

Operation Manual

TVC
Counting Scales
V1.3

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1. INTRODUCTION



- ✓ TVC series of scales provides an accurate, fast and versatile series of counting scales.
- ✓ Weighing units conversion(kg/lb).
- ✓ All units include automatic zero tracking, audible alarm for pre-set weights/quantity, tare and an accumulation facility that allows the count to be stored and recalled as an accumulated total.
- ✓ Standard RS-232 can be connected to receipt and label printer.

2. KEY DESCRIPTION

Keys	Description
C	Used to clear the unit weight or an erroneous entry. Holding this key can shift in weighing check alarm and counting check alarm.
0~9	Numeric entry keys, used to manually enter a value for tare weights, unit weight, and sample size.
M+	Add the current count to the accumulator. Up to 99 values or full capacity of the weight display can be added.
MR	To recall the accumulator memory.
PST	To set the high/low limit for the weighing and counting checking alarm.
U.Wt/ UNIT	Used to enter the weight of a sample manually. Press and hold the key to select weighing units
SMPL	Used to input the number of items in a sample.
ZERO	Set the zero point for all subsequent weighing. Display shows zero.
TARE	Tares the scale. Stores the current weight in memory as a tare value, subtracts the tare value from the weight and shows the Net weight. Entering a value using the keypad will store that value as the tare value.
Print	To print the results to a PC or printer using the optional RS-232 interface.

3. DISPLAY SYMBOLS

Symbols	Description
BATT.	Battery indicator. When it's illuminated, battery should be recharge
NET	Net Weight
STABLE	Stable indicator. When it's illuminated, the scale is stable
ZERO	Zero indicator. When it's illuminated, the scale is in Zero point

kg/lb	Current weighing unit
	indicators will show when the scale has determined that there is an insufficient number of samples to accurately determine the count:
Preset	If a preset count has been stored, this indicator will have an arrow above it.
	When the unit weight is not large enough to determine an accurate count.
Memory	Indicators will show when a value has been entered into memory when the arrow above the "memory" legend is on.
Charge	Status of the battery charging

4. GENERAL INSTRUCTION

1. When battery goes low, the BATT symbol indicator will be shown on automatically. This indicates that the battery needs to be charged with the AC power. If the scale goes on being used without proper charging, the display window will show “BAT LO” every 5 minutes, and scale will eventually shut down automatically after 2 hours of warning in order to protect the battery. Please charge the battery immediately, or scale cannot be used. To charge battery, simply plug AC adapter or main power cord; it is not necessary to turn on the scale.
2. Just left of the quantity display is an LED that indicates the status of battery charging. When the scale is plugged into the mains power, the internal battery will be charged. When charging the battery, the LED is red; when fully charged, the LED will turn to green.
3. Before starting using scale, please check if the bubble is in the middle of the level; if not, please make appropriate height adjustment.

5. BASIC OPERATION

5. 1 Power ON/OFF

Power switch is located below the right side of the scale. Turn on the scale by pressing on/off. The display is switched on and the self-test is started. If you want to switch off, press the key again.

5. 2 Zero the scale

When there is no item on the scale but reading is not zero, press the **ZERO** key to turn on **ZERO** indicator. When the weight goes over 2% of the full capacity, “read zero” function is obsolete.

5.3 Tare

Put container on the platter, once the weight reading is stable, press the TARE key, the TARE indicator will be on and the container's weight will be deducted. When it is time to clear the TARE, take off the container, and press TARE key again.

5.4 Overload Warning

Please do not add item that is over the maximum capacity.

When the scale displays "—OL—" and beeping sounds, remove the item on the platter to avoid damage to the load cell.

5.5 Change unit

You can use the **U.Wt/UNIT** key to change unit(kg/lb). Pressing **U.Wt/UNIT** key will change the weighing unit circularly, and the pertinent indicator will be on.

6. PARTS COUNTING

6.1 Setting Unit Weight

In order to perform parts counting, it is necessary to know the average weight of the items to be counted. This can be done by weighing a known number of the items and letting the scale determine the average unit weight or by manually inputting a known weight using the keypad.

6.1.1 Weighing a sample to determine the Unit Weight

To determine the average weight of the items to be counted, place a known quantity of items on the scale and then enter the quantity being weighed.

The scale will then divide the total weight by the number of samples and display the average unit weight.

Zero the scale by pressing the **ZERO** key if necessary. If a container is to be used, place the container on the scale and tare as discussed earlier.

Place a known quantity of items on the scale. After the weight display is stable enter the quantity of items using the numeric keys followed by **SMPL** key. The number of units will be displayed on the "Quantity" display and the computed average weight will be shown on the "Unit Weight" display.

As more items are added to the scale, the weight and the quantity will increase.

If the scale is not stable, the calculation will not be completed. If the weight is below zero, the quantity display will show negative count.

6.1.2 Entering a Known Unit Weight

If the unit weight is already known, then it is possible to enter that value using the keypad.

Enter the value of the unit weight using the numeric keys followed by pressing and holding the **U.Wt/UNIT** key for three seconds. The "Unit Weight " display will show the

value as it was entered.

The sample is then added to the scale and the weight will be displayed as well as the quantity based upon the unit weight.

6.2 Parts Counting

After the unit weight has been determined or entered it is possible to use the scale for parts counting. The scale can be tared to account for package weight as discussed in an earlier section.

After the scale is tared, place the items to be counted on the scale and the "Quantity" display will show the number of items computed using the weight and the unit weight.

It is possible to increase the accuracy of the unit weight at any time during the counting process by entering the count displayed then pressing the **SMPL** key. You must be certain the quantity displayed matches the quantity on the scale before pressing the key. The unit weight will be adjusted based upon a larger sample quantity. This will give greater accuracy when counting larger sample sizes.

6.3 Automatic Part Weight Updates

The scales will automatically update the unit weight when a sample equal to less than the sample already on the platform is added. A beep will be heard when the value is updated. It is wise to check the quantity is correct when the unit weight has been updated automatically.

This feature is turned off as soon as the number of items added exceeds the count used as a sample.

7.WEIGHING AND COUNTING CHECKING ALARM

7.1 Set Hi/low Limit

Press **PST** key, the display will show *PCS H 1*, key in high limit for counting alarm, press **TARE** to confirm, then the display will show *PCS L 0*, key in low limit for counting alarm, press **TARE** to confirm, then the display will show *nEt H 1*, key in high limit for weighing, press **TARE** to confirm, then the display will show *nEt L 0*, key in low limit for weighing, press **TARE** to confirm. The display will be back to normal weighing mode.

7.2 Checking Alarm

At first, you need set checking mode, press and hold **C** key, you will show *[CHECK nEt* (weighing checking alarm), *[CHECK PCS* (counting checking alarm) or *[CHECK OFF* (don't use alarm function).

The beep sound will be worked as per described in the beep settings. Check parameter *F9 bEEP*

Check mode *no* : No beep sound in the limits. Function turned off.

Check mode *on* : When the weight/quantity is between the limits. beeper will be sounded.

Check mode $\bar{n}E$: When the weight/quantity is out of the limits, the beeper will be sounded.

Note: Check weighing available only when weight more than 20d
For check limits, just one limit value can be set for operations
The check mode will be deactivating, if both values are set to zero.

8. ACCUMULATED OPERATION

8.1 Manually Accumulated Total

The values (weight and count) shown on the display can be added to the values in the accumulator by pressing the **M+** key. The memory indicator will be on. The "Weight" display will show the total weight, the "Count" display will show the total accumulated count and the "Unit Weight" display shows the number of times items have been added to the accumulation memory. The values will be displayed for 2 seconds before returning to normal.

The scale must return to zero or a negative number before another sample can be added to the memory.

More product can then be added and the **M+** key pressed again. This can continue for up to 99 entries, or until the capacity weight display is exceeded.

To observe the total stored press the **MR** key. The totals will be displayed for 2 seconds.

To clear the memory press **MR** to recall the totals from memory and then press the **C** key to clear all values from memory.

9. OTHER FUNCTION

9.1 Backlight

In normal weighing mode, Press and hold [\cdot] key until the following display is shown



Press the **M+** key to change the settings back light display mode to Auto / On /Off.

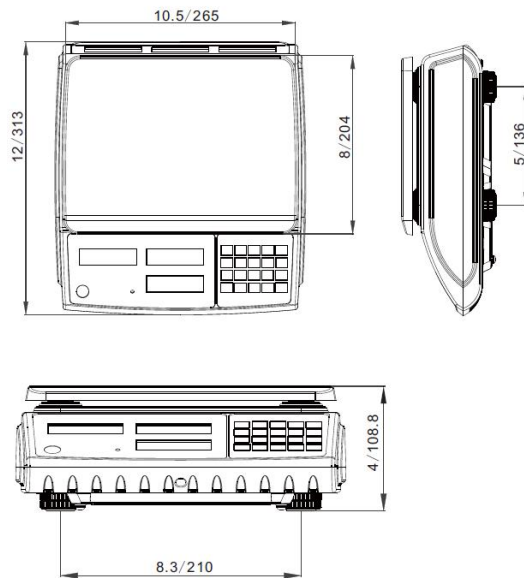
(The third screen saying "Auto" will not always be the same, since it depends on the option)

Display	Description
bLSEt n̄odE AUto	Backlight will be turned on, when start to use or when weight is not in zero.
bLSEt n̄odE on	Backlight will be turned always on
bLSEt n̄odE oFF	Backlight function will be turned off

10.SPECIFICATION

MODEL	TVC-6	TVC-12	TVC-30	TVC-60
Capacity	6lb/3kg	12lb/6kg	30lb/15kg	60lb/30kg
Readability	0.0002lb/0.1g	0.0005lb/0.2g	0.001lb/0.5g	0.002lb/1g
Resolution	30000			
Weighing Units	kg / lb			
Display	0.59inch /15mm digits LCD Display with white LED back Light			
Platter size	8 x 10.5inch / 204 x 265mm			
Housing	ABS Plastic and Stainless Steel pan			
Interface	RS232 Output optional			
Operation Temperature	14°F - 104°F / -10°C - + 40°C			
Power	AC Adaptor 12V/500mA , Rechargeable Battery 6V/3.2Ah			
Battery life	Approx.60 Hours LCD (no backlight)			
Keypad	20 membrane keys			
Dimensions (inch/mm)	10.5 (W) x 12 (D) x 4 (H) / 265 (W) x 313 (D) x 108.8 (H)			
Gross weight	9lb (4.1kg)			

11.DIMENSIONS (inch/mm)



12.ERROR MESSAGE

Error Message	Description	Solution
<i>Err 4</i>	Zero setting error	Zero setting range exceeded due to switching on. Make sure platform empty.
<i>Err 6</i>	A/D value out of range	Make sure platform empty and check the pan is installed proper. Check the load cell connectors.
<i>Err 15</i>	Enter gravity error	Gravity range (0.9~1.0)
<i>Err 19</i>	Initialize zero error	Calibration the scale.
<i>--oL--</i>	Over range	Remove the load. Re-calibrate
<i>FR L</i>	Calibration Error	Re-calibrate
<i>bA Lo</i>	Battery low	Recharge battery, check the voltages.

13.SELECTING THE PRINTER

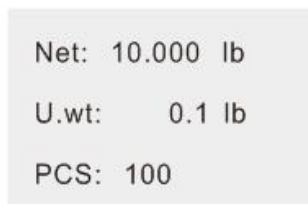
For printer setting, it needs to enter the parameters settings to select F8 RS232 > mode > EP50/LP50, use M+ key to select options

Options	Description
<i>EP50</i>	Press M+ key to send data to DEP receipt printer
<i>LP50</i>	Press M+ key to send data to DLP label printer

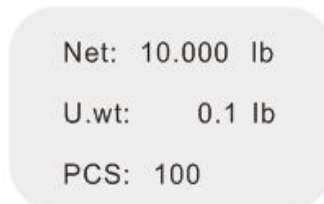
14.RS232 OUT PUT

The TVC Series of scales can be ordered with a standard RS-232 output. It can be connected to DEP receipt printer & DLP label printer

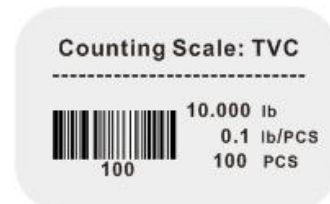
14.1Print Format



Receipt Format

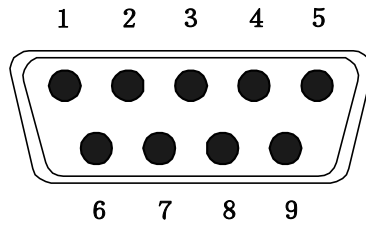


Label Format # 1



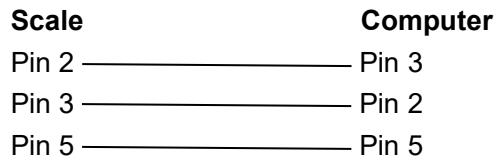
Label Format # 2

14.2 Diagram: Serial interface



Pin 2	RXD	Input	Receiving data
Pin 3	TXD	Output	Transmission data
Pin 5	GND	—	Signal ground

9pin D Connector:



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