PENTAX® PX-06D
EDM THEODLITE
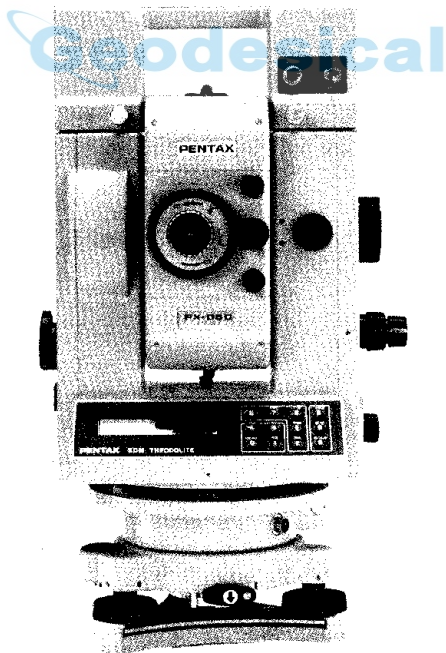
DISTANCE MEASUREMENT PROCEDURES

1. Power ON (Self check, temperature, pressure, prism constant check)

2. Temperature, Pressure, Prism constant input (omitted if not necessary)
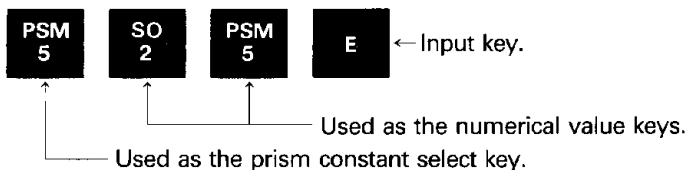
3. Prism acquisition and collimation

4. Vertical angle input (omitted if not necessary)

5. Distance measurement

- Press the **T/P 8** key to recall the pressure already input. (This key is also used to recall the temperature.) When the pressure is recalled and the temperature is displayed, press the **T/P 8** key again aftter pressing the **E** key; the pressure will automatically be displayed.

3) Example of Prism Constant (P.CONST) input: −25mm

PSM 5   **SO 2**   **PSM 5**   **E** ← Input key.

↑ ↑ ↑ ——— Used as the numerical value keys.

↑ ——— Used as the prism constant select key.

- The minus (−) sign is not displayed as prism constants are negative values.

3. Prism acquisition and collimation

1) Press the **AIM ←/−** key.

2) When the prism is sighted with the telescope, a buzzer will sound, the " ▓ " mark on the left end of the display will go out, and a two digit number will appear on the right: gradually increasing in numerical value. The prism is properly collimated when the numbers stop increasing and the " ✳ " appears.
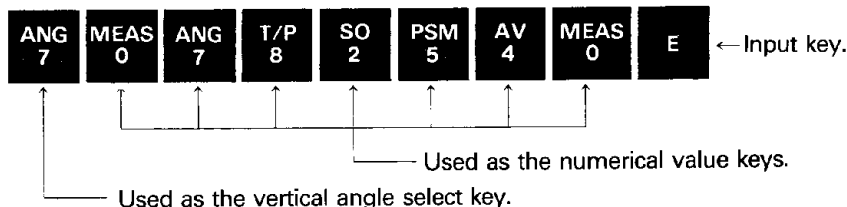
(Example) | ▓   AIM   00 | → | −   AIM   15 | → | ✳   AIM   28 |

- The AIM numbers will vary with the weather and distance; measure the distance with the maximum indicated value.

4. Vertical angle input

The vertical angle must be determined and input to obtain the horizontal distance and difference in elevation.

Example of Vertical Angle (ANG) input: 78° 25′ 40″

| ANG 7 | MEAS 0 | ANG 7 | T/P 8 | SO 2 | PSM 5 | AV 4 | MEAS 0 | E | ← Input key. |

Used as the numerical value keys.

Used as the vertical angle select key.

• The vertical angle must be input in three digits starting from the hundreds column. (E.g., 78° is 078.)
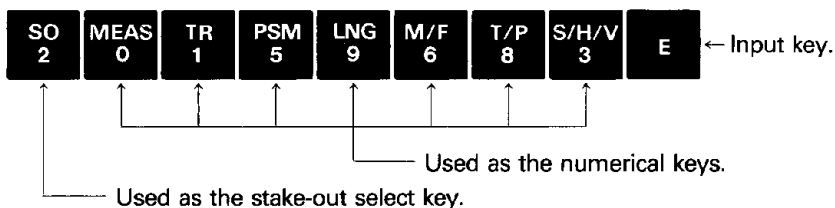
5. Distance measurement (mode specification)

MEAS 0   Ordinary masurement mode....Measures and displays the distance every 5 seconds in millimeters or thousands.

TR 1   Tracking mode ....Measures and displays the distance every second in centimeters or hundredths.

S/H/V 3   Conversion function ....Enables selection of the slope distance, horizontal distance, or the difference in elevation.

AV 4   Average mode ....Displays the average distance after 5 measurements.

LNG 9   Long distance mode ....Use this when a distance greater than 2Km is measured.

6. Others

1) Entering the specified distance for stake-out measurements.
   example: 159.683m

SO 2	MEAS 0	TR 1	PSM 5	LNG 9	M/F 6	T/P 8	S/H/V 3	E

← Input key.

Used as the numerical keys.

Used as the stake-out select key.
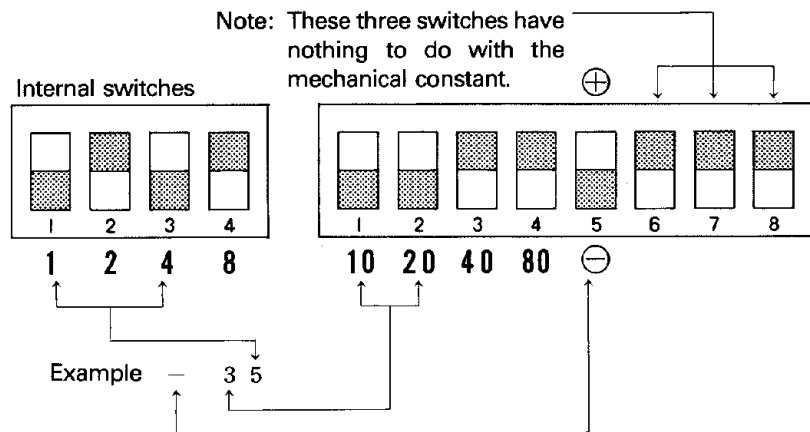
● The difference between the measured distance and the specified distance entered as above will be displayed as either a (+) or (−) value. [Displayed distance = measured distance − specified distance.]

2) Mechanical constant

A different mechanical constant is set for each unit. Use the internal switches to change the setting if the mechanical constant needs to be changed.

Note: These three switches have nothing to do with the mechanical constant.

Internal switches

⊕

| 1 | 2 | 3 | 4 |

1   2   4   8

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |

10 20 40 80 ⊖

Example — 3 5

7. Key functions

In addition to being used as numerical value keys, each of the keys listed below also provide the following functions.

MEAS 0	Ordinary distance measurement	**M/F 6**	Metric-Feet conversion
TR 1	Tracking measurement	**ANG 7**	Vertical angle read out
SO 2	Specified distance measurement in the stake-out mode	**T/P 8**	Temperature, pressure read out
S/H/V 3	Selection of slope distance, horizontal distance or difference in elevation	**LNG 9**	Measuring distances greater than 2km
AV 4	Averaging value from 5 measurements	**E**	Numerical value input
PSM 5	Prism constant read out	**AIM ←/−**	Cursor left shift; minus sign

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