



Amitec Microwave Anechoic Chamber MAC20 Features:

- * EMI/EMC , Antenna & RCS Measurements
- * Low cost solution to anechoic chamber.
- * Reflected signal (reaching test zone) down by min -30dB with respect to direct signal.
- * Low RCS stand (FRP Rod and holding devices) to hold transmitting/ receiving antenna
- * Antenna under test / RCS measurement target stand on a stepper motor monopod with resolution of 1deg.
- * Five-side PU Foam absorber covered Aluminum Clad Frame.
- * Special corner block absorbers used.
- * PU Absorbers are high performance Pyramidal Microwave absorbers constructed using low density, flexible foam impregnated with carbon formulation.
- * Suitable type optimum performing absorbers at near normal/grazing incidences of extraneous signals used.
- * Specially shaped absorbers for transmitting and receiving (Pyramids for Transmitting and Wedges for receiving).

- * Custom tailored solution, other size boxes, anechoic rooms can be provided.
- * The pyramidal structure gives it the geometrical matching and carbon dispersed gives high attenuation
- * Suitable for 600 MHz to 20GHz and higher frequencies. Performance (Reflection Loss) at lower frequencies shall be deteriorated, like at 500MHz it will be -20dB only)
- * Fire retardant and Zero halogen.
- * Comprehensive Testing Validation report available

Areas of Application

- * Suitable for Microwave and Antenna labs.
- * Measurement of radio noise emission.
- * Making screens for hiding area of maximum reflections.
- * For obtaining Quiet zones in very wide frequency range.
- * Wedge shaped absorbers have maximum performance at grazing incidence angles.
- * Designed in view of requirements of educational institutes.
- * Necessary attachment for Antenna/Microwave Trainers
- * Accurate antenna pattern/RCS Measurements

Mfd by: Amitec Electronics Ltd.

Regd. Off: 504, Nilgiri, Barakhamba Road, New Delhi-110001
 Works: 4/32, Site-4, Industrial Estate Sahibabad, UP-201010
 amitec@amitecltd.com, www.amitecltd.com
 91-120-4371276, 91-9811839949, 91-9810193153





Amitec Dual Ridge Horn Antenna DRH20

Frequency Range	: 2-18GHz
Gain(Typ.)	: 8.5dBi
Polarization	: Linear
VSWR (Typ.)	: <2:1
3dB Beam width	: 52-24 degree
Net Weight	: 1.1Kgs
Connector	: N type Female
Mounting Bracket	: Aluminum right angled plates with screws

CSI Markers	
1	2.0001 2.00000 GHz
2	1.6860 6.00000 GHz
3	1.3602 12.00000 GHz
4	1.9296 18.00000 GHz

EXPERIMENTS

- * Square law characteristics of Microwave propagation
- * Polar Plots- E & H Plane
- * Cartesian Plots- E & H Plane
- * Vertical Plane Plots – Ground Plane effect
- * Directive gain, Front to back ratio of Antenna.
- * Side lobe Level and its Angular Position
- * Beam width – Half Power (3dB) & 10 dB
- * Frequency Bandwidth of an Antenna
- * Study RF reflection loss and absorption loss properties of some sample absorbers

Windows Software:

Rs232 interface with polar plotting software with log, linear cartesian and polar plots, Multiple pattern overlay, Double cursor measurement, Zoom, Colour editing, 1000 location editor, Absolute/Relative, 3dB/10dB beam-width

Technical Specifications:

Amitec Anechoic Chamber

Dimensions	: 1.2mX1.2mX1.2m X2 nos
Absorber	: EM Lossy PU Foam Pyramids
Reflection	: -40dB @ 10GHz
Fire retardancy	: As Per NRL USA-8093 Standard complying Tests No.: 1,2 and 3 with ZERO HALOGEN MEANS.

Shielding	
Effectiveness	: 40dB from 2-18 GHz, 50dB 0.5-2 GHz
Quiet zone	: -40dB
Equivalent RCS	: -30dBsm 2-40GHz

Amitec Stepper Motor Controller Unit - 2 Nos.

Display	: 16X2 backlit LCD for angle
Rotation	: 0-359 degrees
Resolution	: 1 degree
Angular steps	: 1, 5, 10, 45 degrees
Memory	: 1000 angular position store/recall
Auto mode	: Automatic rotation with receiver
Mode	: CW/CCW rotation, Fast/Slow speed
Power Supply	: 100-240V AC, 50-60 Hz

Accessories :

- Two stepper motor controlled non radiating monopods for rotation of transmitting & receiving Antenna
- All necessary connectors and cables
- * SMA - N Adapters - 2 Nos, N-N right angle adapter -2 Nos
- * 3m Low Loss SMA-SMA cables - 2 Nos.

Antenna Types :

1. Ridged Horn 2-18GHz DRH20 - 2 Nos
2. Dipole - 2 Nos.
3. Log Periodic - 2 Nos.
4. Biconical

E-Manual: Installation Video for ease of Learning

Dimensions: 1.2m X 1.2m X 1.2m - 2 Nos. Weight: 500 kg.

Warranty: 3 yrs

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