Digital Scale

TITAN-Compact

INSTRUCTION MANUAL

SK-1000WP
SK-2000WP
SK-5000WP
SK-5001WP
SK-10KWP
SK-20KWP

A&D

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:

⚠ WARNING	A potentially hazardous situation which, if not avoided, could result in death or serious injury.
⚠ CAUTION	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 manufacture.

- ☐ When using the SK-WP, the following safety precautions should always be followed.

⚠ **WARNING** **Use only specified optional 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 the 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.
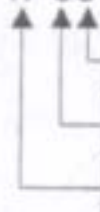
Avoid overloading to the scale.

Avoid using the weighing pan 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.
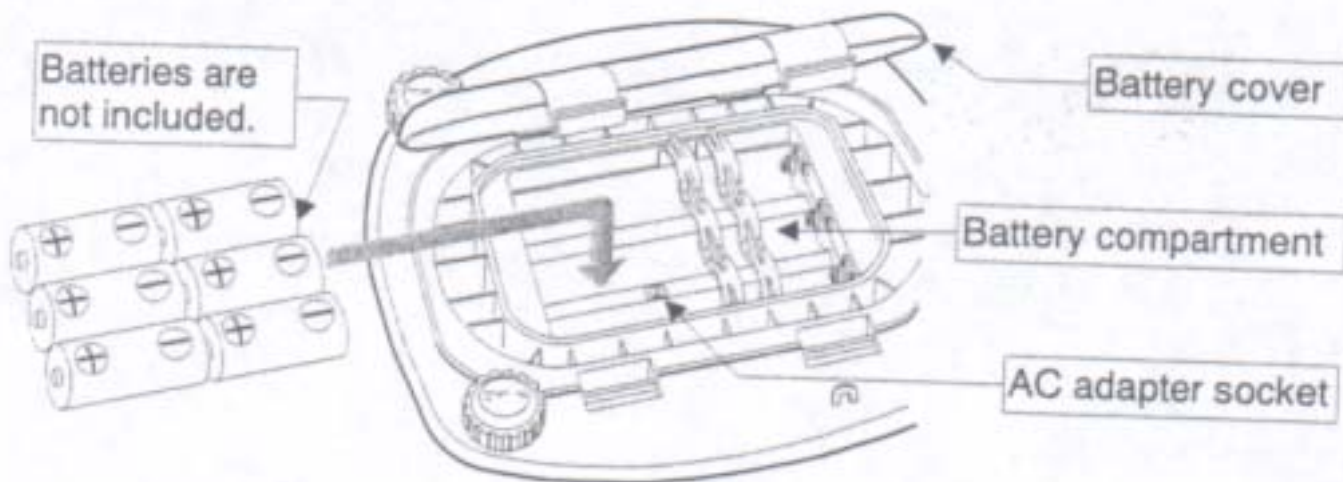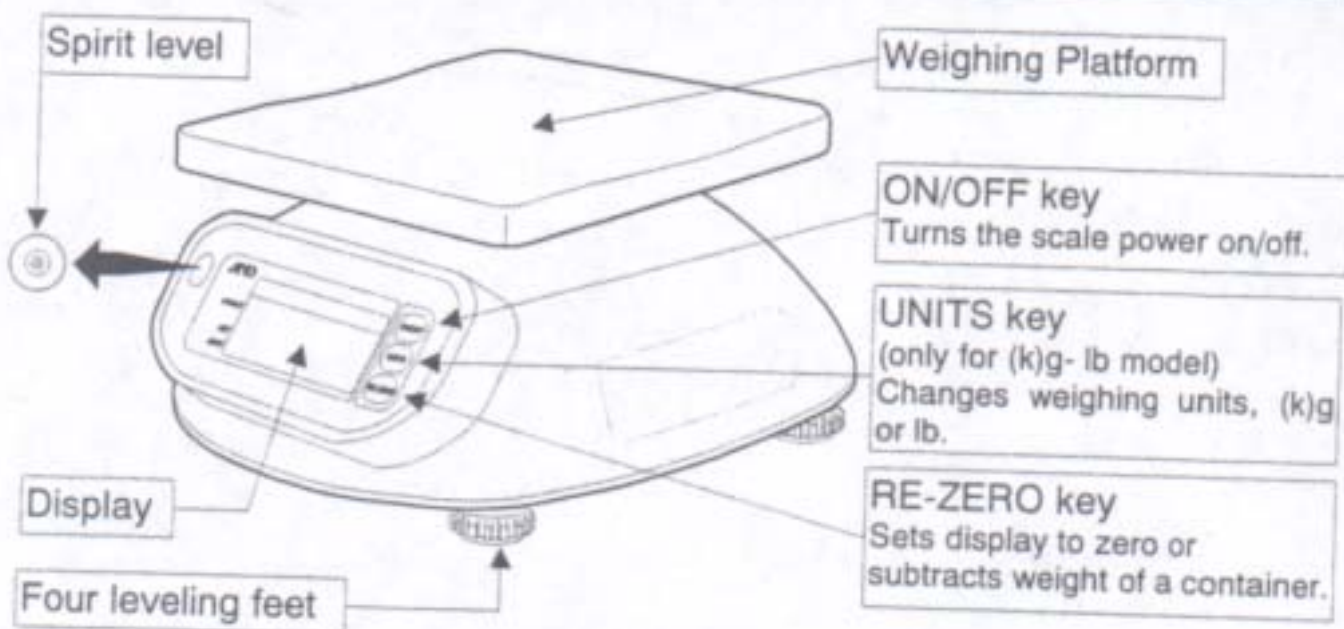
IP65
▲ ▲▲

Degrees of protection against water: Protected against water jets.
Degrees of protection against solid foreign objects: Dust-tight.
International Protection of IEC529.

Parts Description

Spirit level

Weighing Platform

ON/OFF key
Turns the scale power on/off.

UNITS key
(only for (k)g- lb model)
Changes weighing units, (k)g or lb.

Display

RE-ZERO key
Sets display to zero or subtracts weight of a container.

Four leveling feet

Batteries are not included.

Battery cover

Battery compartment

AC adapter socket

DISPLAY

STABLE indicator
Indicates when the reading is stable.

Polarity

$^-I0.000_{kg}$

Weighing unit

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

22.00_{lb}

ZERO indicator
Indicates when the scale zero is correct.

0.000_{kg}

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

## Installing Batteries / Connecting the AC Adapter

Installing Batteries

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

Remove the battery cover and insert six new batteries (R20P / LR20 / D size) into the battery compartment, taking extreme care to that the plus and minus polarities are observed.

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

Stop up with the rubber cap
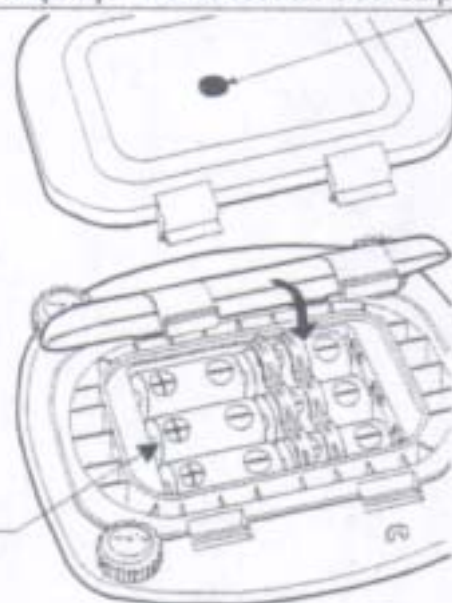
AC Adapter (Optional)

⚠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
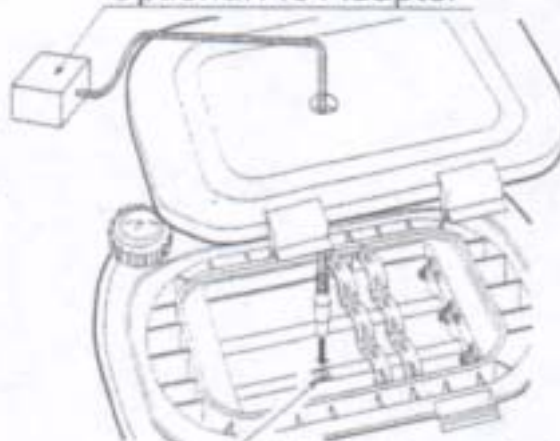
AC Adapter socket

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 sprit level, for accurate weighing.

⬇ Weighing

⬇ Before Weighing

Be Aware of the Automatic Power-Off Function.
If this unit is left ON and the stable indicator is displayed, an automatic power-off function turns the power off after approximately five minutes. To disable this function, press the [ON/OFF] key while pressing the [RE-ZERO] key. | P-xx | will be displayed and the scale returns to the weighing mode.

Error Message

E	Overload
- - - -	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 | 0 | will be displayed.

2. **Start weighing**
   If you do not use a container for weighing,
   Press the [RE-ZERO] key to display | 0 |. Verify the reading is | 0 |.
   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 stability 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.
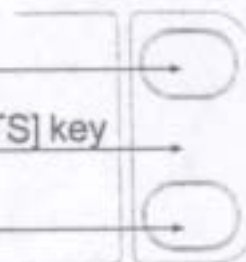
The Position of the [UNITS] key for the Calibration

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

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

2. **Zero calibration**
   Press the [RE-ZERO] key to calibrate zero. CAL 0 will be displayed. Wait for the stable indicator **O** to be displayed and press the [RE-ZERO] key. CAL F 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 **O** to be displayed and press the [RE-ZERO] key. The scale will show End and the scale will automatically return to the weighing mode.

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 m/sec² at the factory. If the gravity acceleration at your location is not same, calibrate the scale by compensating the gravity acceleration. (Refer "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] key and the [UNITS] key, press the [ON/OFF] key. `CAL` will be displayed.

2. **Select a digit to be changed.**
   Press the [UNITS] key. `9798` will be displayed. Press the [RE-ZERO] key, the decimal point will move and the last digit will be selected. Select a digit to be changed with the [UNITS] key. The first digit after decimal point is the selected digit.

3. **Set the new value**
   Set the new value displayed by pressing the [RE-ZERO] key.

4. **Save the value in memory.**
   While pressing the [UNITS] key, press the [RE-ZERO] key to save the value. Then `End` will be displayed.
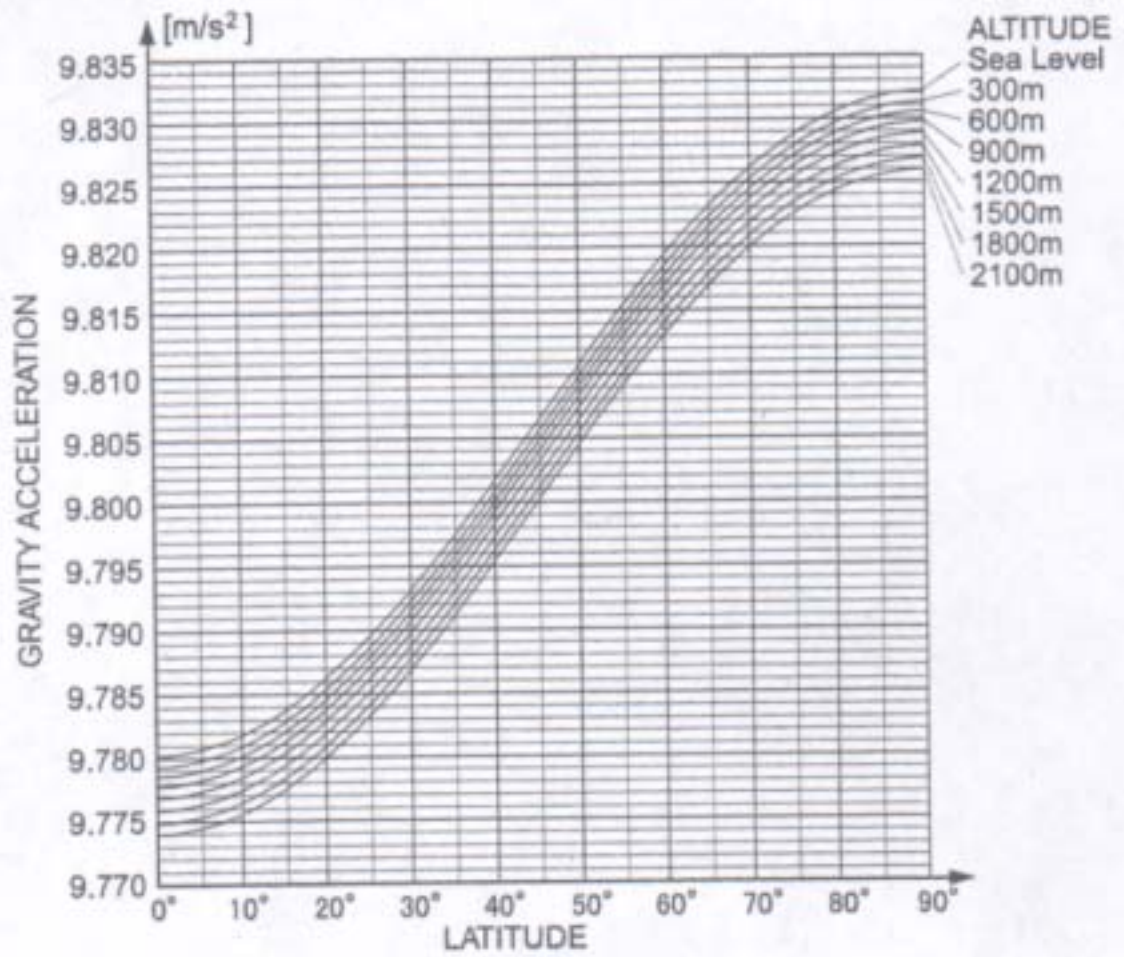
SPECIFICATIONS

Model	SK-1000WP	SK-2000WP	SK-5000WP	SK-5001WP	SK-10KWP	SK-20KWP
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
Calibration Weight	1000g±0.1g	2000g±0.2g	5000g±0.5g	5000g±0.5g	10kg±1g	20kg±2g
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
Non-linearity	±1g	±2g	±4g	±4g	±0.01k g	±0.02kg
Repeatability	±0.5g	±1g	±2g	±2g	±0.005kg	±0.01kg
Span drift	±0.015% / C TYP (5°C~35°C / 41°F~95°F)					
Display	25mm / 0.98in, 7segment liquid crystal display					
Platform size	230mm(W) x 190mm(D) / 9.05in(W) x 7.48in(D)					
Dimensions	266mm(W) x 280mm(D) x146mm(H) / 10.48 in(W) x 11.03 in(D) x 5.75 in(H)					
Weight (approximately)	2.9 kg 6.4 lb				3.2 kg 7.1 lb	
Power	6 x R20P / LR20 / "D" size batteries or AC adapter					
Battery life	Approximately 600 hours with manganese type, 1200 hours with alkaline batteries at 20°C / 68°F					
Operating temp.	-10°C~40°C / 14°F~104°F, Less than 85%RH					
Accessories	This manual					
Options	AC adapter					

The Value of Gravity at Various Locations

Location	g	Location	g	Location	g
Amsterdam	9.813 m/s²	Havana	9.788 m/s²	Paris	9.809 m/s²
Athens	9.807 m/s²	Helsinki	9.819 m/s²	Rio de Janeiro	9.788 m/s²
Auckland NZ	9.799 m/s²	Kuwait	9.793 m/s²	Rome	9.803 m/s²
Bangkok	9.783 m/s²	Lisbon	9.801 m/s²	San Francisco	9.800 m/s²
Birmingham	9.813 m/s²	London (Greenwich)	9.812 m/s²	Singapore	9.781 m/s²
Brussels	9.811 m/s²	Los Angeles	9.796 m/s²	Stockholm	9.818 m/s²
Buenos Aires	9.797 m/s²	Madrid	9.800 m/s²	Sydney	9.797 m/s²
Calcutta	9.788 m/s²	Manila	9.784 m/s²	Taichung	9.789 m/s²
Cape Town	9.796 m/s²	Melbourne	9.800 m/s²	Taiwan	9.788 m/s²
Chicago	9.803 m/s²	Mexico City	9.779 m/s²	Taipei	9.790 m/s²
Copenhagen	9.815 m/s²	Milan	9.806 m/s²	Tokyo	9.798 m/s²
Cyprus	9.797 m/s²	New Delhi	9.791 m/s²	Vancouver, BC	9.809 m/s²
Djakarta	9.781 m/s²	New York	9.802 m/s²	Washington DC	9.801 m/s²
Frankfurt	9.810 m/s²	Oslo	9.819 m/s²	Wellington NZ	9.803 m/s²
Glasgow	9.816 m/s²	Ottawa	9.806 m/s²	Zurich	9.807 m/s²

GRAVITY ACCELERATION [m/s²] vs LATITUDE

ALTITUDE
Sea Level
300m
600m
900m
1200m
1500m
1800m
2100m

World Map

AND
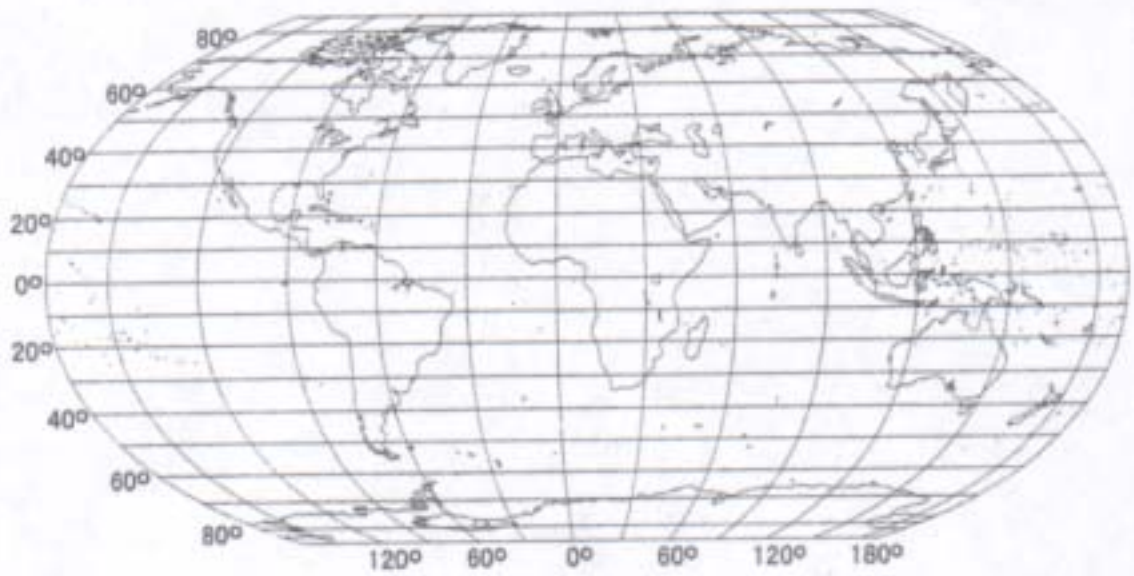
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