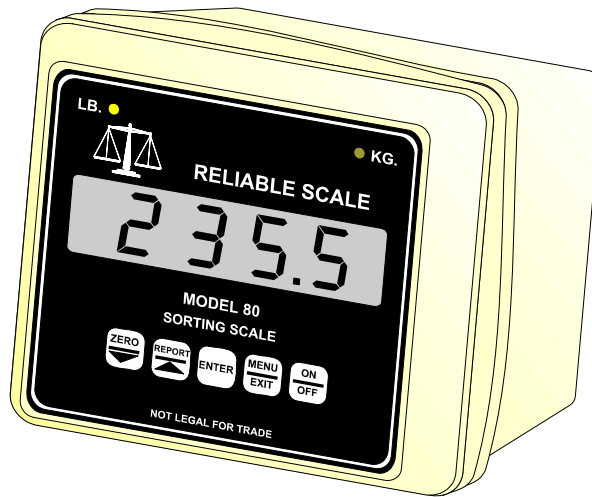




# User Manual

Software version: \_\_\_\_\_

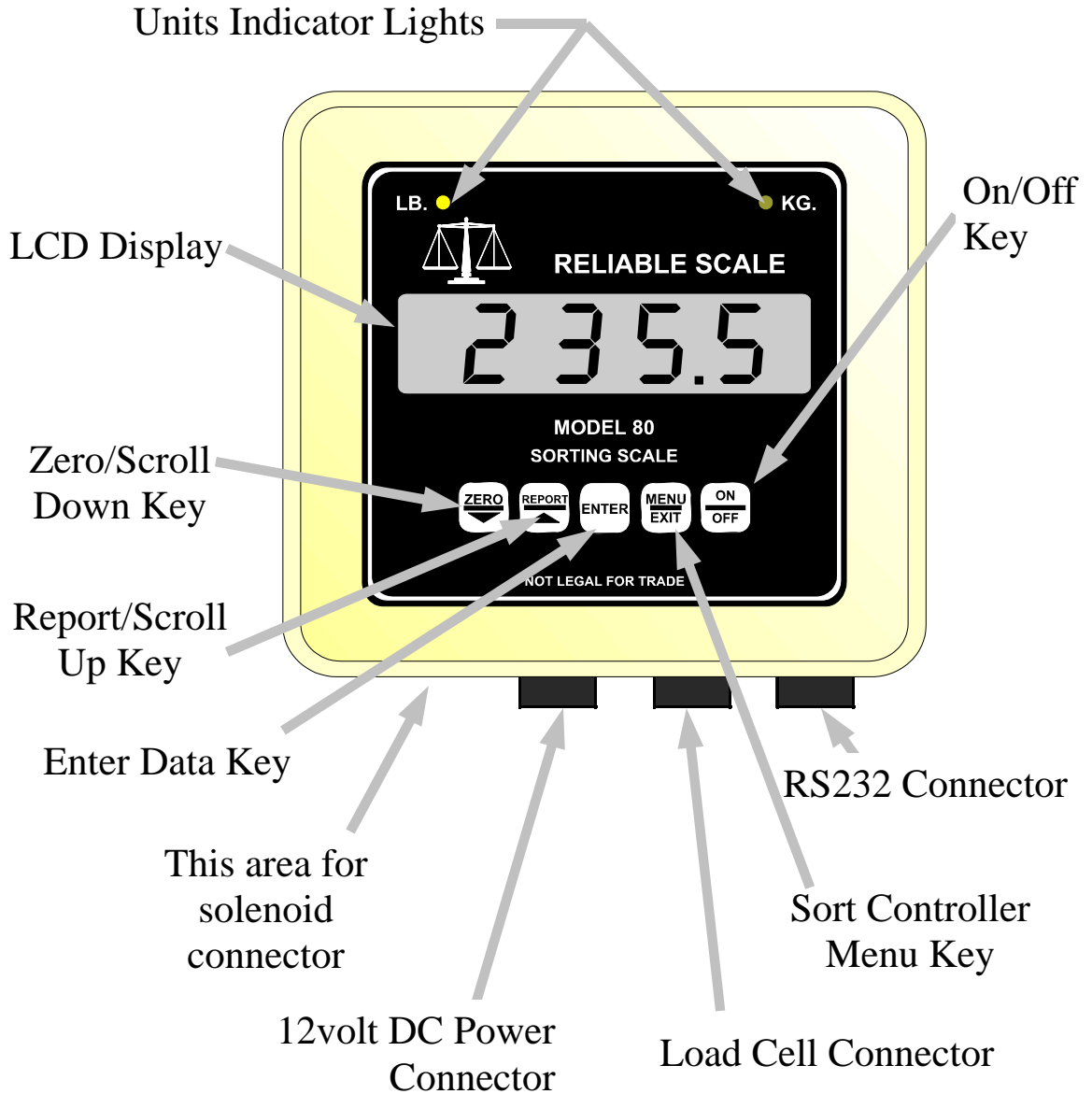
MODEL 80 SORTING SCALE



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980713

# Model 80 Face Layout



## Description of Keys:


**ON/OFF** Turns power on & off.

**MENU** Opens Sort Control Menu to adjust parameters.


**EXIT** Allows operator to exit Sort Control Menu or Report Sequence.

**ENTER** Displays the current value of a parameter in Sort Control Menu. After a parameter has been changed, **ENTER** sets the new value into controller memory.

**REPORT** Displays the Sort Totals; starts the print sequence (for optional printer or computer; allows operator to clear old data.

 Used for moving up the parameter list or for increasing a parameter value.

**ZERO** Sets the display to **0**.

 Used for moving down the parameter list or for decreasing a parameter value.

## **Sort Control Description**

The Model 80 Digital Weight Indicator contains a programmable microcontroller which weighs a live animal standing on a scale platform. The microcontroller analyses the weight then sends a signal to a solenoid, relay, light or horn.

The system can be designed for use with an attendant or operator nearby or for fully automatic use with only periodic human supervision.

It can be used for weighing & sorting several species; although its primary use is for cattle or hogs.

The optically isolated solid state relays in the Scale Control box must be specified for either 3 - 60 volt dc or 12 -125 volt ac electrical systems. These relays can be used to operate other relays, timers, solenoids or other circuits as required.

The controller can control from one to six sort gates and one head gate (see diagram, page 6).

The operator sets several Sort Control parameters as needed.

Some parameters are described only in the technical manual and are usually set by the foreman or owner of the sorting system.

## Basic Scale Operation

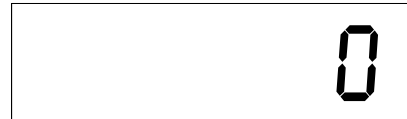
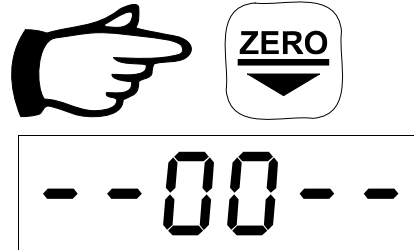
1. To turn the Indicator on, Press the **ON/OFF** button until **[[[ ]]]** appears. Display will show **80**, then its serial number and will go through a “count up” sequence.



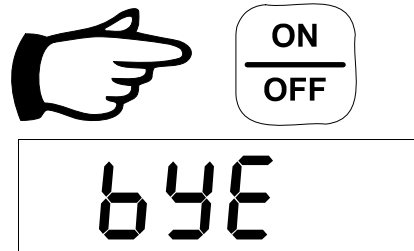
2. Allow the indicator to warm up and the display to stabilize.



3. Press the **ZERO** button. If the “Sort” feature has been turned “OFF” Model 80 will weigh as a basic scale.



4. To turn the Indicator off, Press the **ON/OFF** button



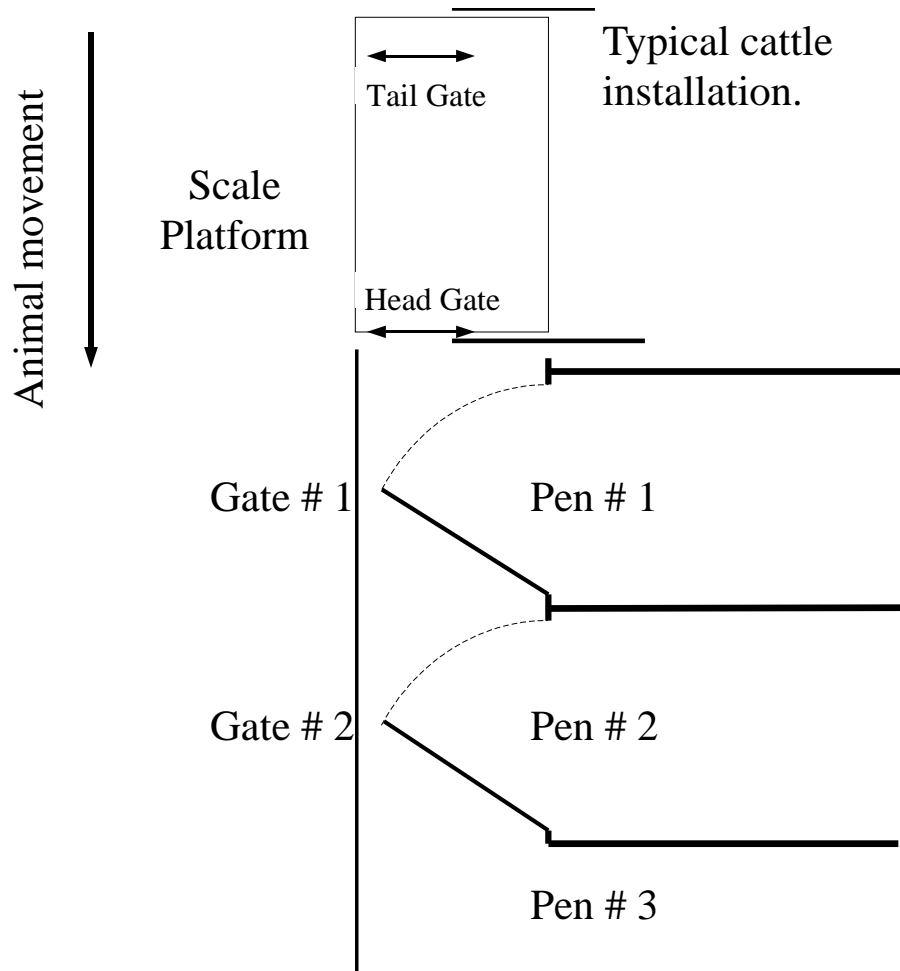
### CAUTION!

It is extremely important that the indicator be turned off using the **ON/OFF** button and not by unplugging it. The sorting totals are saved when the power is turned off.

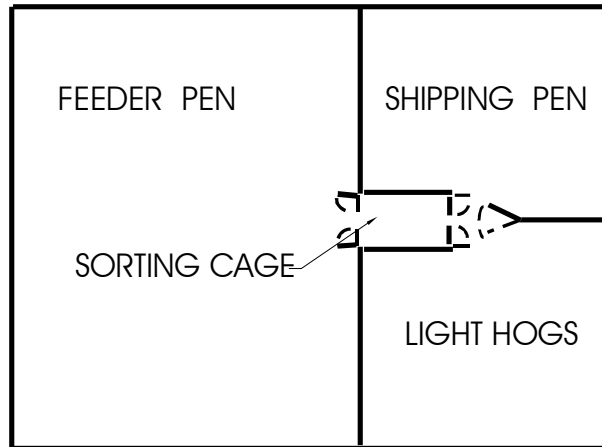
## Sorting Operation

The Model 80 Scale is capable of sorting up to seven directions (three shown below). The sorting feature is usually activated at the factory. The operator sets the Sort Control parameters as needed.

The system can be set for different uses (cattle, hogs etc.). Gates can be controlled electrically, hydraulically or pneumatically. This manual will use cattle as an example.





Typical hog installation.

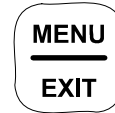



In this arrangement the operator must set **Low Trigger**, **High Trigger**, and **Sort 1** to appropriate weights. The **Low Trigger** is set low enough that the Model 80 will not weigh a hog that is only partly on the platform. The **High Trigger** is set high enough that the Model 80 will not sort when two hogs crowd onto the platform at once. The **Sort 1** weight is set at desired market weight. All other **Sort Parameters** must be set to zero.

Detailed instructions on adjusting the Sort Controller are included on following pages.

## Adjusting the Sort Controller

1. Press **MENU**. Display will flash **set pt** then will show **l trig**. The **LB.** and **KG.** lights will begin to flash. They will continue to flash as long as you are in the Sort Control Menu.
2. Press  or  to scroll through the parameters in the Sort Control Menu



LB. 

 KG.

### Sort Parameter Description:

Low trigger; page 7

L t r 19

High trigger, page 8

H t r 19

Set points, page 10

SET 1

SET 2

SET 3

SET 4

SET 5

SET 6

Sort limit page 11

Sort L

## Adjusting the Sort Controller, cont'd

- Low Trigger (l trig)** All weights below this level are ignored by the Sort Controller. It ensures that unreasonably low weights are not registered and that automatic gates are not activated in error.

**Example:** When weighing cattle which all weigh above 500 lb., set Low Trigger to 400 lb. If a cowboy (approx 200 lb.) accidentally steps onto the scale there is no danger that he will trigger **Sort** activity and be struck by a hydraulic gate opening in error.

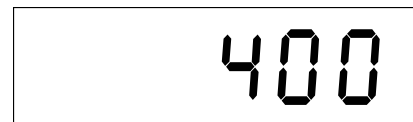
Also, if a large calf steps onto the scale with only one or two hooves, then stops, there is little chance that the Controller will make an error and register the partial weight incorrectly as a small calf.

**Example:** To reset the Low Trigger from 400 to 500 press **ENTER**. Display will show the current setting in the Controller.

To change this to another number use the **UP** and **DOWN** arrow keys.



LB.   KG.



## Adjusting the Sort Controller, cont'd

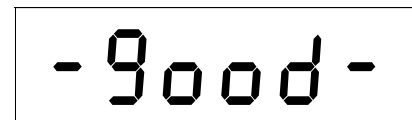
Press the **UP** arrow key until the number climbs to 500.



Press **ENTER** to accept the new value.



Display will flash **good** then return to normal weighing. **LB.** and **KG.** lights will stop flashing.



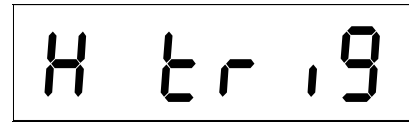
- 4. High Trigger: (h trig)** All weights above this level are ignored by the Sort Controller. It ensures that unreasonably high weights are not registered.

**Example:** When weighing cattle which all weigh below 800 lb., set High Trigger to 800. If two animals crowd onto the scale, the Sort Controller will ignore the unreasonably high weight and remain inactive until one of the animals is removed.

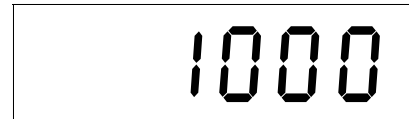
## Adjusting the Sort Controller, cont'd

**Example:** To reset the High Trigger from 1000 to 800 use the **MENU** and **UP ARROW** keys to scroll up to **H trig**.

Press **ENTER**. Display will show the current setting in the Controller.

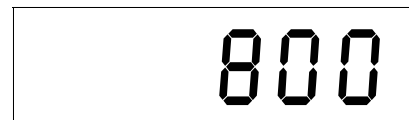


H tr 19



1000

To change this to 800 use the **UP** and **DOWN** arrow keys.

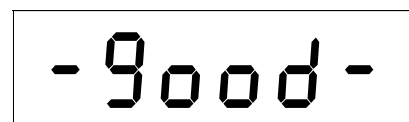


800

Press **ENTER** to accept the new value.



Display will flash **good** then return to normal weighing. **LB.** and **KG.** lights will stop flashing.



- Good -

## Adjusting the Sort Controller, cont'd

5. **Set Points: (set 1)** All set points act in the same fashion. A sample is shown below .

**Example:** For pens on Page 5:

We have a large herd from which we wish to sort 50 cattle into three groups. We will need High and Low Triggers, two Setpoints and the Sort Limit parameters.

From experience we know that all animals in the herd are at least 500 lb. but not more than 800 lb.

We want the groups to be within the following limits:

- Pen# 1      under 600 lb.
- Pen# 2      601 to 700 lb.
- Pen# 3      over 701 lb.

Following the Examples on pages 7 - 9 set the parameters.

Low Trigger @ **500**: Weights below here ignored  
Animals between 500 & 600 will sort here  
Set Point 1 @ **601**:  
Animals between 601 & 700 lb. will sort here  
Set Point 2 @ **701**:  
Animals over 701 will sort here  
High Trigger @ **800**: Weights above here ignored

## Adjusting the Sort Controller, cont'd

### 5. Set Points continued:

**Sort limit:** Adjust this parameter to the total number of animals you want to sort in this group. Follow the procedures shown on pages 7 - 9 for Sort Parameter adjustment.

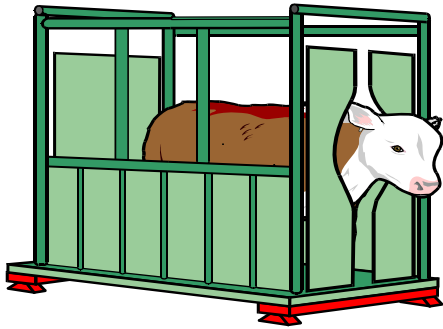
If a limit is not required, adjust Sort Limit to 0 and the Controller will ignore it.

**IMPORTANT:** Adjust **all** unused set points to 0.

Lower set points must be set to smaller numbers than higher set points; ie **Set 1** must be a lower number than **Set 2**.

## Sorting Operation Example

- An animal weighing 540 lb steps onto the scale platform. It will be registered in the Sort 1 category because it is between the Low Trigger (500 lb) and the Low Set-Point (601 lb).



Sort

Sort 1

540

- Model 80 then signals the Controller to open the appropriate gate. The head gate can be controlled manually or automatic depending on the setting.

540

- The display will continue to indicate 540 lb until the entire weight is removed from the platform.

540

-Good-

0

## Reporting Sort Totals

1. Press the **REPORT** button.



2. The total number of animals sorted and total weight are displayed first.

Pr int?

CLEAR?

TOTAL

50

32250

3. The average weight is displayed next.

AVE

645

4. The number of **Sort 1** animals are displayed next, followed by the average **Sort 1** weight.

Sort 1

12

Note: Groups are displayed only if there were animals sorted into them.

565

5. The number of **Sort 2** animals are displayed next, followed by the average **Sort 2** weight.

Sort 2

30

650

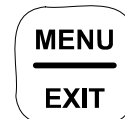
6. The number of **Sort 3** animals are displayed last, followed by the average **Sort 3** weight.

Sort 3

8

745

7. The totals will continue to scroll until the **EXIT** button is pressed. The scale will return to the Sort mode when it stops reporting.



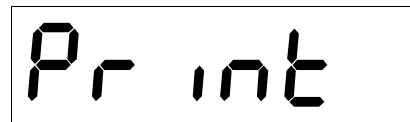
0

## Printing Sort Totals

1. With the Indicator on, press the **REPORT** button.



2. When **PRINT?** is displayed, press the **ENTER** button. If the display changes to **Clear?** before you have pressed **ENTER**, use the **EXIT** key until the display shows **good**. Then start the Report Sequence over again.



3. If the indicator has been set for use with a printer or computer, a **SORTED WEIGHT REPORT** will be generated, similar to the one shown here.

RESULTS		
Group	#	Average
1	12	565 lb
2	30	650 lb
3	8	745 lb
-----		
Total:	50	32250 lb
Average:		645 lb
Settings		
Low Trig	:	500
Set 1	:	601
Set 2	:	701
High Trig	:	800
=====		

Note: Groups will print only if there were animals sorted into them.

## Clearing Sort Totals

1. With the Indicator on, press the **REPORT** button.



Pr int?

CLEAR?

2. When **CLEAR?** is displayed, press the **ENTER** button.



SURE?

3. A safety feature will ask you if you are **SURE?** about clearing the Sort Totals.

- 4a. To continue clearing the totals, press the **ENTER** button again or continue pressing it. The indicator will confirm that the totals have been erased by displaying **CLEAR**.



CLEAR

- 4b. If no key is pressed when **SURE?** is displayed, the totals will not be cleared. The scale will return to the Sort mode.

0

**Your Notes Here:**

## LIMITED WARRANTY

This warranty applies to all new equipment manufactured by RELIABLE SCALE CORPORATION except when otherwise specified in the Terms of Sale. Warranty is subject to the following terms and conditions:

- All new products are warranted for a period of twelve (12) months from the date of final sale to the end user.
- RELIABLE SCALE CORPORATION shall at its option, repair or replace or refund the purchase price, within a reasonable period of time, after being notified of the alleged defect and after acknowledging that a defect does in fact exist.
- Warranty claims must be submitted in writing by mail or fax to RELIABLE SCALE CORPORATION within the warranty period.
- This warranty does not extend to any consequential damage of other equipment, loss of use, commercial or economic loss or inconvenience prior to or during the repair period.
- RELIABLE SCALE CORPORATION is not responsible for any damage or defects caused by misuse, negligence, neglect, modification, improper operation, improper maintenance, or repairs by any unauthorized persons.
- This is the sole warranty applicable to RELIABLE SCALE CORPORATION'S products, and no RELIABLE SCALE CORPORATION employee, agent or dealer has any authority to add to this warranty whatsoever.
- Products for warranty repair must be returned to the factory freight prepaid by the customer. RELIABLE SCALE CORPORATION is not liable for any cost related to removal, replacement, or shipping of the products or any other associated equipment.
- Batteries supplied in or with RELIABLE SCALE CORPORATION products are NOT covered by this warranty.