W-800
A TRULY INTEGRATED SYSTEM

- **Open Platform** allows you to run major softwares such as PowerTopoCE, SurvCE
- **Graphical Stakeout** display results in real time on colour maps as you measure in the field
- **Increased Productivity** swift and easy connectivity, large colour LCD, 640x480 pixels with touch screen function
- **Pentax’s exclusive Auto Focus** system
## W-800 Series Technical Specifications

### Telescope
- **Magnification**: 30x
- **Optical aperture**: 45 mm (EDM 45 mm)
- **Resolving power**: 8
- **Field of view**: 1.4° (2.9°)
- **Minimum focus**: 1.0 m

### Focus
- **Auto-focus + Power Focus + Manual**
- **Phase differential**

### Data Processor
- **CPU, Clock frequency**: Intel Xscale, 400 MHz
- **OS**: Microsoft Windows CE.NET 4.2 (Pro plus version)
- **Internal memory**: SDRAM = 64 MB
- **Interface**: RS-232C
- **Display**: USB (Mini-B Connector) (ver. 1.0)
- **CF Type II Slot**: SD Slot

### EDM
- **Laser class**: (Class IIa) 3R / Class (II) 2
- **EDM**: Class (II) 2
- **Sampling Frequency**: 1040 Hz
- **OS**: Microsoft Windows CE.NET 4.2

### Memory
- **Internal memory**: 128 MB
- **Memory Card**: 2 GB (Max) *

### Angle Measurement
- **Method**: Absolute Rotary Encoder
- **Accuracy (ISO 17123-3)**: 2î (0.6 mgon)
- **Phase differential**: 3î
- **Resolving power**: 3î
- **Optical aperture**: 45 mm (EDM 45 mm)

### Distance Measurement Range
- **Mini Prism**: 1.5 m – 1100 m (1600 m) *(1)
- **Prism, Reflector sheet**: 1.5 m – 3500 m (4500 m) *(2)
- **Reflective sheet**: 1.5 m – 3000 m (4000 m) *(2)
- **Reflective sheet**: 200 m – 4500 m (5600 m) *(3)
- **Reflective sheet**: 200 m – 4000 m (5000 m) *(3)

### Measurement Accuracy
- **Normal**: Prism, Ref. sheet: 2.0 sec. (1 mm)
- **Track**: Prism, Ref. sheet: 0.4 sec. (1 cm)
- **Normal**: Prism, Ref. sheet: 1.2 sec. (1 mm)
- **Quick mode*(5)**

### Initial Measuring
- **Normal**: Prism, Ref. sheet: 2.3 sec. (1 mm)
- **Normal**: Prism, Ref. sheet: 4.0 sec. (1 mm)
- **Quick mode*(5)**

### Application Software
- **Select**

### Compensation
- **Base**: Detachable
- **Shifting**: Detachable
- **Shifting**: Shifting

### Physical
- **Instrument Dimension (Including Battery)**: 197(W) x 347(H) x 217(L) mm (x 187(L) with 1 Display)
- **Weight**: 6.3 kg

### Key board
- **Quantity**: 2 1 2 1
- **33 keys**

### Operating Condition
- **Ambient temperature**: -20∞ C ~ +50∞ C / -4∞ F ~122∞ F (Working range)
- **Water resistant**: IP54
- **Circular level**: 8í / 2 mm
- **Plate level**: (electronic) 30í / 1div.
- **Plummet**: Visible Laser, ±0.8 mm (instrument height 1.5 m)
- **Calendar clock**: Available

### Battery Pack BP03
- **Ni-MH (Rechargeable)**: 4300 mAh, DC 6V
- **Battery Pack**: BP02

### Interface RS-232C
- **Output**: USB (Mini-B Connector) (ver. 1.0)
- **CF Type II Slot**: SD Slot

### Operation time
- **Continuous**: Approx. 2.2 hrs of charging time

### Charger BC03 and AC Adapter AC01
- **Input voltage**: AC100~240 V (AC01)
- **Output voltage**: DC7.5 V (BC03)
- **Weight**: 280 g

### Resolution
- **Distance Reflectorless**: 1.5 ~ 270 m N/A
- **Distance Reflector**: 1.5 m ~ 500 m *(3)
- **Distance Reflector**: 1.5 m ~ 600 m (800 m) *(3)

### Measuring time
- **Initial measuring**: Normal: Reflectorless 2.3 sec. (1 mm)
- **Normal: Prism, Ref. sheet**: 4.0 sec. (1 mm)
- **Quick mode*(5)**

### Track: Prism, Ref. sheet
- **Distance measurement range**: 0.4 sec. (1 cm)

### Note
- The measurement range may vary by measurement conditions.
- Normal conditions: 20 km visibility with slight shelter.
- Good conditions: 40 km visibility overall, no heat, no shimmer and moderate wind.
- Reflector less measurement range may vary by measurement conditions.
- Reflector sheet PENTAX genuine reflector sheet (5 m x 5 cm)
- Quick Mode is effective only under Normal mode (3î) setting, and functions with Prism and Reflector less sheet. It is incorporated in all X series models and effective up to 50 m.
- When Quick Mode is on, the EDM accuracy using prism is ± (3 + 2 ppm x 0.0 mm).
- When automatic correction is activated in Quick Mode, the EDM accuracy is ± (3 + 10 ppm x D) mm.
- EDM Measurement time varies according to distance to be measured and conditions of the environment.
- Reflect Laser
- The measurement range and accuracy of Reflect less are based on the condition that laser beam is emitted perpendicular to the side of the Kodak Gray Card.
- The maximum distance that can be shown on the display is 322 m in the non-prism measurement mode.
- The measurement range may be influenced by the shape of the target and its environment.
- The maximum distance that can be shown on the display exceeds 200 m or to measure the distance to the object that is hard to measure.
- The measurement range, accuracy of distance measurement and time required to measure may be influenced by the shape, size of surface area and reflection target of the body and its environment.

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