

**Ref: FAQ0289****Version: 1.0****Title-Radcom loggers- incorrect pressure****Made By: AB 21/09/15****(Issue 2)**

Radcom Data loggers – internal pressure transducer inaccuracy

The Pressure Transducer in the logger has inside it a circular ceramic diaphragm supported around its edge. On one side the water under pressure pushes against it. On the other side there is a 'wheatstone bridge' resistance network printed on the ceramic disc. As the pressure changes so does the shape of the disc (it distorts) which changes the electrical properties of the resistance network and hence the output voltage. It is by calibrating this device to the logger that the electrical outputs are converted into pressure readings which are logged. The readings are taken every 15 to 20 seconds.

There are two ways pressure readings can be inaccurate –

1. the atmospheric pressure changes and the zero point moves – this can be corrected by re-zeroing the transducer – see FAQ0219
2. the water pressure has exceeded the capability of the ceramic disc and damaged it – this can happen when water pressure transients occur either naturally or as a result of pumps or valves suddenly acting causing pressure waves. Two things happen – either the disc distorts past its recovery point and then continually gives pressure readings higher than actual; or the ceramic disc cracks or fractures allowing water into the logger – this will stop the logger permanently. If the transducer is damaged the logger must be returned to our Service department to be repaired and recalibrated.

Document History:

Edition	Date of Issue	Modification	Notes
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2nd	21/09/15	Format update	