


Application

A **C320 (K306 firmware)** mounted on a bench scale is to be used for a check weighing application. It is configured as a 10 kg x 0.001 kg scale.

There are three grading zones available (Under, Pass and Over). The target weight of the blueberry container's contents is 1kg.

- If the contents are under-weight by 0.005 kg or more, the display colour will be orange.
- If the contents are over-weight by 0.005 kg or more, the display colour will be red.
- Lastly, if the contents are within the range of 0.995 kg and 1.005 kg, the display colour will be green.



The Over and Under weight limits of the check weighing function can be configured in the setup menu. Lit to  indicate various states during check weighing. Print function is given to an input and user can print a label if the weight passes.

Configuration

To enter the full setup menu, hold down the **SELECT** key for a few seconds.

```

FULL SETUP
├── LANG      : EN
├── GEN.OPT
├── SCALE
├── SERIAL
├── SETP
├── APP
│   ├── P.COUNT : OFF
│   ├── CHECK.W
│   │   ├── CW.MODE : ABS
│   │   ├── CW.SRC  : NET
│   │   ├── CW.CTRL : NONE
│   │   ├── CW.HIGH : 1.005 kg
│   │   └── CW.LOW  : 0.995 kg
│   ├── A.TARE
│   │   ├── A.TARE  : ON.AUTO
│   │   ├── CLR.DLY : 0.5 s
│   │   └── THRESH  : 0.200 kg
│   ├── F1 KEY
│   │   ├── TYPE   : PRINT
│   │   └── PRT.OUT : SER 1
│   ├── F2 KEY
│   │   └── TYPE   : TARGET
│   ├── F3 KEY
│   │   └── TYPE   : FUNC.EN
│   ├── IN 1
│   ├── IN 2
│   ├── TEST
│   └── End

```

P. COUNT shows no. of pieces. It can be used according to the requirement.

CW. MODE configures the behavior of the check weighing. **ABS** enables absolute check weighing.

For **CW. SRC**, **NET** is recommended if there is a container involved. Can also be set to **_GROSS_** or **_DISP_** depending on requirement.

CW. CTRL Controls when check weighing is inhibited. **NONE** means check weighing is always active.

CW. HIGH and **CW.LOW** sets the higher threshold and lower threshold of the check weigh range respectively.

ON. AUTO is for enabling the automatic tare feature. **CLR.DLY** sets the delay before clearing the tare weight.

THRESH is the weight to reach before automatically taring. The weight should be higher than **THRESH** for the automatic taring.

-F1 KEY sets as print key.

-F2 KEY sets as **TARGET** key which allows the operator to change the **CW. HIGH** and **CW.LOW** with a long press.

-F3 KEY configured as function enable which allows the operator to switch checking on and off.

NOTE:

CW. MODE can be set as,

- 1.OFF
- 2.ABS
- 3.REL

When using the **REL** as CW.MODE, user will be able to set TARGET, CW.TOL.L and CW.TOL.H using F2 key according to their requirements. For this example, TARGET is 1.000 kg, tolerance high and tolerance low for the checkweighing is 5g. (User will be able to set different targets for different sizes of blueberry containers using this target key.)

Settings for the printout:

```

SERIAL
  HEADER : BERRY PLACE
  FOOTER : THANK YOU!
  SER 1
    BAUD : 9600
    DATA : 8
    PARITY : P NONE
    STOP : 1
    SER.NET
    SER.AUT
    PRINT
      FORMAT : CUSTOM
      TYPE : RECORD
      ACCUM : ON
      AUTO : NO
      IL.TYPE : NONE
      I.LOCK : 0.000 kg
      P.WIDTH : 20
      SP.TOP : 2
      SP.LEFT : 0
      SP.BOT : 2
      BUT.PRN : \C2\C3 \C6
      TOT.PRN : \C2\C3 \C6
  SER 2
  SER 3
  
```

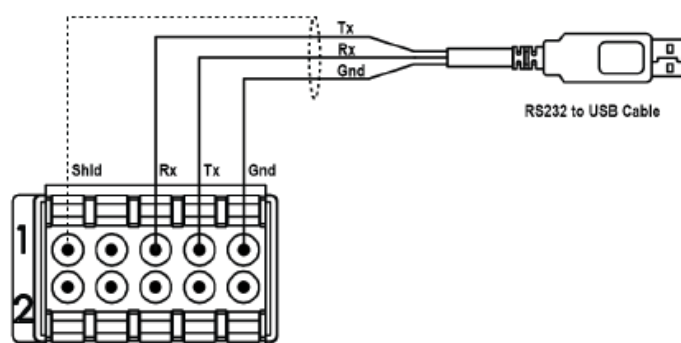
HEADER and **FOOTER** define the Printout header and footer. Can be set as required.

BAUD sets the baud rate for the port and 9600 is the default value. **DATA** sets the number of data bits for the port. **PARITY** sets the parity for the port and **STOP** is the number of stop bits for the port. These values can be given as required.

For the Printouts, user can customize it according to their requirements. Sets **AUTO: ON** if printing needs to be done automatically. **I.LOCK** type is given as NONE, and it can be set as required (For more details refer the reference manual). Page settings and **BUT.PRN/ TOT.PRN** can be given according to the requirements.

Outputs

The RS232 drivers are used for connecting the printer and the connections are shown below.

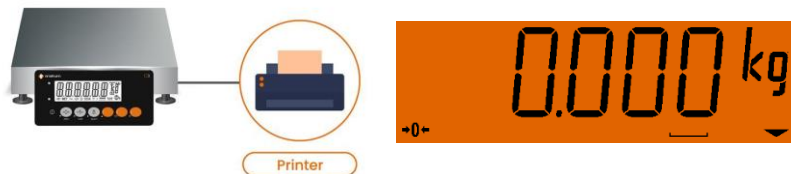
Outputs to Printer


Operation

Example 1: Filling Blueberry container with Auto tare

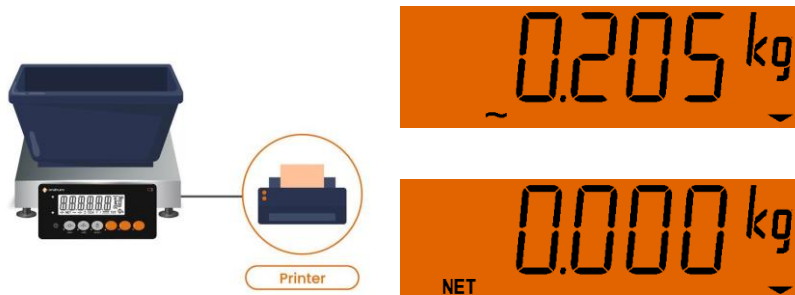
In this example a C320 indicator is used to check the weight of Blueberry containers.

1. Setup



First, scale should be setup to zero before placing the empty container. (NET is recommended for CW.SRC where the containers are involved.)

2. Auto Tare



In setup A. TARE should be set to ON. AUTO.

When place an empty container on the scale, the indicator will automatically tare if the empty container is over the Auto Tare threshold weight (according to this example, more than 0.200kg).

3. Filling and check weigh



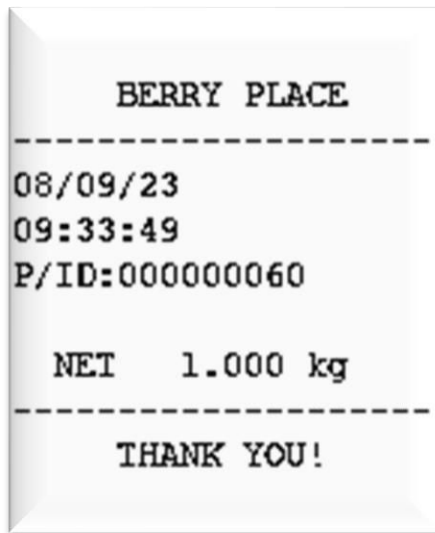
a. Fill the container while it is on the scale. If the weight is less than 0.995 kg (eg. 0.993 kg as shown above), Display colour will be orange.

b. If the weight is over 1.005 kg (eg. 1.009 kg as shown above), Display colour will be red.

c. If the weight is between 0.995kg and 1.005 kg (eg. 1.002 kg as shown above), Display colour will be green. Then user can print the label.



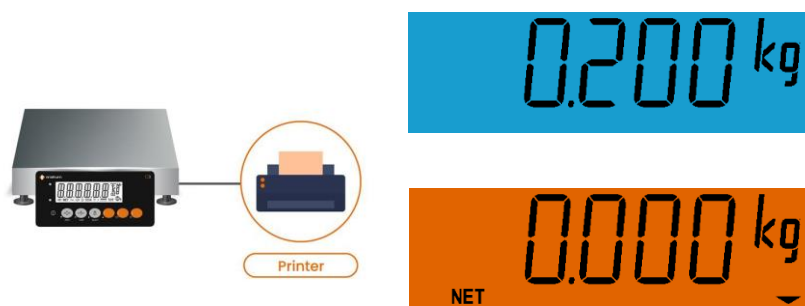
Printout for example 1:



Example 2: Filled Blueberry container with Preset tare

For this example, **A. TARE** should be off and needs to set the preset tare (PT) weight. To enter the **PT** settings, hold down the **TARE** key for a few seconds.

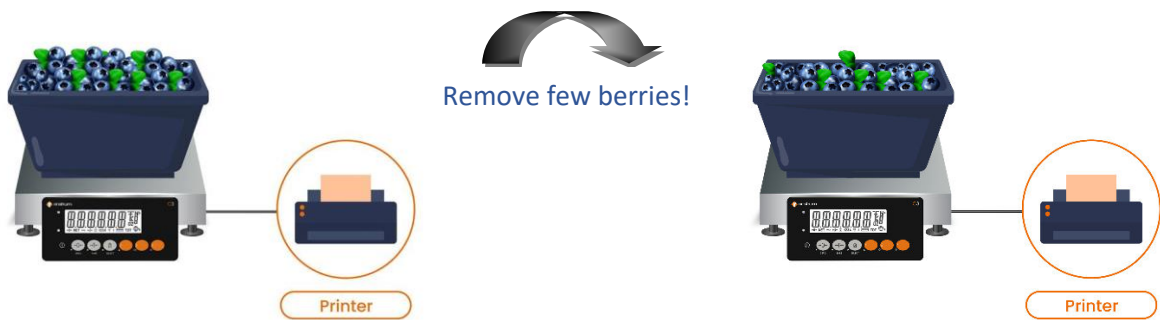
1. Setup Preset tare.



The weight of the empty container should be given as the preset tare. According to this example it is 0.200 kg.

After PT setup, user can start from zero. When put the filled blueberry container on the scale it measured the net weight of blue berries (Gross - PT).

2. Check Weighing

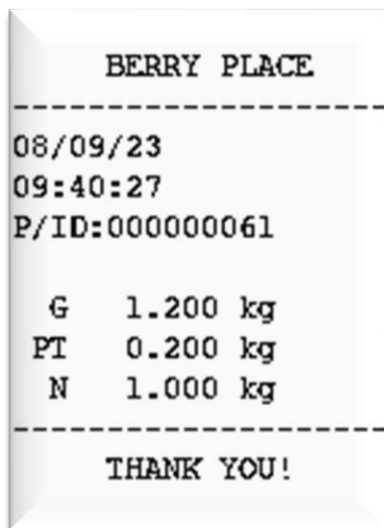


a. When place the filled container on the scale, preset tare weight is automatically reduced from the gross weight and net weight is displaying. But the weight is higher than 1.005 kg (eg 1.009 kg as shown above), display colour will be red and need to remove few berries.

b. If the weight is in between 0.995 kg and 1.005 kg (eg 1.002 kg as shown above), Display colour will be green. User can print the label. (Otherwise display colour will be orange if the weight is less than 0.995, then need to add some berries.)



Printout for example 2:



For more information refer to the **C300-600 Reference Manual**.