

# TOTAL STATION HANDLING

## Primary handling guideline : Traverse Distance and Angular Measurement

<b>MANUAL BOOKING (EDM mode)</b>	<b>TOPCON-TS model</b>
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### Steps

- 1 Centering and leveling of **TOTAL STATION** on the ground Station = same steps as Theodolite set up.
- 2 Record the instrument height (HI) and pole height (RH) of Station **A & B** ( if RL computation is required).
- 3 Keep the instrument in **Left Face** and sight the **back sight Station BS** (reference line) suppose **A**.
- 4 Press the **Power On** key on key pad. Normal mode (**Angle mode** ) will display.
- 5 Press function key **F1 (O SET)** for **Hz Ang (HR) zero set**.
- 6 Press function key **F3 (yes)** to confirm zero set.
- 7 Collimate the telescope at prism & press **distance measure key**  on key pad.
- 8 Record the **horizontal distance HD** (and vertical dst  $\pm$  VD if required)
- 9 If you press again  measure key , slope distance will display (not required to record). After **recorded horizontal distance HD and vertical dst  $\pm$  VD**, press the **Angle Mode key** to stop distance mode.
- 10 Turn the telescope towards the **Station B** & coincide at pole & prism.
- 11 If the power is already on, distance measurement will immediately start (if the option is set to same way). If the power is already off, press power on key, normal mode will display, then press distance measure key  then record the given **Hz Ang= HR, Hz Dst= HD and (vertical dst  $\pm$ VD if required)**.
- 12 Turn the telescope **Right Face** and sight again at **Station B** to Reflector pole.
- 13 If the power is already on, the **step-11** will repeat immediately. The **Hz Ang (HR)** will result by **+180°**. If the power is already off, press the power on key, **record Hz Ang (HR)** and press distance measure key  on keyboard to repeat the work as **step-11**.
 

- » In **Traverse work HI, RH and Vertical Distance (VD) are not necessary to record.**
  - » In **Right Face** observation = **record only Hz Ang (HR); distance measurement not necessary.**
  - » If the **power** is **off** after first measurement, the **Hz Ang will remain in memory**, it will save battery.
  - » **SD (slope distance)** is not required to record in field book.
- 14 Turn the telescope towards the **Station A**, and record **Hz Ang (HR)**, which will be near to **180°**.
- 15 Turn the instrument to **Left Face**, sight at pole **A**, Press function key **F3 (HSET)**. **Hz angle set HR=.....** will display in monitor, then **input the Hz Ang 90° 00' 00"** by alphanumeric keyboard such as **90**, Press function key **F4 (ENT)**. Thus the **Hz Ang** is set to **90° 00' 00"** towards Station **A**. If you have to input **90° 18' 45"**, input like **90.1845**, it will give same value as **90° 18' 45"**.
- 16 Turn the telescope towards **Station B** and sight the **Reflector pole**. Record the **Hz Ang (HR)**.
- 17 Repeat the process untill **2 set Hz Ang** observation to be completed for **Major Traverse** and **1 set** for **Minor Traverse**. Compute and check the **mean of Hz angle & two way distance** immediately at the same station before shifting the instrument to next station. Verify the precision and personel mistake in recording, if error occurred out of precision, repeat the observation.