

## Miniaturizing the Chaparral Model 2 Infrasonic Sensor

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The versatility of the Chaparral Model 2 infrasonic sensor lends itself to multiple integration applications; however, the sensor's form factor doesn't support certain integration applications where size and weight considerations are critical. In an effort to meet these added requirements, the Chaparral Model 2 infrasonic sensor has been redesigned from the bottom up. The Chaparral Model 7's new sensor package has a precision-made aluminum casing with increased package strength. The sensor package also doubles as the backing volume, thereby providing a more stabilized sensing capability in volatile environments. The sensitivity switch has been relocated to an external area easily accessible to support rapid changes for experimentation and/or operations in the field, thereby virtually eliminating the need to open the sensor package under inhospitable conditions. A removable data/power cable also is provided. Chaparral Model 7 has adjustable leg supports designed to ensure optimum clearance when emplaced. This gives users flexibility in using the default height (3-inches), using the user configurable heights to meet variable environmental conditions, or not using the legs at all - allowing for easy integration into other systems. The Chaparral Model 7 maintains the Model 2's pass band from 0.1 to 100 Hz, but is factory configurable to 400 Hz - enabling sensing in both the infrasonic and low acoustic bands. The Model 7 is also configurable for 12-volt DC applications with reduced sensitivity as the trade off. The sensor's new form factor, reduced dimensions (less than 2.5 inches OSD and under 1-pound), and optional calibration adaptor (for use with the Chaparral Portable Piston-phone) lend the Chaparral Model 7 to a multitude of infrasonic and low acoustic applications not previously suited to the Chaparral Model 2 infrasonic sensor.

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