

Multi-Co-Planar Scan (MCP) Jig



Get Accurate Far-Field Results with MCP Jig for Large Antennas

Multi-Co-Planar Scan (MCP) function which is available only with the RFX2 enables power and pattern measurements at a single frequency or series of frequencies of antennas that are too large to measure with a single RFX2 scanner.

The MCP Jig is designed to ensure accurate antenna pattern measurements for antennas larger than L 32 cm x W 32 cm (L 12.60" x W 12.60"). With this function, the RFX2 can test antennas as large as are L 2.32 m x W 2.32 m (L 7.61' x W 7.61').

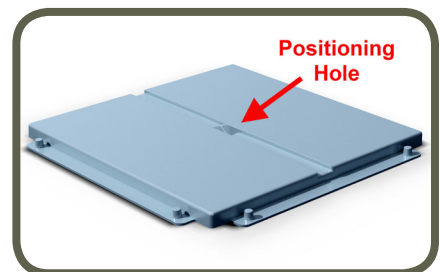
For accurate far-field results, the distance between the antenna array and the RFX2 must be constant and each measurement must be made in 40 cm (15.75") increments. A recommended approach is to suspend the antenna above the RFX2 and move the RFX2 on the MCP Jig.

Basic MCP Jig is designed for DUTs with maximum dimensions: L 1.12 m x W 0.78 m (L 3.67' x W 2.56'). It is composed of 6 tiles, 6 absorber blocks and one rolling rig.

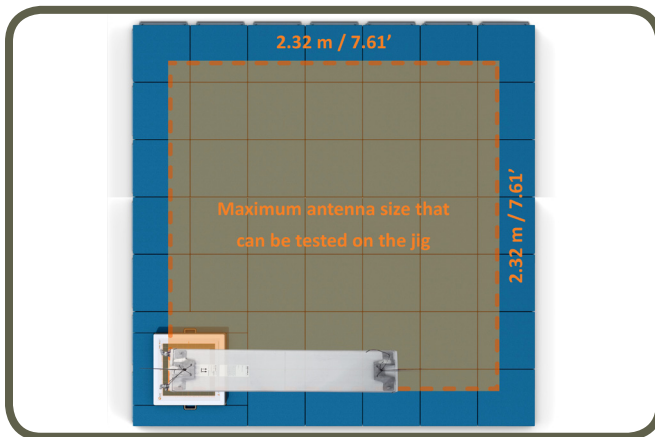
The rolling rig has wheels that allow the accurate movement and positioning of the RFX2 on tiles. Tiles have built-in tracks and positioning holes for the rolling rig which serves as a guide to move the RFX2 precisely to the next subsequent position in 40 cm (15.75") increments. The rolling jig has to be lifted up and placed on the next set of tracks for testing along another row of tiles.

Absorber blocks are required to help minimize the impact of manually moving the RFX2 on the DUT and to prevent interferences.

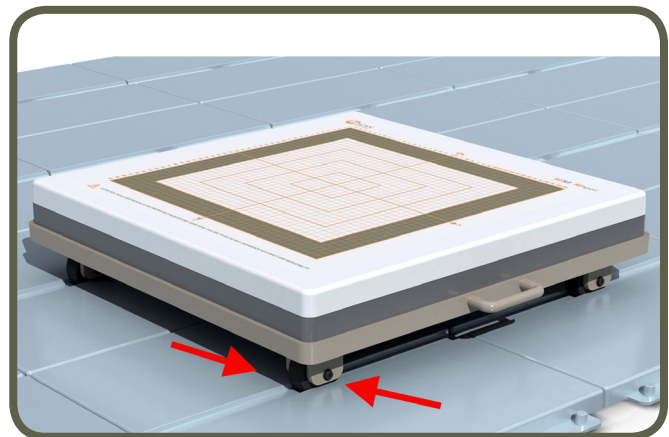
Depending on the size of the DUT, basic MCP Jig can easily be expanded with MCP Expansion Kit (part #: 3000-0821 and 3000-0823)



Assembling tiles is easy:
Snap 'n Fix



MCP Jig with absorber pad:
Move rolling rig to the next position



MCP Jig without absorber pad:
Rolling rig in the next position

MCP (Multi Co-Planar) Jig Features

Features	Allows precise positioning of RFX2 along antenna to enable accurate antenna pattern measurements for antennas larger than 32 cm x 32 cm.																									
Hardware requirement	RFX2 (part number 3000-0604, 3000-0605, 3000-0606 or 3000-0607)																									
Software requirement	RFxpert 4.0 and above																									
Part number	3000-0820	High Frequency Basic MCP Jig: Set of tiles, absorber blocks and rolling rig to enable high frequency 1.3 GHz to 6 GHz multiple-co-planar measurements with RFX2. Includes - 6 tiles with positioning holes for a 2 x 3 set - 6 absorbers: 4 RFX2 blocks and 2 standard blocks for test above 1.3 GHz - 1 rolling rig for RFX2 with positioning wheels																								
	3000-0824	High Frequency MCP Jig Expansion : Two tiles and two square absorber blocks for test > 1.3 GHz																								
	3000-0825	Low Frequency Basic MCP Jig: Set of tiles, absorber blocks and rolling rig to enable high frequency 600 MHz GHz to 6 GHz multiple-co-planar measurements with RFX2. Includes - 6 tiles with positioning holes for a 2 x 3 set - 6 absorbers: 4 RFX2 blocks and 2 standard blocks for test above 600 MHz - 1 rolling rig for RFX2 with positioning wheels																								
	3000-0826	Low Frequency MCP Jig Expansion: Two tiles and two square absorber blocks for test > 600 MHz																								
Dimensions	Tile : ~ L 43 cm x W 43 cm x H 2 cm (~ L 16.93" x W 16.93" x H 0.79") Rolling rig : ~ L 49 cm x W 49 cm x H 8.9 cm (~ L 19.29" x W 19.29" x H 3.5")																									
Weight	Tile: 1.4 kg (3.09 lb) Rolling rig: 6.0 kg (13.23 lb)																									
Absorber foam (Frequency dependant)	<table border="1"> <thead> <tr> <th rowspan="2"></th> <th colspan="2">Thickness</th> <th colspan="2">Weight</th> <th rowspan="2">Frequency Range</th> </tr> <tr> <th>cm</th> <th>inch</th> <th>kg</th> <th>lb</th> </tr> </thead> <tbody> <tr> <td>AN-77</td> <td>5.72</td> <td>2.25</td> <td>1.50</td> <td>3.30</td> <td>-20dB 1.3 GHz – 40 GHz</td> </tr> <tr> <td>AN-79</td> <td>11.43</td> <td>4.50</td> <td>2.95</td> <td>6.50</td> <td>-20dB 0.6 GHz – 40 GHz</td> </tr> </tbody> </table>					Thickness		Weight		Frequency Range	cm	inch	kg	lb	AN-77	5.72	2.25	1.50	3.30	-20dB 1.3 GHz – 40 GHz	AN-79	11.43	4.50	2.95	6.50	-20dB 0.6 GHz – 40 GHz
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RFX2 Scanner Specifications

Broadband frequency coverage	300 MHz to 6 GHz								
Antenna array	1,600 (40 x 40) H-field probes								
Measurement sensitivity	0 dBm source power for a reasonably efficient antenna								
Measurement accuracy	Band 1: 300 MHz - 1GHz			Band 2: 1 GHz - 3 GHz			Band 3: 3 GHz - 6 GHz		
	σ	2σ	N	σ	2σ	N	σ	2σ	N
	1.54	3.08	195	0.81	1.62	517	0.94	1.88	247
Measurement repeatability	+/- 0.2 dB								
Far-field resolution	1.8° for theta and 3.6° for phi								
Maximum radiator size	RFX2 L 32 cm x W 32 cm (L 12.60" x W 12.60")								
	RFX2 with MCP Option: L 2.32 m x W 2.32 m (L 7.61' x W 7.61')								