User Manual

HR2000 Weighing Indicator

Ver 1.4

Introduction

Congratulations on your purchase of the HR2000 weighing indicator.

The indicator has been designed to be extremely easy to operate, this manual describes how to best use the instrument.

Mains Power

The mains adapter supplied with the indicator should be plugged into a standard 240V AC mains socket.

Ensure the mains adapter is kept dry and has good air circulation at all times.

The red button on the indicator is used to power the HR2000 on and off.

Note the first time after applying power this button will take a few seconds to become active.

Battery Power

The mains charger supplied with the indicator should be plugged into a standard 240V AC mains socket.

Ensure the mains charger is kept dry and has good air circulation at all times.

The batteries will require about 12 hours to fully charge, but will also charge during use.

The Toggle switch on the side of the indicator is used to power the HR2000 on and off.

Note the first time after applying power this button will take a few seconds to become active.

The initial startup screen will be visible for a few seconds. This typically shows the following information :

> Supplier :
> Last Calibration date :
> Next Calibration required :

It is advisable to contact the supplier for a calibration check when required.

Normal Operation

After power up the large display will show the Gross weight and the Tare will be automatically zeroed.

Dual Platform Operation

If two scales have been installed then the keys **1** and **2** will allow switching between the scales.

In weighing or counting modes there will be a 1 or 2 suffix after each weight to show which scale is active at any time.

ZERO key

The ZERO key is used to re-zero the scale when it has drifted away from zero with no weight applied. Note the scale will only re-zero within a small band of the zero point.

When no weight is on the scale the system will automatically perform zero tracking where it holds the scale at zero even if there is loadcell drifting. Note the zero tracking only works within a small band of the zero point.

TARES

The HR2000 indicator provides three types of tare functions.

    1.   TARE (manual)
    2.   PRESET TARE
    3.   ID Tare (Discussed later)

MANUAL TARE

The manual tare is normally operated as follows :

1. Ensure the empty scale is correctly zeroed.
2. Place an empty container on the scale
3. Press the TARE key.
4. The large display will switch to Nett mode, the small display will be in Gross mode, and theTare display will show the container weight.

5. Place the product in the container to display the product weight as the Nett value on the large display.

The manual tare may be cancelled by pressing the TARE key again, and the main display will revert back to Gross mode.

PRESET TARE

If the container tare weight is already known it is possible to enter the tare value at the keyboard without performing a weighing.

The preset tare is normally operated as follows:

1. Press the PRESET TARE key.

2. Enter the preset tare (Container weight)

3.   The large display will switch to Nett mode, the small
      display will be in Gross mode, and theTare display
      will show the container weight as entered.

4.   Ensure the empty scale is correctly zeroed.

5.   Place container plus product on the scale to display
      the product weight as the Nett value on the large
      display.

The preset tare may be cancelled by pressing the PRESET TARE key again, and
the main display will revert back to Gross mode.

Note when entering the preset tare it MUST be entered in multiples of the scale
resolution. Any preset tare entry which is not a multiple of the resolution will not
be accepted.

For exam ple if the resolution of the scale is 5 kg and the accurate weight of the
container is 36 kg , then the preset tare weight should be entered as 35 kg. If the
container weight was 38 kg then the preset tare weight would be entered as 40 kg.

NETT / GROSS Switching

The NETT / GROSS key allows the user to switch the large display between Nett
and Gross modes.   The system will still automatically override this setting if a
tare is entered or cancelled.

(F1) - SETUP FEATURES

The F1 key provides a menu as follows :

1.   Adjust display contrast
2.   Set Time / Date
3.   Select lb / kg
4.   Backlight options
5.   Totals
6.   I.D Setup
7.   Print Setup
8.   Exit

Adjust Display Contrast - (1)

This provides a futher option to lighten or darken the display contrast. To lighten the display contrast press 1 repeatedly, and to darken the display contrast press 2 repeatedly.

Once the contrast is correct press 3 to return back to the main screen.

TIME / DATE setting - (2) (OPTION)

The time and date may be set by choosing option 2. The Year is prompted for and the user may type in a new year if desired or press ENTer to continue to the month setting.

Once the date is fully entered the display will show PLEASE WAIT for a few seconds and automatically return to the main screen.

Select lb / kg setting - (3)

On this indicator this option is not installed.

Backlight Options - (4)

Three options may be selected as desired:

> Backlight always ON
> Backlight always OFF
> Backlight ON during weighing (auto off)

Totals - (5)

The user may press the **1** key to RESET the total nett weight. If totals are not required it may be desirable to not display the total on the main screen. The user may press the **2** key to toggle the totals show option.

Note the totals always record in the background even if not displayed on the main screen.

I.D Setup - (6)

The indicator has capability for 50 I.D's (more can be provided as an option).
The ID gives the capability to set up the following :

> Preset Tare
> ID Description (20 characters)
> Unit Weight

Note :   Preset Tare is only used in weighing mode
          Unit Weight is only used in counting mode

It is possible to change a number of different I.D's before returning to the main
menu.

Note: In a dual scale setup the Preset tare and unit weight only operate with scale
one.

Print Setup - (7)

It is possible for the user to select what is to be printed on a connected tally roll
printer when the PRINT button is pressed.

The eight possibilities are :

I.D	-	Prints if selected
Nett Weight	-	Prints if selected
Gross Weight	-	Prints if selected
Tare Weight	-	Prints if selected
Unit Weight	-	If selected only prints in COUNTING mode
Count	-	If selected only prints in COUNTING mode
Totals	-	If selected only prints in WEIGHING mode
Time/Date	-	Prints if selected

Exit - (8)

This option returns to the main screen.

SETPOINT

The setpoint allows the limits to be set for target weighing or counting. The UNDER / OVER / ACCEPT lamps are used for this feature.

For example:

If the High Limit is set to 120 kg and the low limit is set to 80 kg then the lamps will behave as follows :

Weight below 80 kg   UNDER lamp lights
Weight above 80 kg and below 120 kg   ACCEPT lamp lights
Weight above 120kg   OVER lamp lights

If the limits are BOTH set to zero then the lamps will be disabled.

In counting mode the limits may be set in counts, and the lamps operate as above.

Mode

Three modes are possible :

          1.   Weighing Mode (Standard)
          2.   Weighing Mode (Peak Hold)
          3.   Counting Mode

Each option may be selected as desired by the mode key, and the indicator functions change to reflect the operating mode.

Peak Hold Weighing

This is a special mode which displays the maximum weight achieved. This mode will typically be used to record the breaking tension of a material.

While in this mode the display will show : PEAK HOLD

To reset the peak hold to zero the ENTER key may be pressed. At this time the display will show : PEAK CLEAR.

Note when using the ZERO or the TARE functions the peak will be automatically cleared. This allows the display to reflect these functions correctly.

Note : The peak hold feature ONLY works on the first weigh channel.

Counting

The following is the simple weighing sequence.

1. Place empty container on scale
2. Press TARE key to zero the scale
3. Press sample and enter the number of samples to weigh (eg 10)
4. System will request samples to be placed on scale
5. Press enter and system computes unit weight and displays the pieces count.

Unit weight entry (By keyboard)

1. Press the SAMPLE key
2. Press the F1 key
3. Enter the unit weight
4. System returns to counting mode with the new unit weight active.

Unit weight / Description selection (By I.D)

1. Press the I.D
2. Enter an I.D number (1 - 50)
3. System returns to counting mode with new unit weight and description active

Note :   The selected I.D should previously have been configured.

Dual Scale Weighing

When two scales are active it is often desireable to use one scale to do the sampling and then switch to the second scale to do the main counting.

The unit weight may be derived from either scale, and the counting may be performed on either scale.

Analog Output (4-20mA or 0 - 12 volts)

If the 4 - 20mA option is installed it is necessary to also calibrate this output.

This is really a 4 - 20mA output , but a resistor may be fitted to give a voltage output.

Initially calibrate the weighing scale in the normal way.

When exiting the weight calibration it will now be required to calibrate the 4 - 20mA output.

A milliammeter or voltmeter is required to monitor the analog output

1.   Enter the number setting (0-65000) for the ZERO weight

2.   Press the MODE key continue

3.   Enter the number setting (0 - 65000) for the FSD weight

4.   Press the MODE key continue

The analog output is now calibrated.