

## Instructions for KIT 4

### SET-UP AND OPERATION OF EDM (Electromagnetic Distance Measurement)

#### Horizontal Jumps

**Preliminaries:** Ensure all batteries are put on charge well before the meeting.

#### 1. For Long and Triple Jump

a) **Location:** Must give a clear and complete view of the landing sand pit and take off board.

b) **Assembly and Levelling:**

- i. Ensure tripod is set firmly into the ground at a convenient working height for all users with top plate as level as possible (use spirit level).
- ii. Fit tribrach, making sure securing screw is tight and base cannot move.
- iii. Level Tribrach, use two foot screws to centre bubble between them then adjust remaining screw to centre bubble in bubble-level.
- iv. Fit geodimeter on tribrach (power socket goes in recess), lock tribrach in place.
- v. Adjust for parallax - hand in front of telescope and check hairlines are sharp, adjust lens as necessary.
- vi. Connect external batteries or mains power source (if used).

**TO POWER SOCKET ON TRIBRACH, NOT KEYPAD.**

c) **Setting up the Instrument:**

- i. Turn power on.
- ii. Either press **YES (enter)** to continue if already set up or **NO (←)** for machine to go to set up.
- iii. Check level on display - if necessary carefully adjust on tribrach foot screws to centre both index marks [*Prolonged adjustment will force return to c) i.*], and press **ENTER (Yes)**.
- iv. Machine will perform self checks and rotate around then rotate back again.

**Note:**

- v. Enter approx. temperature, press **ENTER (Yes)** (*it may be necessary to press 'ENTER' twice*).
- vi. Enter approx. atmospheric pressure, press **ENTER (Yes)** (*it may be necessary to press 'ENTER' twice*).
- vii. Enter prism constant **Offset = 0.00**, press **ENTER (Yes)** (*it may be necessary to press 'ENTER' twice*).
- viii. Enter **HA ref = 00.00.00**, press **ENTER (Yes)**.

- ix. Press **PRG 24**, then enter
- x. Enter Job No. '1', press **ENTER(Yes)**. Instrument reads: **IMEM**  
**EXMEM**  
**SERIAL**
- xi. Ignore, press **ENTER(Yes)**.
- xiv. Screen shows :       **1 Known Line**  
**2. Unknown Line**
- xv. **Select 2**
- xvi. Screen shows **STN = 1**               - **press YES**
- xvii. Screen shows **HT measure?**       - **press YES**
- xviii. Screen shows **Ih = 0**               - **press YES**
- xix. Screen shows Ref. line point A  
**Pno =**               - **Enter 1, press YES**
- xx. Screen shows **SH = 0.000**       - **press YES**
- xxi. Screen shows **STD**  
**HA**  
**VA**
- xxii. Focus on prism on one end of take off board   - **Press A/M**
- xxiii. Instrument shows “measuring”, when finished - **Press Reg**
- xxiv. Screen shows Ref. line point B  
**Pno =**               - **Enter 2, press YES**
- xxv. Screen shows **SH = 0.000**       - **press YES**
- xxvii. Screen shows **STD**  
**HA**  
**VA**
- xxviii. Focus on prism on other end of take off board - **Press A/M**
- xxix. Instrument shows “measuring”, when finished - **Press Reg**
- xxx. Screen shows       **Dist A – B =**  
**Start = 0.000**               - **Press YES**
- xxxi. Screen shows       **1. Measure**

**2. Setout**

**3. Exit**

- **Select 1**

- xxxi. Screen shows **Slope = xx.xxxx** - **Press YES**
- xxxii. Screen shows **SH = 0.000** - **Press YES**
- xxxiii. Screen shows **STD**  
**HA**  
**VA**

**Set-up is finished.**

**d) Taking Measurements.**

- i. For a measurement, focus on the prism.
- ii. **Press A/M**
- iii. Screen shows      ?????????? = .....  
                                  ?????????? = .....  
                                  **RT of s**    = .....  
                                  ?????????? = .....
- iv. **Read RT of s** - This is the distance and may show as negative.
- iv. For the next jump just focus on the prism and press A/M again and so on.
- v. Immediately before and after the competition, confirm the instrument accuracy on two pre-measured check marks at either end of the pit and at the centre of the take-off board (this last one should of course read zero)
- vi. Helpful hint:- Refocus on the centre of the pit between jumps to minimise change when measuring.