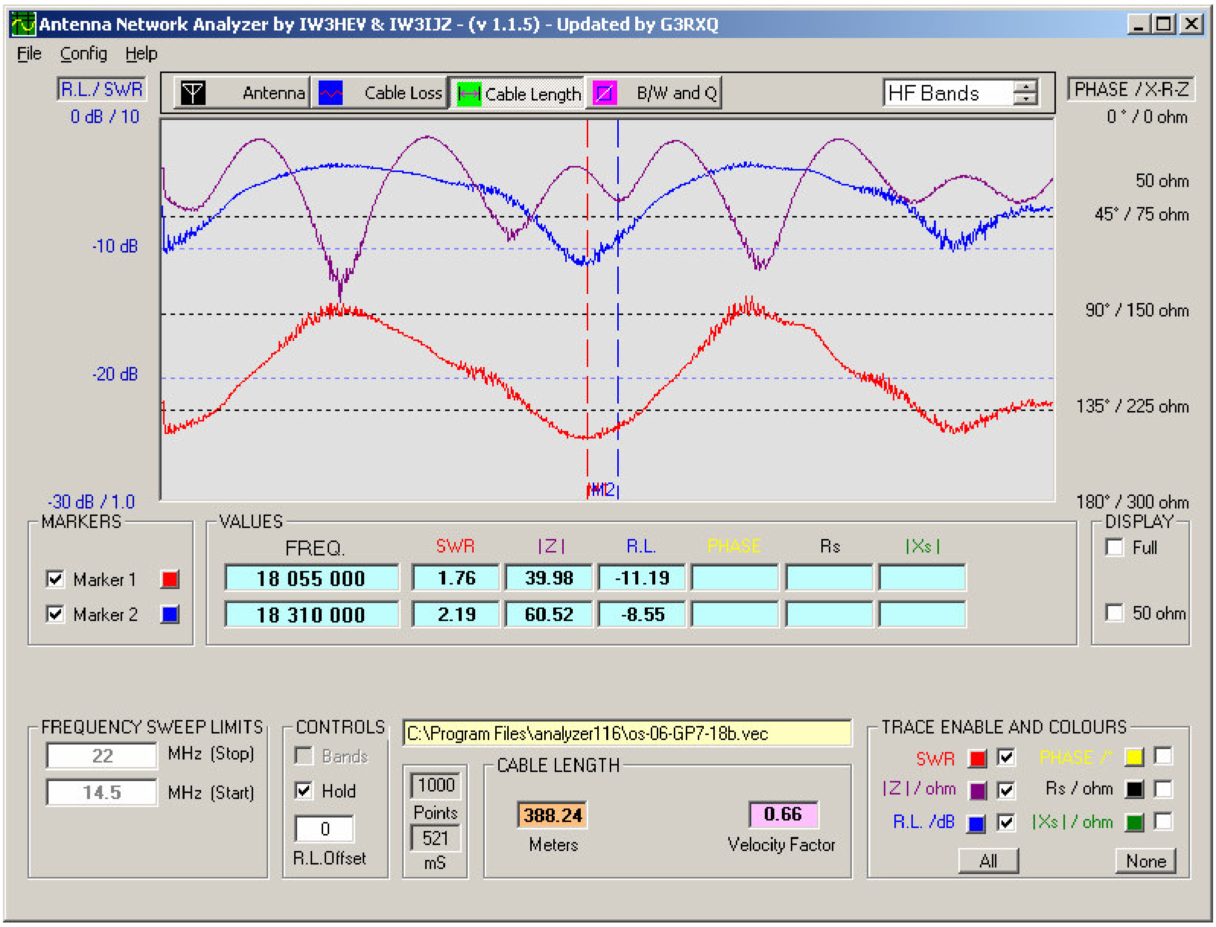


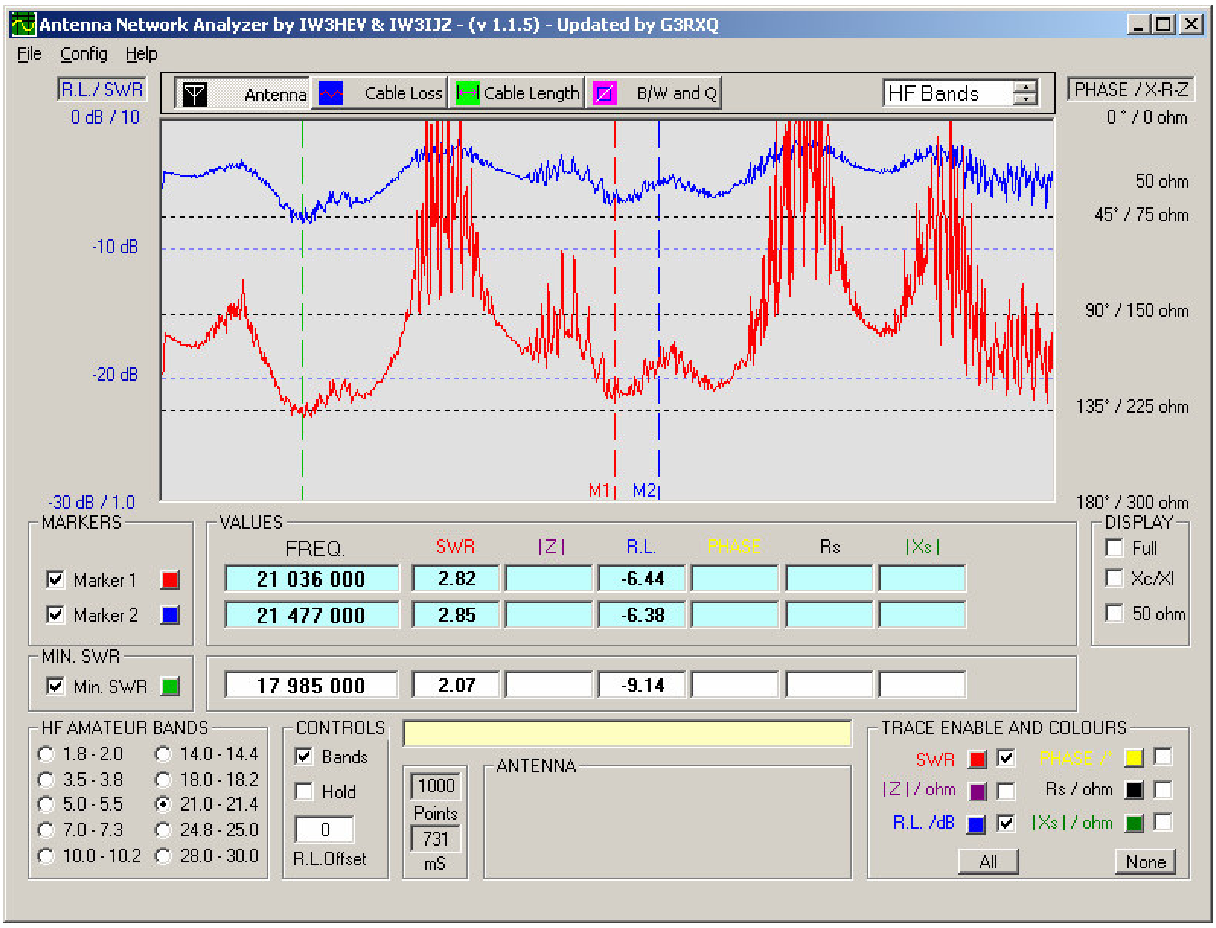



Antenna Network Analyzer by IW3HEV & IW3IJZ - (v 1.1.5) - Updated by G3RXQ
File Config Help
R.L./ SWR
0 dB / 10
Antenna
Cable Loss
Cable Length
B/W and Q
HF Bands
PHASE / X-R-Z
0 ° / 0 ohm
50 ohm
45° / 75 ohm
90° / 150 ohm
135° / 225 ohm
180° / 300 ohm
-10 dB
-20 dB
-30 dB / 1.0
M1 M2
MARKERS
Marker 1
Marker 2
VALUES
FREQ. SWR |Z| R.L. PHASE Rs |Xs|
7 048 000 2.38 96.49 -7.79
7 129 000 2.43 68.82 -7.61
DISPLAY
Full
50 ohm
MIN. SWR
Min. SWR
7 084 000 1.5 59.58 -13.94
HF AMATEUR BANDS
1.8 - 2.0 14.0 - 14.4
3.5 - 3.8 18.0 - 18.2
5.0 - 5.5 21.0 - 21.4
7.0 - 7.3 24.8 - 25.0
10.0 - 10.2 28.0 - 30.0
CONTROLS
Bands
Hold
0
R.L.Offset
1000
Points
731
mS
CABLE LENGTH
1222.2
Meters
0.66
Velocity Factor
TRACE ENABLE AND COLOURS
SWR PHASE /°
|Z| / ohm Rs / ohm
R.L. /dB |Xs| / ohm
All None

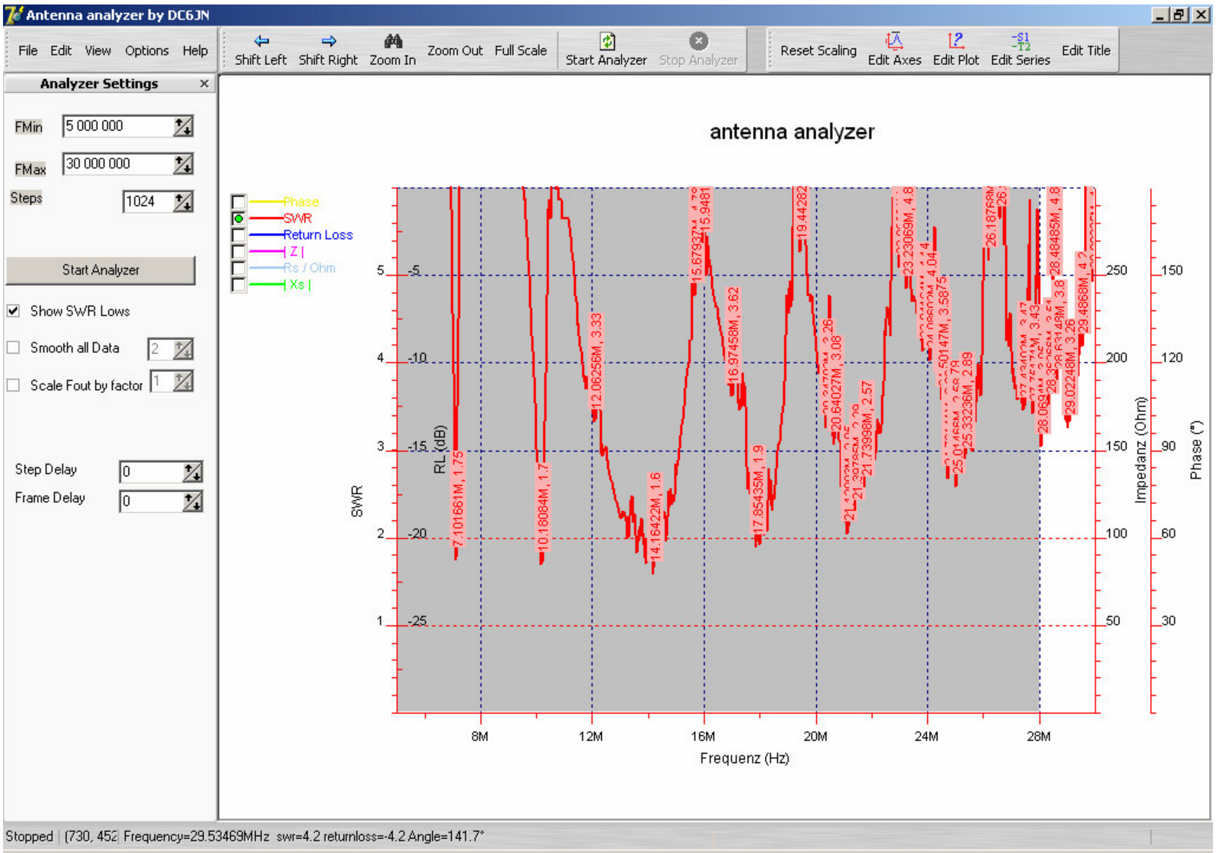

Antenna Network Analyzer by IW3HEV & IW3IJZ - (v 1.1.5) - Updated by G3RXQ
File Config Help
R.L./ SWR
0 dB / 10
Antenna
Cable Loss
Cable Length
B/W and Q
HF Bands
PHASE / X-R-Z
0 ° / 0 ohm
50 ohm
45° / 75 ohm
90° / 150 ohm
135° / 225 ohm
180° / 300 ohm
-10 dB
-20 dB
-30 dB / 1.0
M1 M2
MARKERS
Marker 1
Marker 2
VALUES
FREQ. SWR |Z| R.L. PHASE Rs |Xs|
10 322 000 4.51 39.64 -3.92
10 443 500 7.31 68.51 -2.4
DISPLAY
Full
50 ohm
MIN. SWR
Min. SWR
10 178 000 1.66 42.22 -12.13
HF AMATEUR BANDS
1.8 - 2.0 14.0 - 14.4
3.5 - 3.8 18.0 - 18.2
5.0 - 5.5 21.0 - 21.4
7.0 - 7.3 24.8 - 25.0
10.0 - 10.2 28.0 - 30.0
CONTROLS
Bands
Hold
0
R.L.Offset
1000
Points
751
mS
CABLE LENGTH
814.81
Meters
0.66
Velocity Factor
TRACE ENABLE AND COLOURS
SWR PHASE /°
|Z| / ohm Rs / ohm
R.L. /dB |Xs| / ohm
All None


Antenna Network Analyzer by IW3HEV & IW3IJZ - (v 1.1.5) - Updated by G3RXQ
File Config Help
R.L./SWR
0 dB / 10
Antenna
Cable Loss
Cable Length
B/W and Q
HF Bands
PHASE / X-R-Z
0 ° / 0 ohm
50 ohm
45° / 75 ohm
-10 dB
90° / 150 ohm
-20 dB
135° / 225 ohm
M1
M2
-30 dB / 1.0
180° / 300 ohm
MARKERS
VALUES
FREQ.
SWR
|Z|
R.L.
PHASE
Rs
|Xs|
DISPLAY
Full
Marker 1
Marker 2
50 ohm
13 984 000
1.5
46.76
-14.
14 548 000
1.72
65.01
-11.54
MIN. SWR
Min. SWR
14 116 000
1.44
44.31
-14.82
HF AMATEUR BANDS
1.8 - 2.0
14.0 - 14.4
3.5 - 3.8
18.0 - 18.2
5.0 - 5.5
21.0 - 21.4
7.0 - 7.3
24.8 - 25.0
10.0 - 10.2
28.0 - 30.0
CONTROLS
Bands
Hold
0
R.L.Offset
1000
Points
741
mS
CABLE LENGTH
175.53
Meters
0.66
Velocity Factor
TRACE ENABLE AND COLOURS
SWR
PHASE /°
|Z| / ohm
Rs / ohm
R.L. /dB
|Xs| / ohm
All
None

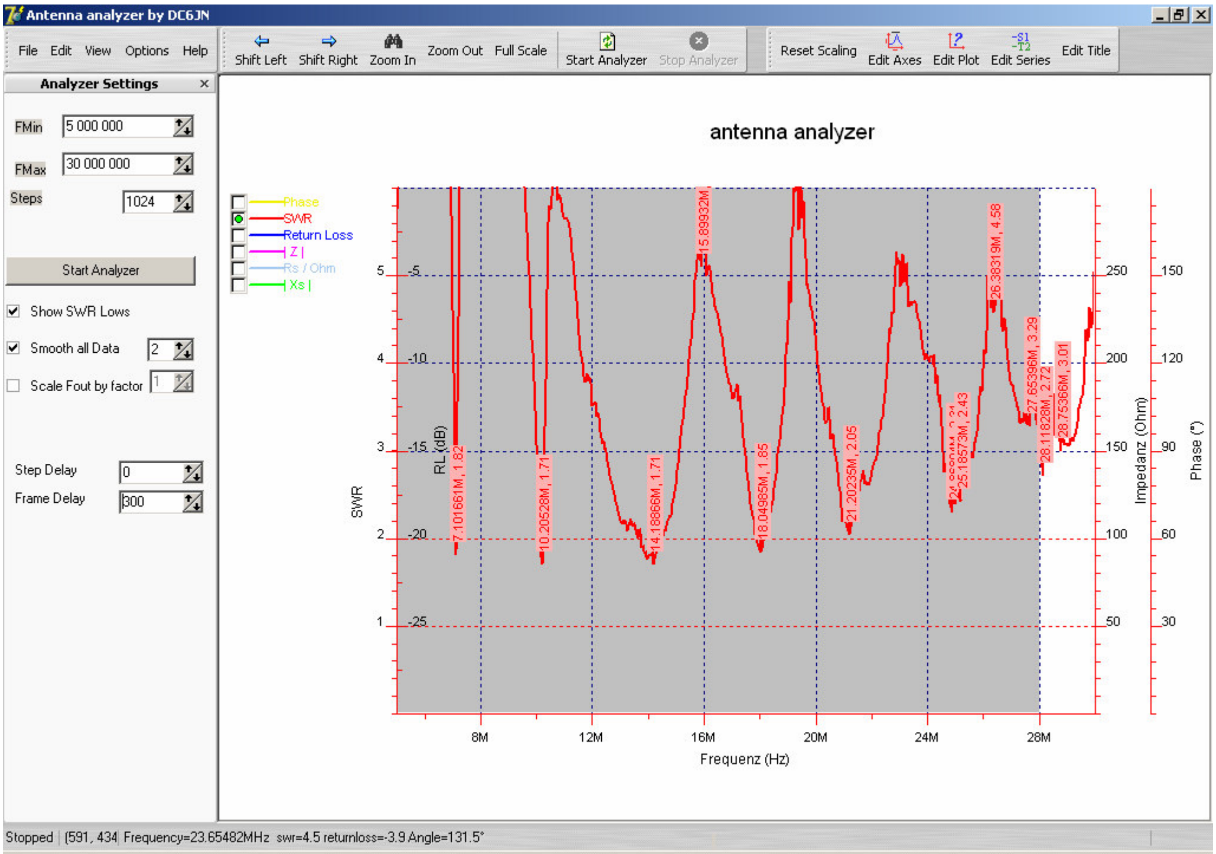

Antenna Network Analyzer by IW3HEV & IW3IJZ - (v 1.1.5) - Updated by G3RXQ
File Config Help
R.L./SWR
0 dB / 10
Antenna
Cable Loss
Cable Length
B/W and Q
HF Bands
PHASE / X-R-Z
0 ° / 0 ohm
50 ohm
45° / 75 ohm
-10 dB
90° / 150 ohm
-20 dB
135° / 225 ohm
-30 dB / 1.0
180° / 300 ohm
MARKERS
VALUES
FREQ.
SWR
|Z|
R.L.
PHASE
Rs
|Xs|
DISPLAY
Full
Marker 1
Marker 2
50 ohm
18 055 000
1.76
39.98
-11.19
18 310 000
2.19
60.52
-8.55
FREQUENCY SWEEP LIMITS
22
MHz (Stop)
14.5
MHz (Start)
CONTROLS
Bands
Hold
0
R.L.Offset
C:\Program Files\analyzer116\os-06-GP7-18b.vec
1000
Points
521
mS
CABLE LENGTH
388.24
Meters
0.66
Velocity Factor
TRACE ENABLE AND COLOURS
SWR
PHASE /°
|Z| / ohm
Rs / ohm
R.L. /dB
|Xs| / ohm
All
None



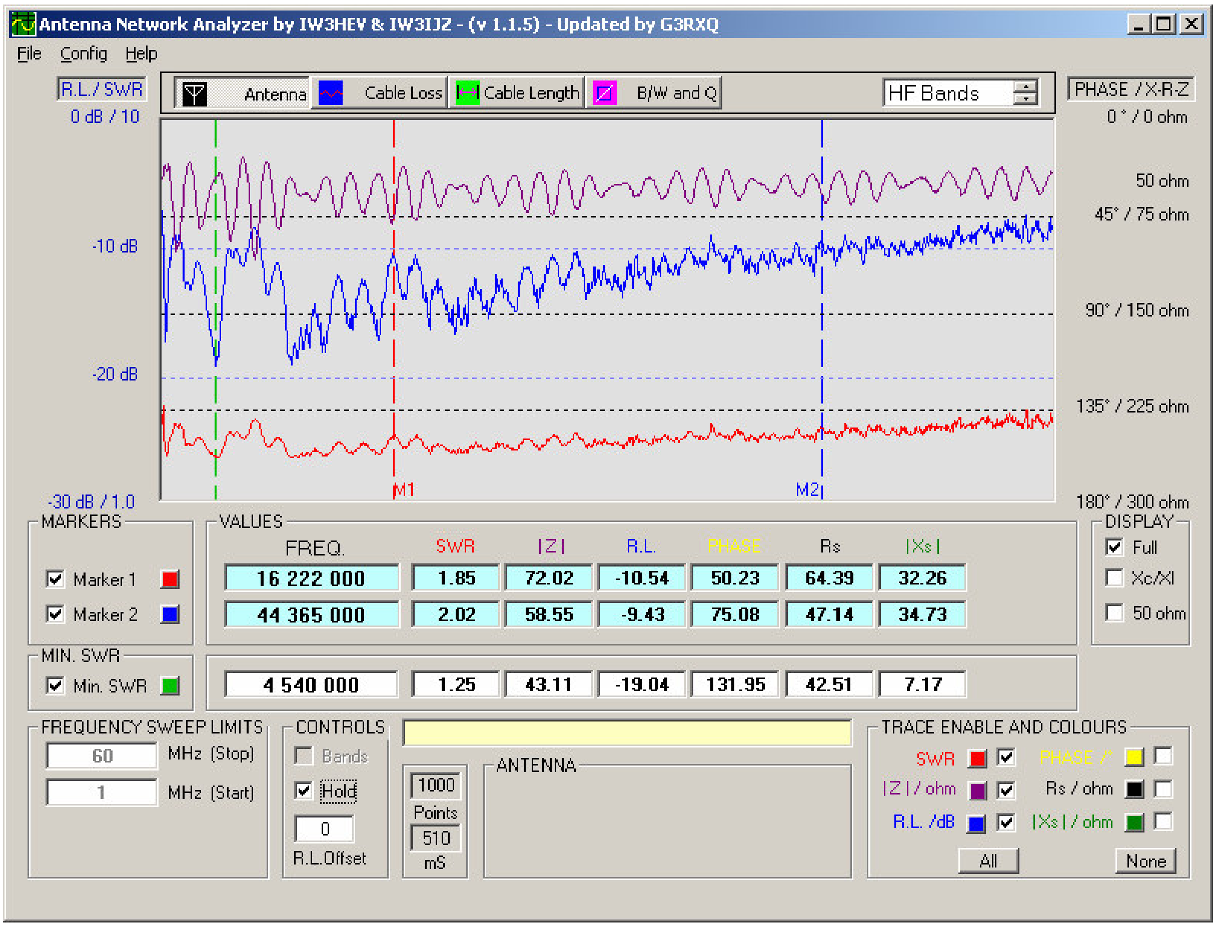
Antenna Network Analyzer by IW3HEV & IW3IJZ - (v 1.1.5) - Updated by G3RXQ
File Config Help
R.L./ SWR
0 dB / 10
Antenna
Cable Loss
Cable Length
B/W and Q
HF Bands
PHASE / X-R-Z
0 ° / 0 ohm
50 ohm
45° / 75 ohm
90° / 150 ohm
135° / 225 ohm
180° / 300 ohm
-10 dB
-20 dB
-30 dB / 1.0
M1
M2
MARKERS
Marker 1
Marker 2
VALUES
FREQ.
SWR
|Z|
R.L.
PHASE
Rs
|Xs|
21 036 000
2.82
-6.44
21 477 000
2.85
-6.38
DISPLAY
Full
Xc/Xl
50 ohm
MIN. SWR
Min. SWR
17 985 000
2.07
-9.14
HF AMATEUR BANDS
1.8 - 2.0
3.5 - 3.8
5.0 - 5.5
7.0 - 7.3
10.0 - 10.2
14.0 - 14.4
18.0 - 18.2
21.0 - 21.4
24.8 - 25.0
28.0 - 30.0
CONTROLS
Bands
Hold
0
R.L.Offset
1000
Points
731
mS
ANTENNA
TRACE ENABLE AND COLOURS
SWR
PHASE /°
|Z| / ohm
Rs / ohm
R.L. /dB
|Xs| / ohm
All
None



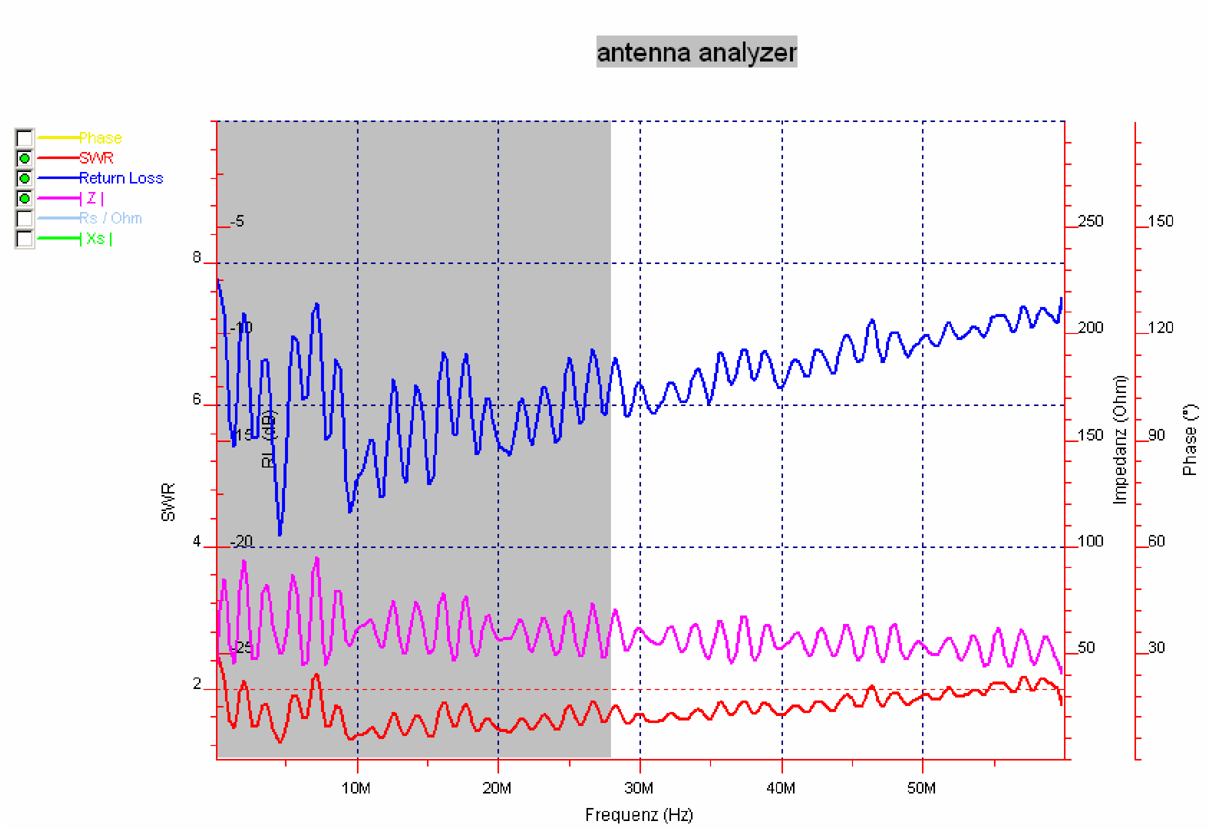
Antenna analyzer by DC6JN
File Edit View Options Help
Shift Left Shift Right Zoom In Zoom Out Full Scale Start Analyzer Stop Analyzer Reset Scaling Edit Axes Edit Plot Edit Series Edit Title
Analyzer Settings
FMin 5 000 000
FMax 30 000 000
Steps 1024
Start Analyzer
Show SWR Lows
Smooth all Data
Scale Fout by factor
Step Delay 0
Frame Delay 0
antenna analyzer
Phase
SWR
Return Loss
|Z|
Rs / Ohm
|Xs|
SWR
RL (dB)
Impedanz (Ohm)
Phase (°)
8M
12M
16M
20M
24M
28M
Frequenz (Hz)
Stopped (730, 452) Frequency=29.53469MHz swr=4.2 returnloss=-4.2 Angle=141.7°


Antenna analyzer by DC6JN
File Edit View Options Help
Shift Left Shift Right Zoom In Zoom Out Full Scale
Start Analyzer Stop Analyzer
Reset Scaling Edit Axes Edit Plot Edit Series Edit Title
Analyzer Settings
FMin 5 000 000
FMax 30 000 000
Steps 1024
Start Analyzer
Show SWR Lows
Smooth all Data 2
Scale Fout by factor 1
Step Delay 0
Frame Delay 300
antenna analyzer
Phase
SWR
Return Loss
| Z |
Rs / Ohm
| Xs |
SWR
RL (dB)
Impedanz (Ohm)
Phase (°)
Frequenz (Hz)
8M 12M 16M 20M 24M 28M
7.101661M, 1.82
10.20528M, 1.71
14.18866M, 1.71
15.89932M
18.04965M, 1.85
21.20235M, 2.05
25.18573M, 2.43
26.38319M, 4.58
27.65396M, 3.29
28.11828M, 2.72
28.75366M, 3.01
Stopped | (591, 434) Frequency=23.65482MHz swr=4.5 returnloss=-3.9 Angle=131.5°

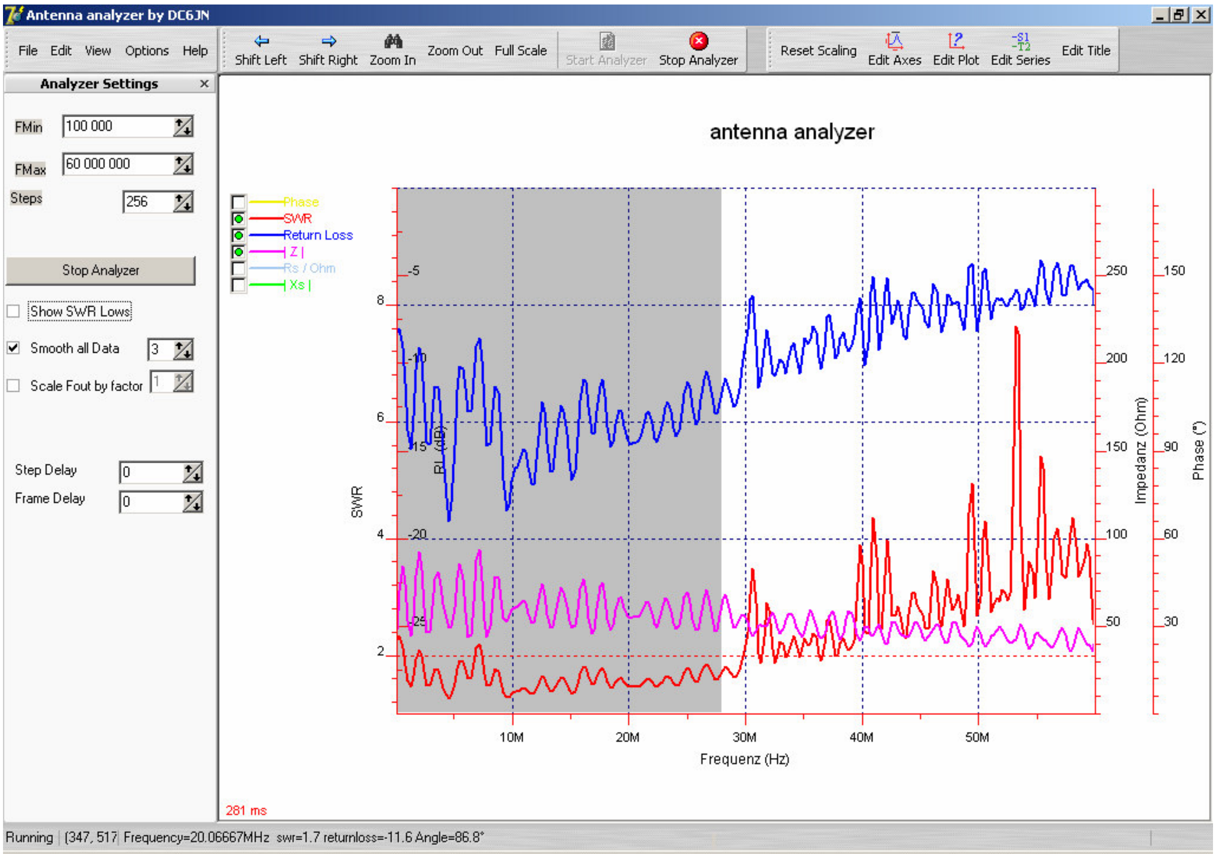
T2FD

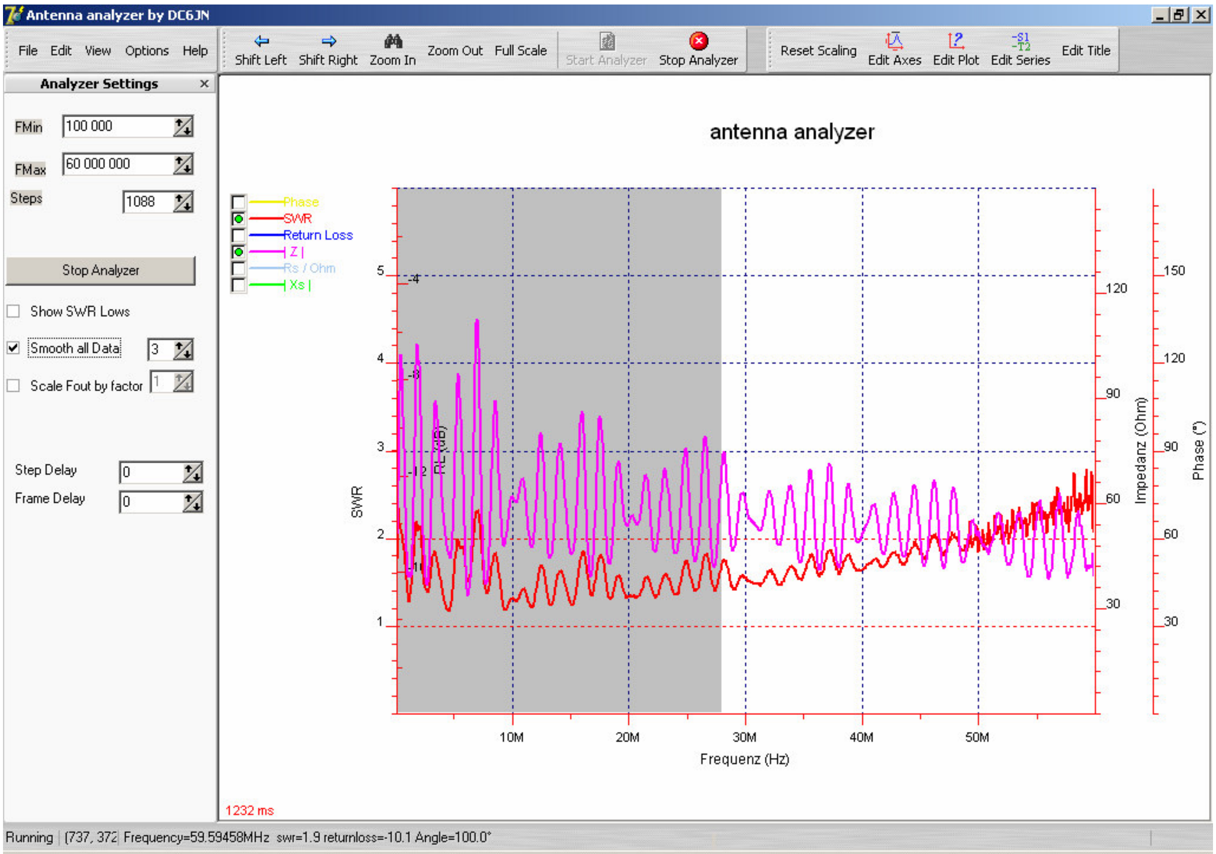


Antenna Network Analyzer by IW3HEV & IW3IJZ - (v 1.1.5) - Updated by G3RXQ
File Config Help
R.L. / SWR
0 dB / 10
Antenna
Cable Loss
Cable Length
B/W and Q
HF Bands
PHASE / X-R-Z
0 ° / 0 ohm
50 ohm
45° / 75 ohm
90° / 150 ohm
135° / 225 ohm
180° / 300 ohm
-10 dB
-20 dB
-30 dB / 1.0
M1
M2
MARKERS
Marker 1
Marker 2
VALUES
FREQ. SWR |Z| R.L. PHASE Rs |Xs|
16 222 000 1.85 72.02 -10.54 50.23 64.39 32.26
44 365 000 2.02 58.55 -9.43 75.08 47.14 34.73
MIN. SWR
Min. SWR
4 540 000 1.25 43.11 -19.04 131.95 42.51 7.17
DISPLAY
Full
Xc/Xl
50 ohm
FREQUENCY SWEEP LIMITS
60 MHz (Stop)
1 MHz (Start)
CONTROLS
Bands
Hold
0
R.L.Offset
1000
Points
510
mS
ANTENNA
TRACE ENABLE AND COLOURS
SWR
PHASE /°
|Z| / ohm
Rs / ohm
R.L. /dB
|Xs| / ohm
All
None



antenna analyzer
Phase
SWR
Return Loss
| Z |
Rs / Ohm
| Xs |
SWR
RL (dB)
Impedanz (Ohm)
Phase (°)
10M
20M
30M
40M
50M
Frequenz (Hz)


Antenna analyzer by DC6JN
File Edit View Options Help
Shift Left Shift Right Zoom In Zoom Out Full Scale Start Analyzer Stop Analyzer Reset Scaling Edit Axes Edit Plot Edit Series Edit Title
Analyzer Settings
FMin 100 000
FMax 60 000 000
Steps 256
Stop Analyzer
Show SWR Lows
Smooth all Data 3
Scale Fout by factor 1
Step Delay 0
Frame Delay 0
antenna analyzer
Phase
SWR
Return Loss
| Z |
Rs / Ohm
| Xs |
SWR
RL (dB)
Impedanz (Ohm)
Phase (°)
10M 20M 30M 40M 50M
Frequenz (Hz)
281 ms
Running | (347, 517| Frequency=20.06667MHz swr=1.7 returnloss=-11.6 Angle=86.8°


Antenna analyzer by DC6JN
File Edit View Options Help
Shift Left Shift Right Zoom In Zoom Out Full Scale Start Analyzer Stop Analyzer Reset Scaling Edit Axes Edit Plot Edit Series Edit Title
Analyzer Settings
FMin 100 000
FMax 60 000 000
Steps 1088
Stop Analyzer
Show SWR Lows
Smooth all Data 3
Scale Fout by factor 1
Step Delay 0
Frame Delay 0
antenna analyzer
Phase
SWR
Return Loss
| Z |
Rs / Ohm
| Xs |
SWR
RL (dB)
Impedanz (Ohm)
Phase (°)
10M 20M 30M 40M 50M
Frequenz (Hz)
1232 ms
Running | (737, 372| Frequency=59.59458MHz swr=1.9 returnloss=-10.1 Angle=100.0°

pomiar długości kabla do anteny UKF

z pomiaru widać że antena jest „otwarta””