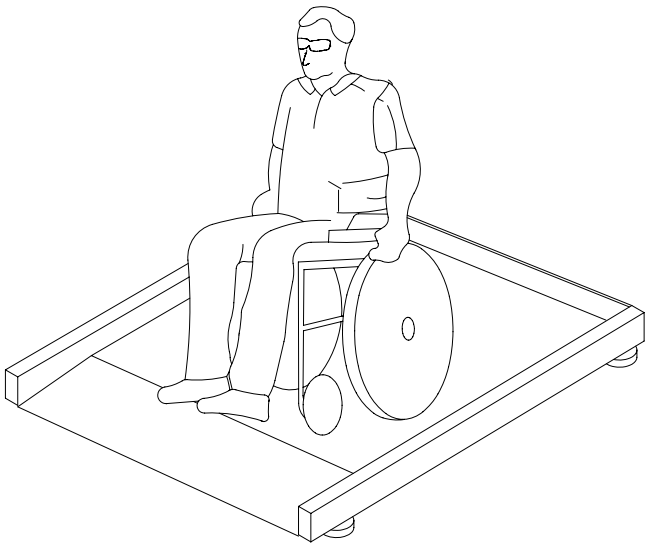
WCS SERIES

INSTRUCTION MANUAL

WHEEL CHAIR SCALE (WCS)



A&D Company, Limited

WCS-IM : 01032006

Welcome !

Thank You for purchasing your new A&D Mercury (WCS) Wheel Chair Scale.

The WCS is the product of years of design, development, and infield testing. It is designed to withstand harsh environmental conditions and each WCS is subjected to several levels of quality control before it leaves the factory. Every care has been taken during the manufacturing process of the WCS to ensure that it will perform accurately and reliably for many years.

Features

- Unique Castor Design: for simple movement of the platform location
- Light Weight Drop Centre Design: easy access to drop surface via entry ramp
- Your Choice of Powder Coated or Anodised Finish: Visually appealing
- Dual Power Supply: unit can be operated on AC or Battery power
- 300kg Capacity – 100 gram Accuracy: suitable for all wheel chairs
- Separate Indicator Stand: allows maximum flexibility in set up
- Keyboard Tare Entry: subtracts the weight of the wheel chair
- Large Weight Area: suitable for both motorised and non-motorised wheel chairs

Notes !

This is a hazard alert mark.

This mark informs you about the operation of the product.

Product specifications are subject to change without any obligation on the part of the manufacturer.

Table of Contents

INSTALLATION and POWER SUPPLY

Installation and Power Supply

Installation

The WCS indicator is a precision electronic instrument, and requires careful handling.

The operating temperature range is –5°C to +40°C. It should be installed where it will not be exposed to direct sunlight.

The WCS Indicator must be kept away from electrical noise sources, since only an extremely weak voltage is produced as the load cell output, and the cable connected to the WCS Indicator is affected by noise sources which include pulse components.

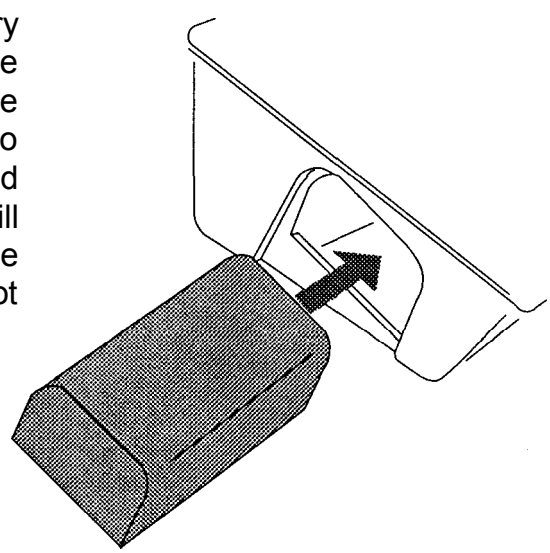
Power Supply

- When the AC adapter is used

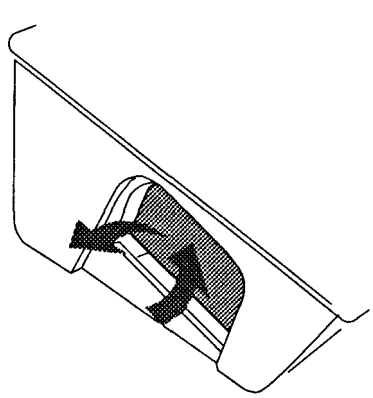
  A stable power source must be used, since an unstable power source which includes an instantaneous noise component may result in misoperation.

- When dry batteries are used

  Use fresh batteries, preferably alkaline type. Insert the batteries into the battery box (use caution in inserting to match the polarity of the batteries), and insert the battery box as shown with the contacts to the inside of the indicator. Push it in and towards the bottom. The battery box will hook onto the edge of the case. Install the cover over the battery box so that it will not fall out.



To remove the battery box, press in and up on the end of the battery box. Slowly release pressure on the battery box while holding it against the top of the battery compartment and the battery box will slide out.



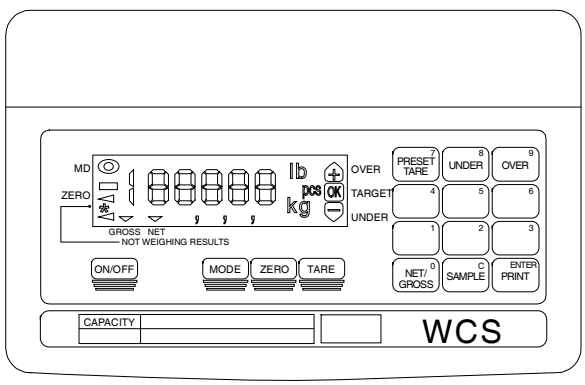
The Optional AD-1681 re-chargeable battery pack can be used in place of the standard battery box.

DESCRIPTION of PANEL

Description of Panels

Front Panel

WCS INDICATOR



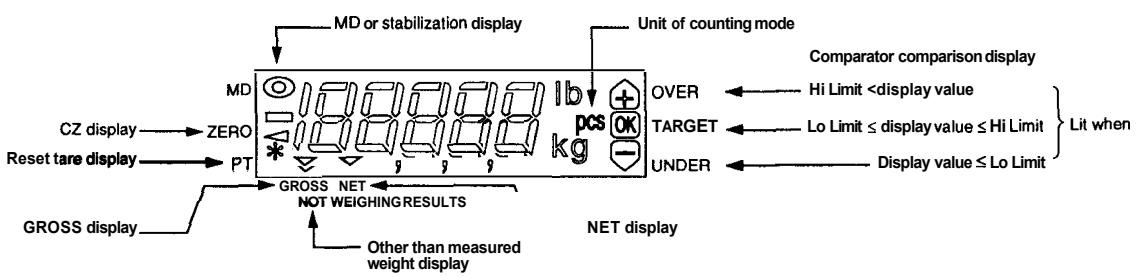
TOP VIEW

Key

ON/OFF	Turns power on/off.
MODE	Switches the unit. (See "Unit Switching"(pg. D■3))
ZERO	Sets the zero point. (See "Zero"(pg. D■2))
TARE	Sets the tare. (See "Tare Deduction"(pg. D• 2))
GROSS/ NET	Switches between gross weight and net. (See "Gross Weight ↔ Net Weight Display Switching"(pg. D• 3))
PRINT ENTER	Outputs data to a peripheral device such as a printer. Saves the input data.
TARE SETTING	Sets the preset tare. (See "Tare Deduction Using Numeric Keys"(page D■3))

1 ~ 6	Numeric keys, 1 to 6
7 P. TARE	Used to input the preset tare value. Also used as numeric key 7.
8 UNDER	Used to input the Target LO Limit. Also used as numeric key 8.
9 OVER	Used to input the Target HI Limit. Also used as numeric key 9.

Display Unit



Weight over display

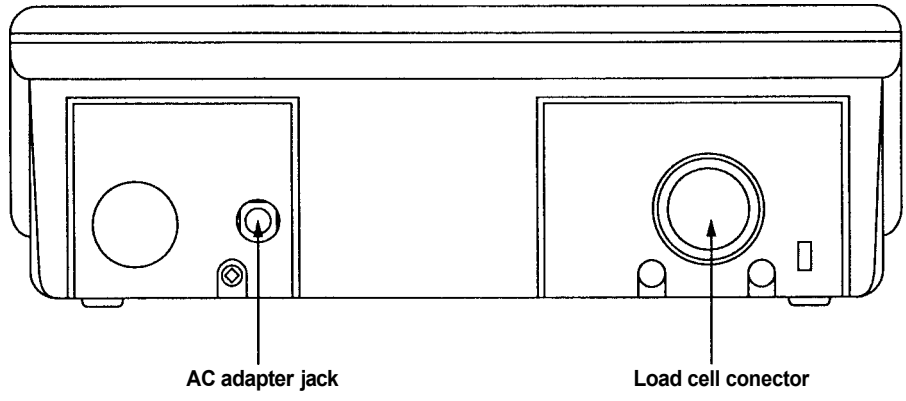
Plus over	When the GROSS data is greater than the capacity data plus 9 digits, display is blank.
Minus over	When the measurement data is minus over or the GROSS data is smaller than the calibration zero data minus 20% of the capacity data. The numerical display will blank, leaving only the minus sign.

However, the unit, GROSS, NET and other annunciators are left. Also, when the comparator is operating, the comparison result is OVER or UNDER.
In the case of OVER, the weighing result output is replaced with spaces.

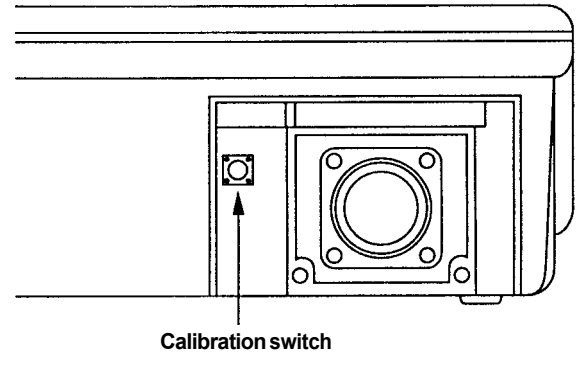
Rear Panel

- ❑ **Calibration switch** — **Used for calibration and some function settings**
- ❑ **Load cell connector** — **Connects to the load cell cable.**
- ❑ **AC adapter jack** — **Used** toConnect **the AC adapter.**

With cover



Without cover



BASIC OPERATION

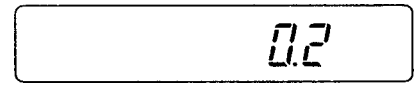
Basic Operation

Zero

If the zero point has drifted, pressing [ZERO] will correct it.
Normally this is only valid when the instrument is stabilized.

- In case of gross weight display

Zero point has drifted



Press the [ZERO] key

Tare Deduction

Weights for which tare deduction can be performed are 1 division more or less than or equal to the maximum capacity.
If 30.0 tare deduction is performed when the maximum capacity is 300.0, the weighable net weight is 270.0. When tare deduction is performed, the display automatically changes to the net weight display. Normally, the [TARE] key is only valid when the instrument is stabilized.

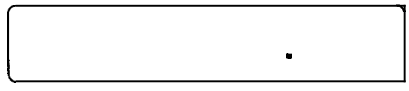
Tare Deduction Using [TARE] Key (One-Touch Tare Deduction)

- ❑ Place the tare weight on the weighing platform
- ❑ Press [TARE]. The weight display changes to net weight.

Tare Deduction Using Numeric Keys (Digital Tare Deduction)

❑ Press [PRESET TARE].

← When preset tare has been input



← When preset tare has not been input
In case of tare by one-touch tare deduction

❑ For example, for a tare deduction of 10.5, input [1],[0],[5]. The decimal point is fixed. (If you make a mistake, press [SAMPLE] and the value prior to setting will be returned; you can then set the value again.)

Press [ENTER], and the display changes to the net display.

Tare Clearance

If the [TARE] key is pressed when the balance is at the zero point, the tare will be cleared. The WSC Indicator tare can also be cleared by inputting 0 in preset tare deduction.

Gross Weight Display ↔ Net Weight Display Switching

Pressing the [NET/GROSS] key switches between gross weight display and net weight display. However, the display does not switch to net weight if the tare has been cleared.

Unit Switching ([MODE] Key)

Pressing the [MODE] key changes the unit. The WSC Indicator Hi/Lo target setting is also performed here.

[MODE] Kg [MODE] PCS [MODE] - +

SPECIFICATIONS

Specifications Section E

A/D Conversion Unit

Input sensitivity	0.2μV/dmin (d = minimum division)
Input signal range	–1 mV to 15mV
Load cell applied voltage	5VDC±5% (with remote sensing)
Load cell drive capacity	Max 6 units with 350 Ω load cell (max 90mA)
Zero point temperature coefficient	±(0.2μV±0.0008% of zero adjustment voltage) / °C(TYP.)
Span temperature coefficient	±8ppm/°C of rdg (TYP.)
Non-linearity	0.01% of F.S.
Maximum input noise	±0.2 μ V p-p
Input impedance	10MΩ or more
AID conversion method	Integral type
Maximum display resolution	10000d (divisions)
A/D conversion speed	Approx. 5 times/sec (same for display update)

Front Panel

7-segment liquid crystal display, character height: 22mm
Selection of g, kg or t, lb or lb/kg; and pcs (number of items)

General Specifications

Power supply	AC adapter or 6 "C" size batteries
Weight	750g (approximately, excluding batteries)
Operating temperature range	–5°C to 40°C
Operating humidity range	85% RH or less (no condensation)
External dimensions	See dimensions on page 1-3

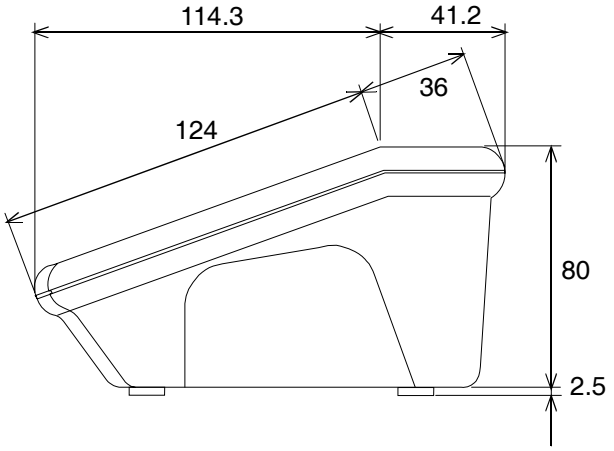
Options

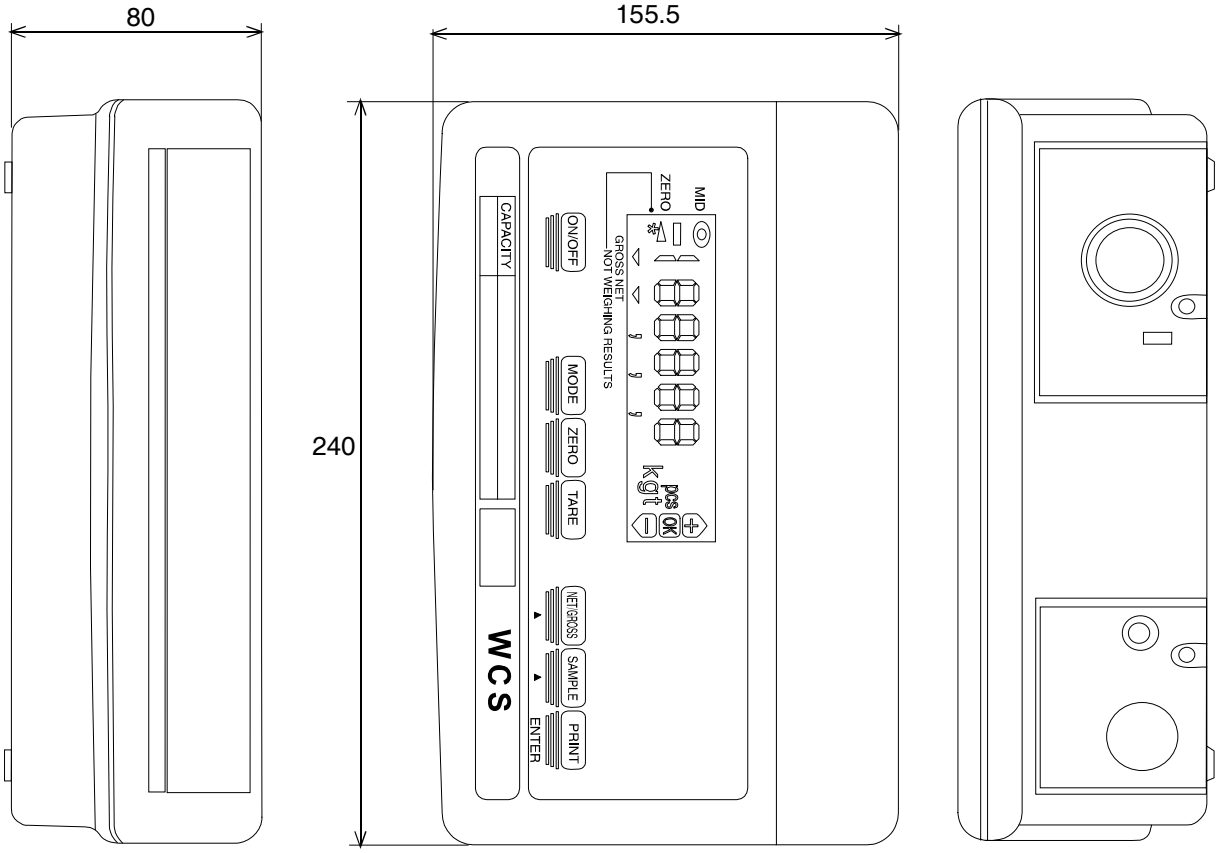
OP-03	RS-232C interface
OP-04	RS-232C interface + comparator relay output
OP-05	Printer interface (20mA current loop)
AD-1681	Rechargeable NiCd Battery Pack

Accessories

Load cell connector	1 (NJC-207-PF)
AC adapter	1
Maximum capacity nameplate	1
Instruction Manual	1
Battery box	1

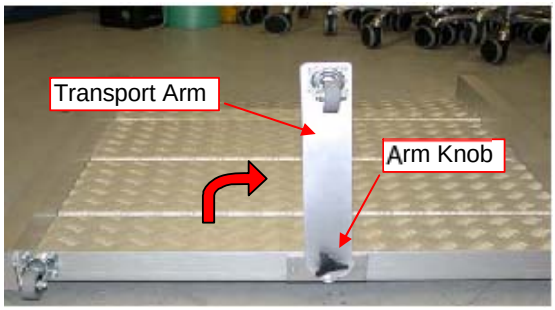
DIMENSIONS


114.3
41.2
36
124
80
2.5


80
155.5
240
CAPACITY
WCS
ON/OFF
MODE
ZERO
TARE
NET/GROSS
SAMPLE
PRINT
ENTER
MID
ZERO
GROSS NET
NOT WEIGHING RESULTS
pcs
kg
OK

SETUP and TRANSPORTING

Step 1



A - Lift unit off the packaging & place onto the floor.

B - Undo the Arm knob & swing the Transport arm into the upright position, tighten Arm knob to lock the arm firmly in position.

Step 2

A - Stand in front of the unit (Ramp end)

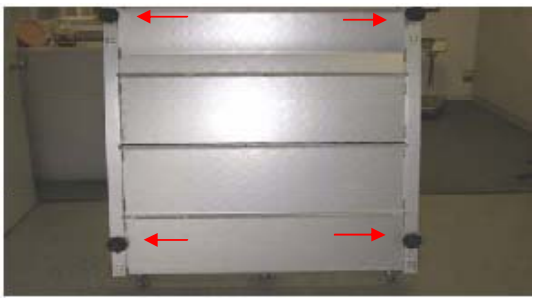
B - Place hands under the ramp.

C - Lift the unit up onto it's wheels.

Step 3

A - Lift up and over until the Transporting arm wheel is sitting on the ground.

Step 4



A - Screw the levelling leg into the load cells on the under side of the unit.
(4 - Levelling Legs)

Notice
This is the transport position to move the unit around.
Stand at one end and placing both hands on
the top of the unit.
Push the unit forwards and steer in the required
direction as needed.

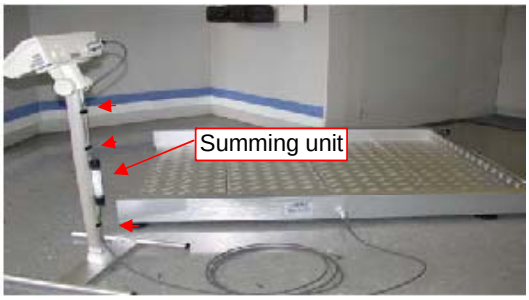
Step 5

A - Lower unit back onto the floor.

B - Level unit by turning the levelling legs to remove any rock from the unit.

C - Lower the Transporting arm back to the storage position , locking with the Arm knob.

Step 6



A - Plug the short lead from the Summing unit on the cable into the Indicator & the other end to the Bas socket.

B - Attach the cable into the grove in the Column using the clips.
(3 - Cable clips) ►

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