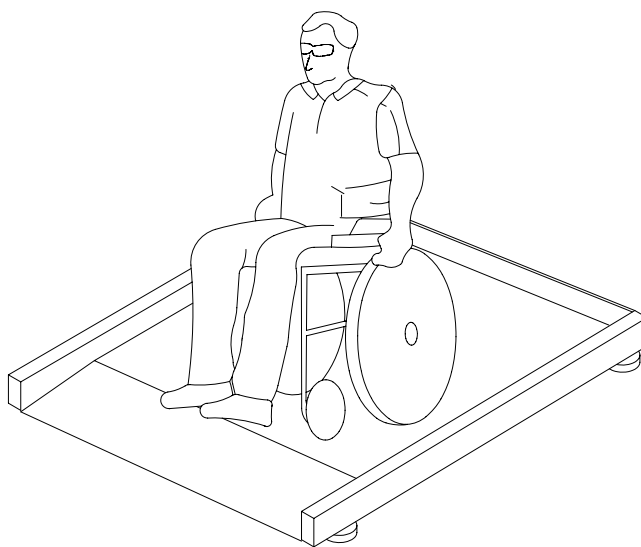


WCS SERIES

INSTRUCTION MANUAL

WHEEL CHAIR SCALE (WCS)



A&D

A&D Company, Limited

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.

This manual is subject to change without notice at any time to improve the product. No part of this manual may be photocopied, reproduced, or translated into another language without the prior written consent of the A&D Mercury.

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

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**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 $+40^{\circ}\text{C}$. 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.



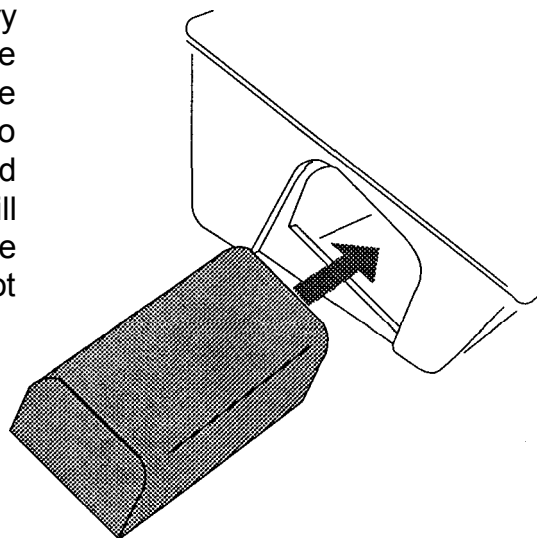
Power Supply

- 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.

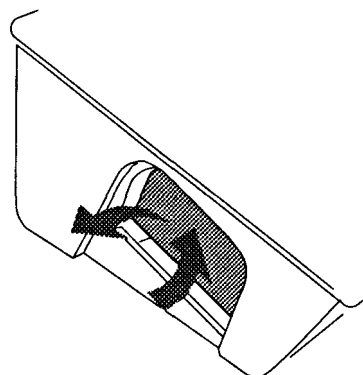
- When dry batteries are used

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**

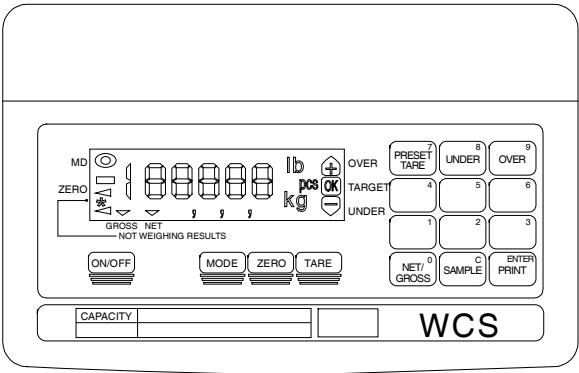


Description of Panels



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

7
P. TARE

8
UNDER

9
OVER

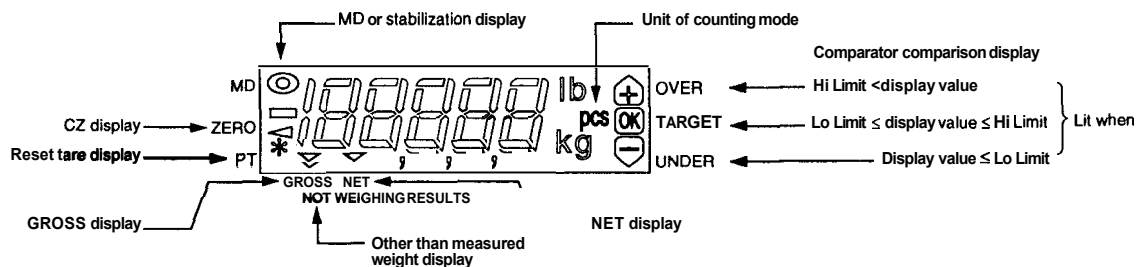
Numeric keys, 1 to 6

Used to input the preset tare value. Also used as numeric key 7.

Used to input the Target LO Limit. Also used as numeric key 8.

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.

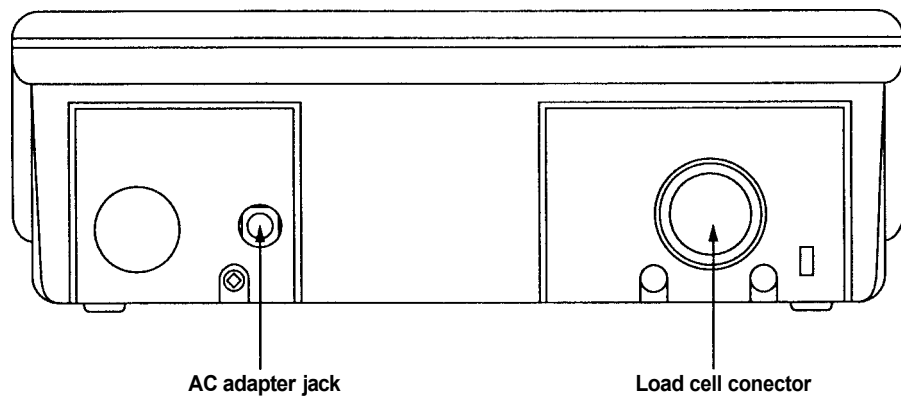
However, the unit, GROSS, NET and other annunciators are left. Also, when the comparator is operating, the comparison result is OVER or UNDER.
In the case of OVER, the weighing result output is replaced with spaces.



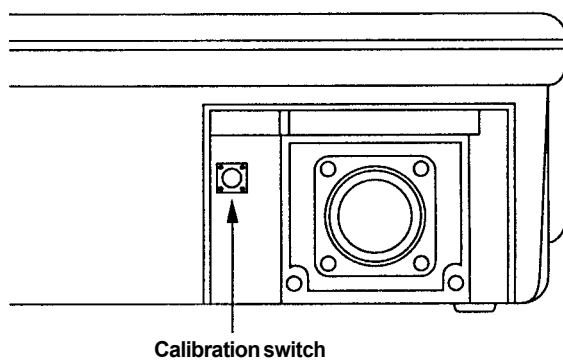
Rear Panel

- | | |
|--|---|
| <input type="checkbox"/> Calibration switch | Used for calibration and some function settings |
| <input type="checkbox"/> Load cell connector | Connects to the load cell cable. |
| <input type="checkbox"/> AC adapter jack | Used to connect 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

0.2

Press the **ZERO** key

0.0



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.

SPECIFICATIONS



Specifications

Section E



A/D Conversion Unit

Input sensitivity	0.2 μ V/dmin (d = minimum division)
Input signal range	-1 mV to 15mV
Load cell applied voltage	5VDC \pm 5% (with remote sensing)
Load cell drive capacity	Max 6 units with 350 Ω load cell (max 90mA)
Zero point temperature coefficient	\pm (0.2 μ V \pm 0.0008% of zero adjustment voltage) / $^{\circ}$ C(TYP.)
Span temperature coefficient	\pm 8ppm/ $^{\circ}$ C of rdg (TYP.)
Non-linearity	0.01% of F.S.
Maximum input noise	\pm 0.2 μ V p-p
Input impedance	10M Ω 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 $^{\circ}$ C to 40 $^{\circ}$ C
Operating humidity range	85% RH or less (no condensation)
External dimensions	See dimensions on page 1-3



Options

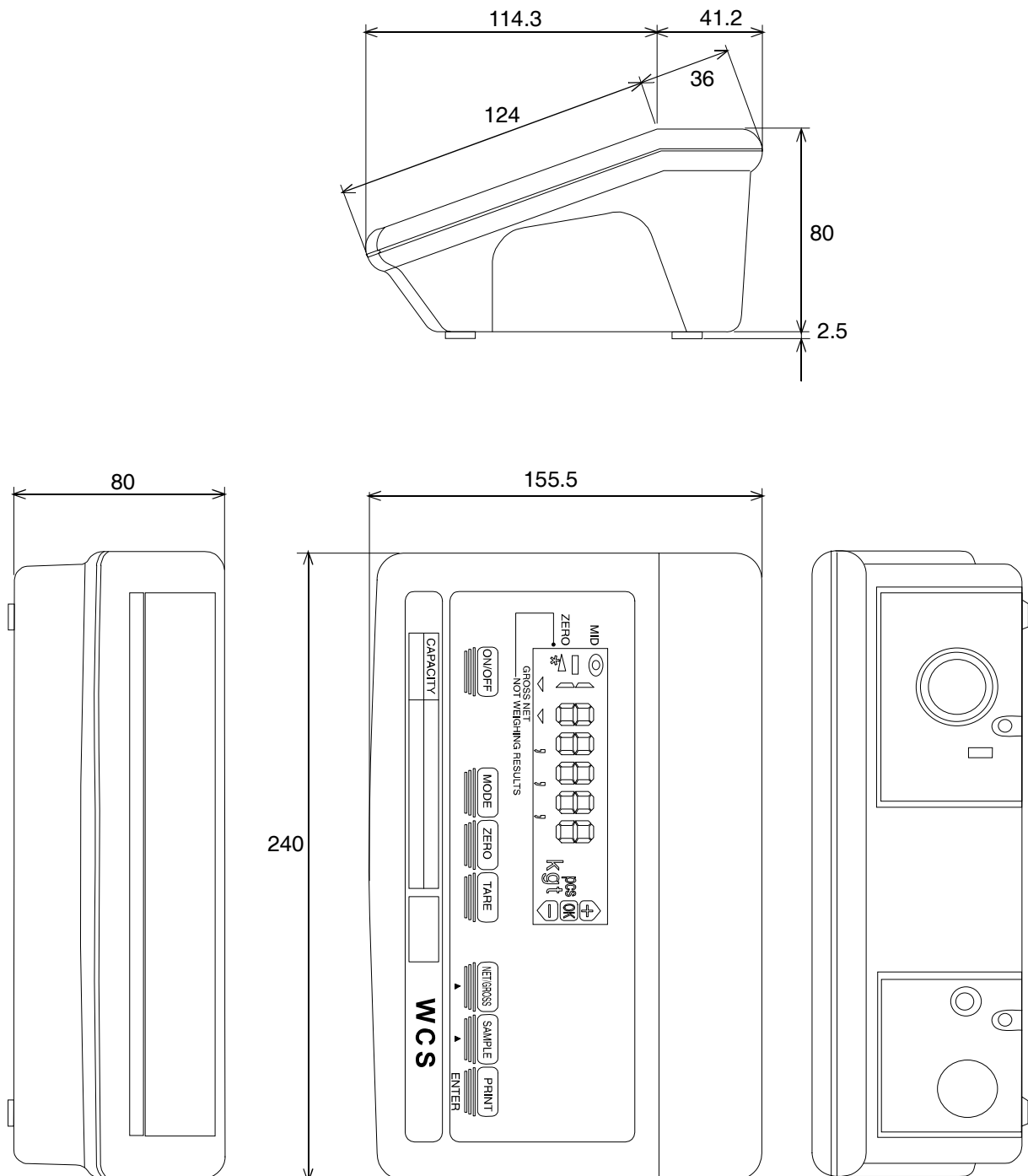
OP-03	RS-232C interface
OP-04	RS-232C interface + comparator relay output
OP-05	Printer interface (20mA current loop)
AD-1681	Rechargeable NiCd Battery Pack

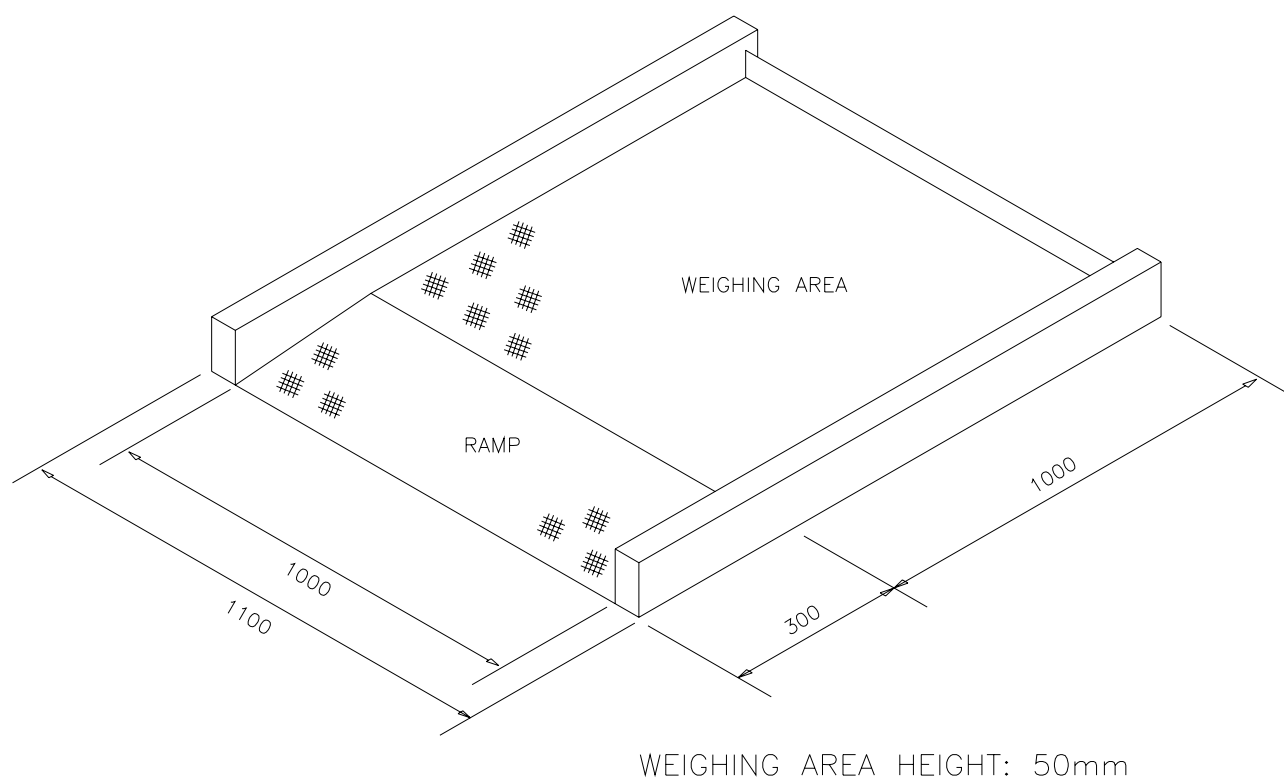


Accessories

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

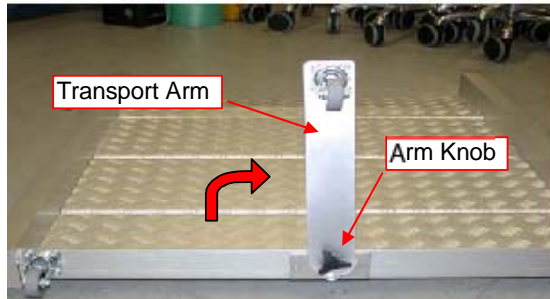
DIMENSIONS





**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.

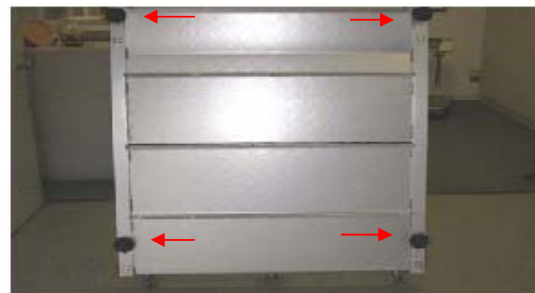
C - Lift the unit up onto it's wheels.

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.

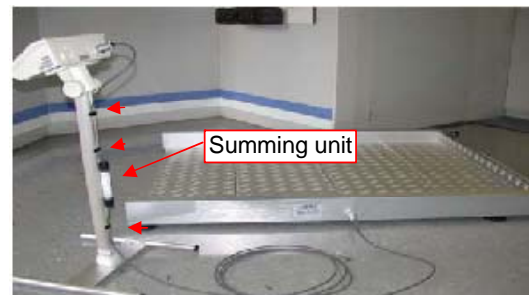


Step 5



- 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 groove in the Column using the clips.
 (3 - Cable clips) ▶



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