

COMSAT SYSTEMS PVT LTD

1.2 M Ku BAND FLYAWAY ANTENNA SYSTEM

General Description:

M/s.Comsat Systems designed Flyaway Antenna System.

The basic features are:

- Quick Deployment.
- 1.2 Mtr Ku Band.
- Pre-assembled Tripod Base Mount.
- Polypropylene/ Plastic/ Aluminum cases for easy transportation.
- Carbon Fibre Reflector in 2 pieces.
- Feed boom can take outdoor units.
- Screw type leveling feet, for leveling the Azimuth plane.
- Motorised Azimuth and Elevation adjustments.
- Az and El Gear boxes.
- 20 minute setup.

SYSTEM OVERVIEW

The 1.2 M Ku band System consists.

- 1.2 M Carbon Fibre Reflector in 2 pieces.
- Ku band Feed.
- Telescopic Tripod Base Mount
- Sturdy Feed Boom
- Self leveling Mount for uneven Surfaces.
- Az and El Gear Boxes
- Azimuth and Elevation Motors for easy adjustment.
- 20 Minutes setup.
- Aluminum / Plastic / Polypropylene Carrying Cases.
- Spirit Level for adjustment.

SYSTEM OPERATION

- Open the Carrying Cases. Take out all the equipments.
- Install the preassembled Tripod box mount on the surface.
- Assemble the Azimuth and Elevation Drive to the Tripod Mount.
- Level of Az – El Mount with spirit level using the leveling screws in the Tripod Base Mount.
- Assemble the reflector pieces and fix them to elevation arms of Az – El mount with fastness.
- Assemble feed supporting pipe to the reflector at the bottom of the reflector.
- Assemble the feed & Transceiver to the feed supporting pipe on the bracket.
- Connect the Modem to Transceiver.
- Operate the Az & El Switches to point the Antenna to the Satellite based on the LAT / LONG data.
- Peak the signal by fine tuning the Az / El Drives.

Specifications

SI.No	Parameter	Specifications
Mechanical		
1.1	Reflector Size	1.2 Mtr.
1.2	Reflector Type	Offset
1.3	Reflector Material	Carbon Fibre – 2 Pcs
1.4	Optional Steerability	Motorised
1.5	Azimuth Adjustment	0 to 360°
1.6	Elevation Adjustment	0 to 90°
1.7	Polarization Adjustment	Full Rotation
1.8	Angle Markings	Engraved angle marking for Azimuth and Elevations axes, to the accuracy of ± 1 deg.
1.9	Antenna Mount	Antenna mount is rugged and light weight. The erecting and pointing operation is very simple and easy. The antenna can be setup and peaked by two people in about 15 to 20 minutes.
1.10	Plating /Painting	All the parts are plated /painted with suitable weather resistant plating/painting and also scratch resistant.
1.11	Wind Speed	Operational: 70kmph
1.12	Temperature	-20 to 50 deg C
1.13	Humidity	95% at typical outdoor Temperature (35deg C)

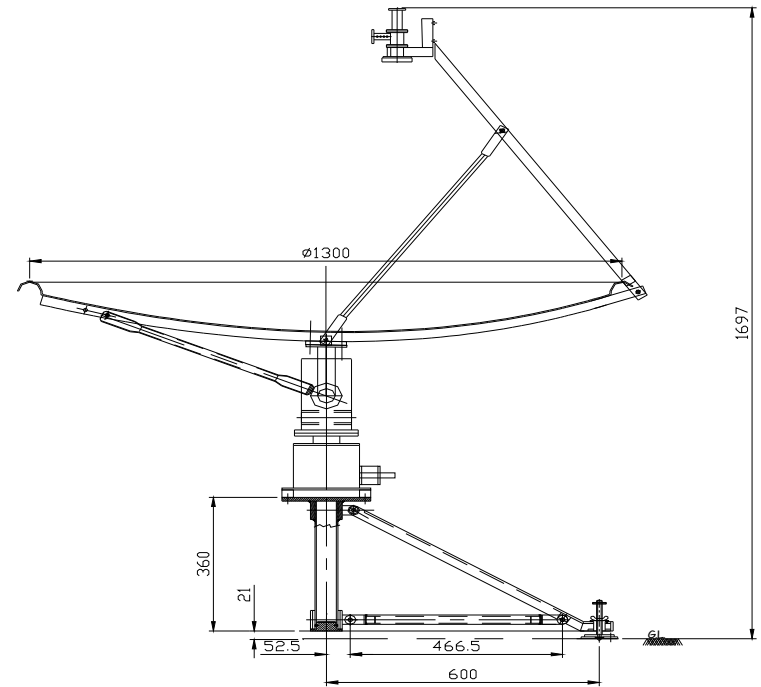
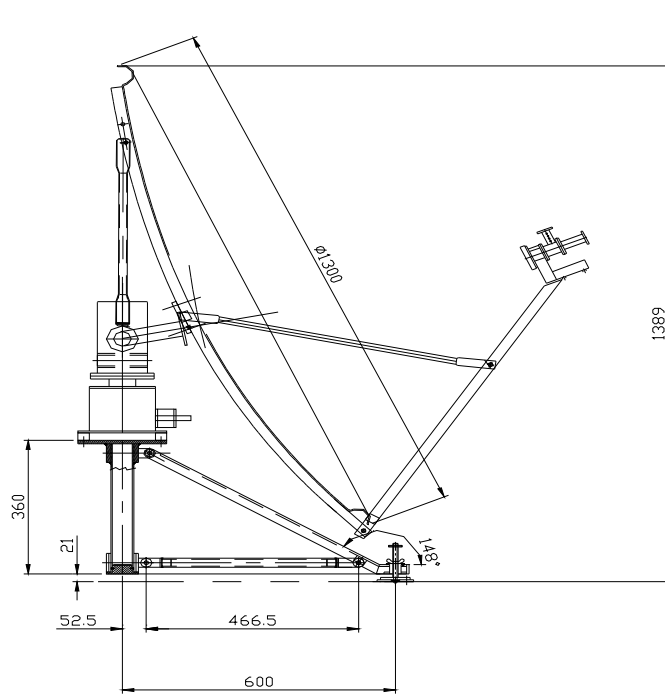
1.14	Rain	100 mm/hr
1.15	Atmospheric Conditions	Can resist: salt, pollutants and other contaminants encountered in coastal/marine, industrial and other city/rural areas.
1.16	Vibrations	The antenna systems will with stand the vibrations encountered during the transportation on Indian Rural Roads.
1.17	Weight	Max Weight is 35 Kgs.
Electrical		
1.18	Type of Antenna Feed	Offset
1.19	Frequency Band	Ku Band
1.20	Transmit Frequency	14.0 to 14.5 GHz
1.21	Receive Frequency	10.95 to 12.75 GHz
1.22	Antenna Size	1.2 Mtr
1.23	Antenna Gain (Mid Band)	
	Transmit	42.5 dBi
	Receive	41.0 dBi
1.24	Radiation Pattern	Confirming to CCIR 580-5
1.25	Feed RF Interface	

	Transmit	CPR-75 Waveguide Flange or as applicable
	Receive	CPR-75 Waveguide Flange or as applicable
1.26	VSWR	1.3 : 1
1.27	Polarization	Linear Orthogonal, Orientable
1.28	Cross Polarization Discrimination	Better than 30 dB

CARRY CASE FOR THE ANTENNA

2.1	It is rugged and will withstand the transportation bumps and vibration on Indian Road conditions.
2.2	Each box loaded with materials will not exceed 35 kgs.
2.3	The system is completely rain proof
2.4	Systems has proper cushioning for Shockproof Transportation
2.5	System is designed for daily application, hence the body and mechanisms will sustain.
2.6	The boxes will be provided (if mentioned) space with cushioning for accommodating RF equipments like BUC, LNBC, Satellite modem, IFL cables and Tools.
2.7	Each antenna system will be accompanied with one set of tools required for assembling and peaking the antenna, including compass and inclinometer.
2.8	Maximum number of boxes is 2 (two).

2.9	Each box is having locking mechanism - external
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MACHINING FINISH IN MICRONS	
▽ +6.3	▽▽ 16 - 6.3
▽▽▽ 0.2 - 1.6	▽▽▽▽ 0.2

DEVIATION FOR NON-TOLERANCKED DIMENSIONS - IS 2102-MEDIUM	
DIAMETER AND LENGTHS	
UP TO 1 INCL. 6	- 0.1
6 - 30	- 0.2
30 - 120	- 0.3
120 - 300	- 0.5
300 - 1000	- 0.8
1000 - 2000	- 1.2
2000 - 3000	- 1.5
3000 ABOVE	- 2.0

- 1) ALL DIMENSIONS ARE IN MILLIMETERS, UNLESS OTHERWISE SPECIFIED.
- 2) DO NOT SCALE THE DRAWING AS PER INQUIRY.
- 3) REMOVE SHARP EDGES, BURRS, SLATERS AND WELD-DRIK.
- 4) CHAMFER 1mmx45°.
- 5) THESE DRAWINGS AND INFORMATION THERE IN IS THE SOLE PROPERTY OF CSPL, AND MUST NOT BE COPIED, USED, REPRODUCED OR TRANSFERRED WITHOUT THE WRITTEN PERMISSION OF CSPL.

	NAME	SIGN	DATE	SCALE	WT. (Kg)	MATERIAL	QTY.
DRAWN	NARESH		21.08.2009	NTS		---	1
DESIGNED	M.S.R		21.08.2009				
CHECKED	M.S.R		21.08.2009				
APPROVED	P.V.S		21.08.2009				



COMSAT SYSTEMS PVT. LTD.,
HYDERABAD - 500 076

TITLE		DRAWING NUMBER	SHEET
1.2m FLY AWAY ANTENNA		SK-991	1
			1

Z/D: DRAWINGS/1.2M FLY AWAY ANTENNA

SIZE-A3