

TR2000

USER GUIDE

NTEP & CANADIAN WEIGHTS & MEASURES

PRINTER

To use the Tru-Test printer, connect the printer to the TR2000 with the cable supplied. Connect the TR2000 to an external 12 VDC supply (battery or power adaptor). Disconnect the printer cable when printed records are not required.

WARNING: Some cables, that connect pin 7 to the other end of the cable, may damage printers/computers.

COMPUTER INTERFACE

Computer programs can request the displayed weight from the indicator via the serial port. The computer sends {RW}. The indicator responds with [102.5] for a weight of 102.5 kg/lb or [U102.5] if unstable. There is no carriage return or line feed sent or received.

Computer program suppliers should contact Tru-Test for further information.

SPECIFICATIONS

Note: product specifications may change without prior notice.

Class III/III L, 6 or 4 wire.

n _{max}	5000.
V _{SI} _{min}	1 uV/d.
Loadcell excitation	5 VDC.
Input range	-2 to +17 mV.
Loadcell impedance	60 to 450 .
Power supply	12 VDC (power adaptor or vehicle battery).
Operating temperature	-10 to +40 °C (+14 to +104 °F).
Storage temperature	-20 to +35 °C (-4 to +95 °F).
Internal battery run time	8 hours with 2 loadcells connected.
Serial port	RS-232, D9 male connector, 9600 baud, 8 data bits, 1 stop bit, no parity. Pin 2 receive data (Rx), pin 3 transmit data (Tx), pin 5 ground, pin 7 fused 12 V output when external 12 V supplied.
Environmental	IP67 (immersion in 1m of water).

FOR SERVICE www.tru-test.com

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FCC NOTICE

The Tru-Test Model TR2000 indicator has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is used in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction leaflet, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case users will be required to correct the interference at their own expense.



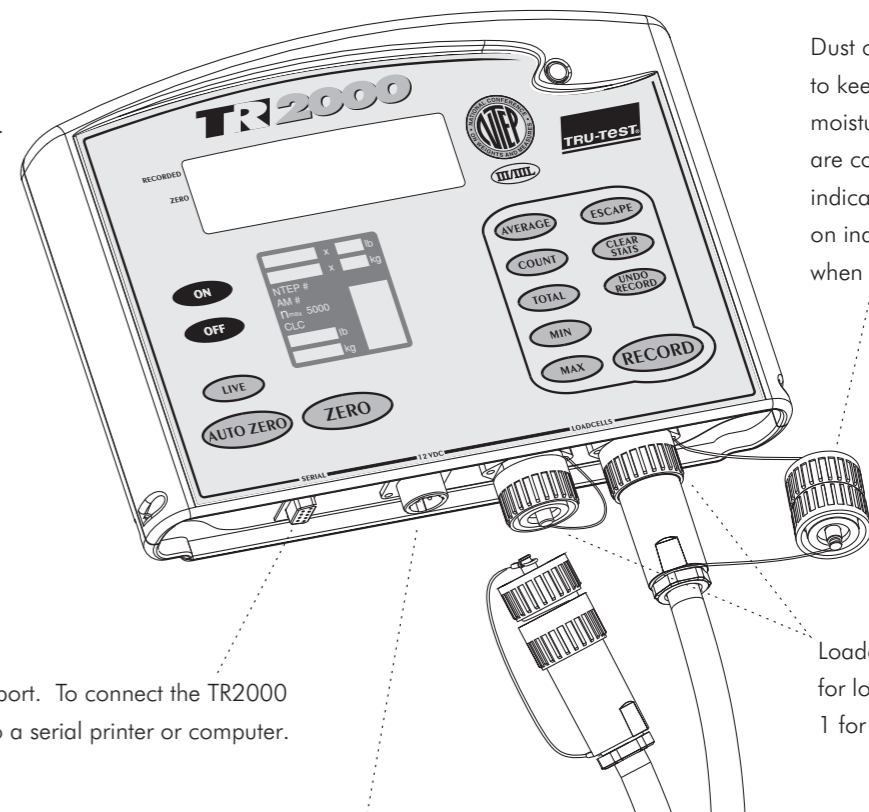
WID81010 NTEP W&M rev 2 10.10

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Congratulations on your purchase of this Tru-Test Series 2000 scale indicator. To ensure you receive the service you are entitled to, please complete and post the warranty card without delay.

INSTALLATION

- 1 Install the loadcells and platform as per manufacturer's recommendations.
- 2 Mount indicator bracket in a convenient place where the indicator or cables will not be damaged. The bracket mounts onto flat surfaces (timber rails, concrete) or horizontal pipe-work with the supplied U-bolts.
- 3 Connect loadcell(s) to the indicator. Connect dust caps as shown.
- 4 Connect power cable (if needed).



Dust caps screw together to keep out dirt and moisture when cables are connected to indicator. Screw back on indicator/cables when cables removed.

Serial port. To connect the TR2000 to a serial printer or computer.

Loadcell connectors, 2 for loadbars, use either 1 for single loadcells.

Power connector for connecting 12 V vehicle battery (red clip to positive terminal) or Tru-Test power adaptor. To connect power adaptor, pull battery clips off indicator lead and plug lead into power adaptor lead (red to red). The power cable is permanently connected to non battery indicators.

BASIC WEIGHING

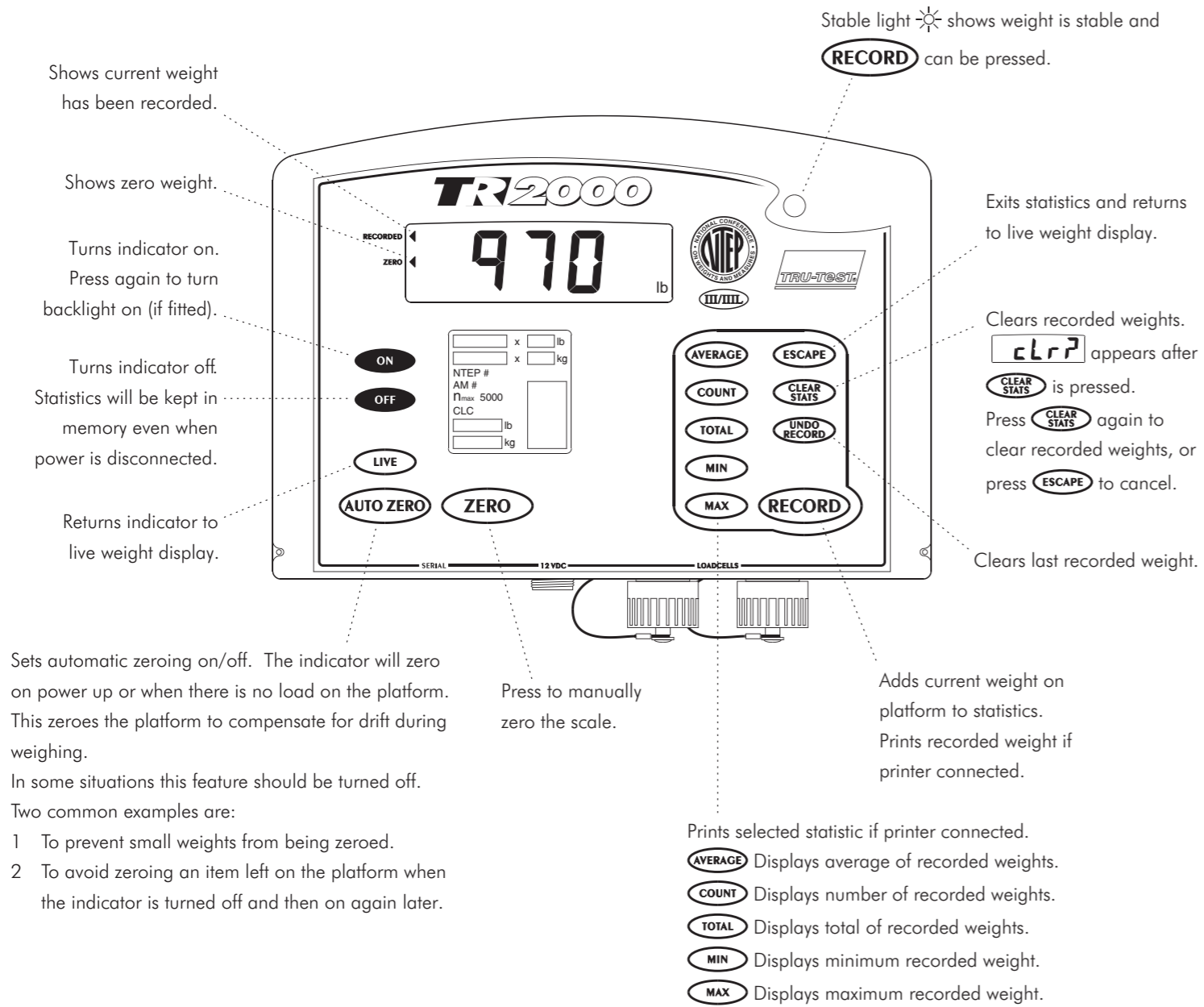
- 1 Press **ON** and wait for display.
- 2 Move item onto platform.
- 3 Wait for stable light .
- 4 Remove item and repeat from step 2.

RECORDING STATISTICS

- 1 Press **ON** and wait for display.
- 2 If weighing a new group of items, press **CLEAR STATS** twice to clear memory.
- 3 Move item onto platform.
- 4 Wait for stable light and press **RECORD**.
- 5 Remove item and repeat from step 3.
- 6 When weighing session completed, note down statistics.



FUNCTIONS

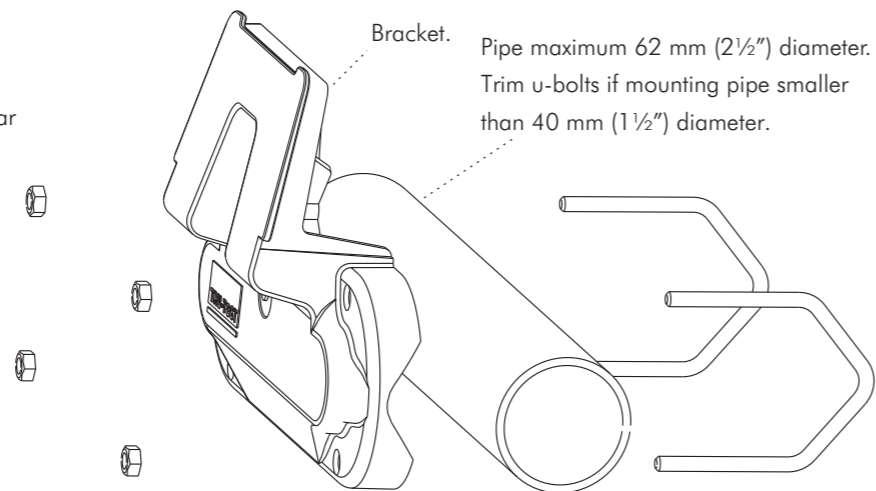


OPERATING NOTES

During weighing, check that items are fully on the platform. Ensure that the underside of the platform or crate is kept clear of dirt and stones. Do not leave the indicator or loadcells in water. Store the indicator in a cool dry place. The indicator automatically turns off after 15 minutes of no activity, to limit discharge of the internal battery.

BRACKET INSTALLATION

Install on a horizontal pipe as shown, or attach to the wall using screws supplied.



DISPLAY MESSAGES

AUrg	Displays average recorded weight.	H1	Displays maximum recorded weight.
bAdc	Loadcell type not recognised. Contact TRU-TEST.	HULt	External power supply too high. Check power supply.
bAtt	Recharge battery. About 10 minutes till flat.	Lo	Displays minimum recorded weight.
cAnt	Memory empty, or previous recorded weights already removed.	LULt	External power supply too low. Voltage too low to charge.
chAr	Battery is charging. Indicator can be used normally.	nrEc	Not recorded. No loadcell connected or weight not stable. Otherwise clear stats and try again.
clr?	Clear statistics prompt. Press CLEAR STATS to confirm, or ESCAPE to cancel.	OFF	Function is off.
cnt	Displays number of weights recorded.	On	Function is on.
donE	Previous recorded weight has been removed from statistics.	oUeR	Overload. Weight on scale is greater than capacity.
duPl	Duplicate record. Item already recorded.	rEcD	Weight recorded.
E-F	Charge level. Battery is low.	tot	Displays total recorded weight.
E--F	Charge level. Battery is fully charged. It is safe to leave on charge.	uL	Under load. Negative load or faulty loadcell/wiring.
Er42	Scale needs service. Note the error number and contact TRU-TEST.	ZEro	Indicator is zeroing.
		zoL	Zero overload.

INTERNAL BATTERY OPTION

The internal battery charger operates from either the recommended Tru-Test power adaptor or a 12 volt vehicle battery. Damage to the indicator caused by other charging supplies, including automotive battery chargers, is not covered by the warranty.

The indicator displays **bAtt** about 10 minutes before flat, if the battery was fully charged within the last 2 weeks.

Charge the indicator for 12 hours before using it for the first time.

To maximise battery life, observe the following simple guidelines:

- Preferably recharge the battery overnight.
- Never charge the indicator in direct sunlight.
- Store the indicator in a cool dry place.

The internal battery charger ensures maximum life of the battery, while giving the fastest charging rate possible. The battery is protected from overcharging. Charging a flat battery takes 6 hours at temperatures of 10 to 35 °C (50 to 95 °F).

You can safely leave the indicator on charge all the time. The scale can be used while charging. You do not need to charge before storage.

Charging at low or high temperatures could extend the charging time to 12 hours. At extreme temperatures the indicator will not charge.

Fully charge the indicator after storage.