



# Wireless Device Over the Air Performance Data Summary

DATA NO. : OQ410336  
APPLICANT : Nokia Shanghai Bell Co., Ltd.  
MANUFACTURER : Nokia of America Corporation  
BRAND NAME : NOKIA  
MODEL NAME : Beacon 24  
ANTENNA TYPE : PCB Antenna  
DEVICE RECEIVING DATE : Nov. 28, 2023  
TEST DATE(S) : Nov. 28, 2023

Reviewed by:

*Feynman Liu*

Feynman Liu / Vice Manager

Approved by:

*Kevin Chu*

Kevin Chu / Manager

***Sporton International Inc. (Kunshan)***

***No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300  
People's Republic of China***



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## 1. Administration Data

### 1.1 Testing Laboratory

<b>Test Site</b>	Sporton International Inc. (Kunshan)
<b>Test Site Location</b>	No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China TEL: +86-0512-5790-0158
<b>Chamber</b>	<input type="checkbox"/> OTA01-KS <input type="checkbox"/> OTA02-KS <input type="checkbox"/> OTA03-KS <input checked="" type="checkbox"/> OTA04-KS <input type="checkbox"/> OTA05-KS

■: Indicates the chamber(s) used in this test report.

### 1.2 Applicant

<b>Company Name</b>	Nokia Shanghai Bell Co., Ltd.
<b>Address</b>	No.388, Ningqiao Rd, Pilot Free Trade Zone, Shanghai, 201206 P.R. China

### 1.3 Manufacturer

<b>Company Name</b>	Nokia of America Corporation
<b>Address</b>	2301 Sugar Bush Rd. Raleigh, NC 27612



## 2. Test Equipment List

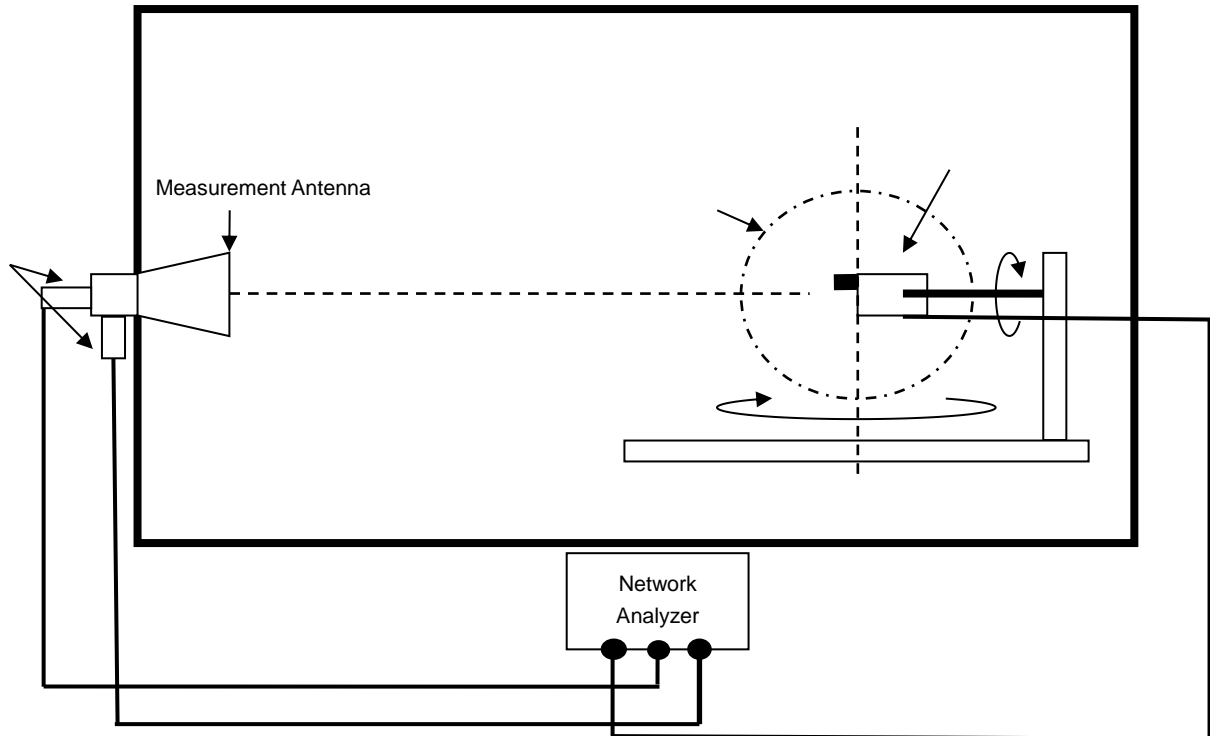
Name	Manufacturer	Type/Model	Serial Number	Calibration	
				Last Cal.	Due Date
Network Analyzer	Agilent	E5071C	MY46317418	2023/01/05	2024/01/04
Switch Control	ETS-Lindgren	EMCenter	00160100	NCR	NCR
Diagonal Dual Polarized Horn	ETS-Lindgren	3164-08	00099205	NCR	NCR
Multi-Devices Controller	ETS-Lindgren	2090-OPT1	00066604	NCR	NCR
Medium Duty Holder	ETS-Lindgren	2015	N/A	NCR	NCR

Note: Antenna gain was measured in the anechoic chamber (Measurement System: ETS-Lindgren AMS-8500, SW Version: EMQuest 100 V1.08).

### 3. Test procedure

1. Setup for testing facility:

Connect all the equipments according to the figure below :



2. Run ETS-Lindgren EMQuestTest software script , Hit Run button to execute measurement.
3. Save Measurement result



### 4. Summary of WLAN Antenna Gain Test Results

Remark: For detailed raw data please refer to Appendix A.

#### Summary of Router \_Gain Test Results:

Model	Nokia_B24_Router_Gain 6G-5										
Test / Position	Gain / Free Space										
Frequency (MHz)	5955	6175	6415	6435	6475	6515	6535	6695	6875	6995	7095
Peak Gain	4.43	4.03	3.96	4.39	3.80	3.77	3.81	4.38	3.76	4.99	3.91
Polarization	Theta	Theta	Theta	Theta	Theta	Theta	Theta	Theta	Theta	Theta	Theta

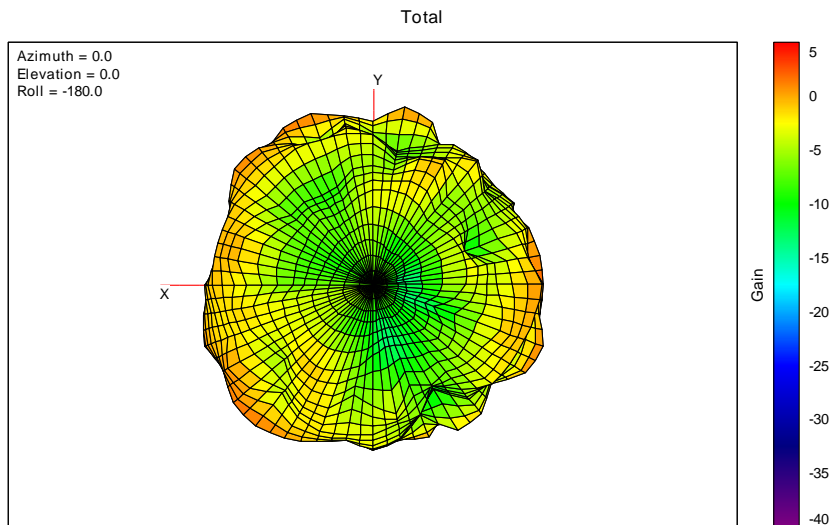
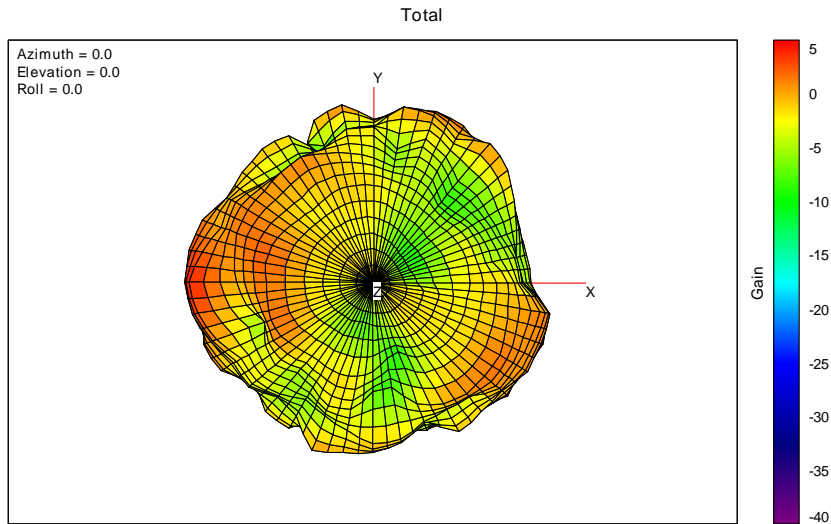
Model	Nokia_B24_Router_Gain 6G -6										
Test / Position	Gain / Free Space										
Frequency (MHz)	5955	6175	6415	6435	6475	6515	6535	6695	6875	6995	7095
Peak Gain	3.08	2.50	3.20	3.54	2.93	2.81	3.08	3.64	3.44	3.73	4.54
Polarization	Theta	Theta	Theta	Theta	Theta	Theta	Theta	Theta	Theta	Theta	Theta

Model	Nokia_B24_Router_Gain 6G -7										
Test / Position	Gain / Free Space										
Frequency (MHz)	5955	6175	6415	6435	6475	6515	6535	6695	6875	6995	7095
Peak Gain	4.67	4.65	3.85	3.61	4.05	3.44	3.84	3.72	4.38	3.83	3.69
Polarization	Theta	Theta	Theta	Theta	Theta	Theta	Theta	Theta	Theta	Theta	Theta

Model	Nokia_B24_Router_Gain 6G -8										
Test / Position	Gain / Fre Space										
Frequency (MHz)	5955	6175	6415	6435	6475	6515	6535	6695	6875	6995	7095
Peak Gain	3.07	3.29	3.43	3.16	3.87	3.47	3.91	3.18	3.85	4.13	5.32
Polarization	Theta	Theta	Theta	Theta	Theta	Theta	Theta	Theta	Theta	Theta	Theta

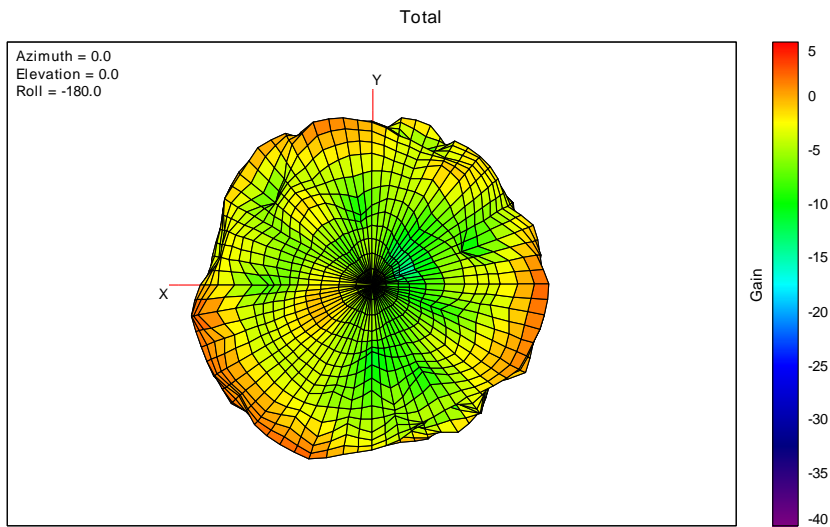
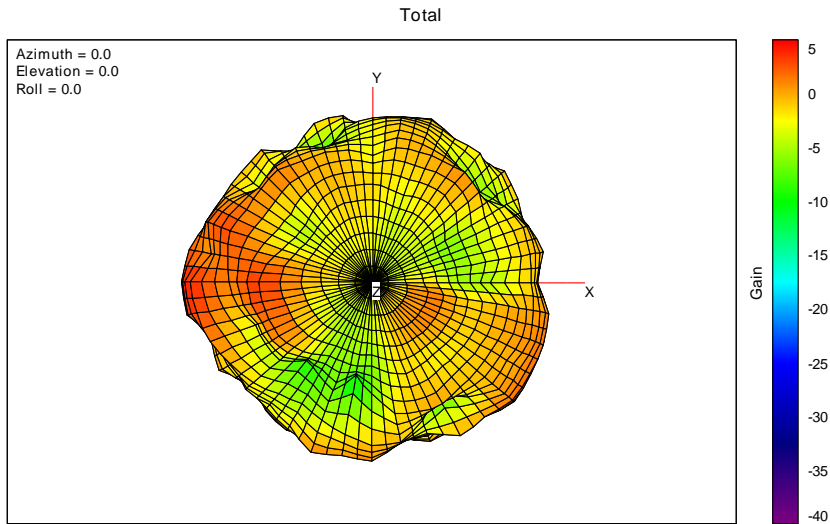
### 5. FS Pattern

Note: Only the peak gain patterns of each Band were recorded as below:

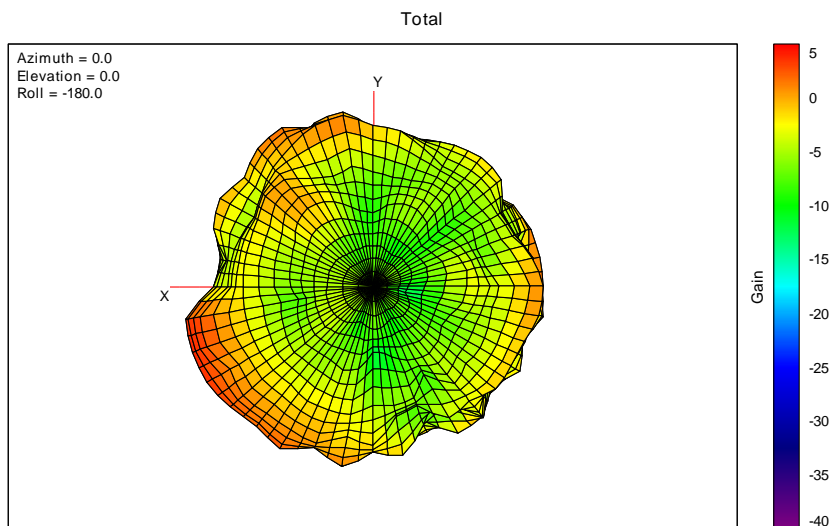
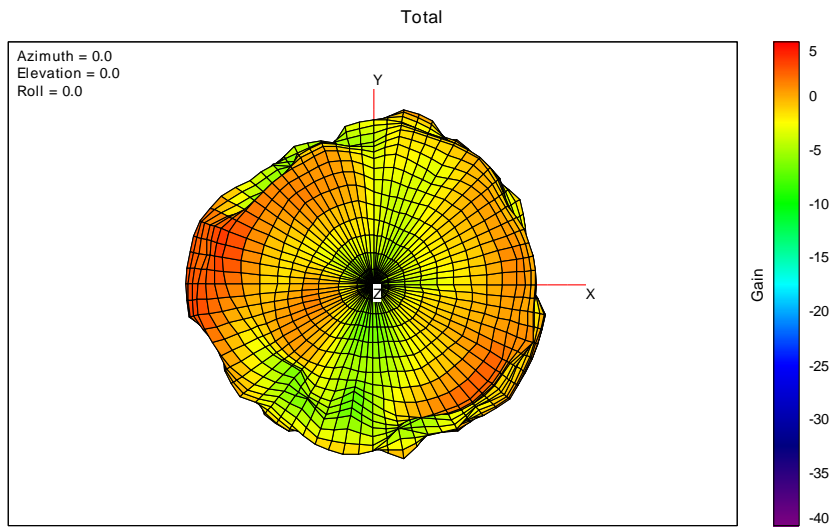


3D Free Space Router Gain Pattern 6G-5-5955MHz

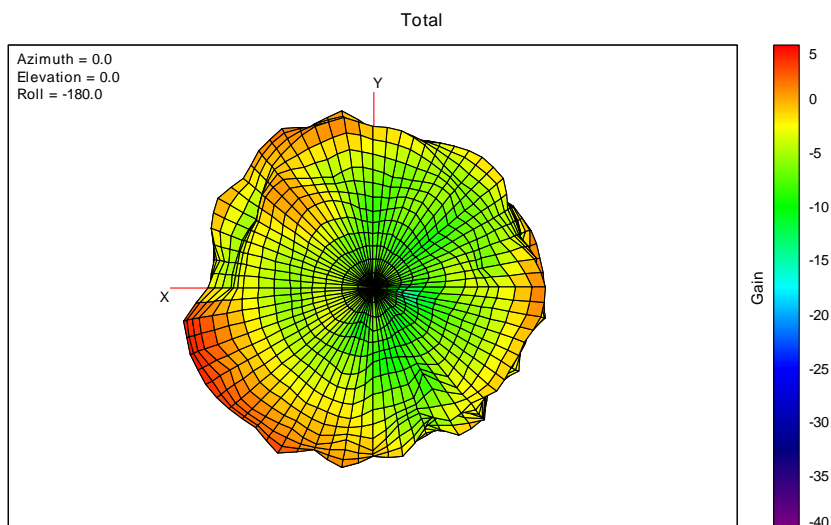
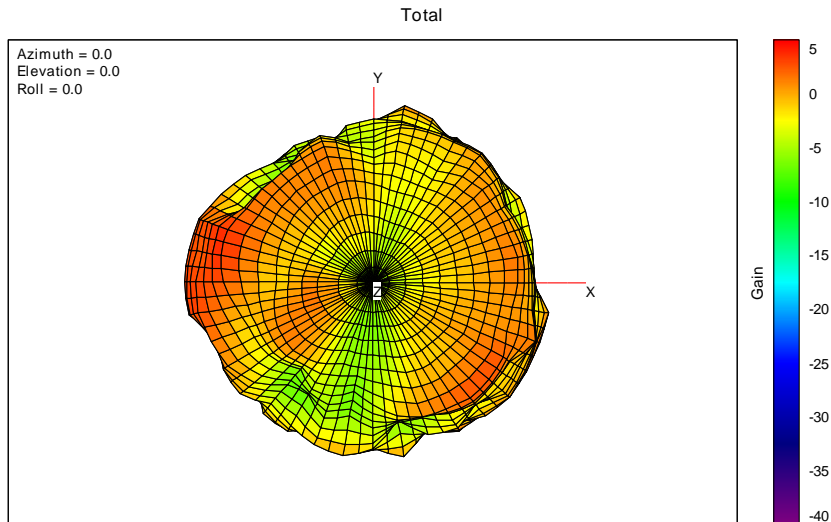




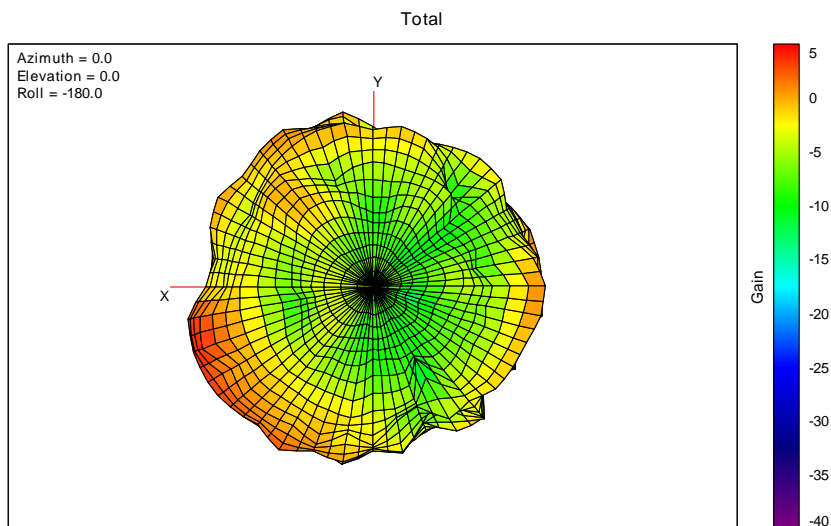
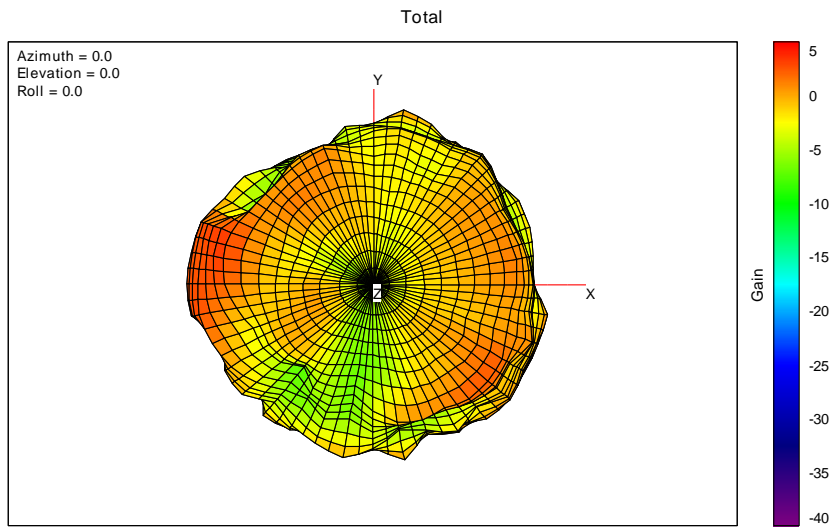
**3D Free Space Router Gain Pattern 6G-5-6175MHz**



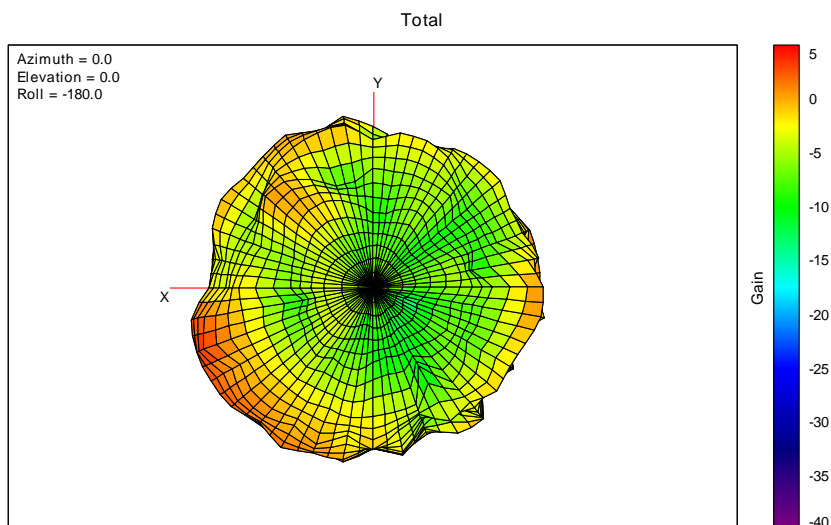
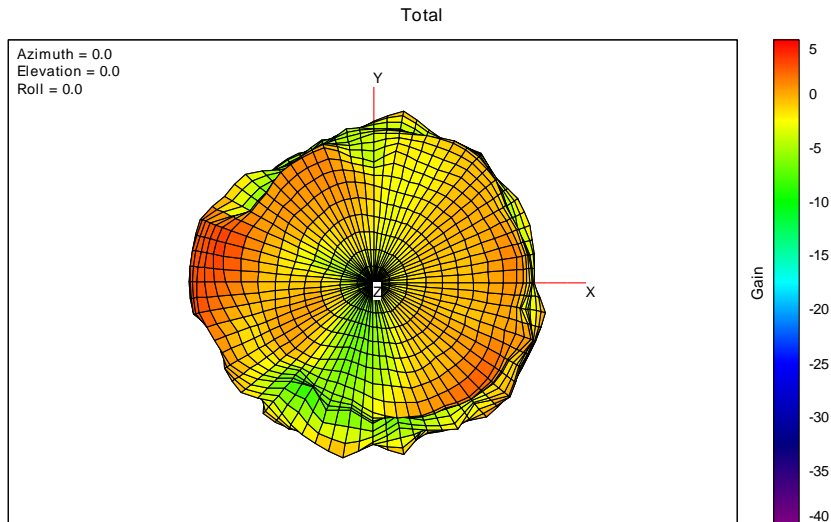
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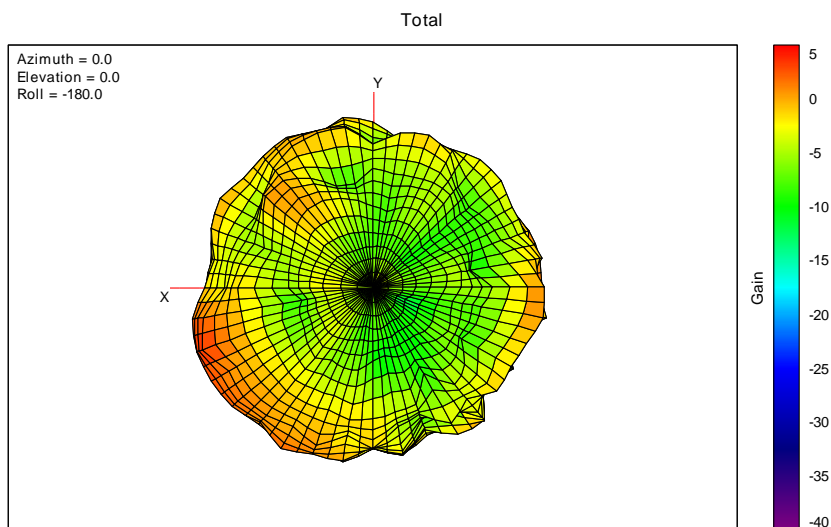
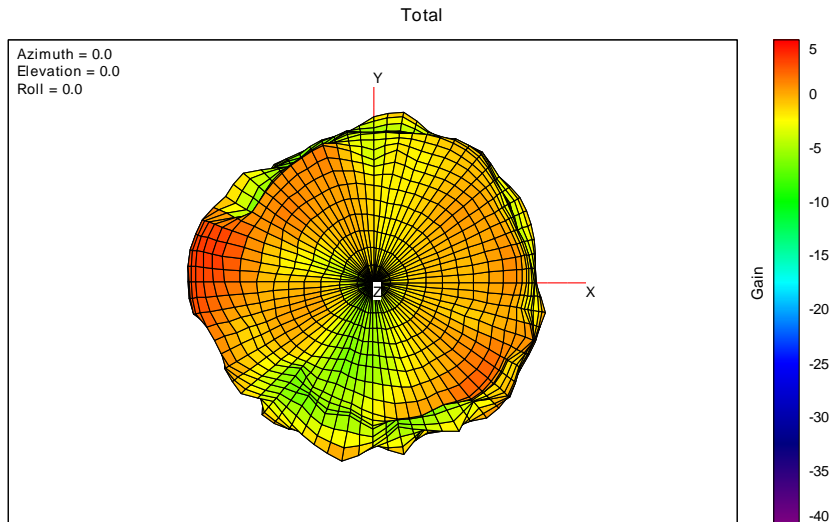
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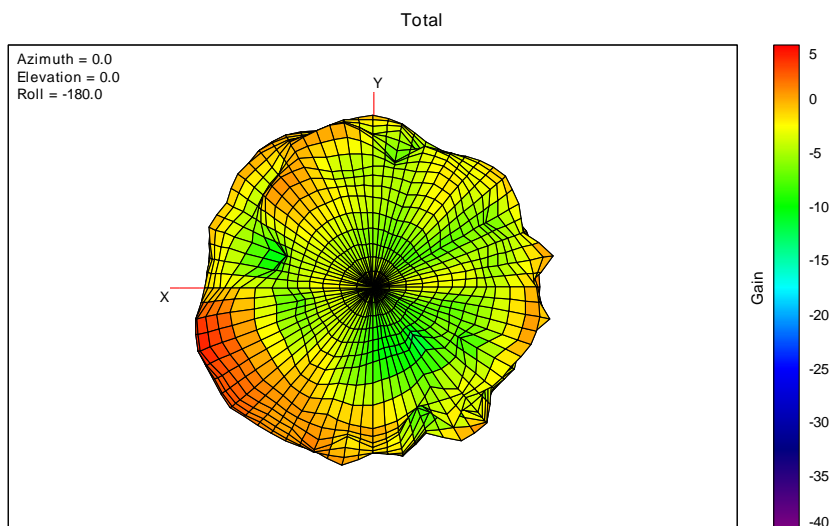
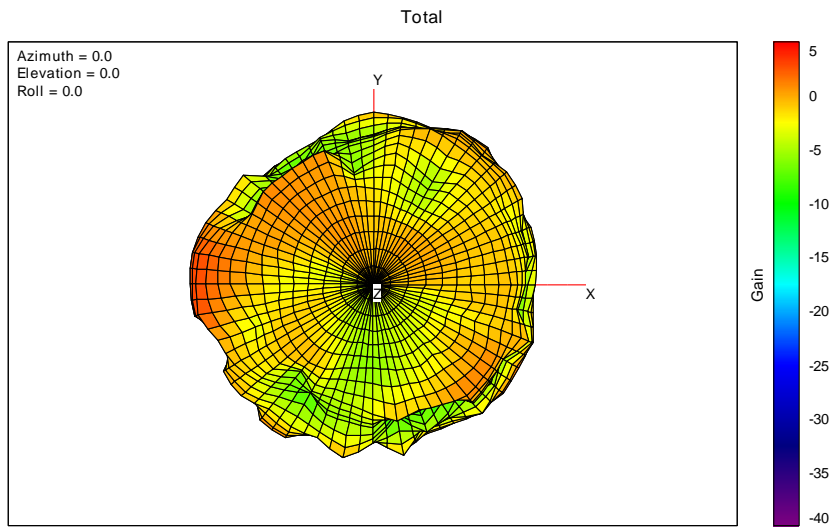
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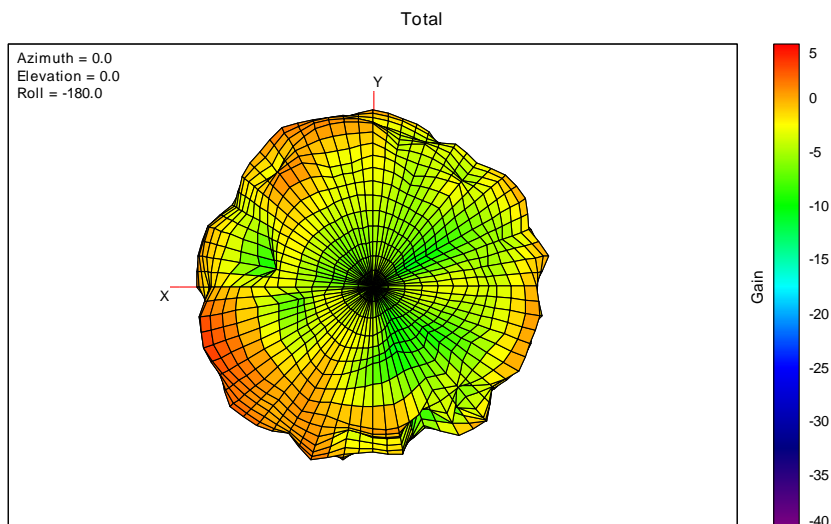
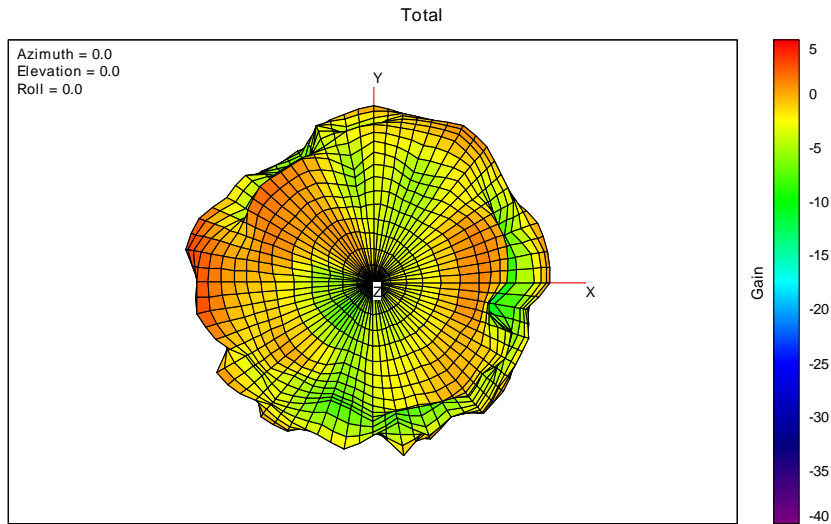
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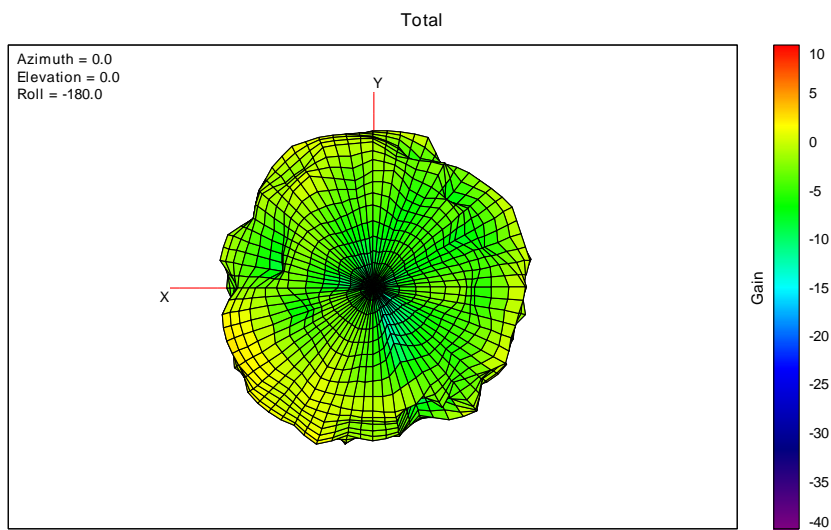
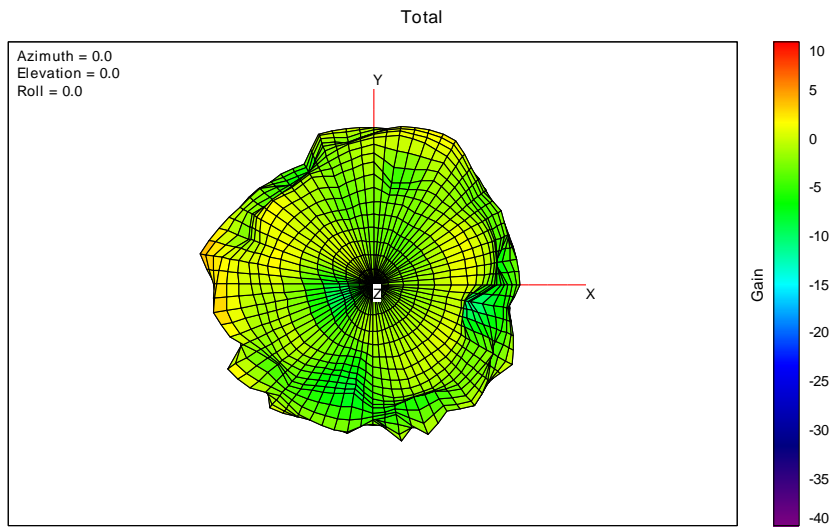


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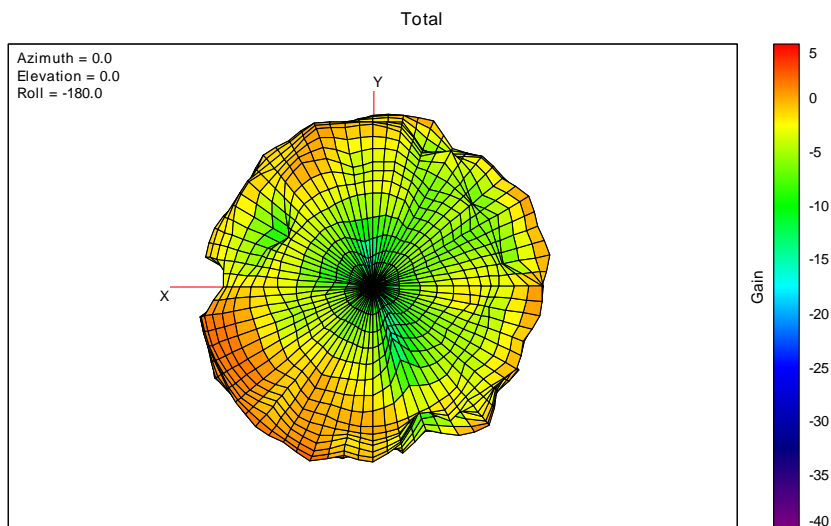
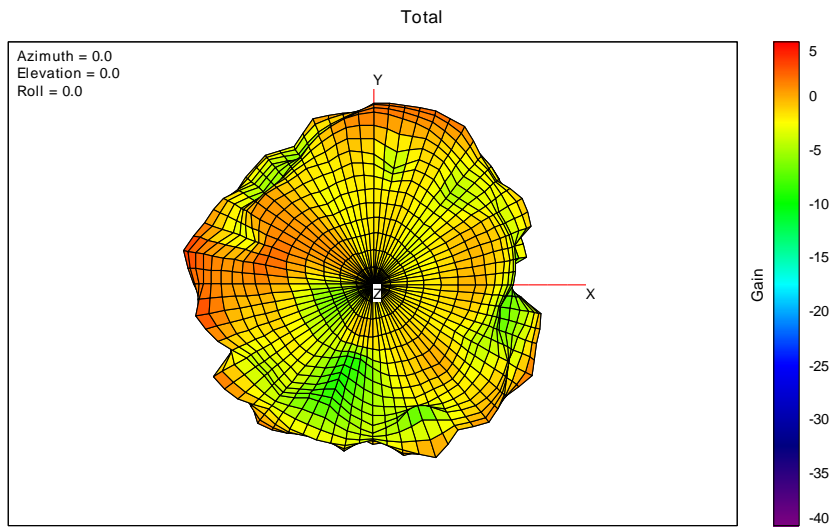


3D Free Space Router Gain Pattern 6G-5-6875MHz

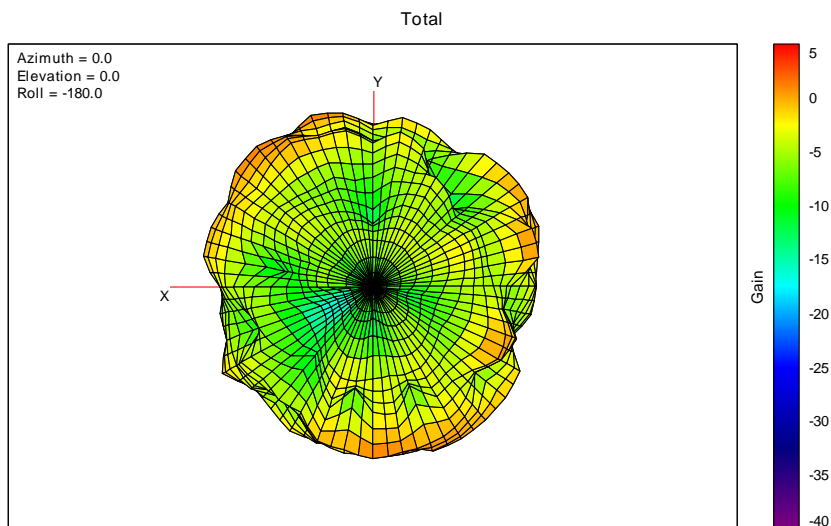
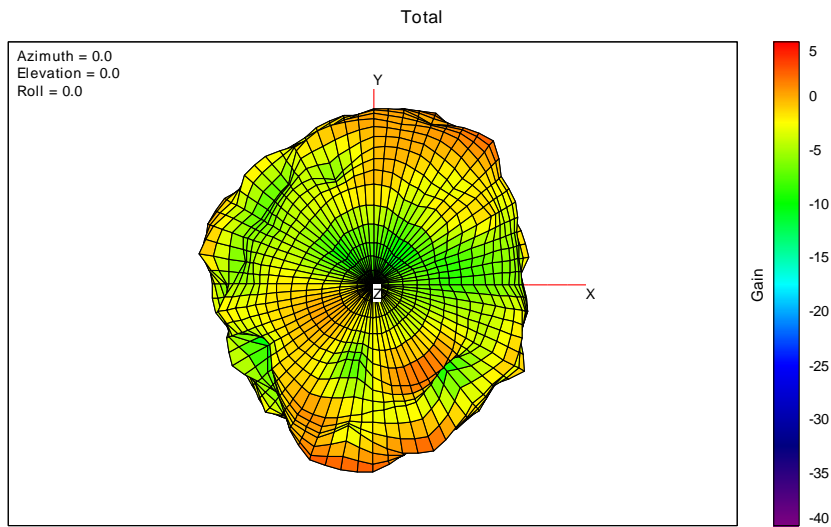




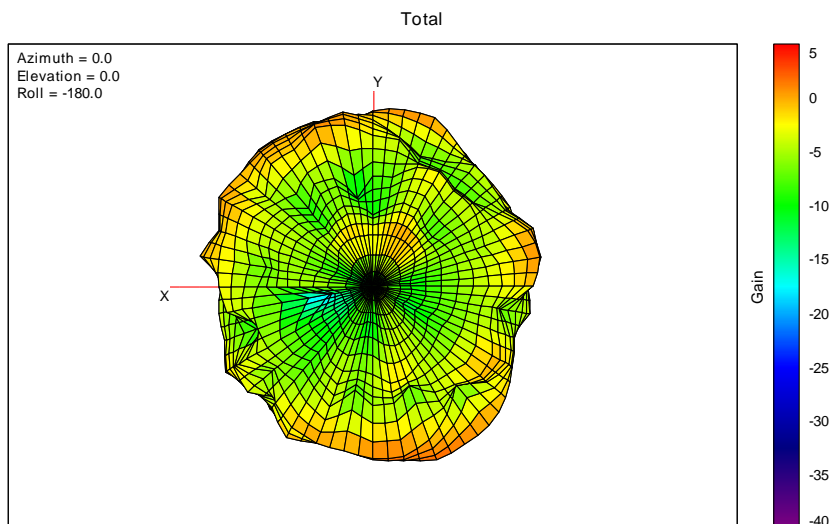
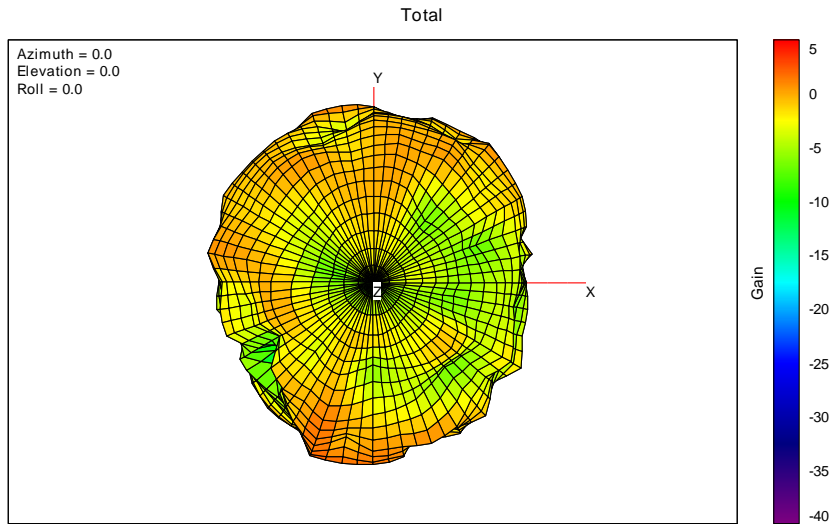
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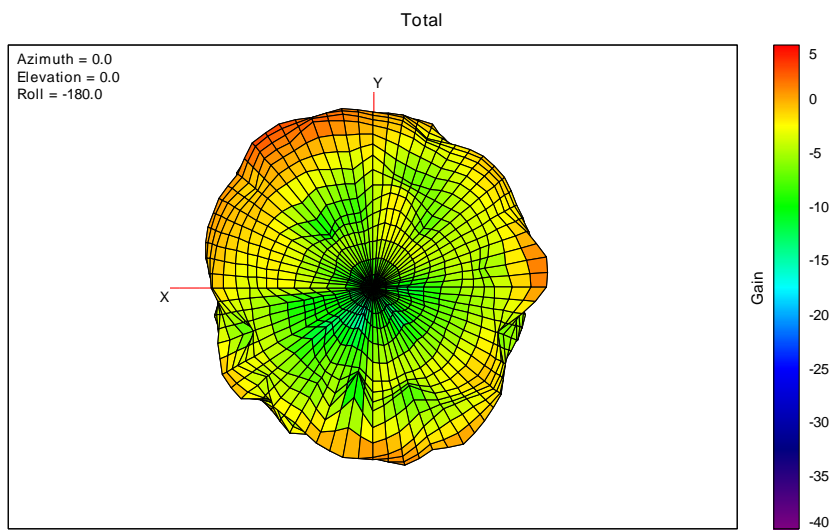
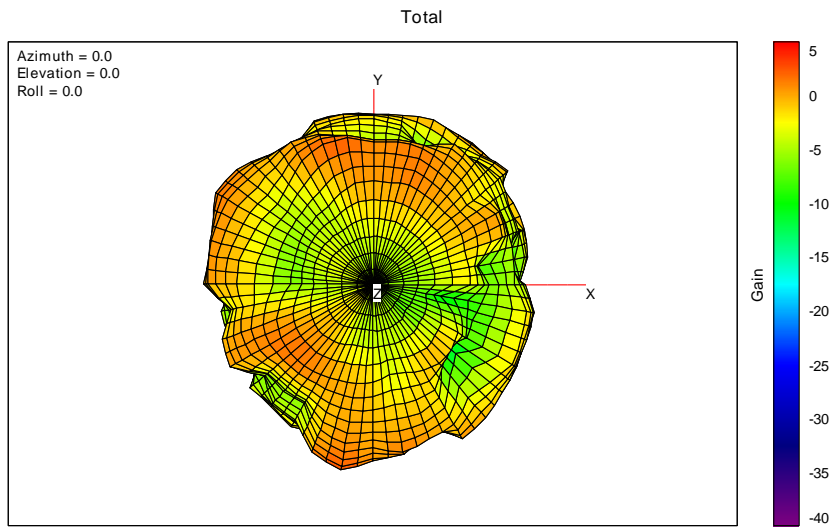
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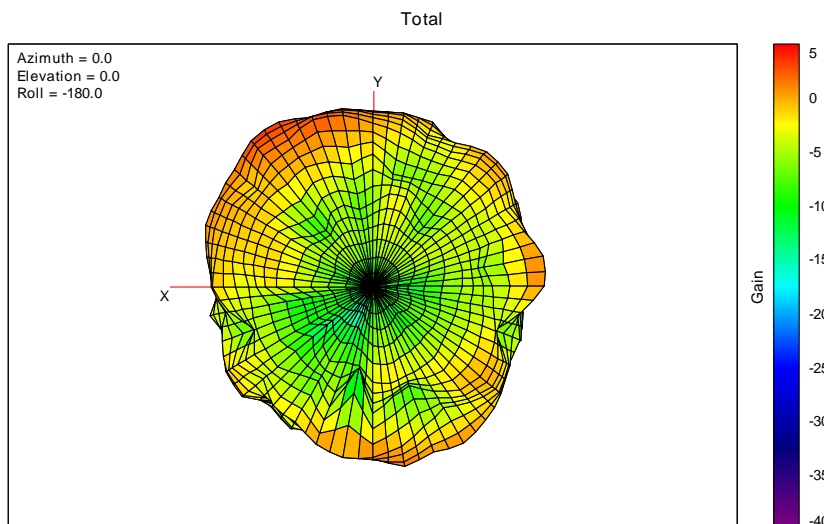
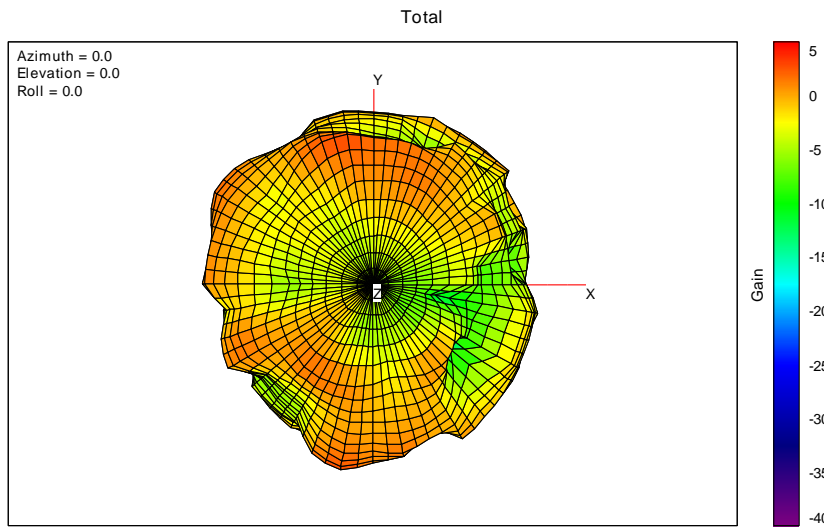
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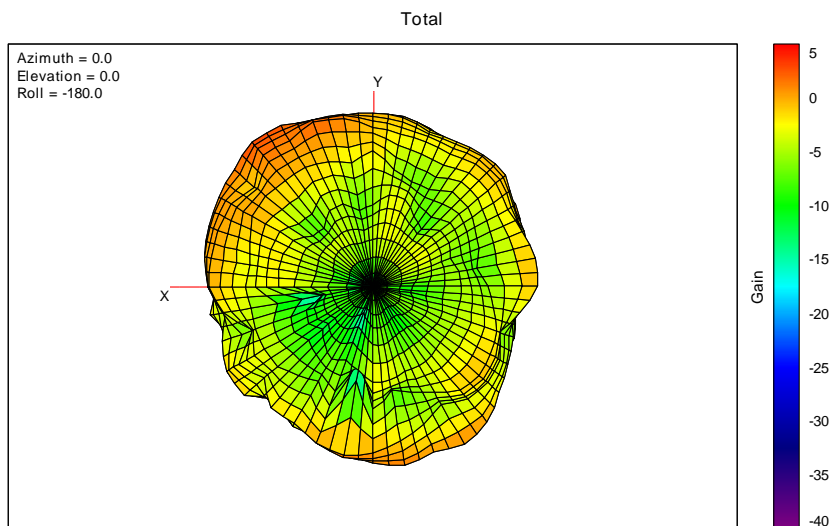
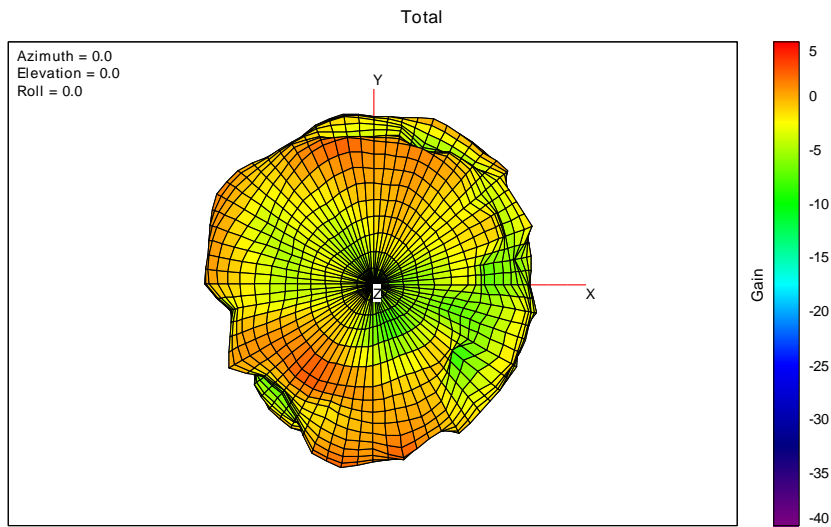
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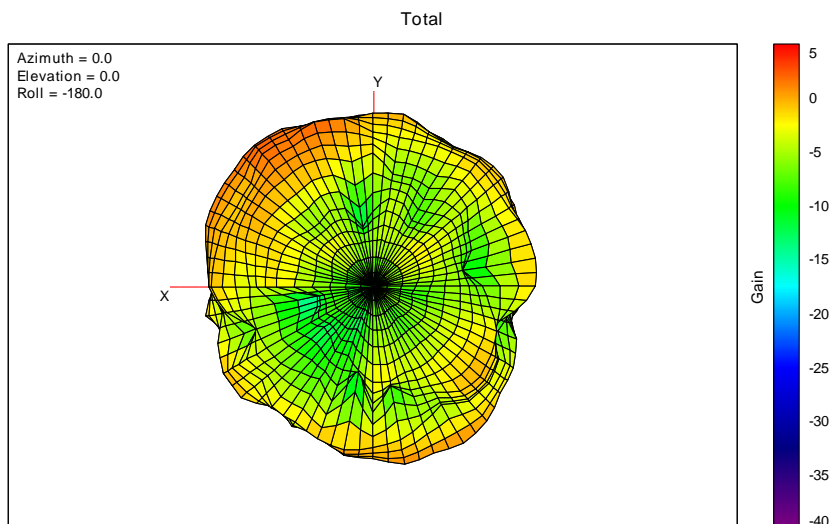
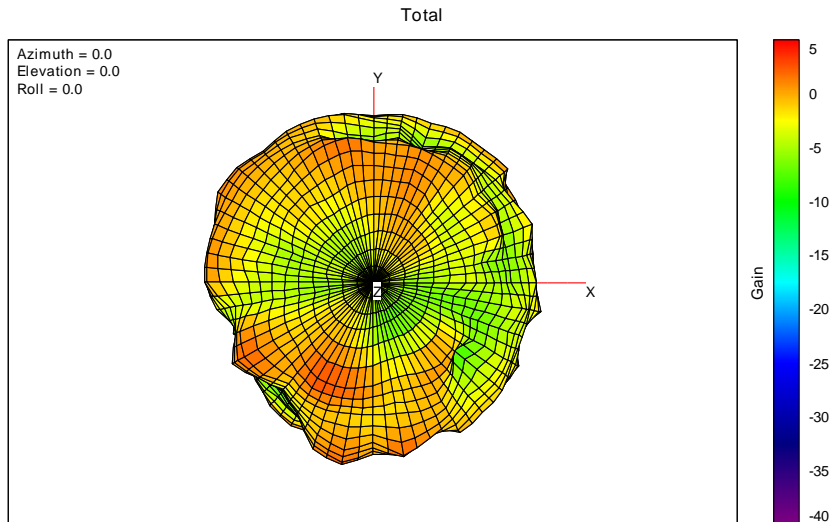
**3D Free Space Router Gain Pattern 6G-6-6415MHz**



3D Free Space Router Gain Pattern 6G-6-6435MHz

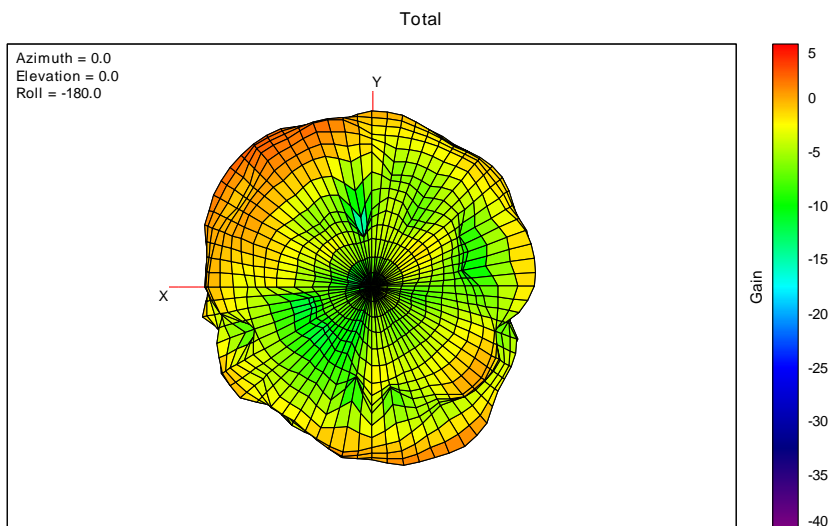
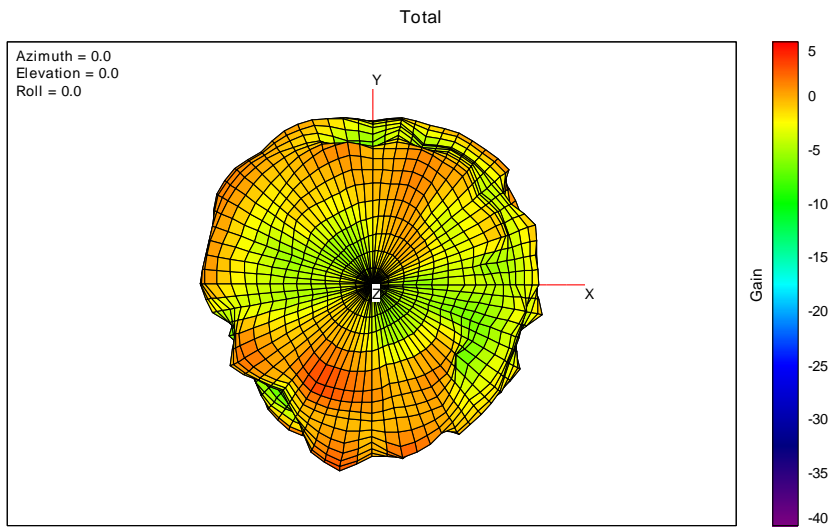


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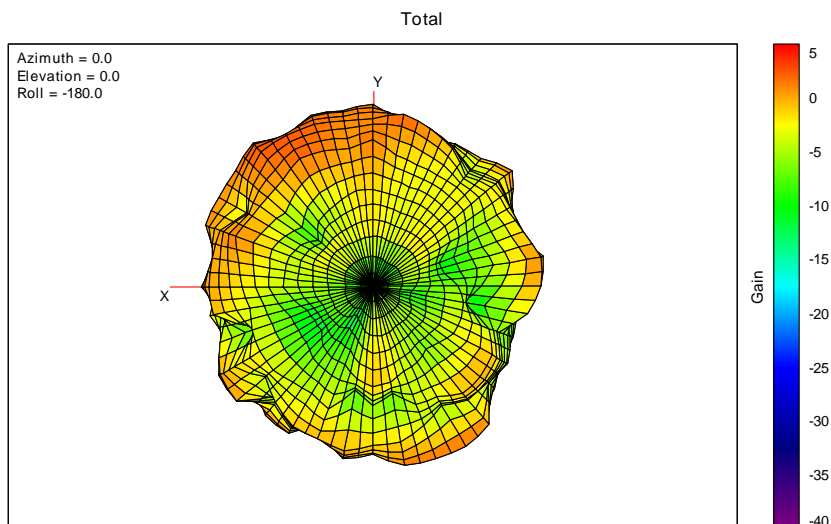
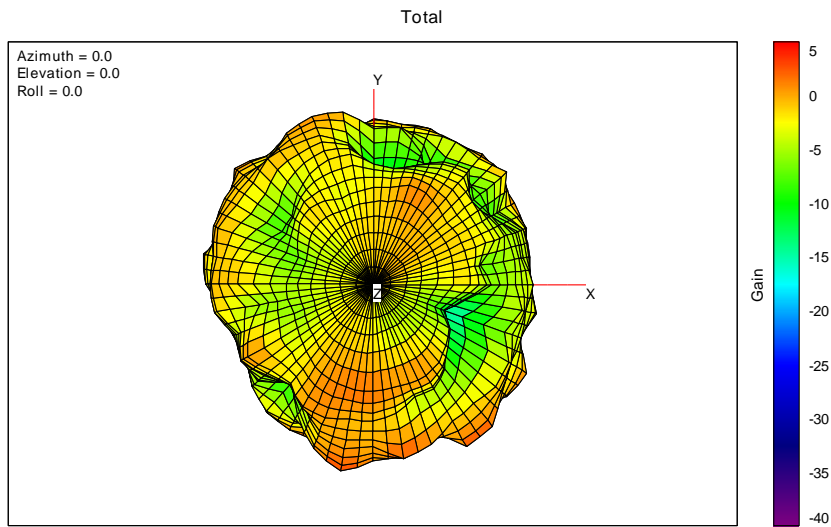


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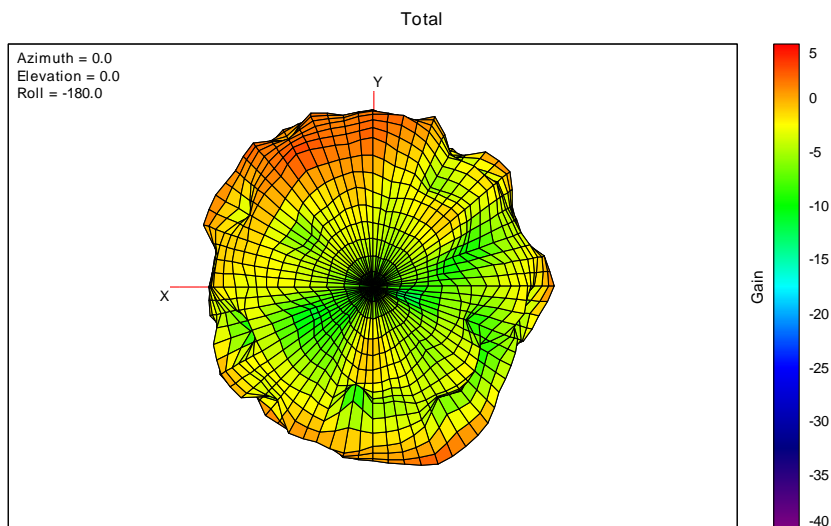
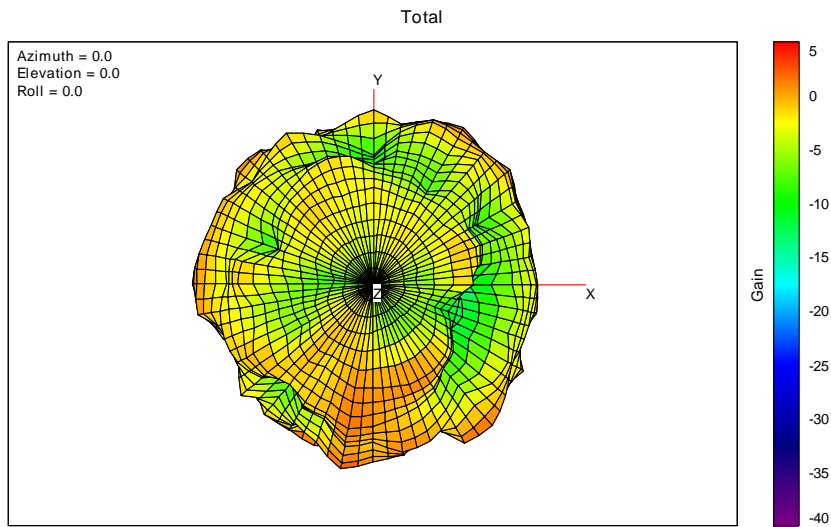




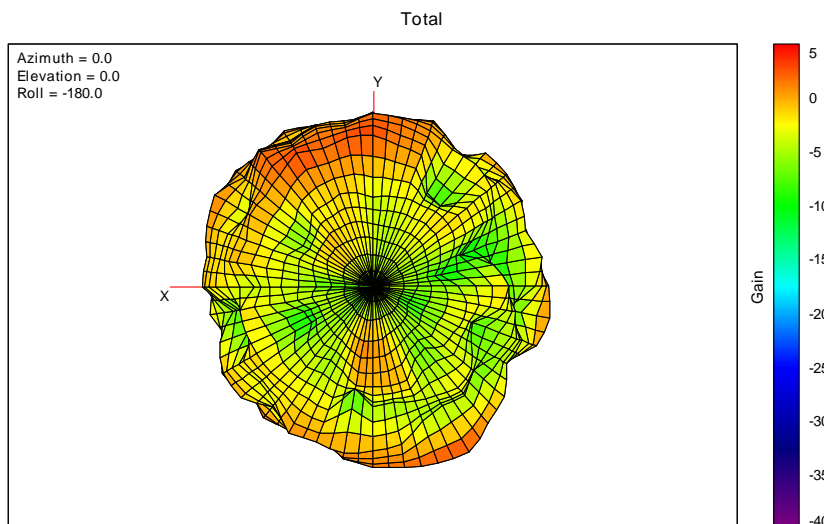
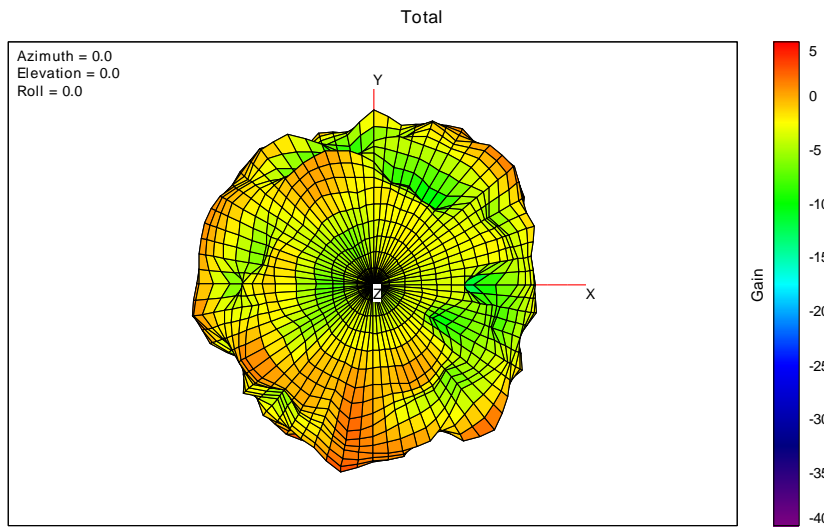
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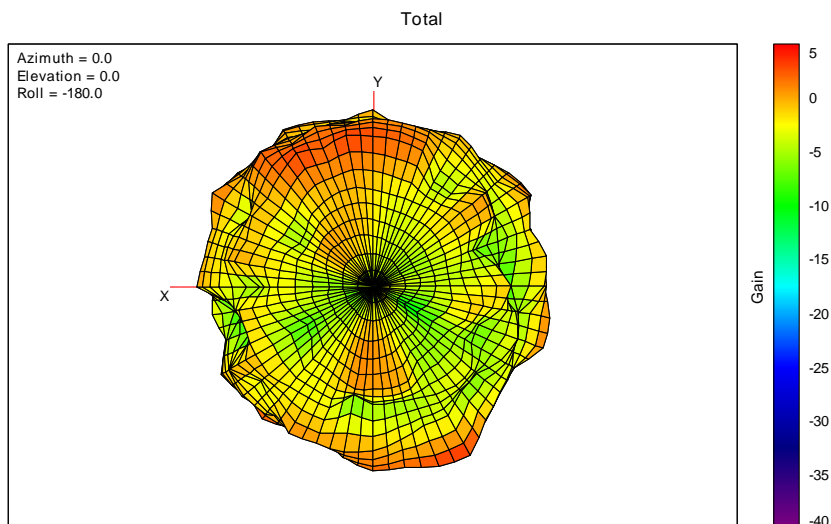
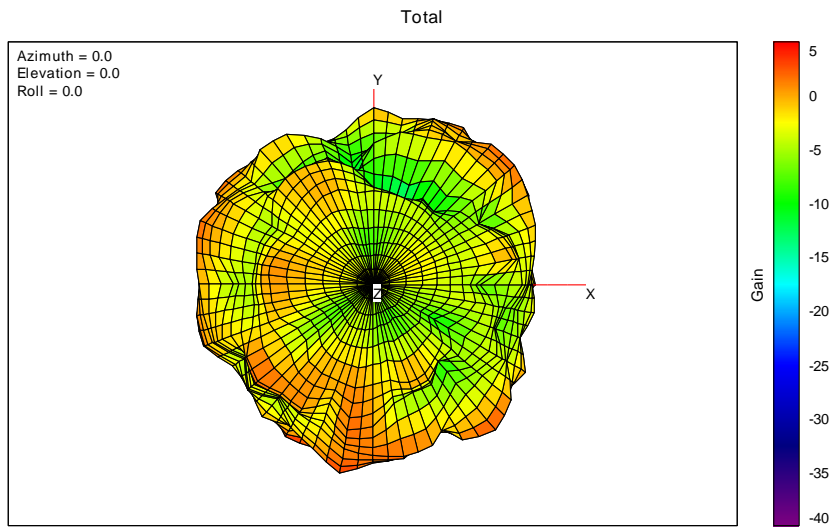
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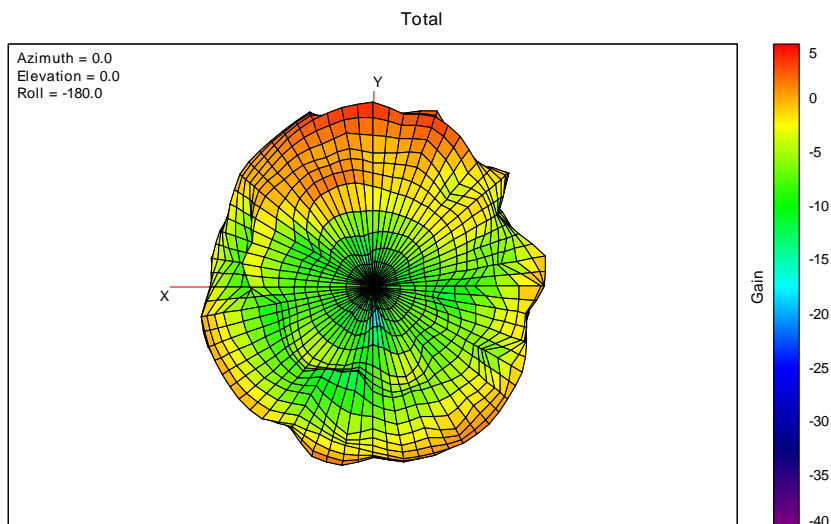
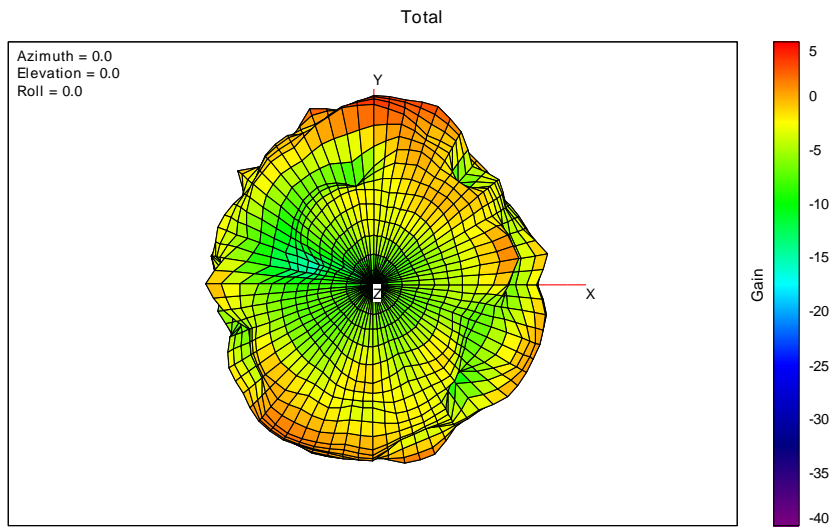
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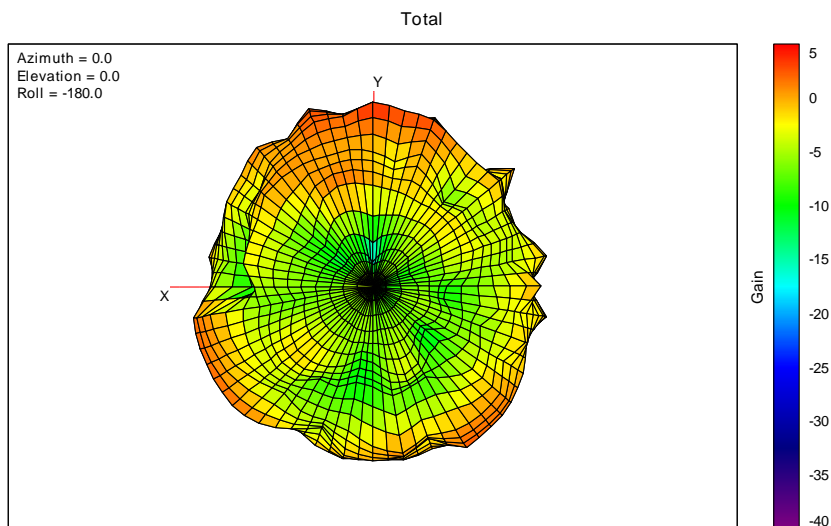
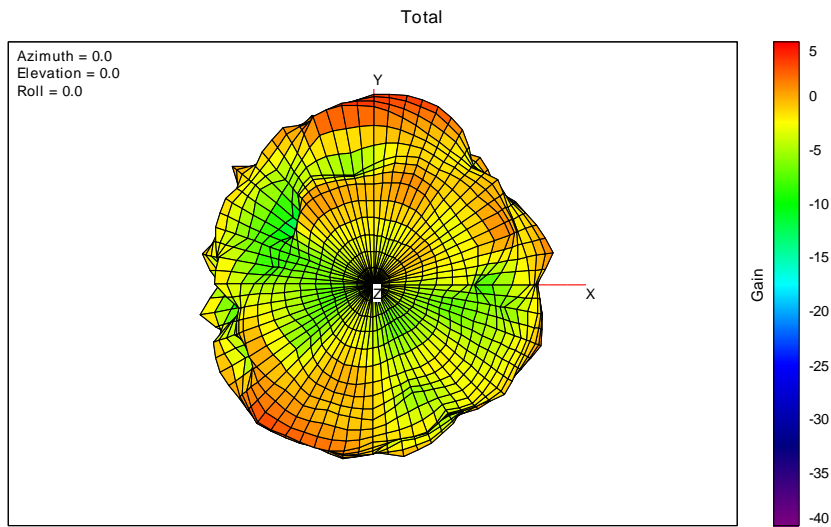
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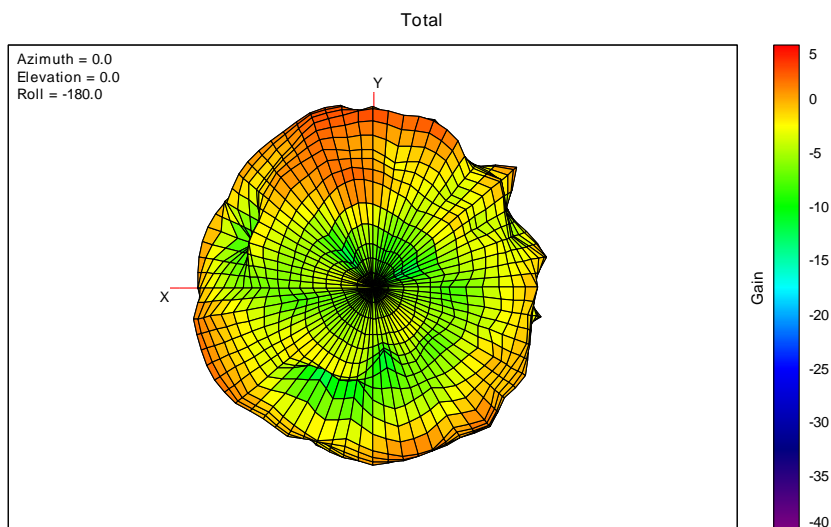
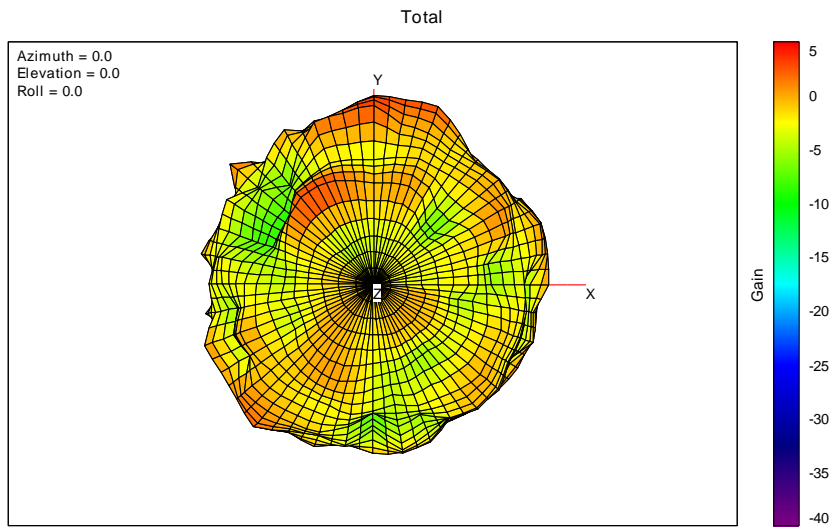
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3D Free Space Router Gain Pattern 6G-7-5955MHz

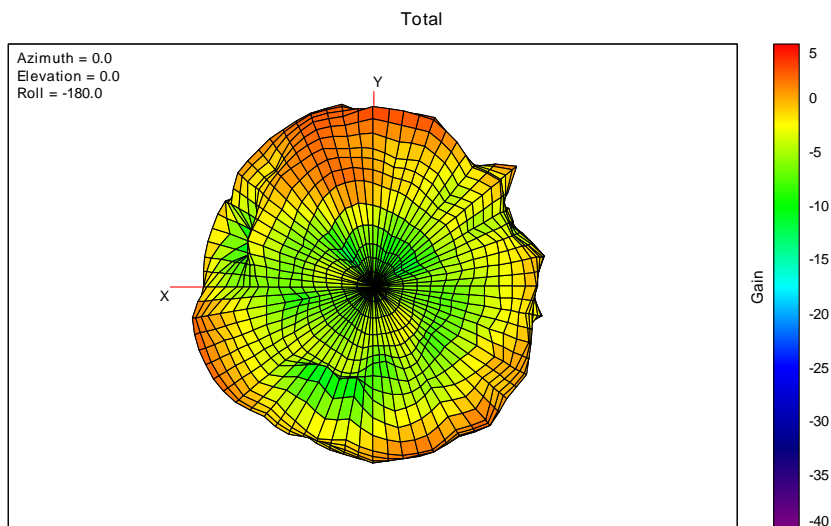
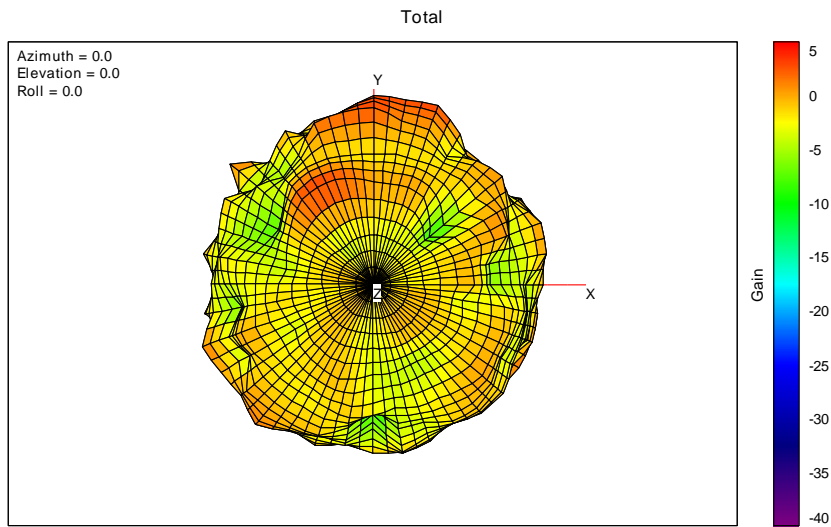


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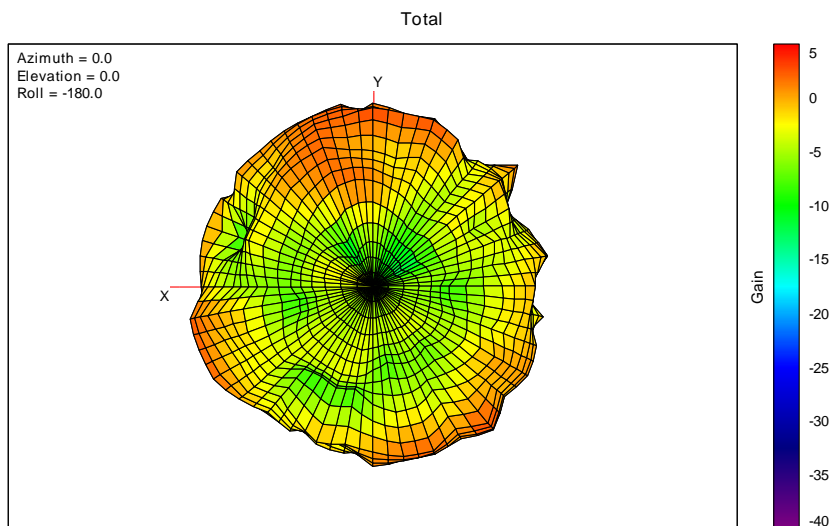
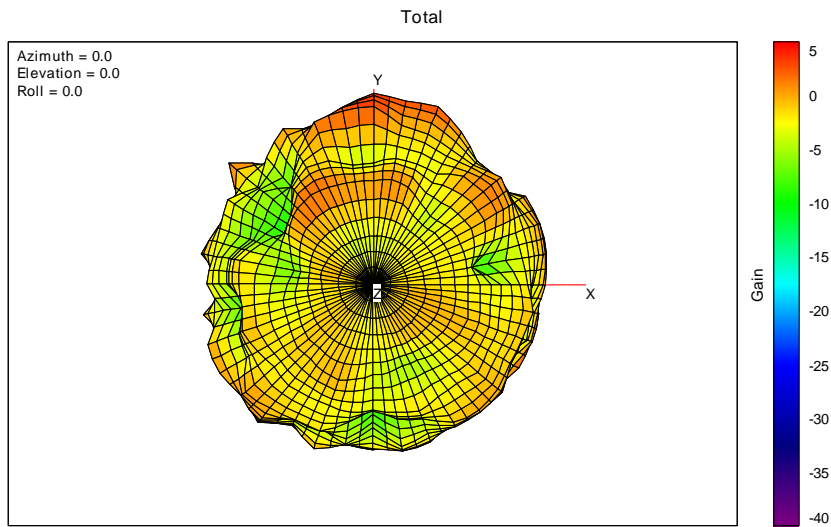


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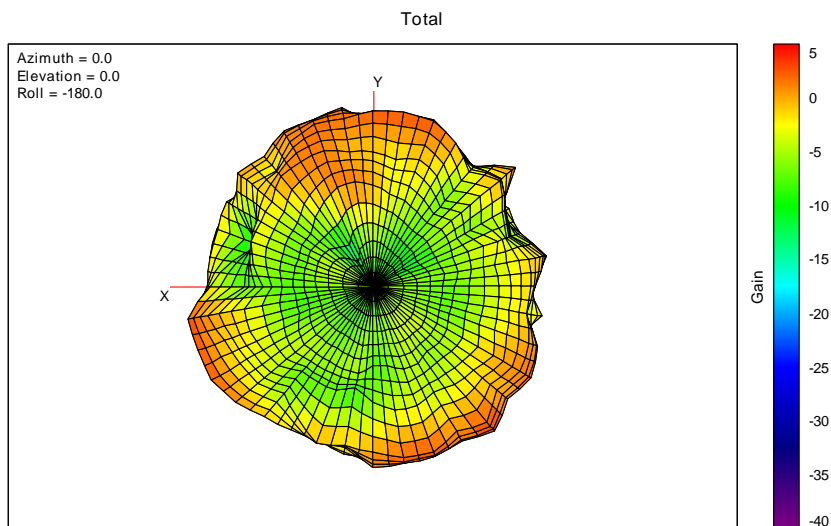
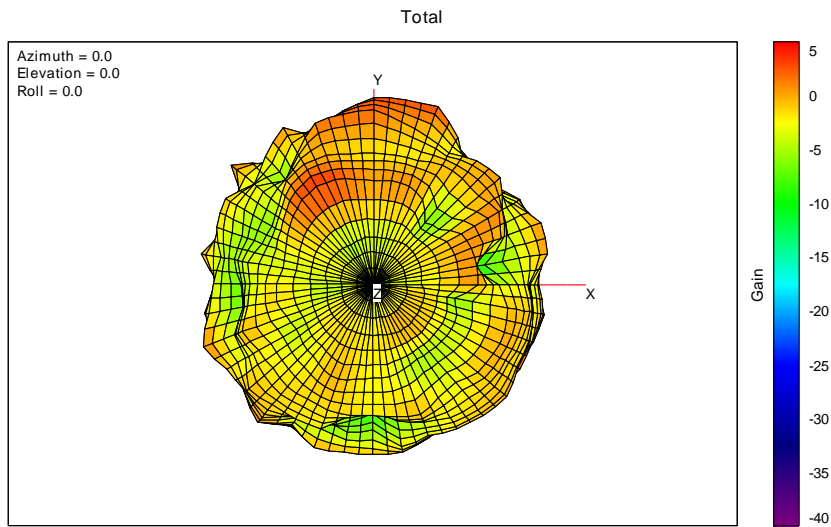




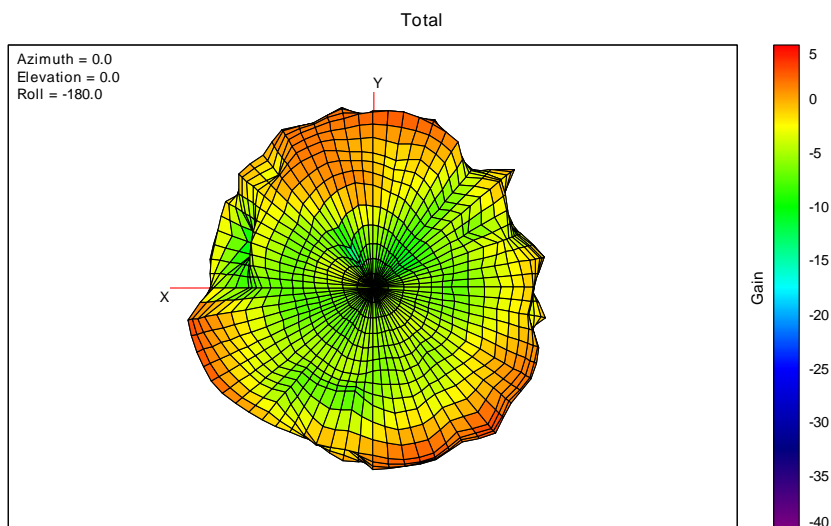
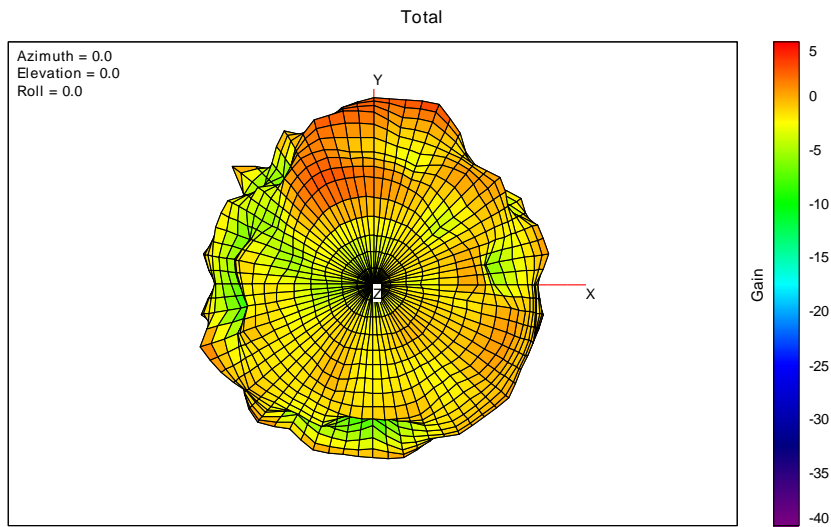
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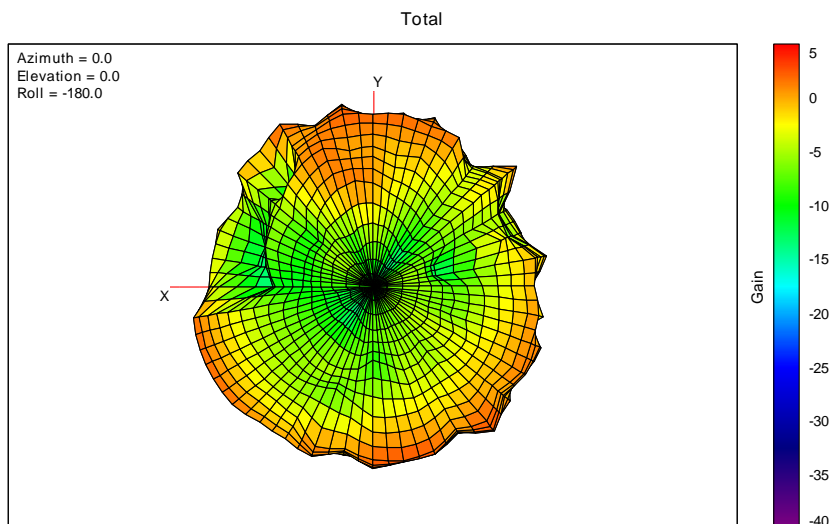
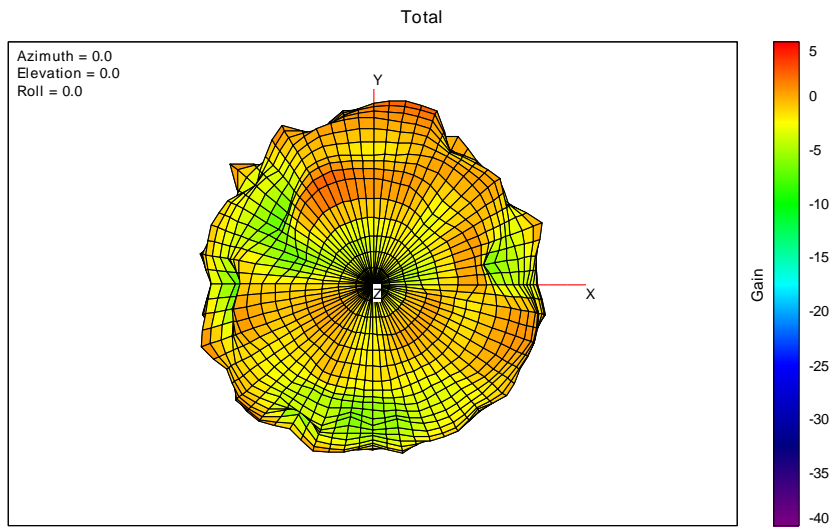
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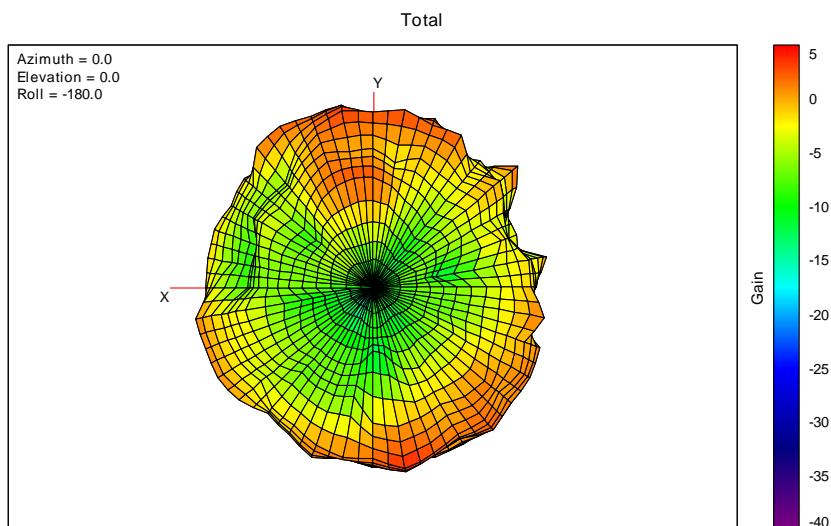
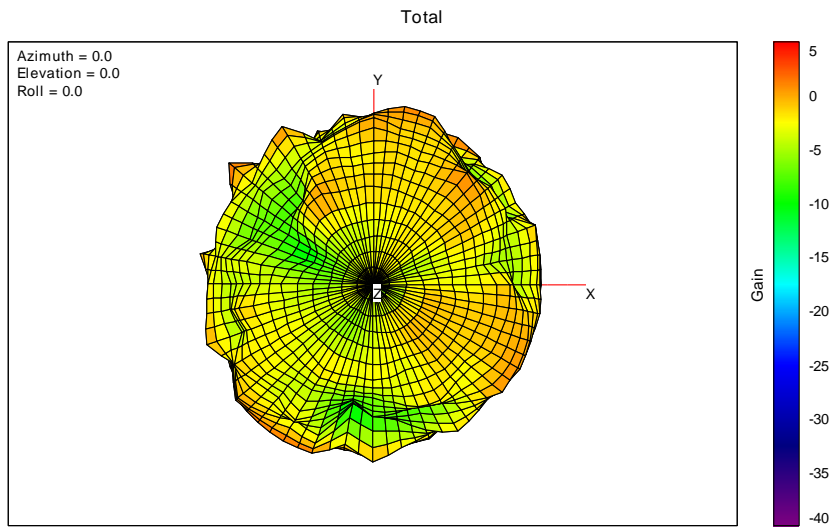
3D Free Space Router Gain Pattern 6G-7-6515MHz



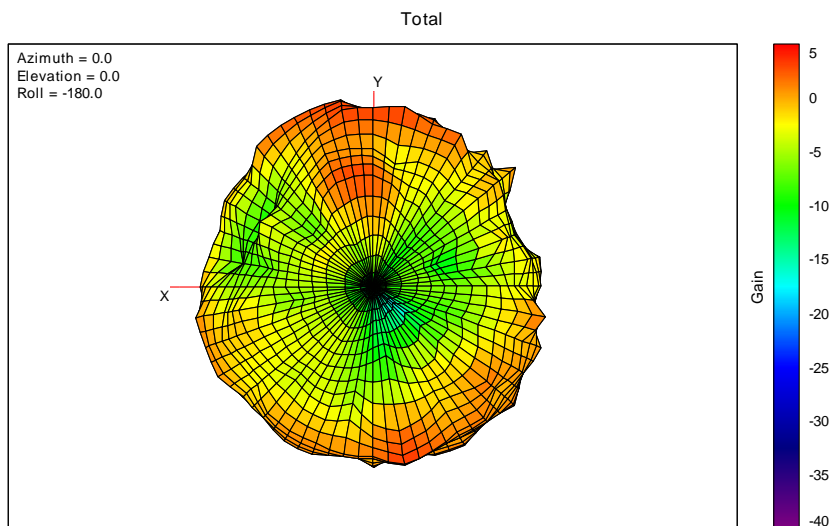
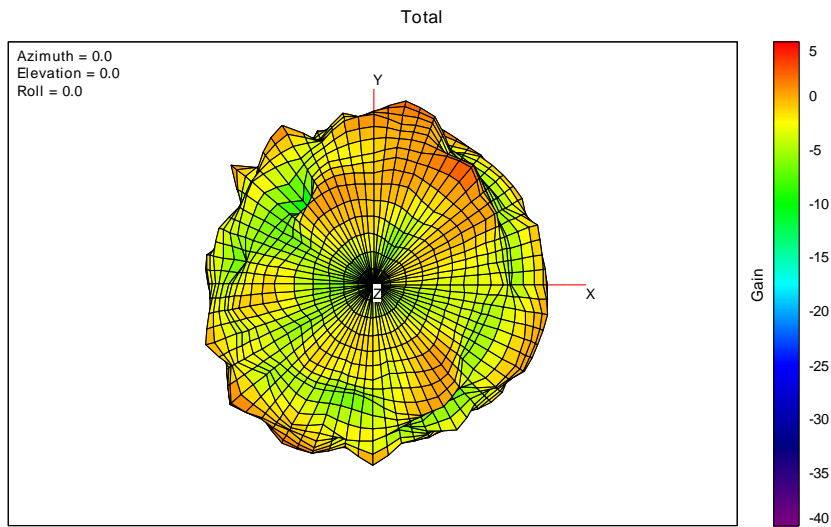
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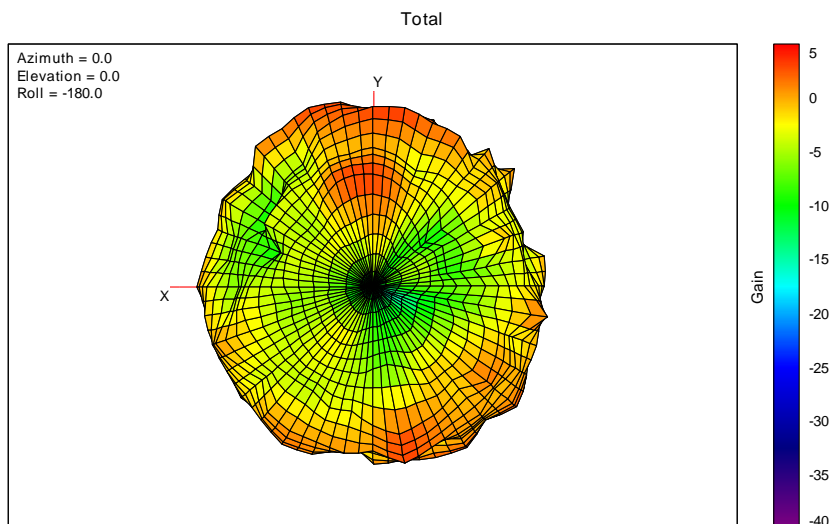
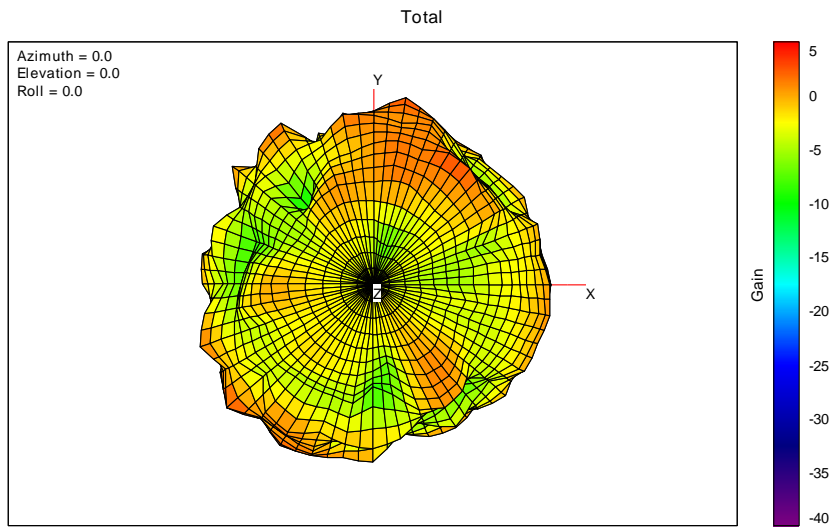
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3D Free Space Router Gain Pattern 6G-7-6875MHz

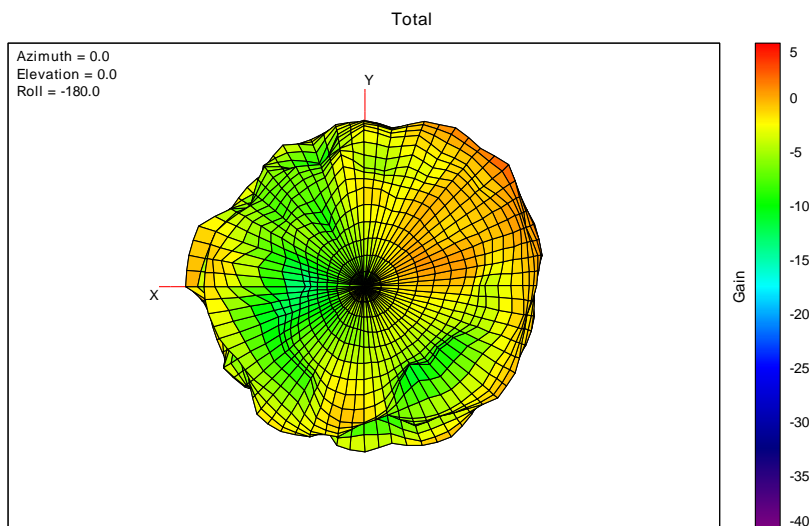
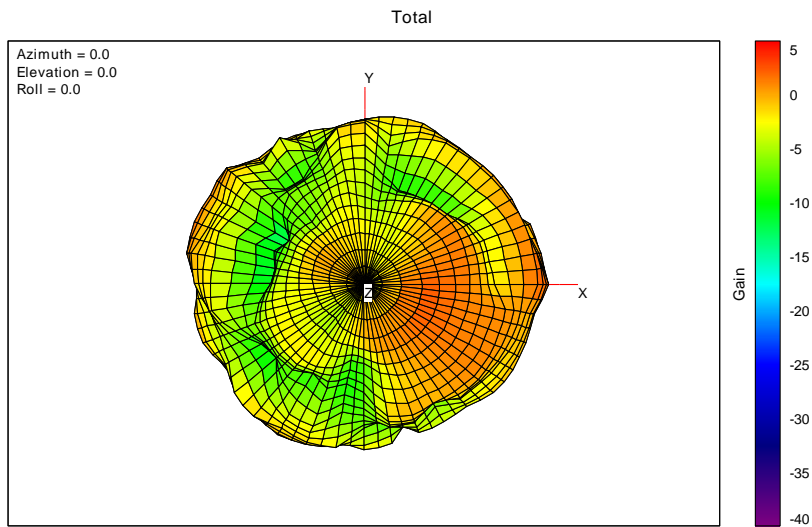


**3D Free Space Router Gain Pattern 6G-7-6995MHz**

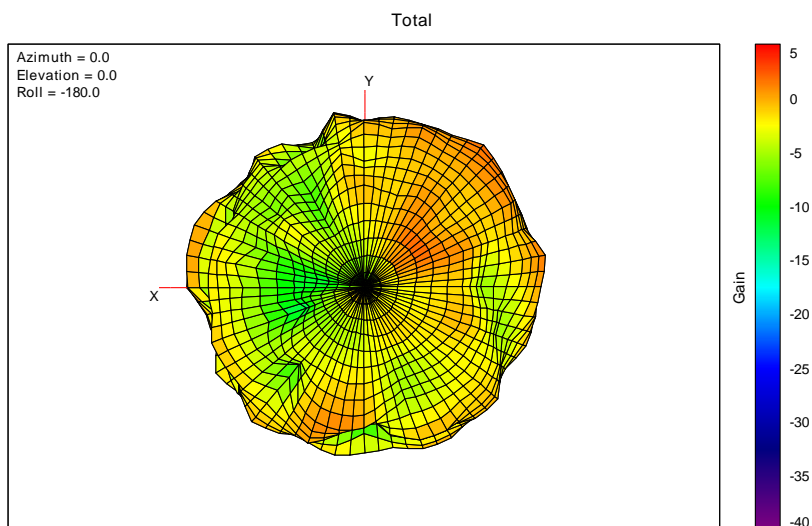
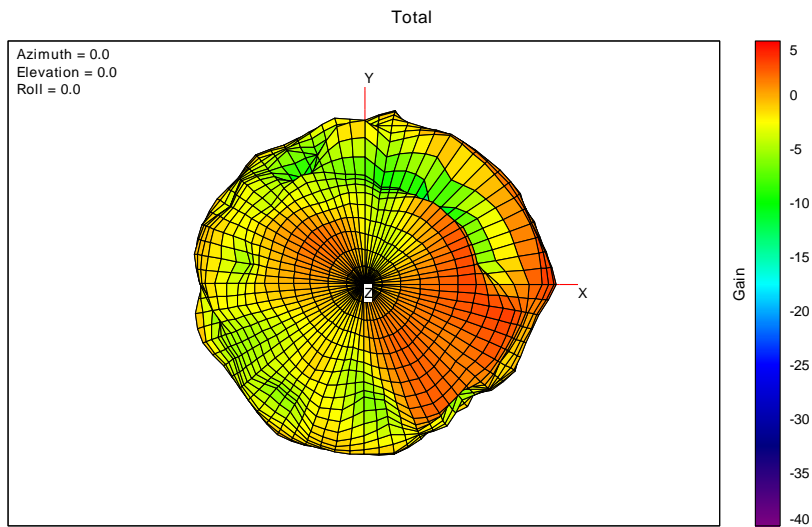


**3D Free Space Router Gain Pattern 6G-7-7095MHz**

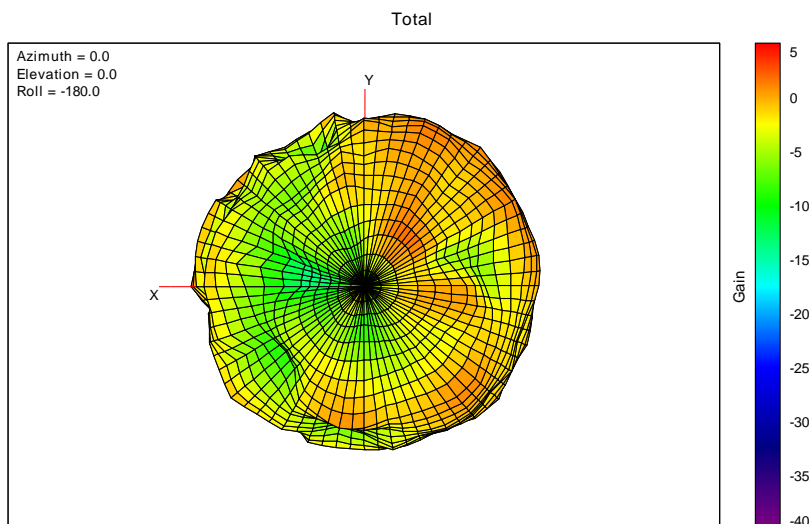
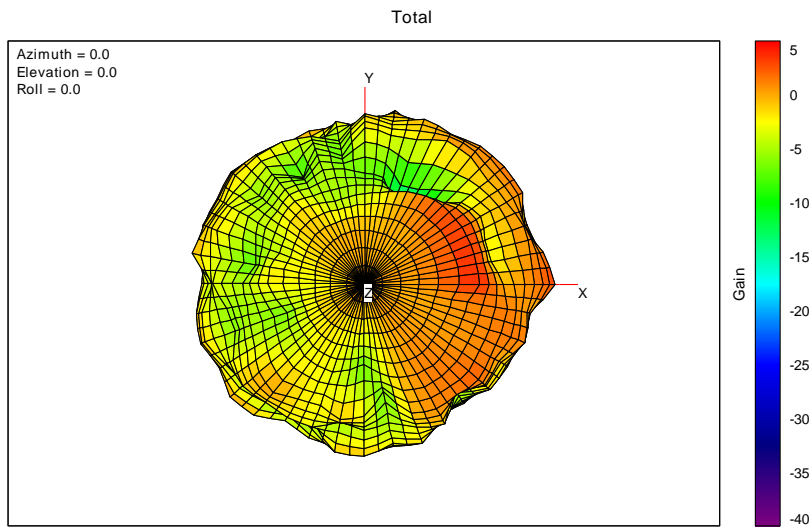




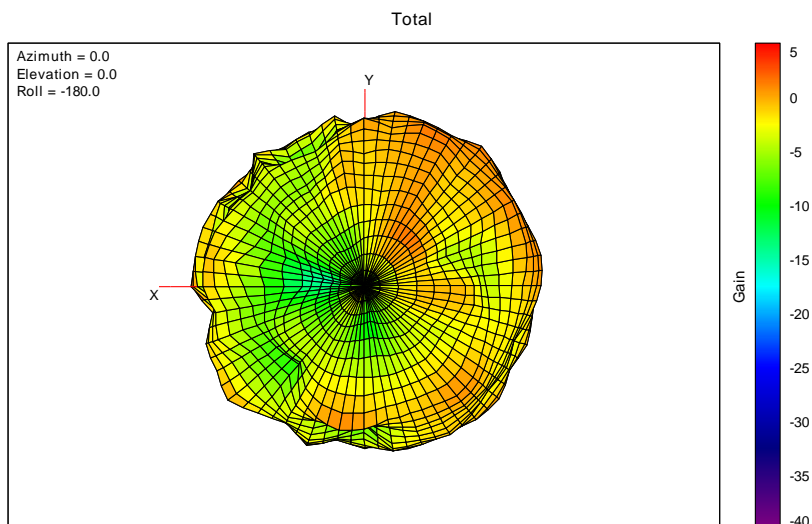
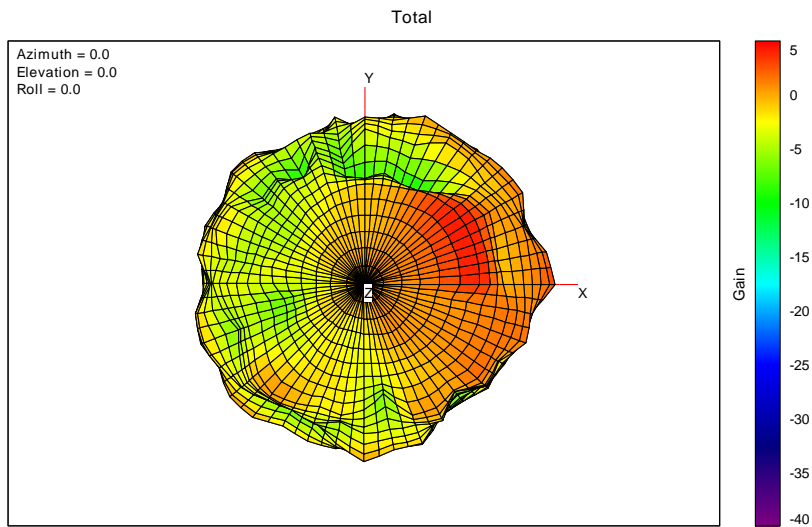
3D Free Space Router Gain Pattern 6G-8-5955MHz



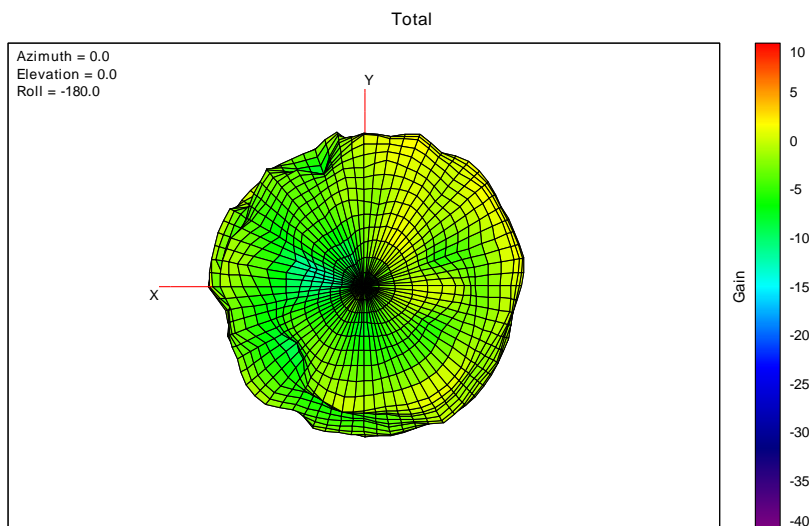
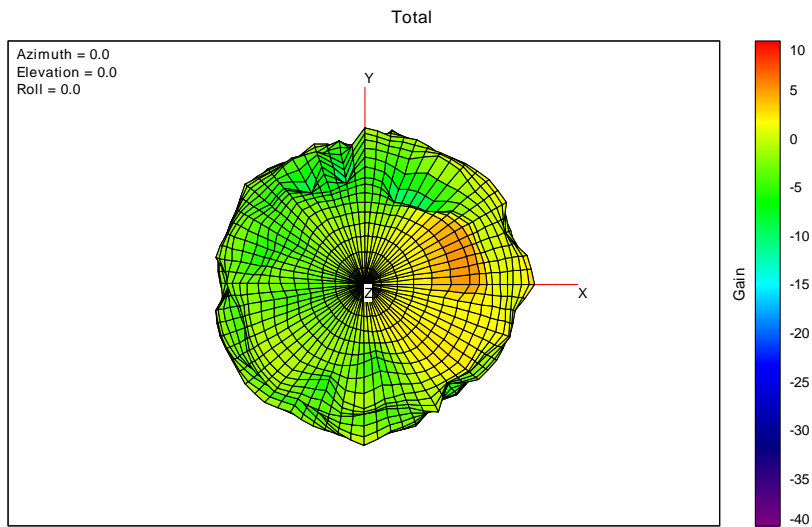
**3D Free Space Router Gain Pattern 6G-8-6175MHz**



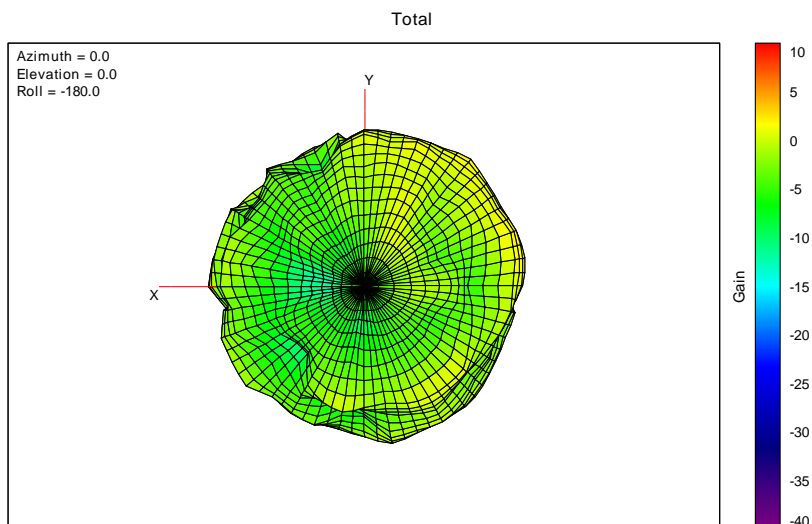
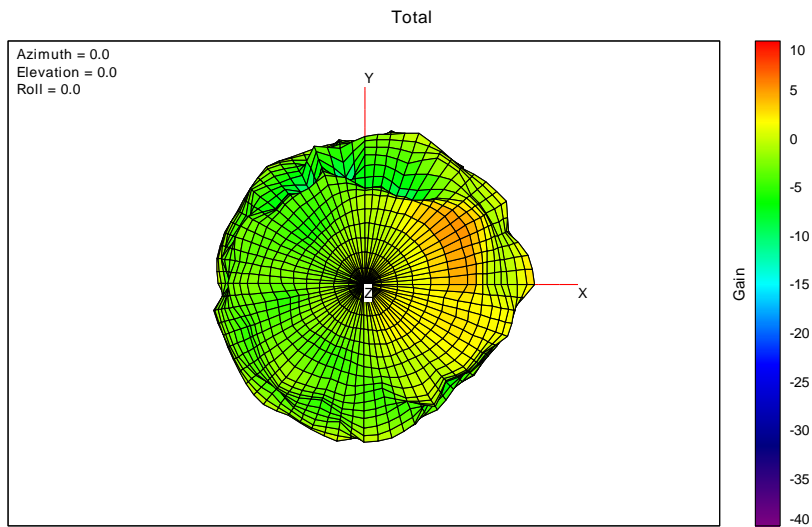
3D Free Space Router Gain Pattern 6G-8-6415MHz



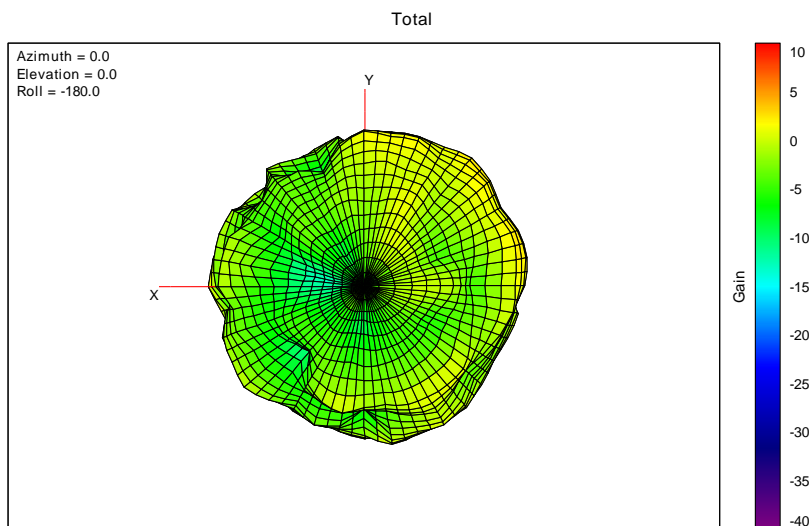
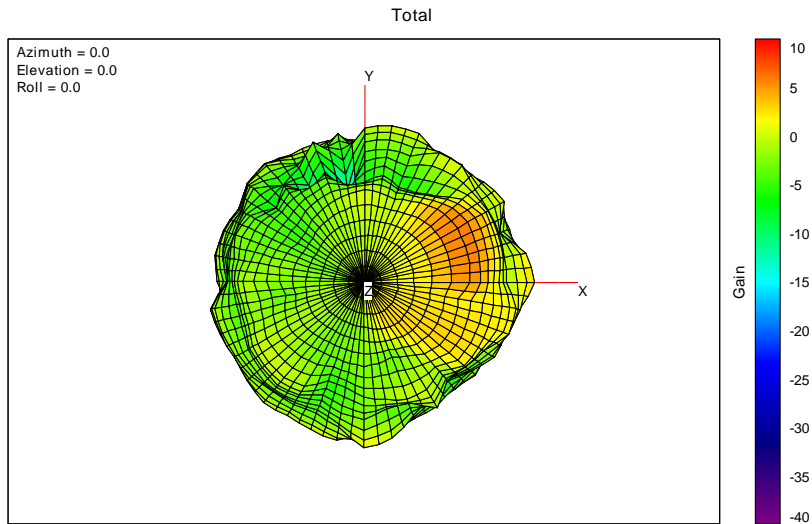
3D Free Space Router Gain Pattern 6G-8-6435MHz



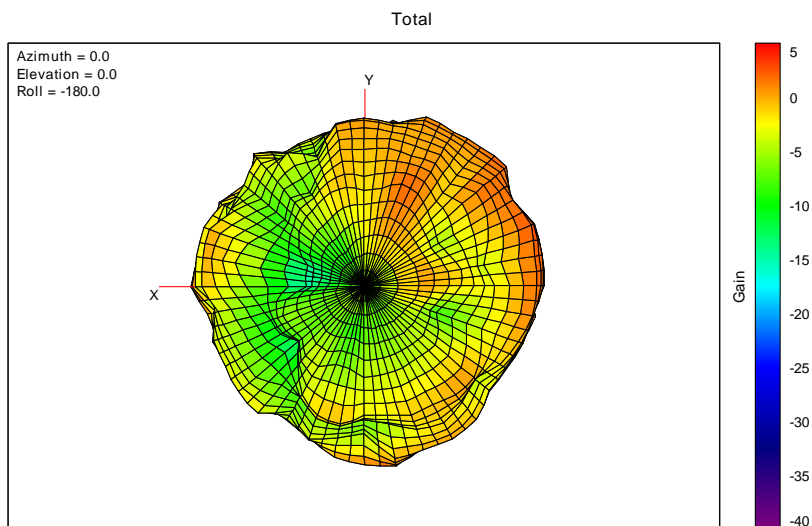
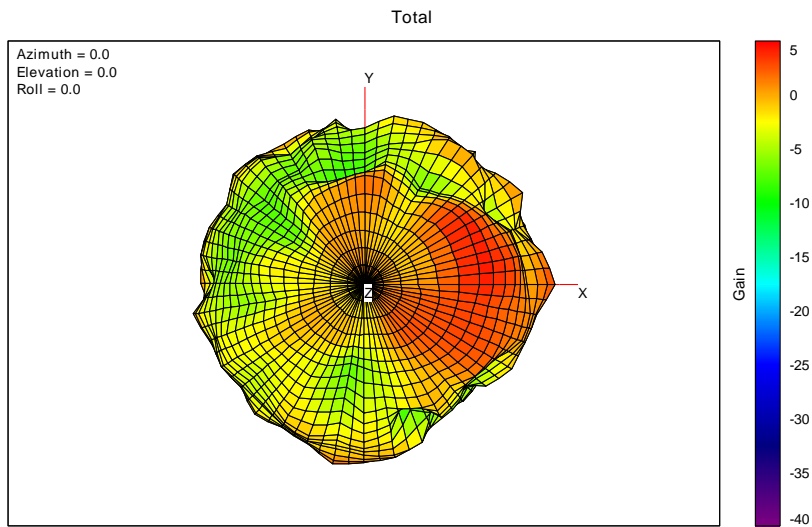
3D Free Space Router Gain Pattern 6G-8-6475MHz



3D Free Space Router Gain Pattern 6G-8-6515MHz

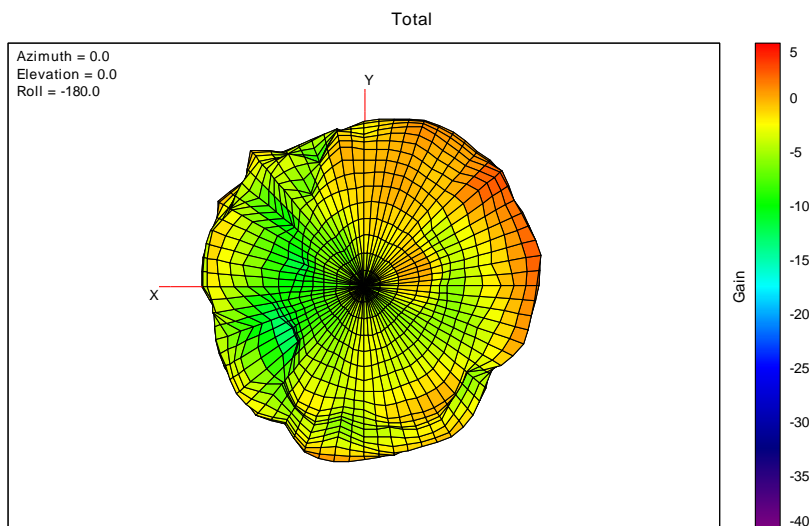
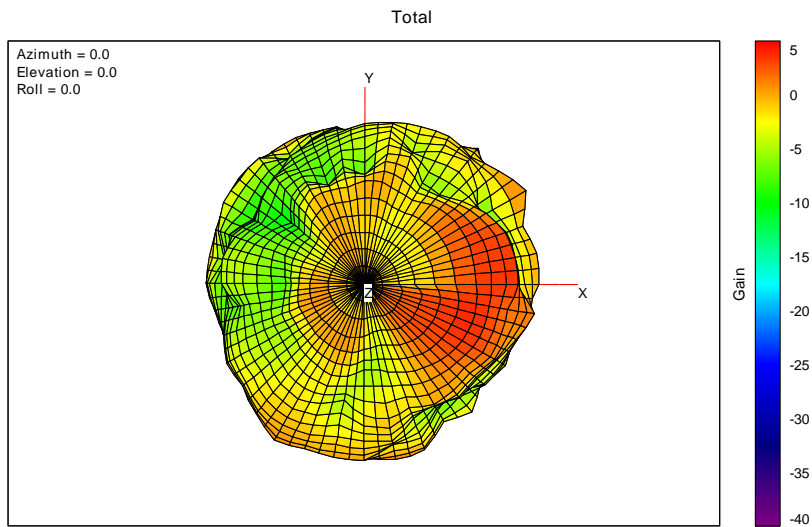


3D Free Space Router Gain Pattern 6G-8-6535MHz

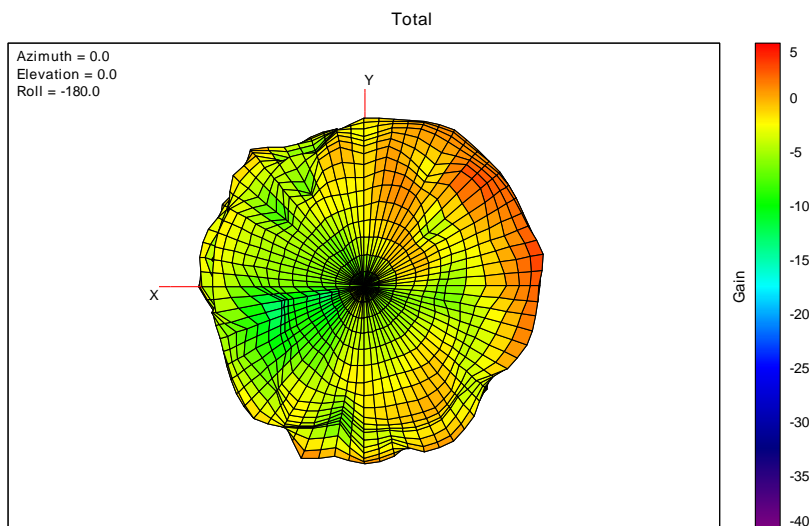
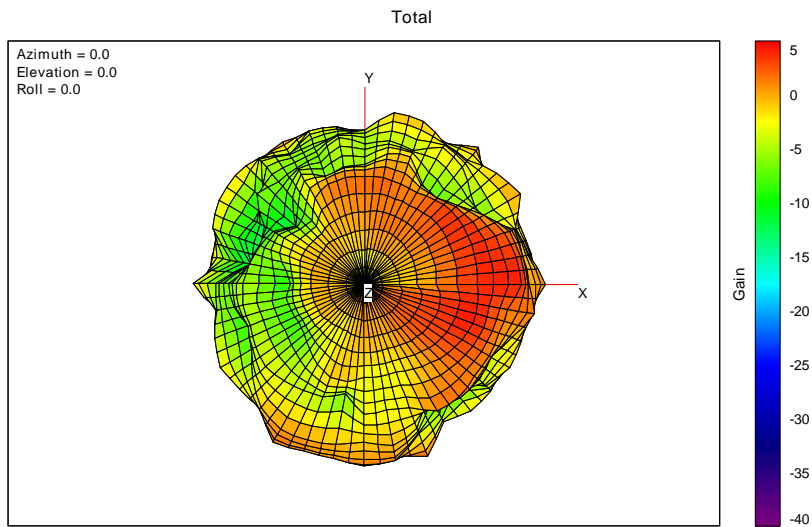


3D Free Space Router Gain Pattern 6G-8-6695MHz

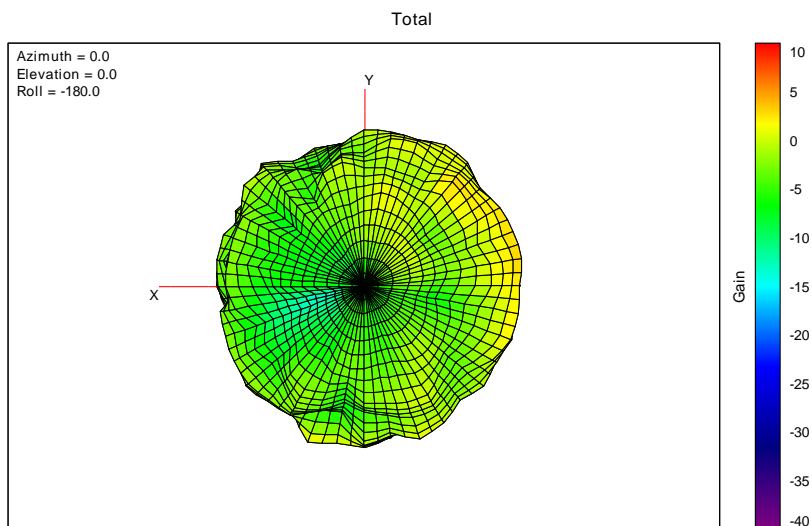
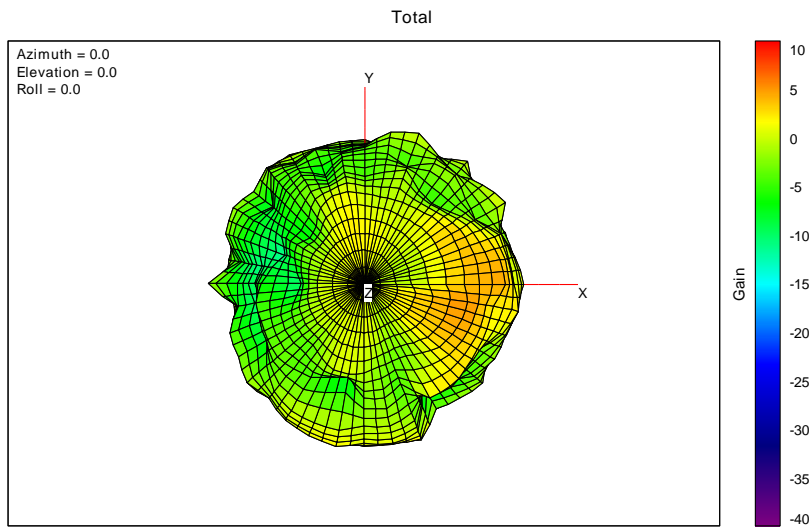




3D Free Space Router Gain Pattern 6G-8-6875MHz



3D Free Space Router Gain Pattern 6G-8-6995MHz



3D Free Space Router Gain Pattern 6G-8-7095MHz