

RECHARGEABLE TELEMETRY SYSTEM

ATTACHES TO SHAFTS FOR ROTATING MEASUREMENTS

FEATURES

- Transmits Signals via Radio Telemetry Link to a Stationary Receiver.
- No Shaft Modifications required.
- Collars available for most any shaft size.
- Single Piece or Split Transmitter Collars mount directly to shaft or rotating equipment.
- No Slip Rings or moving parts
- Quick and easy user installation.
- Remote Shunt Calibration.
- Turn-key systems available. Send us a shaft and we will instrument it for you. NIST traceable calibration supplied
- Multi-Channel Systems Available.



Model 2110RB Telemetry Collar (with Model 2140 Miniature Strain Gage Transmitter installed) shown with Model 2125B Portable Telemetry Receiver

Telemetry System Converts Rotating Shafts into Sensors

(Suitable for Axles, Drive Shafts, Half Shafts, Prop Shafts, or any Rotating Equipment)

ATI's new Rechargeable Telemetry System offers more performance and features while providing solutions to common shaft mounted obstacles. Separate but simultaneous data and status signals allow a variety of control functions independent of the **high quality data stream** ATI is known for. Battery power means lower noise floors, more versatile installations, no active power generation or tuning.

The newly designed 2140RB Series Transmitters feature a **contoured profile, which reduces radial and axial clearances required for installation.** Transmitters are available for any type of measurement. Transmitter **operation is remotely controlled** from the 2125B Receiver, limiting the need for access to set switches or make DMM measurements.

Manufactured from Fiberglass composites, the **2110RB Telemetry Collars** can be used to house the transmitter and battery for easy installation. Collars require **only 0.65" (16.5mm) radial and 2.5" (63.5mm) axial clearance** allowing them to be placed almost anywhere on the shaft. Single or multi-piece collars

mount to the rotating part and transmit the signal to a stationary receiver.

The **2140RB Miniature Strain Gage Transmitter** can be connected directly to strain gages adhered to a shaft, **converting it into a torque sensor.** Since the system is wireless, it can transmit shaft torque **while the shaft is turning.** Often used as a testing tool by automotive and racing engineers to obtain real-time torque measurements from vehicle drivelines; the system can be installed on most any size shaft and is completely field installable by the end user.

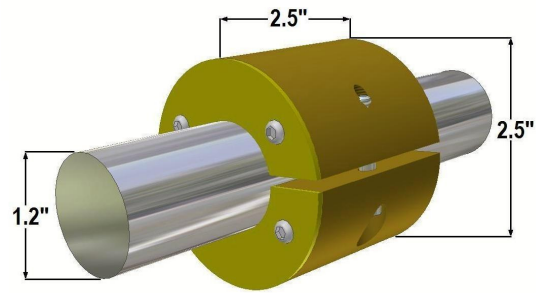
A **rechargeable Li-Ion battery pack** supplies power for about **25 hours of continuous run-time** to the transmitter. The system comes with a spare battery pack and charger, so that power is always available.

The **Model 2125B Receiver** features a new programmable, multi-function, digital backlit display. Transmitter mode (On/Sleep/Off) and remote calibration (+/-) are selected from menu based display. The receiver can be powered from 12 VDC or 120 VAC and provides an analog output for use with any data acquisition system.

Specifications

SYSTEM

Bandwidth: Wide Band DC to 1100 Hz
 Filtered DC to 100 Hz
 Integral Non-Linearity $\pm 0.10\%$
 Repeatability $\pm 0.05\%$
 Maximum Error $< 0.25\%$ Full Scale



RECEIVER: Model 2125B

Power 120 Volts AC
 and 12 Volts DC
 Output 0-2, 5, 10; $\pm 2, 5, 10$ VDC
 (4-20 mA Optional)
 Display Multi-function Digit Backlit
 Output Ripple < 2 mV (Filtered)
 < 15 mV (Wide band)
 Size 5.5"L x 4.2"W x 2.5"H

MINIATURE TRANSMITTER COLLAR: Requires only 0.65" (16.5mm) radial and 2.5" (63.5mm) axial clearance!

Power Rechargeable Li-Ion Battery Pack
 Zero Drift 0.02% / Deg C
 Span Drift 0.02% / Deg C
 Operating Temperature Range -40°C to 140°C

Model	Transmitter Type	Dimensions inches (mm)			Input	Excitation
		H	W	L		
2140RB	Strain Gage	0.4 (10.2)	1.0 (25.4)	2.15 (54.6)	4 arm Wheatstone Bridge (>120 ohms)	5 Volts DC
2141RB	Voltage				± 50 mV to 10 Volts Full Scale	5 Volts DC
2142RB	Thermocouple				Type J or K Thermocouples, Specify Measurement Range	--
2143RB	Acceleration				Compatible with most ICP type accelerometers	1mA constant current
2144RB	Thermistor				Thermistor	5 Volts DC
2145RB	RTD				100 Ohm Platinum RTD – 3 Wire	≈ 2 mA or Tuned to Mfr. Spec.

Standard Features:

- Remote Calibration
- Remote Power Activation
- Two rechargeable Lithium-Ion Battery Packs
- Programmable Multi-Function Display
- Analog outputs
- Up to 25 hours of continuous run-time
- Up to 5 months in sleep mode
- Integrated charge / discharge control and protection
- Selectable Engineering Units

Turn-key systems are also available!

Send us a shaft. We will instrument it, install the telemetry components, calibrate it and ship it back to you complete with NIST traceable Certificate of Calibration.

Custom Collars are available for most any shaft size. Multiple transmitters can be housed in one collar.



Multi-channel Receivers available when multiple torque measurements are required; such as with 4-wheel drive vehicles.

