# ECHORI





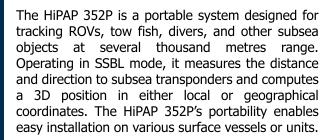
HIPAP® 352P

PORTABLE HIGH PRESICION ACOUSTIC POSITIONING

The HiPAP 352P is a portable system designed for tracking ROVs, tow fish, divers, and other subsea objects at several thousand metres range. Operating in SSBL mode, it measures the distance and direction to subsea transponders and computes a 3D position in either local or geographical coordinates.

# **Integrated Motion Sensing**

Featuring built-in motion sensors, the HiPAP 352P compensates for the vessel's roll and pitch movements, enhancing positioning accuracy. Models such as HiPAP 352P-H and HiPAP 352P-5 incorporate MRU-H and MRU-5 motion sensors, respectively. These models require no calibration for roll and pitch alignments but do need to be calibrated in alignment with the vessel's gyro compass. Meanwhile, the HiPAP 352P-MGC combines a motion sensor and a gyro compass, completely eliminating the need for roll, pitch, and heading alignments calibration.



Its operator station, APOS, offers a full range of functions for acoustic positioning and data communication, while the system itself benefits from the Cymbal acoustic protocol. Designed to accommodate a wide range of transponder channels and cNODE models, the HiPAP 352P excels in performance up to depths of 4000 meters.





### **TECHNICAL SPECIFICATIONS**

Transducer

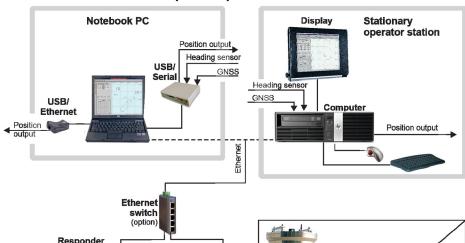
MAX. OPERATING TEMPERATURE IN AIR AND WATER	35°C
STORAGE TEMPERATURE	-40°C to +70°C
DEPTH RATING	50 m
VIBRATION RANGE	5-100 Hz
VIBRATION EXCITATION LEVEL	5-13.2 Hz ±1.5 mm, 13.2-100 Hz 1 g

### System Accuracy

MODEL	352P-H	352P-5	352P-MGC	
MOTION SENSOR (°)	0.05 Range ±180°	0.02 Range ±180°	0.01 Range ±180°	
HIPAP ONLY (°) S/N [dB Rel. 1μPa]	0.1	0.1	0.1	
TOTAL (°), (1 σ)	0.11	0.1	0.1	
% OF SLANT RANGE (1 $\sigma$ )	0.19	0.17	0.17	
RANGE ACCURACY, CYMBAL [m]	0.02	0.02	0.02	
RECEIVER BEAM [°]	15			
OPERATIONAL COVERAGE [°]	±90			
MAIN COVERAGE [°]	±80			

### SYSTEM OVERVIEW

## Optional operator stations





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