





Stores

Industry

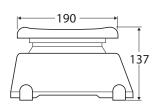
**Factory** 

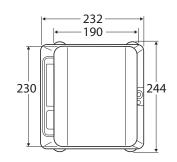
# Unlimited applications for shops, stores, offices, industries, and warehouses.



- 1/2000 Resolution (SK-30K:1/1500, SK-5001:1/5000)
- Solid & Reliable Design
- Splash Proof (Driptight )
- Large & Clear LCD Display (25mm)
- Large Square Weighing Pan
- Designed to Meet Weights & Measures Regulations
- Portable (6 D Type Batteries, Batteries Not Included)
- Net Weight / Stability Indication
- Low Battery Indication
- Separate Keys for Power and Re-Zero
- Auto Power Off
- AC Adapter (Option)

#### Dimensions (mm)





#### **Specifications**

MODEL	SK-1000	SK-2000	SK -5000	SK -5001	SK -10K	SK -20K	SK -30K
Capacity/Resolution*	1000x0.5g	2000 x 1g	5000 x 2g	5000 x 1g	10kx 0.005g	20kx 0.01g	30k x 0.02g
Linearity	±1g	±2g	±4g	±4g	±0.01g	±0.02g	±0.02kg
Repeatability/Std. Dev.	0.5g	1g	2g	2g	0.005g	0.01g	0.02kg
Display	Liquid Crystal Display, 25mm/0.98inch height						
Pan Size	230(W) x 190(D) mm / 9.05(W) x 7.48(D) inches						
Battery Life	600 hours with manganese type cells						
(approximately)	1200 hours with alkaline type cells						
Operating Temp.	-10°C~ 40°C / 14°F ~ 104°F RH less than 85%						
Weight(approximately)	1.6kg / 3.53 lb				1.9kg / 4.19lb		
Calibration Mass (option)	1000g	2000g	5000g	5000g	10kg	20kg	30kg
Power	6 x R20P / LR20 / D type batteries or AC adaptor (Option)						
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\* lb version available

Specifications subject to change for improvement without notice.

#### Option Accessories

**OP-10 Stainless Weighing Pan** 

AX-TB113 AC Adaptor AC100-120V 'A' plug AX-TB125 AC Adaptor AC200-240V 'C' plug AX-TB126 AC Adaptor AC200-240V 'BF/S/no' plug



# Digital Scale

SK-1000

**SK-2000** 

**SK-5000** 

**SK-10K** 

**SK-20K** 

**SK-30K** 

# INSTRUCTION MANUAL







# **SAFETY PRECAUTIONS**

All safety messages are identified by the following the words "**WARNING**" and "CAUTION". These words mean the following.

<b>⚠</b> WARNING	Important information to alert you to a situation that might cause serious injury and damage to your property if instructions are not followed.					
⚠ CAUTION	Important information that tells how to prevent damage to equipment.					

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

## **⚠** WARNING

Use only the AC adapter which comes with the scale. Other adapter 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, that may cause discoloration or malfunctions.

Do not mix the type of batteries. Replace all other batteries at the same time.

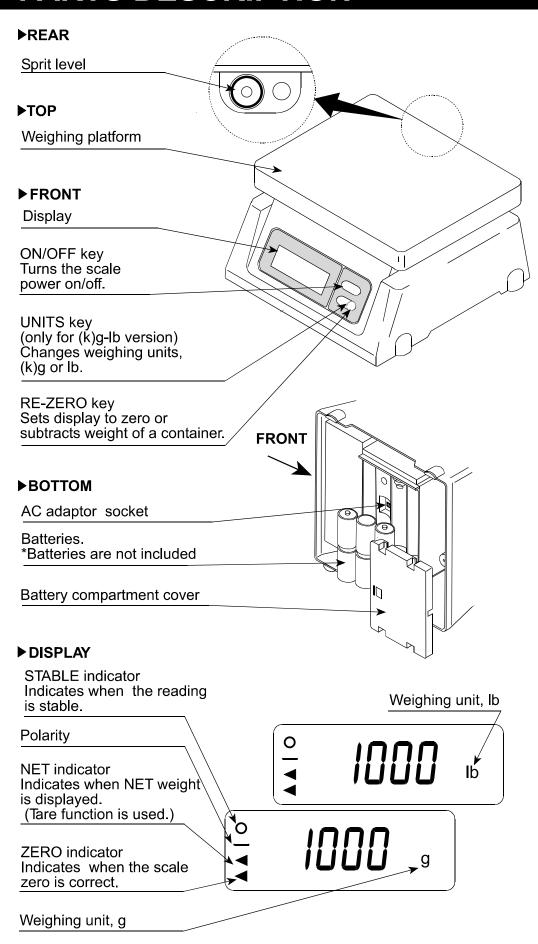
If the scale is not to be used for a long period of time, remove all batteries from the battery compartment to avoid leakage which may cause damage to the instrument.

Avoid overloading that could cause damage to the scale.

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

# **\***

# **PARTS DESCRIPTION**

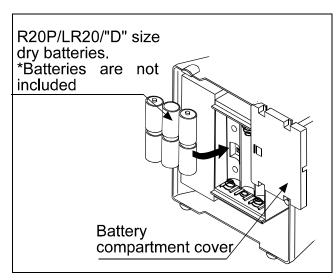


# **PREPARATION**

# 1. Installing batteries / Connecting the AC adapters Batteries

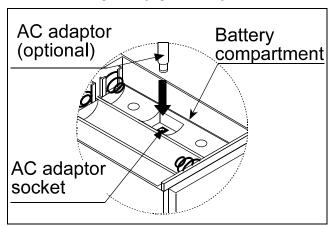
# ⚠ CAUTION

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

### **AC** adapter (optional)



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

The AC input requirement could be 100, 120, 220, 230, or 240Volts (50/60Hz) depending on the area where used, so please verify that the adapter is correct.

# 2. Setting up the SK

## **A** CAUTION

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

Place the SK on the firm surface so that the sprit level shows that the scale is leve for an accurate 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.)

Paff Function disabled Paff Function enabled

#### **Error Messages**

Ε	Overload
	The scale zero is out of range
LЬ	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  $\Box$  will be displayed.

## 2. Start weighing

# If you do not use a container for weighing,

## 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.

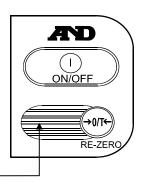


#### When to Calibrate

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.



Location of the [UNITS]

## **Calibration Using a Calibration Weight**

Calibrate the scale with the following calibration weight.

SK-1000:  $1000g \pm 0.1g$  SK-2000:  $2000g \pm 0.2g$  SK-5000:  $5000g \pm 0.5g$  SK-10K:  $10kg \pm 1g$  SK-20K:  $20kg \pm 2g$  SK-30K:  $30kg \pm 2g$ 

#### 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, [IRL] will be displayed.

#### 2. Zero calibration

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

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

Wait for the stable indicator  $\bullet$  to be displayed and press the [RE-ZERO] key.  $\boxed{\textit{ERLF}}$  will be displayed in a few seconds. If the zero calibration only is to be done, press the [UNITS] key. The scale will show  $\boxed{\textit{End}}$  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  $\bullet$  to be displayed and press the [RE-ZERO] key. The scale will show  $\boxed{\varepsilon_n d}$  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 m/sec<sup>2</sup> 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 the 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, will be displayed.

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

Press the [UNITS] key. The previously set value, for example \$\frac{979,8}{9}\$, 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 <u>End</u> is displayed. The scale will automatically return to the weighing mode.



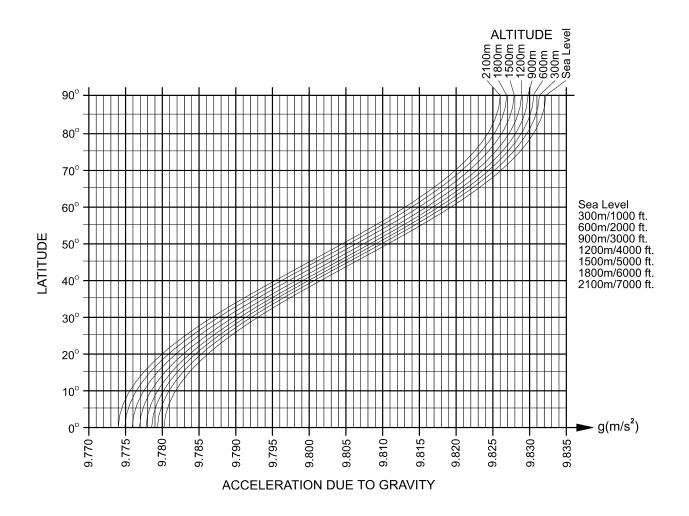
# **SPECIFICATIONS**

Model	SK-1000	SK-2000	SK-5000	SK-10K	SK-20K	SK-30K
Capacity	1000 g	2000 g	5000 g	10 kg	20 kg	30 kg
	2.2 lb	4.4 lb	11 lb	22 lb	44 lb	66 lb
Resolution	0.5 g	1 g	2 g	0.005 kg	0.01 kg	0.02 kg
	0.001 lb	0.002 lb	0.005 lb	0.01 lb	0.02 lb	0.05 lb
Non-linearity	±1g	±2g	±4g	±0.01 kg	±0.02 kg	±0.04 kg
Repeatability	0.5g	1g	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	230 mm (W) x 190 mm (D) / 9.05 in(W) x 7.48 in(D)					
Dimensions	244 (W) x 232 (D) x 137 (H) mm / 9.61 (W) x 9.13 (D) x 5.39 (H) inches.					
Weight (approximately.)	1.6 kg / 3.53 lb				1.9 kg / 4.19 lb	
Calibration	1000g±0.1g	2000g±0.2g	5000g±0.5g	10kg ±1g	20kg ±2g	30kg ±2g
weight						
Accessories	This manual					
Options	AC adapter					



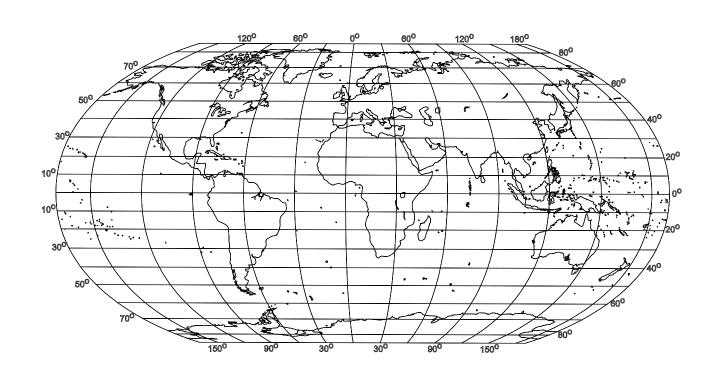
# THE VALUE OF GRAVITY AT VARIOUS LOCATIONS

					_
Amsterdam	9.813	m/s <sup>2</sup>	Manila	9.784	m/s <sup>2</sup>
Athens	9.800	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>
CapeTown	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>	Taiwan	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>



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# **WORLD MAP**





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