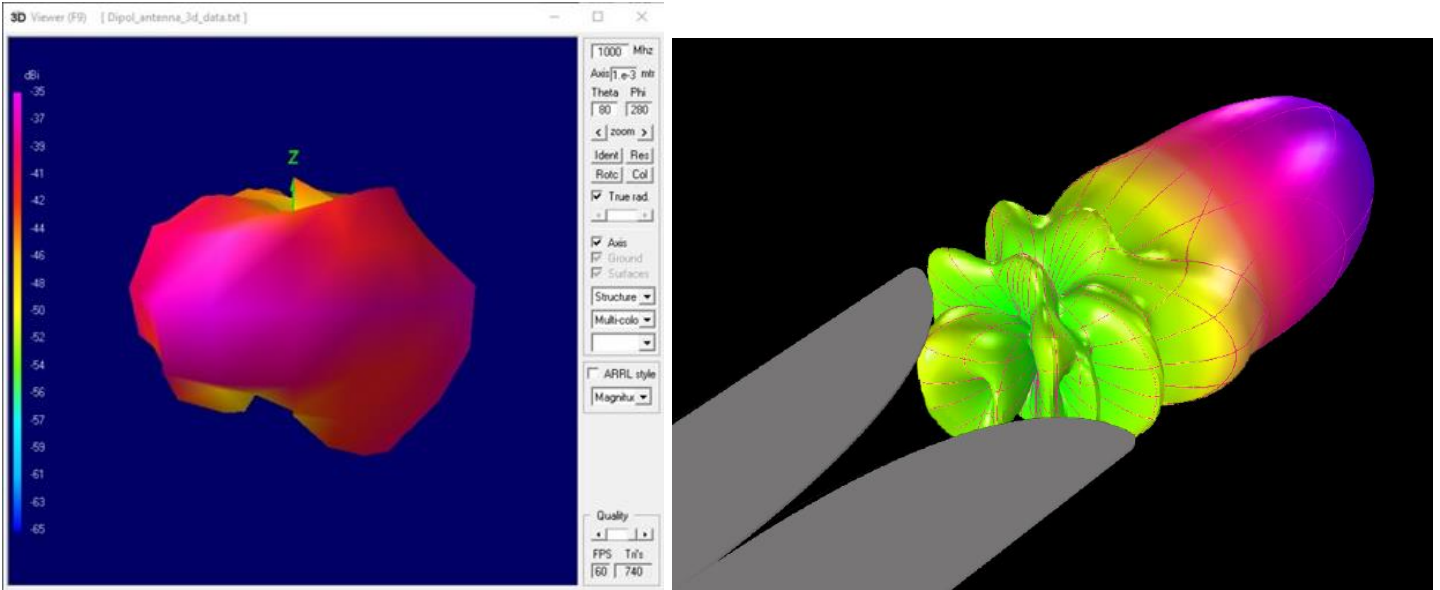
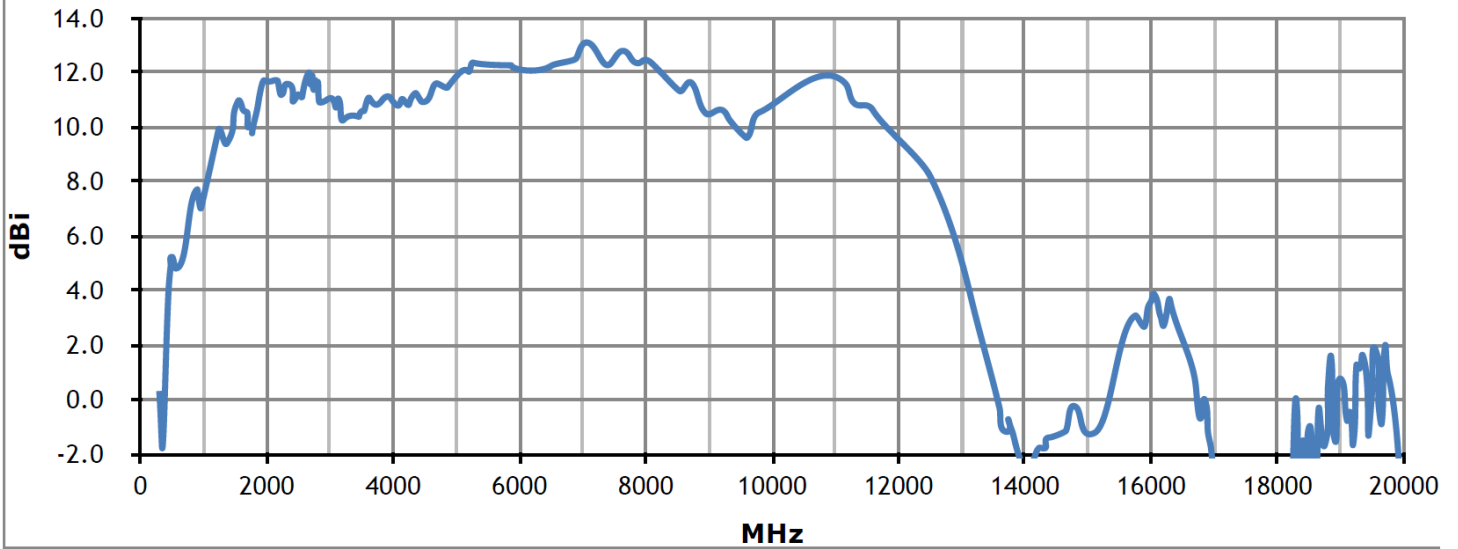


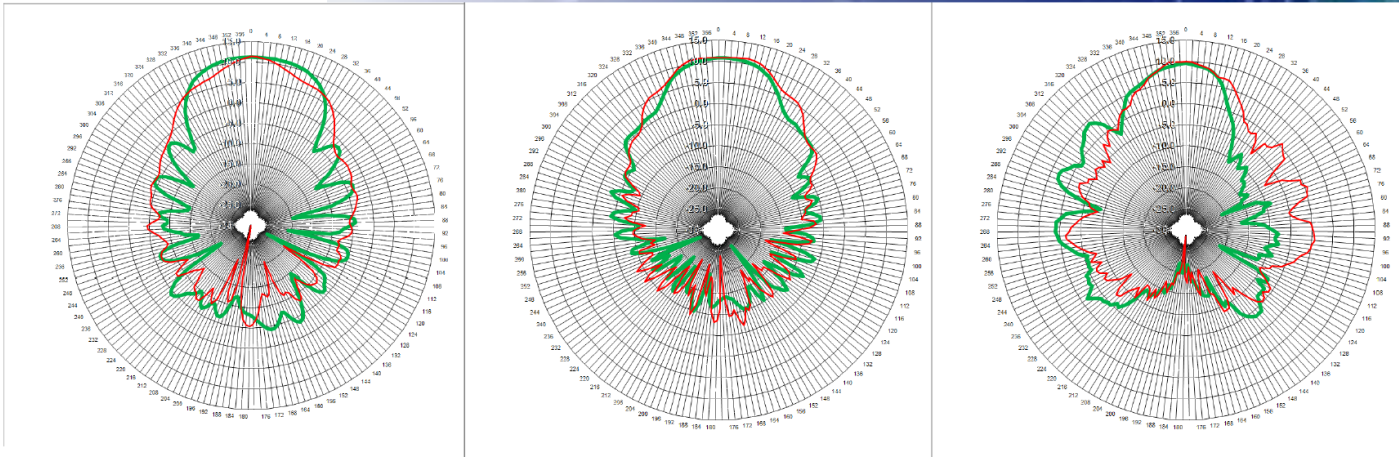
**SAP20 complies with IEEE Std 149-1979, "Test Procedure for Antennas".**



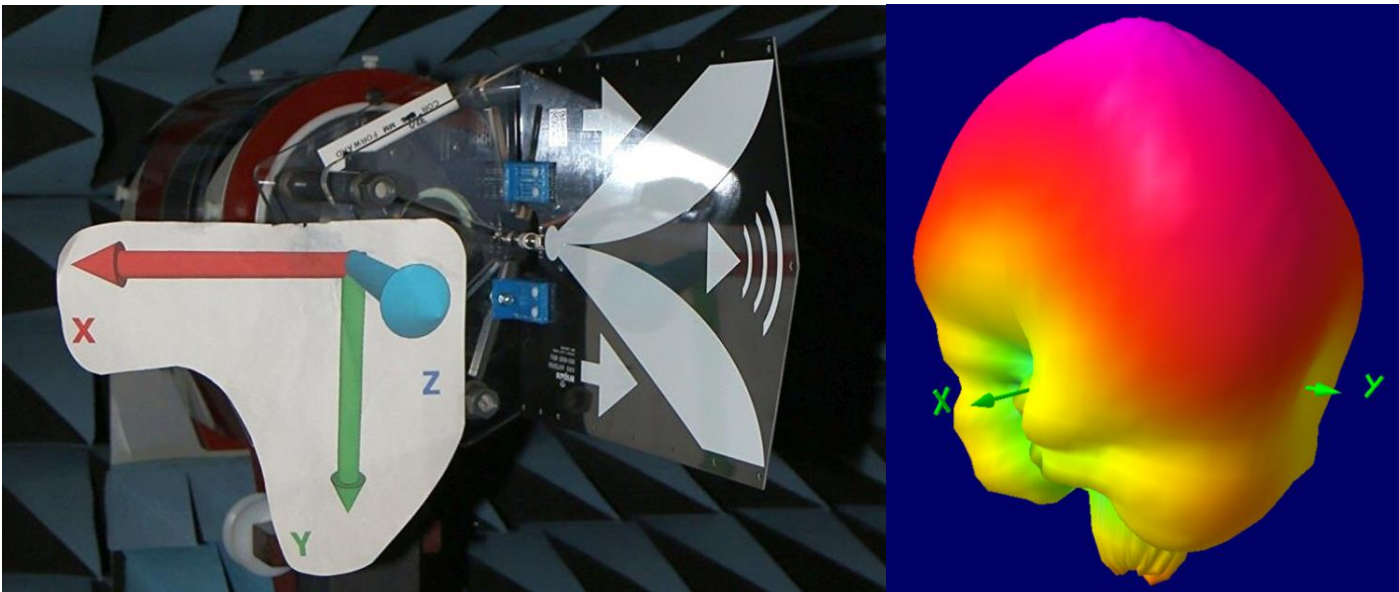


### Main Axis Realized Gain (dBi)





## Antenna patterns at 2.4 GHz, 4.0 GHz and 12 GHz



\*Image subject to change without notice

### Features:

1. Frequency support till 26.5 GHz.
2. 3D Positioner (with VNA interfacing for Automatic Measurement of 3D pattern, gain measurement, S-parameter etc).
3. Maximum load: upto 1.5Kg.
4. Azimuth rotation: 360 degree.
5. Elevation Movement will be 360 degree.
6. Ultra Low loss Testing cables.
7. 3D Visualization and Data Acquisition Software.



## Description:

Amitec is offering complete set of 3 D positioner & accessories required for antenna positioning for far-field pattern plotting. As against rotary tables which have been the common practice, we offer state of the art 3 D positioner for research and development & measurement in antennas. It provides freedom required for antenna pattern measurement. One is able to hold the antenna from the back lobe and rotate the antenna by 360 degree along horizontal plane for azimuthal measurements. Over 360 degree of rotation in vertical plane is used for elevation plane measurements. The stepper motor controlled rotator is controlled by PC using software provided. The data acquisition system software controls the axis motors and synchronizes the VNA to record the RF level corresponding to different angular locations. The data array is then used to synthesize the pattern in 3D for visualization as per IEEE norms. Low loss cables armored cables connect the Reference and test antennas to the VNA (provided by the customer). The system is able to interface to Keysight, R&S, Anritsu, Planar brands of VNA's. A pair of planar horn antennas with calibration charts complete the measurement setup for measuring the gain of the test antenna. Pyramidal absorbers are used to shroud the antenna rotator to reduce the radar cross section and reduce the induction in near field. This enables the antenna to be measured in near anechoic field and obviates the need for anechoic chamber for >50% of antenna measurements. For R&D a quick first pass of measurement is desired for faster iterations and emphasis is mostly on main lobe, gain, beamwidth, side lobe levels etc. Only when the need is to characterize these with a higher order of accuracy and <-20dB side lobe levels do we really would require an anechoic chamber.

## Technical specifications:

Antenna Mount	Full spherical 3D antenna mount with 26.5 GHz Frequency support
THETA/ PHI Start/ Stop Angle	0 to 360 degrees in 0.1degree resolution
Software	Full 3D Heat Map of with upto 12.9 million data points
Hardware Compatibility	Keysight, Anritsu, R&S, Planar VNA
Software Compatibility	MATLAB
Auto Mode	Single button operation with predefined Theta, Phi and resolution for data acquisition with motor synchronization and 3D visualization of antenna
Manual Mode	Custom Theta Start/Stop angle, and resolution Phi Start/Stop angle and resolution, with Auto stepping and Manual stepping
Power measurement	10MHz to 26.5GHz with dBm & 20 different units like dBfW, VRMS, dBfW EMF, uV, dBuW, dBfW PD, uV EMF, dBuW EMF, dBu, uV PD, dBuW PD, dBuV, W, dBpW, dBuV EMF, mW, dBpW EMF, dBuv PD, uW, dBpW PD, VPEAK, dBr on Touchscreen based TFT
Positioner Control	Software control via USB Cable
Loading Capacity	1.5 kg
Material Finish	Aluminum alloy
Radar Cross Section	Low Radar cross section -30dBsm
Microwave Cable	SMA-SMA cables 2m, 2-Nos
Absorber for Positioner	EM Lossy PU
Foam Pyramidal Reflection	-25dB @ 10GHz
Equivalent RCS	-20dBsm 1-18GHz