



**DepthCalibrator
WDC-40BC
V1.0**



1. Introduction	3
2. Working principe.....	3
3. Setup.....	4
4. Specifications total setup.....	4



1. Introduction

MGB-Tech's DepthCalibrator exists out of two parts. One part is the actual measuring equipment, the other the operational unit which will show an accurate depth to the user.

The two devices communicate with each other over a wireless link.

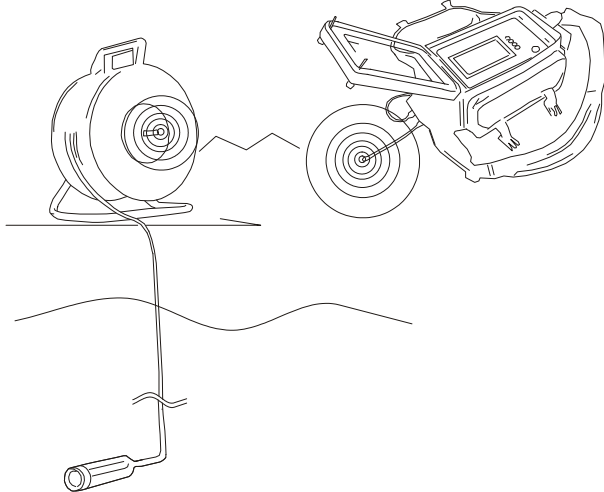
The two parts of the DepthCalibrator reside on their own and can be combined in other configurations. For this reason we give a brief description how the two parts can be combined, how they work together and how their setup is supposed to be. Summarising their combined specifications in the end.

Each part has it's own detailed manual, which are for this DepthCalibrator configuration the OperationalUnit manual and the DataAquisitionUnit manual.

2. Working principle

MGB-Tech uses pressure systems to calculate depth. The DataAquisitionUnit comes with two sensors. The first is the underwater pressure sensor, the second an atmospheric sensor. Both sensors are read with an accurate A/D convertor by the DataAquisitionUnit. This data is successively send to the OperationUnit, which will then calculate the depth of the underwater sensor. Simplified, the depth is derived from the pressure difference between the two sensors.

3. Setup



1. Before starting ensure that batteries are charged.
2. Install the AcquisitionUnit on a sturdy location and keep the OperationUnit at hand.
3. Turn both the units on and wait until the OperationUnit has initialized and shows a steady connection.
4. Perform all the necessary settings in the OperationUnit.
5. Activate the calibration method on the OperationUnit and perform actions displayed.
Note: be sure to keep the sensor out of the water at all time during calibration.
6. Lower the sensor to the required position and read the depth from the OperationUnit.

More detailed information can be found in the manuals of the modules.

4. Specifications total setup

- Depth range : 0 tot 30m
- Statistic accuracy: +/-0.1% FSL
- Temperature range: -20 to +60 C
- Communication range (line of sight) : minimum 1000m
- Combined uptime : 10 hours
- Automatic temperature compensation
- Dual battery pack
- Combined charge circuit
- Frequency : 869,525 MHz
- Bandwidth : 100 kHz