



## DriveNews™ PKM-120

### Drive-Away Antenna System

The Pals DriveNews™ series Antenna Systems are specifically designed to meet all your requirements for Vehicle mounted antennas with a concept of "Go Anywhere with High Performance".

The DriveNews™ PKM-120 is a fully motorized Gregorian offset Antenna System with a 1.2m dual optic reflector and a POD (Shell) for protection against weather influences and to improve vehicle performance.

The PKM-120 Antenna System includes the by PALS specifically shaped, high performing 1.2m Gregorian offset feed antenna in Dual Optic configuration. The precision-made and accurate glass fiber reinforced polyester Reflector surface, combined with the Dual Optic design provides remarkably low side lobes and excellent cross polar performance with the specially designed feed-horn system.

The lightweight construction and compact installation on top of any kind of Vehicle makes it the ideal choice for fast Newsgathering (SNG) for broadcasters and VSAT applications; These can be Disaster Relief Emergency Communications, Corporate Networks, Military satellite communications)and many others.

Our PALS In House Engineering and Manufacturing team, under strict ISO9001 control, designed an Antenna with a specific lightm weight Antenna mount. It has a trim axis positioner which provides full Antenna rotation and is entirely Backlash free in Elevation, Azimuth and Polarization axis.

PALS optionally provided Satellite Auto Acquisition system Package is designed to operate with Minimal training. The Extreme ease and Acquisition Speed will guarantee you will not miss any Event and News opportunity. This PAC-450 Auto Acquisition System has the "One Touch" operation feature for an immediate and Reliable broadcast or Data communication setm up under any conditions in the field.



The perfectly shaped POD (Outer Shell Casing) improves Aerodynamic vehicle driving to quickly and safely reach the Event location, while it also provides weather protection for the Outdoor Electronic Equipment such as BUC and Transceiver.

#### Key Features

- Fully compliant with satellite operator specifications.
- Glass Fiber reinforced polyester One Part design of Reflector and Sub-reflector.
- Extended Ku-Band operation
- 3- axis motorized pedestal with built-in manual drive gear system in case of emergency use.
- Easy and fast antenna deployment and operation with a single touch smart button.
- Aerodynamic POD design for improved vehicle performance, safe driving, and housing for outdoor electronics.
- Vehicle battery motor control through ACU in case of electricity problem.

#### Options

- Satellite Auto Acquisition positioning package for fully automatic satellite Acquisition and Pointing including Inclinometer, Electronic compass GPS receiver and PALS Auto-positioning Software.
- Remote Control Panel
- Satellite tracking (Step track, Intelligent Track™)
- Remote Control SW for in-vehicle Windows based PC

## Technical Specifications

<b>General</b>	
Model	DriveNews™ PKM-120
Antenna Type	Gregorian, Dual Optics offset reflector.
Size	1.2 meter
Antenna Material	Glass fiber reinforced polyester
Polarization	Linear, orthogonal transmit and receive
Cross polar performance	>35dB within 1dB beamwidth
Antena Noise Temperature	21°K@20° elevation
Total RF power	1.0 kW
Radiation pattern	$1^\circ \leq \theta \leq 7^\circ$ : 29 - 25 log $\theta$ dBi $7^\circ \leq \theta \leq 9,2^\circ$ : 8 dBi $9,2^\circ \leq \theta \leq 48^\circ$ : 32 - 25 log $\theta$ dBi $\theta$ $> 48^\circ$ : -10 dBi
Port to port Isolation	Tx to Rx 80dB
<b>Transmit</b>	
Frequency Band	Tx 13.75 - 14.50 GHz
Transmit Gain	42.5dBi @14.25 GHz.
Transmit Power	1kW max.
VSWR	1.3:1
DSNG EIRP	67 dBW with 400W TWTA
<b>Receive</b>	
Frequency	Rx 10.70 - 12.75 GHz.
Receive Gain	41.8dBi @12.5 GHz.
<b>Mechanical Characteristics</b>	
Antenna Position	Full 3-axis motor control with manual override mechanism.
Azimuth adjust.	$\pm 180^\circ$
Elevation adjust.	up to $90^\circ$
Polarization adjust	$\pm 115^\circ$
Speed of rotation	AZ/EL/POL slow 0.3°/sec, mid 1°/sec, high 1.7°/sec,
Weight	93 kg without POD (Shell) and 130 kg with POD (Shell)
<b>Antenna Control (with PAC-450 Antenna Control System)</b>	
Deploy and stow	Automatic, by "one touch" command through Antenna Control Unit.
Satellite acquisition & Autopointing	Automatic with optional antenna positioning kit (DVB Receiver, Fluxgate Compass, GPS receiver, Autopointing SW)
Antenna Sensors	True elevation and azimuth with high precision (16 bit) size-11 type resolvers.
<b>Environmental Specifications</b>	
Ambient temperature	Operational: -30°C to +60°C
Operational Wind speed	Up to 70 km/h

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