

# Digital Scale

## TITAN-Compact

### INSTRUCTION MANUAL

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SK-1000WP

SK-2000WP

SK-5000WP

SK-5001WP

SK-10KWP

SK-20KWP

SK-30KWP

**AND**

A&D Company, Limited



## SAFETY PRECAUTIONS

All safety messages are identified by the following, “**WARNING**” or “**CAUTION**”, of ANSI Z535.4 (American National Standard Institute: Product Safety Signs and Labels). The meanings are as follows:

<b>WARNING</b>	A potentially hazardous situation which, if not avoided, could result in death or serious injury.
<b>CAUTION</b>	A potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

- This manual is subject to change without notice at any time to improve the product.
- Product specifications are subject to change without any obligation on the part of the manufacturer.
- When using the SK-WP, the following safety precautions should always be followed.

**WARNING** Use only the specified AC adapter for the scale. Other adapters may cause damage. (AC adapter is optional.)

**Internal service or adjustment to this product should be performed by a qualified person.**

**CAUTION** Avoid installing the scale in direct sunlight, which may cause discoloration or malfunctions.

Do not mix battery types, or new and old batteries. Replace with all new batteries at the same time.

If the scale is not to be used for a long period of time, remove all batteries from the battery compartment to avoid leakage.

Avoid overloading to the scale.

Avoid using the weighing platform to move the scale, as that could cause damage to the scale.

Avoid chemical solvents. Clean the scale with water.

When the scale is used with an AC adapter, the scale does not conform to IP65 protection.

IP65



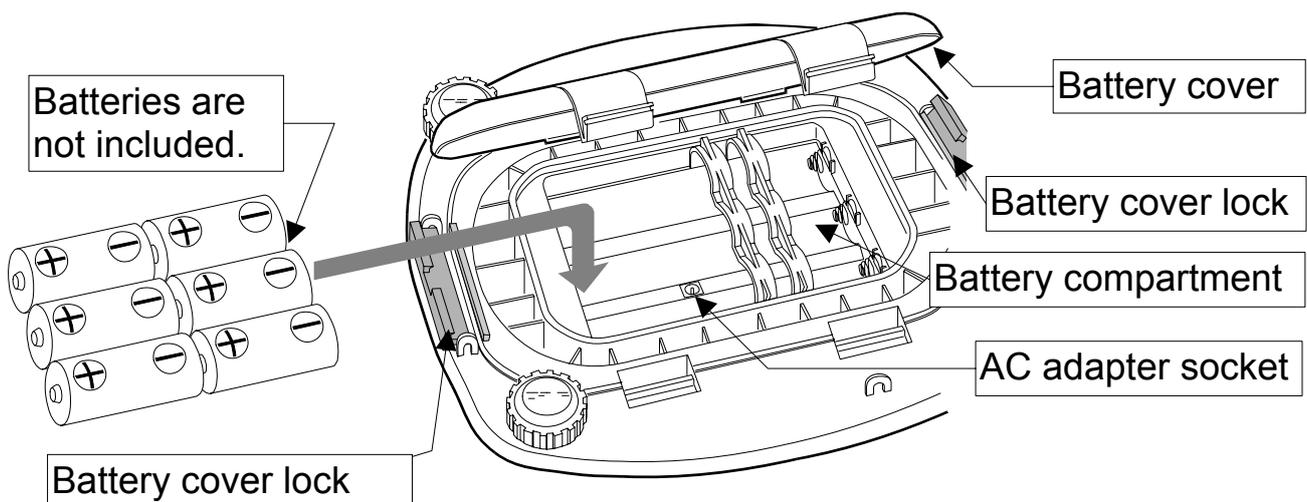
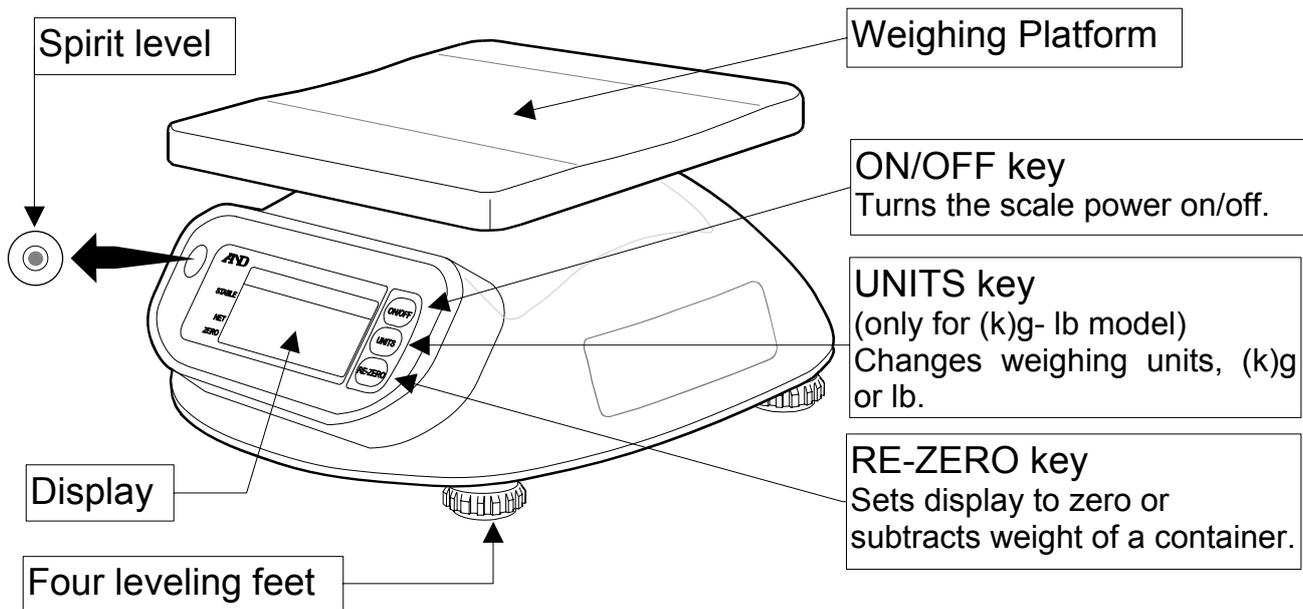
Degrees of protection against water: Protected against water jets.

Degrees of protection against solid foreign objects: Dust-tight.

International Protection of IEC529.



# PARTS DESCRIPTION



## DISPLAY

**STABLE indicator**  
Indicates when the reading is stable.

**Polarity**

**NET indicator**  
Indicates when NET weight is displayed. (Tare function is used.)

**ZERO indicator**  
Indicates when the scale zero is correct.



**Weighing unit**



**Weighing unit for (k)g-lb model only.**



## PREPARATION



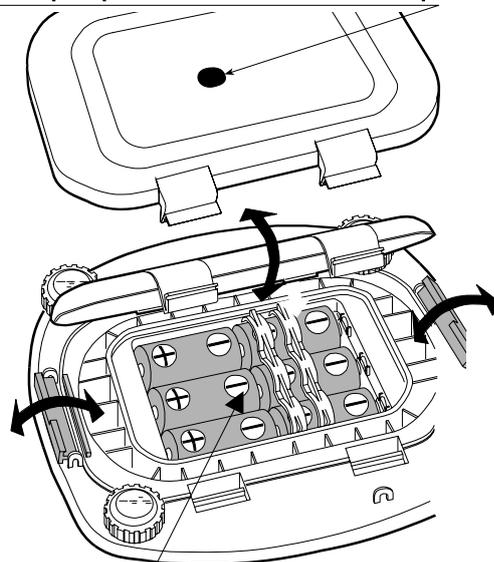
### Installing Batteries / Connecting the AC Adapter

#### Installing Batteries

**⚠ CAUTION** When replacing batteries, be careful not to apply too much force to the weighing platform. An excessive force could damage the scale.

Unlock and remove the battery cover. (See illustration at the right)  
Insert six new batteries (R20P / LR20 / D size) into the battery compartment, taking extreme care to that the plus and minus polarities are observed.  
Be sure to install and lock the battery cover after installing the batteries.

Stop up with the rubber cap



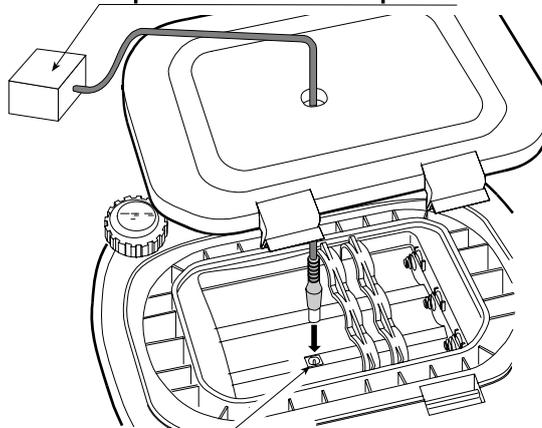
New six batteries. (R20P/ LR20/ D size)

#### AC Adapter (Optional)

**⚠ CAUTION** When using an AC adapter, the scale doesn't comply with IP65. The AC input requirement could be 100, 120, 220, 230 or 240 volts (50/60Hz) depending on the area where used, so please verify that the adapter is the correct type.

Plug the AC adapter to the AC adapter socket inside the battery compartment.

Optional AC Adapter



AC Adapter socket



## Setting up the Scale

**⚠ CAUTION** Avoid installing the scale in direct sunlight, that may cause discoloration or malfunctions. Place your SK-WP on a firm weighing table so that the scale is level. The scale will not perform accurately when it is not level.

Place the scale on a firm surface and adjust the feet to level the scale, while using the spirit level, for accurate weighing.



## WEIGHING



### Before Weighing

#### Automatic Power-Off Function.

If the scale is left ON and the stable indicator is displayed, the automatic power-off function turns the power off after approximately five minutes (factory setting). To disable or enable the function, press the [ON/OFF] key while pressing the [RE-ZERO] key. The scale stores this setting. To verify this, press both the [RE-ZERO] and [UNITS] keys while in the weighing mode. (See "CALIBRATION" about the [UNITS] key.)

PoFF0

Function disabled

PoFF1

Function enabled

#### Error Message

E

Overload

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The scale zero is out of range

Lb

Low battery

#### Calibration May be Required Before Weighing

Read "CALIBRATION" first and if necessary, calibrate your scale for accurate weighing.



### Weighing Procedures

#### 1. Turn on the scale.

Press the [ON/OFF] key to turn on the scale. Then the scale displays all segments for a few seconds and then  will be displayed.

#### 2. Start weighing

##### If you do not use a container for weighing,

Press the [RE-ZERO] key to display . Verify the reading is .

Place objects on the weighing platform to weigh.

When the reading becomes stable, the stable indicator  is displayed.

##### If you use a container for weighing,

Place an empty container on the platform.

Wait for the stable indicator  to be displayed and press the [RE-ZERO] key. Place the objects to be weighed in the container. When the reading becomes stable, the stable indicator  is displayed.

##### Select the weighing unit, --- Only for the "(k)g-lb" model---

If you use the (k)g-lb model, press the [UNITS] key to select weighing with either (k)g or lb as the unit.

Normally scales power up in lb when shipped from the factory. To power up in (k)g, turn the scale off. Press and hold the [UNITS] key, then press the [ON/OFF] key. The scale will start with (k)g. To return to the original setting, repeat this instruction.



## CALIBRATION



### When to Calibrate

Calibration may be required when the scale is initially installed, if it is moved a substantial distance, or in accordance with local regulations. This is necessary because the weight of a mass in one location is not necessarily the same in another location. Also, with time and use, mechanical deviations can occur.

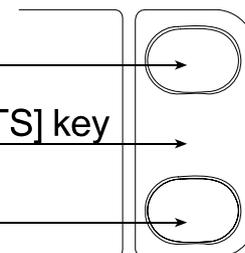
### The Position of the [UNITS] key for the Calibration

The (k)g model has no [UNITS] key, but the key for the calibration is located under the overlay.

ON/OFF key

Location of the [UNITS] key

RE-ZERO key



### Calibration Using a Calibration Weight

Calibrate the scale with the following calibration weight.

SK-1000WP: 1000g ± 0.1g

SK-2000WP: 2000g ± 0.2g

SK-5000WP: 5000g ± 0.5g

SK-5001WP: 5000g ± 0.5g

SK-10KWP: 10kg ± 1g

SK-20KWP: 20kg ± 2g

SK-30KWP: 30kg ± 2g

#### 1. Enter calibration mode.

Press the [ON/OFF] key to turn the power off.

While pressing both the [RE-ZERO] and [UNITS] keys, press the [ON/OFF] key. Then, CAL will be displayed.

#### 2. Zero calibration

Press the [RE-ZERO] key to calibrate zero. CAL0 will be displayed.

When you have proceeded to the display other than CAL0, press the [ON/OFF] key to turn the power off and start over again.

Wait for the stable indicator  to be displayed and press the [RE-ZERO] key. CALF will be displayed in a few seconds. If the zero calibration only is to be done, press the [UNITS] key. The scale will show End and automatically return to the weighing mode.

#### 3. Span calibration

Place the weight at the center of the platform for accurate calibration. Wait for the stable indicator  to be displayed and press the [RE-ZERO] key. The scale will show End and the scale will automatically return to the weighing mode.



## Calibration by Gravity Compensation

If you have calibration weights at the capacity of the scale, you can calibrate the scale with the weights instead of compensating for the gravity acceleration.

The scale is calibrated at  $9.798 \text{ m/sec}^2$  at the factory. If the gravity acceleration at your location is not the same, calibrate the scale by compensating for the gravity acceleration. (See “The Value of Gravity at Various Locations” and “World Map” and find your location value.)

**1. Enter calibration mode.**

Press the [ON/OFF] key to turn the power off. While pressing both the [RE-ZERO] and [UNITS] keys, press the [ON/OFF] key. Then, CAL will be displayed.

**2. Select a digit to be changed.**

Press the [UNITS] key. The previously set value, for example 9798, will be displayed. A digit after the comma “,” will be changed by pressing the [RE-ZERO] key. Press the [UNITS] key to move the comma “,” and select a digit to be changed.

**3. Set the new value.**

Change the value of the gravity acceleration using the [RE-ZERO] and [UNITS] keys.

**4. Save the value in memory.**

Press and hold the [UNITS] key until End is displayed. The scale will automatically return to the weighing mode.



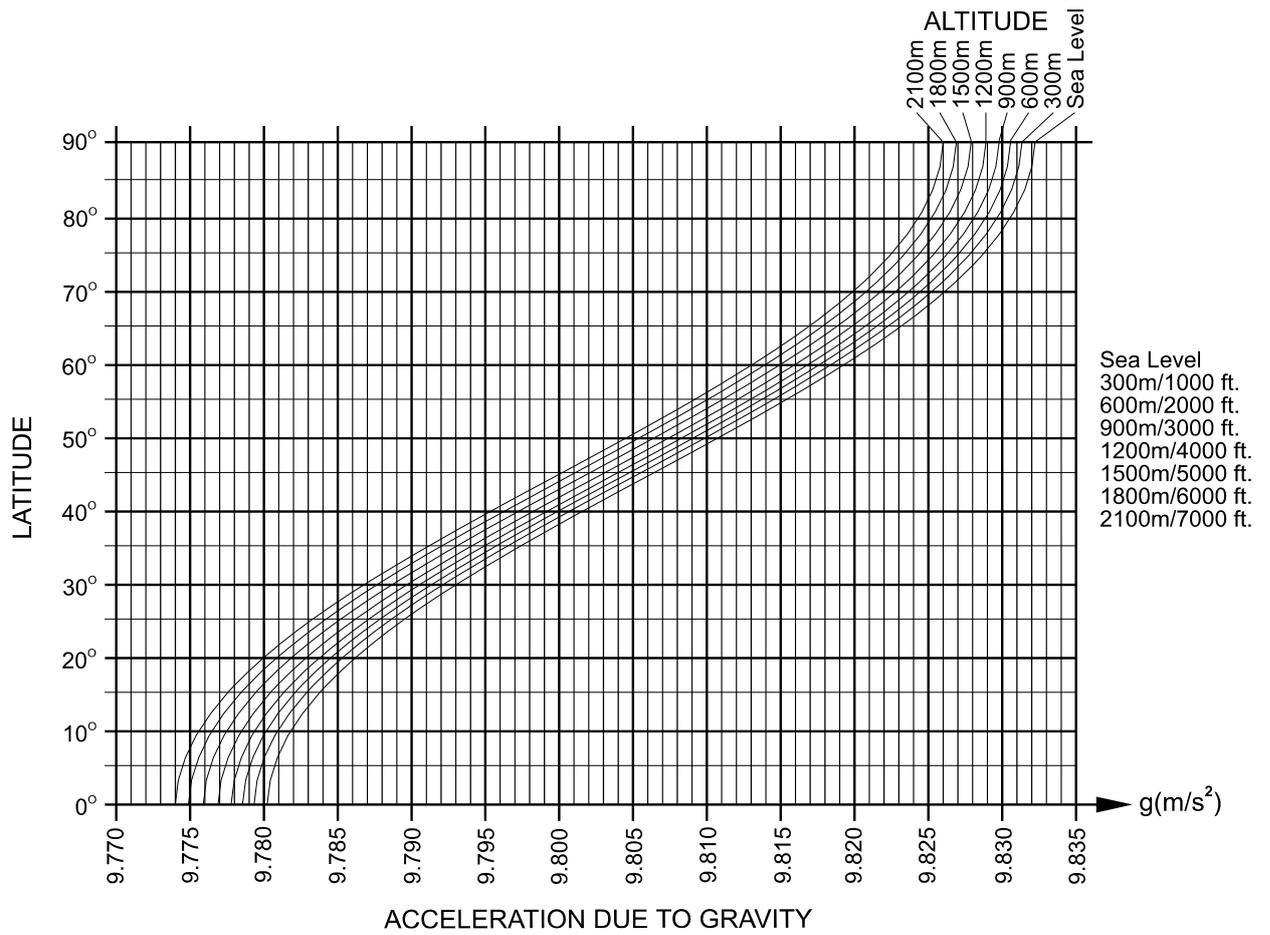
## SPECIFICATIONS

Model	SK-1000WP	SK-2000WP	SK-5000WP	SK-5001WP	SK-10KWP	SK-20KWP	SK-30KWP
Capacity	1000 g 2.2 lb	2000 g 4.4 lb	5000 g 11 lb	5000 g ---	10 kg 22 lb	20 kg 44 lb	30 kg 66 lb
Resolution	0.5 g 0.001 lb	1 g 0.002 lb	2 g 0.005 lb	1 g ---	0.005 kg 0.01 lb	0.01 kg 0.02 lb	0.02 kg 0.05 lb
Non-linearity	±1g	±2g	±4g	±4g	±0.01 kg	±0.02 kg	±0.04 kg
Repeatability	0.5g	1g	2g	2g	0.005 kg	0.01 kg	0.02 kg
Span drift	±0.015% / °C TYP (5°C~35°C / 41°F~95°F)						
Operating temperature	-10°C~40°C / 14°F~104°F, Less than 85%RH						
Display	25 mm / 0.98 inches, 7 segment liquid crystal display						
Display update	Approximately 10 times per second						
Power	6 x R20P / LR20 / "D" size batteries or AC adapter						
Battery life	Approximately 600 hours with manganese type 1200 hours with alkaline cells at 20°C / 68°F						
Platform size	232 (W) x 192 (D) mm / 9.13 (W) x 7.56 (D) in.						
Dimensions	266 (W) x 280 (D) x 146 (H) mm / 10.48 (W) x 11.03 (D) x 5.75 (H) in.						
Weight (approx.)	2.9 kg / 6.4 lb					3.2 kg / 7.1 lb	
Calibration weight	1000g±0.1g	2000g±0.2g	5000g±0.5g	5000g±0.5g	10kg ±1g	20kg ±2g	30kg ±2g
Accessories	This manual						
Options	AC adapter						

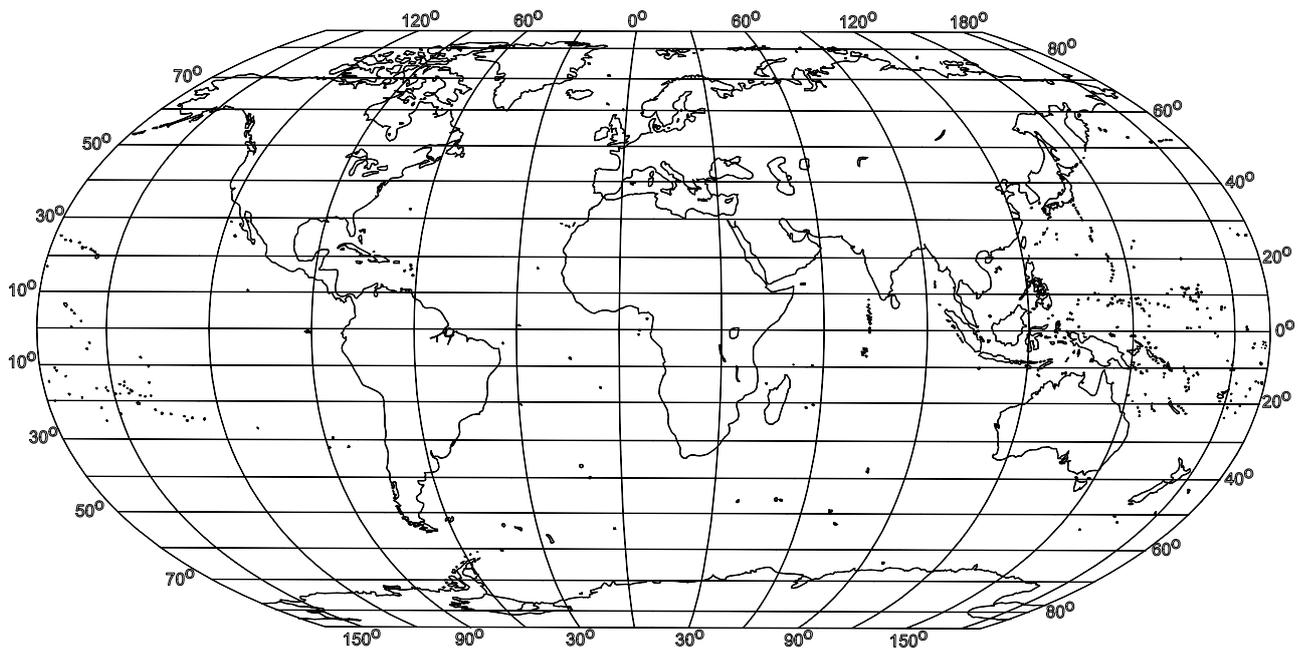


## The Value of Gravity at Various Locations

Amsterdam	9.813 m/s <sup>2</sup>	Manila	9.784 m/s <sup>2</sup>
Athens	9.807 m/s <sup>2</sup>	Melbourne	9.800 m/s <sup>2</sup>
Auckland NZ	9.799 m/s <sup>2</sup>	Mexico City	9.779 m/s <sup>2</sup>
Bangkok	9.783 m/s <sup>2</sup>	Milan	9.806 m/s <sup>2</sup>
Birmingham	9.813 m/s <sup>2</sup>	New York	9.802 m/s <sup>2</sup>
Brussels	9.811 m/s <sup>2</sup>	Oslo	9.819 m/s <sup>2</sup>
Buenos Aires	9.797 m/s <sup>2</sup>	Ottawa	9.806 m/s <sup>2</sup>
Calcutta	9.788 m/s <sup>2</sup>	Paris	9.809 m/s <sup>2</sup>
Cape Town	9.796 m/s <sup>2</sup>	Rio de Janeiro	9.788 m/s <sup>2</sup>
Chicago	9.803 m/s <sup>2</sup>	Rome	9.803 m/s <sup>2</sup>
Copenhagen	9.815 m/s <sup>2</sup>	San Francisco	9.800 m/s <sup>2</sup>
Cyprus	9.797 m/s <sup>2</sup>	Singapore	9.781 m/s <sup>2</sup>
Djakarta	9.781 m/s <sup>2</sup>	Stockholm	9.818 m/s <sup>2</sup>
Frankfurt	9.810 m/s <sup>2</sup>	Sydney	9.797 m/s <sup>2</sup>
Glasgow	9.816 m/s <sup>2</sup>	Taichung	9.789 m/s <sup>2</sup>
Havana	9.788 m/s <sup>2</sup>	Tainan	9.788 m/s <sup>2</sup>
Helsinki	9.819 m/s <sup>2</sup>	Taipei	9.790 m/s <sup>2</sup>
Kuwait	9.793 m/s <sup>2</sup>	Tokyo	9.798 m/s <sup>2</sup>
Lisbon	9.801 m/s <sup>2</sup>	Vancouver, BC	9.809 m/s <sup>2</sup>
London (Greenwich)	9.812 m/s <sup>2</sup>	Washington DC	9.801 m/s <sup>2</sup>
Los Angeles	9.796 m/s <sup>2</sup>	Wellington NZ	9.803 m/s <sup>2</sup>
Madrid	9.800 m/s <sup>2</sup>	Zurich	9.807 m/s <sup>2</sup>



 **World Map**





**A&D Company, Limited**

3-23-14 Higashi-Ikebukuro, Toshima-ku, Tokyo 170-0013 JAPAN  
Telephone: [81] (3) 5391-6132 Fax: [81] (3) 5391-6148

**A&D ENGINEERING, INC.**

1756 Automation Parkway, San Jose, California 95131 U.S.A.  
Telephone: [1] (408) 263-5333 Fax: [1] (408) 263-0119

**A&D INSTRUMENTS LIMITED <UK Office>**

Unit 24/26 Blacklands Way, Abingdon Business Park, Abingdon, Oxfordshire  
Telephone: [44] (1235) 550420 Fax: [44] (1235) 550485

**A&D INSTRUMENTS LIMITED <German Sales Office>**

Große Straße 13 b 22926 Ahrensburg Deutschland  
Telefon: [49] (0) 4102 459230 Telefax: [49] (0) 4102 459231

**A&D Australasia Pty Ltd.**

32 Dew Street, Thebarton, South Australia 5031 AUSTRALIA  
Telephone: [61] (8) 8301-8100 Fax: [61] (8) 8352-7409

**A&D KOREA Limited**

한국에이.엔.디(주)  
대한민국 서울시 영등포구 여의도동 36-2 맨하탄 빌딩 8층  
( 8th Floor, Manhattan Bldg. 36-2 Yoido-dong, Youngdeungpo-ku, Seoul, KOR  
전화: [82] (2) 780-4101 팩스: [82] (2) 782-4280

**A&D RUS CO., LTD. Компания Эй энд Ди Рус**

121357, Российская Федерация, г.Москва, ул. Вереysкая, дом 17  
( Bldg. 17, Vereyskaya st., Moscow, 121357 RUSSIAN FEDERATION )  
тел.: [7] (495) 937-33-44 факс: [7] (495) 937-55-66

**A&D Instruments India Private Limited ऐ&डी इन्स्ट्र्यूमेन्ट्स इण्डिया प्रा० लिमिटेड**

509, उद्योग विहार, फेस -5, गुडगांव - 122016, हरियाणा, भारत  
( 509, Udyog Vihar, Phase-V, Gurgaon - 122 016, Haryana, India )  
फोन : 91-124-4715555 फैक्स : 91-124-4715599