DIGITAL WEIGHT COMPUTER MODEL TR-1-NK

STANDARD OPERATION FEATURES (NKLCD-AXLE SOFTWARE for AX series scales)

This multiple platform scale system can be used to weigh each truck axle or the complete vehicle, depending on the number of platforms available.

If using to weigh axles, then add up the axles to get the total vehicle weight.

The platforms are water resistant but are not waterproof. Do not let the platforms get immersed in water or any other liquid. Never let the cable connectors get wet, and do not let the digital display unit get water inside.

Only use the scale system with all the platforms connected, or the weight display will not be correct.

For best results, place the platforms on **a solid level dry surface**. If a vehicle is weighed on a un-level surface, the readings may not be accurate.

Place the platform in front of the tire, then pull the vehicle up and onto the platform. The display reads the total weight that is currently on all the platforms.

BATTERY RECHARGE: When the battery becomes low, the unit will not turn on, or if in use, it will turn off. Charge the battery with the charger supplied. The unit can be operated while charging if desired. Full charge should take aprox. 4 to 5 hours it the battery is dead. Do not charge for no more than 5 hours.

Be sure to turn the battery disconnect switch on (up) to use the system.

ZERO BUTTON:

To bring the scale to a zero balance reading, press the ZERO button.

NOTE: Hold this button to turn the power OFF.

* : This is the ON button

GROSS NET: (TOTAL – CURRENT)

Press the GROSS/NET button to switch between the GROSS (TOTAL) weight display mode and the NET (CURRENT) weight display mode. The lamp will light to indicate which mode is being displayed.

PRINT: (ADD TO TOTAL)

To activate an optional printer, and add the current weight to the total, press the PRINT button.

The display will show all dashes to indicate that the weight has been added to the total.

TARE: (TOTAL CLEAR)

This button is used to clear the total. Note that the total is cleared when the unit is first turned on.

MODEL TR-1-NK CALIBRATION INSTRUCTIONS

Parameter Entry:

1. Power OFF
2. Hold the PRINT button while turning power on (*) button
3. The display will show ------
4. Press and release the NET/GROSS button.
5. The display will show 00--nn (The 00 denotes parameter number 0 and the nn may be any 2 digit number representing the current value set for parameter number 0.
6. To change the value of this parameter, use the PRINT button to go up or use the TARE button to go down.
7. To cycle to the next parameter, press the NET/GROSS button
8. Continue steps 5 and 6 for all parameters desired.
9. When finished, press the ZERO button to flash ------ and return to the weight display mode.

Parameter List: (x) Denotes factory settings

0 = LB or KG / 00 = LB light is on / 01 = KG light is on
(1)

1 = Sample rate / Update rate.
(2) The sample rate can be set for the desired operation.
Note that having the continuous data output turned on by parameter 9, will slow down the displayed update rate.
Set this to a value between 1 and 7.
1 is the slowest and most stable update rate
7 is the fastest update and can be used when batching or setpoints are being used.

2 = The displayed graduation size. Set at 05 if a
(10) graduation size of 5 is required.
Valid settings are from 01 to 50
NOTE: Scale capacity of 20,000 lbs or more, must have a graduation of 10 or higher

3 = The overload trip-point in hundreds of graduations +1%
(99) If the scale is to be 2,500 by a graduation of 1, then a setting of 25 would cause the overload to activate at 2,525.
Set to 99 if no overload point is desired.
Set to 00 for a 10,000 graduation overload.

4 = For units with battery, this parameter sets the auto-shutoff
(20) time period.

5 = Zero tracking amount. This parameter is set to the
(1) number of graduations allowed to be auto-zeroed, when the weight is not in motion and is equal or under this setting.

6 = The decimal point position. ie, 02 will cause 0.00
(0)

7 = Relay options: Set to 01 to turn ON the solid state
(0) relay when it reaches the low limit and turn OFF when it reaches the high limit. Set to 00 for opposite operation.

8 = Slave indicator output enable.
(0) 00 = No slave indicator output
01 = Send GROSS only to slave unit
02 = Send NET only to slave unit

9 = Optional / Printer OR Continuous data output
(0) wire cable direct to main board or ask for data output kit. (contains terminal block and strain relief for enclosure.
00= Printer output of displayed weight only to EPSON TM295 or other epson printer.
01= Same as 00 without the EPSON format codes
02= Printer output of gross tare and net with EPSON printer codes.
03= Printer output of gross tare and net without EPSON format codes.
04= ELTRON form recall TARA for displayed weight print
05= ELTRON form recall TARAGTN for gr/tr/nt print
10= Continuous output of displayed weight
11= Continuous output of gross tare and net

Major Test Weight Calibration: (Do the MINOR calibration for small adjustments)

This procedure is done to set the initial calibration.

1. Turn power OFF
2. Hold the PRINT button while turning power on.
3. When the display shows ----- release the buttons
4. Press and release the TARE button.
5. The display will be in the calibrate mode.
6. Assure there is no weight on the scale and press ZERO to remove the dead load.
7. When the display is zeroed, load the known weight on the scale.
8. Press the * button to reset the calibration to default.
9. Press the PRINT button to increase and TARE to decrease until the display is as close as possible to the correct weight.

NOTE: The up and down jumps in large numbers in the beginning. It will jump in smaller amounts on each press of the NET/GROSS button.

10. If the display is showing the correct weight, go to step 12 If more adjustment is needed with smaller jumps, then continue At step #11
11. Press and release the NET/GROSS button to flash ------ Then go to step 9 and continue.
12. If the display is showing the correct weight, press the NET/GROSS button repeatedly until the display locks on ------ for aprox. 5 seconds, and then returns to the normal weigh mode.

Minor Calibration Adjustment

This procedure is done to make minor adjustments to the calibration. It is similar to the major calibration, but starts at a finer adjustment increment.

NOTE: This can be done with the known weight already on the scale

1. Turn power OFF
2. Hold the PRINT button while turning power on.
3. When the display shows ----- release the buttons
4. Press and release the TARE button.
5. The display will be in the calibrate mode.
6. If there is no load on the scale, you can press ZERO to remove the dead load.
7. If there is no known load on the scale, load the known weight on the scale.
8. If the weight being displayed is in need of adjustment, go to step #9. If the weight is correct, go to step #12.
9. Press the PRINT button to increase and TARE to decrease until the display is as close as possible to the correct weight.

NOTE: The up and down jumps in large numbers in the beginning. It will jump in smaller amounts on each press of the NET/GROSS button.

10. If the display is showing the correct weight, go to step 12. If more adjustment is needed with smaller jumps, then continue at step #11
11. Press and release the NET/GROSS button to flash ------ Then go to step 9 and continue.
12. If the display is showing the correct weight, press the NET/GROSS button repeatedly until the display locks on ------ for aprox. 5 seconds, and then returns to the normal weigh mode.

LOAD CELL CONNECTION

ASSURE THAT THE LOAD CELL SIGNAL IS POSITIVE. A NEGATIVE SIGNAL WILL NOT REGISTER.

CIRCULAR LOAD CELL CONECTOR		COLOR CODE	DB9 9 PIN CONECTOR
PIN 4 =	NEG EXCITATION	BLACK	1
PIN 1 =	POSITIVE EXCITATION	RED	2
PIN 3 =	POSITIVE SIGNAL	GREEN	3
PIN 2 =	NEGATIVE SIGNAL	WHITE	4

REVERSE SIGNAL LINES IF SCALE OPERATES BACKWARDS

DATA OUTPUT CONNECTION (OPTIONAL)

*** STANDARD OUTPUTS ***

BOARD PIN		DB9M ON FRONT PANEL	
PIN 1 ----	DATA GROUND	PIN 5	GROUND
PIN 2 ----	DATA OUTPUT	PIN 3	DATA

PRINTER OUTPUT:
Set parameter number 9 for the printer type or continuous data output.
Set for single line of displayed weight or gr/tr/nt
NOTE: For ELTRON printers, use the "Create-a-Label" program to setup the label. Then name the label TARA or TARAGTN and set parameter 9 accordingly. A sample format of these two labels can be sent via email or on diskete upon request.

Baud rate 9600
8 data bits 1 stop bit no parity

In continuous output mode, the data string starts with the addition of a STX (Start of text) character at the beginning

Slave indicator output OPTION:
If a slave model RM-SE is attached, it can read the gross or net weight from the main indicator. Be sure to set the slave parameter #8 accordingly. (for example, disable the slave tare through parameter 8 if it will be receiving NET weight)
Terminal #1 ground
Terminal #2 data
The data stream is a combination of binary and ASCII data and is not easily read by a computer.