



ATTITUDE HEADING REFERENCE SYSTEM (AHRS)

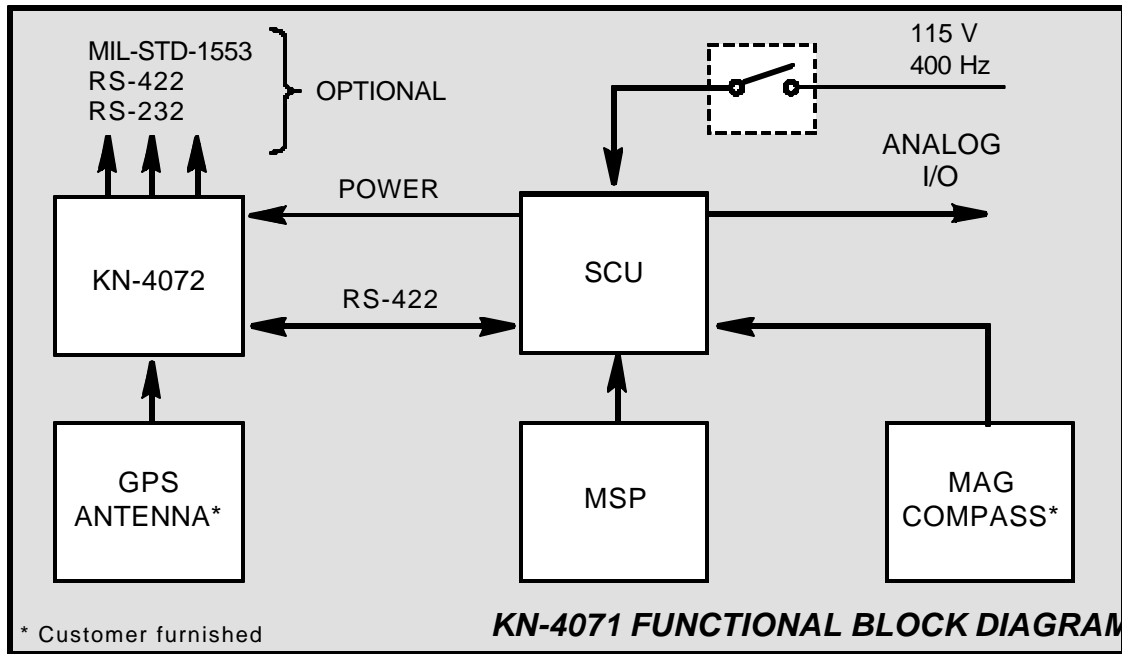


Kearfott's state-of-the art highly reliable integrated GPS/INS, when integrated with a Mode Select Panel, a Signal Conversion Unit (SCU) and a standard Mag Compass provides the user with high performance attitude and gyro stabilized heading outputs. The multiple analog heading and attitude outputs, can be used to drive cockpit indicators, flight directors or weapon computer elements of the avionics system.

In a special "Enhanced" mode of operation, improved accuracy heading $.25^\circ$ and attitude $.15^\circ$, are achieved with the use of an embedded C/A code GPS receiver, which is used to fine-tune the resident Kalman filter in the GPS/INS unit.

Future growth to full navigation can be realized by the use of the digital output available from the integrated GPS/INS (KN-4072) and incorporation of multifunction display while keeping the analog outputs available for residual analog devices retained in the cockpit or the flight director.

The three Line Replaceable Units (LRU's) pictured above are the functional equivalent of the Smith's A6000 AHRS. The KN-4071 interfaces with the standard Mag Compass normally provided by the user, as shown in the block diagram.



SPECIFICATION

POWER	115 Volts 400 Hz Single phase 90 VA max.
OUTPUTS	4 Heading; 3 Pitch; 3 Roll
<ul style="list-style-type: none"> Analog (Synchro Transmitters) (3 wire, 11-8 V L-L) Digital (Optional) 	MIL-STD-1553, RS-422, RS-232 <ul style="list-style-type: none"> Position Velocity Attitude Heading
COOLING	Free Convection
SIZE	GPS/INS 9.5 x 5.4 x 6.1, SCU 10.1 x 4.5 x 6.4, MSP 5.8 x 3.4 x 1.5
ENVIRONMENTAL REQUIREMENTS	
<ul style="list-style-type: none"> Altitude Temperature 	-1,500 ft to +50,000 ft -40°C to +71°C
OPERATIONAL MODES	PERFORMANCE
<ul style="list-style-type: none"> Compass – Direct Mag Output Slaved Mode – Gyro Stabilized Mag Output Gyro Mode – Compensated Directional Gyro Enhanced Mode – GPS Ground Track Aided Gyro 	±0.7° typical Heading: ±0.5° of MAD Attitude: ±0.25° Heading: ±0.5°/h Attitude: ±0.25° Heading: ±0.25° Attitude: ±0.15°
MTBF	2,000 hours

Please contact Kearfott Marketing at (973) 785-6075 or FAX at (973) 785-5905, for further information, including other air products: Sensor Packages, Gyroscopes, Inertial Measurement Units, Air Data Computers, Displays, CDU's, Flight Control Systems, Display Processors and Mission Computers.

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