08/2024

AVAWEIGH
COMMERCIAL SCALES

USER MANUAL

NTEP NATIONAL CONFERENCE ON WEIGHTS AND MEASURES

Digital Receiving Scales with 14" x 12" Platform

Legal for Trade

334BS30, 334BS30TK	334BS70, 334BS70TK	334BS150, 334BS150TK
30 lb.	**70 lb.**	**150 lb.**

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GENERAL & SAFETY INFORMATION

- **Risk of electric shock: disconnect all power sources before making cable connections to the floor scale platform or indicator.**
- **For use in dry environments only.**
- **The floor scale platform is very heavy. Use appropriate lift equipment.**
- **Scale platform must be installed on a foundation capable of safely supporting the weight of the floor scale plus the weight of the maximum load.**
- **Do not operate in hazardous areas.**

- Read & understand all operating instructions before using this product.
- Keep this manual for future reference.
- Record the weight shortly after placing a load on the platform. After extended periods, the load cell's output signal may result in a less accurate reading.
- Avoid extended exposure to extreme heat or cold. Optimum operation is at normal room temperature. See operating temperature range in the specifications table. Allow the scale to acclimate to room temperature before using.
- Allow sufficient warmup time. Turn the scale on and allow up to 2 minutes for internal components, to stabilize before weighing.
- Electronic scales are precision instruments. Do not operate near cell phones, radios, computers or other electronic devices that emit radio frequencies that may cause unstable readings.
- This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with this manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at their own expense.
- Avoid using in heavy vibration or heavy airflow conditions. This also applies when the floor scale is integrated into conveying systems.

SPECIFICATIONS

	334BS30	334BS70	334BS150
MAX CAPACITY	30 lb. / 15 kg	70 lb. / 30 kg	150 lb. / 60 kg
READABILITY	0.01 lb. / 0.005 kg	0.02 lb. / 0.01 kg	0.05 lb. / 0.02 kg
MIN WEIGHT	0.2 lb. / 0.1 kg	0.5 lb. / 0.2 kg	1 lb. / 0.4 kg
DISPLAY	6-digit, 7-segment, 25 mm (1") LCD with backlight		
DISPLAY RESOLUTION	1:3000		
PLATFORM SIZE	12" x 14" (305 mm x 355 mm)		
(OPTIONAL) TOWER HEIGHT	15.35" (390 mm)		
CONSTRUCTION	Die-cast aluminum base, stainless steel platform		
WEIGHING UNITS	kg / lb. / lb.: oz.		
CALIBRATION UNIT	kg		
APPLICATION MODES	Weighing / Counting / Check Weighing / Percent Weighing		
ZERO RANGE	Programmable zero range		
TARE RANGE	Full capacity		
STABILIZATION TIME	<3 seconds		
OPERATING TEMPERATURE	15 - 105°F (-10 - 40°C)		
HUMIDITY RANGE	<90% relative humidity, non-condensing		
POWER SUPPLY	Alkaline Batteries: 4 x “AA” size cells AC Adapter: 9Vdc/600mA, central positive		
INTERFACE	RS232 (COM1) and USB (COM2)		
FEET	4 x fixed bolt design, adjustable height		
SAFE MAX OVERLOAD	150% of capacity		

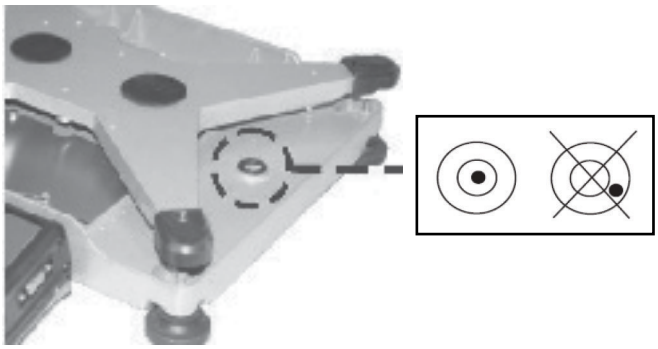
UNPACKING & SETUP

PACKING LIST

- Scale
- Manual
- C9V 600mA Power Adapter

UNPACKING & ASSEMBLY

1. Place the scale in the desired location and level the platform.
2. Lift the stainless steel platform off the base.
3. Adjust the feet to center the level bubble.



4. Install the stainless steel platform.
5. Install the batteries or plug in the adapter.
6. The scale is now ready for use.

Indicator and platform are NTEP certified, making the scale capable of being used in Legal for Trade applications. However, the scale is not Legal for Trade until it has been certified and registered by an authorized Weights and Measures agent.

See *www.ncwm.net/content/regions* for a listing of registered U.S. Weights and Measure offices by state.

INSTALLATION OF OPTIONAL POLE

PACKING LIST

- Pole
- Screw and Nut Sets
- U-Shape Indicator Bracket with 2 Knobs
- Indicator Bracket

UNPACKING & ASSEMBLY

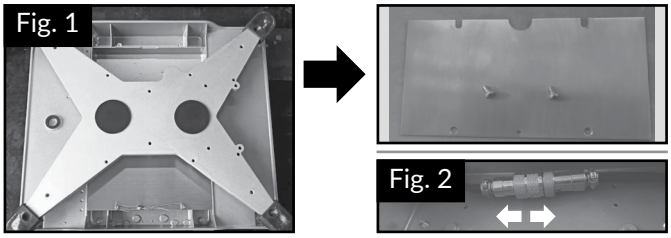
1. Remove the stainless steel platform from the scale platform.
2. Break the lead seal and open the cavity cover. (Fig. 1)
3. Disconnect the connectors inside the cavity. (Fig. 2)
4. Turn over the scale (Fig. 3), then:

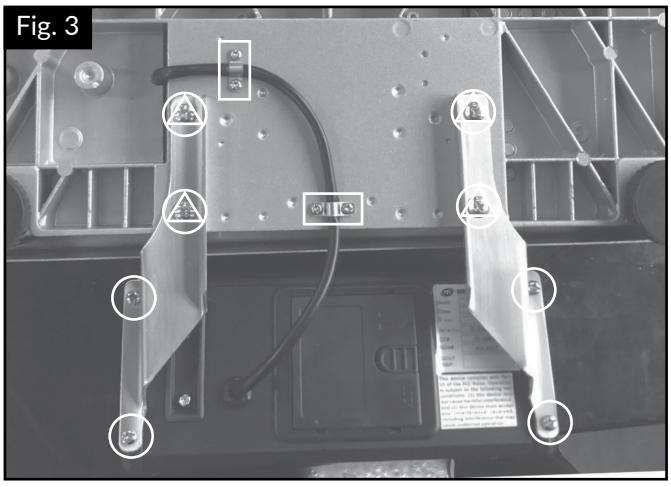
◯ a) Remove all (8) screws.

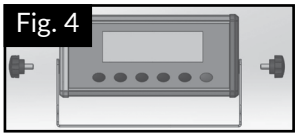
△ b) Put these (4) screws aside; they will be used to fix the pole to the platform.

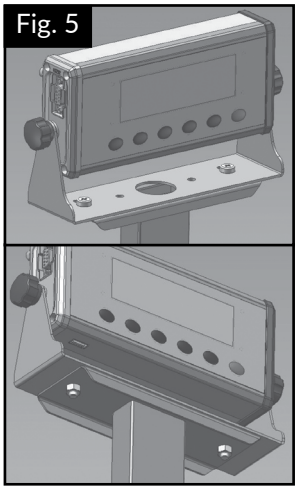
▯ c) Loosen (2) cable stoppers.

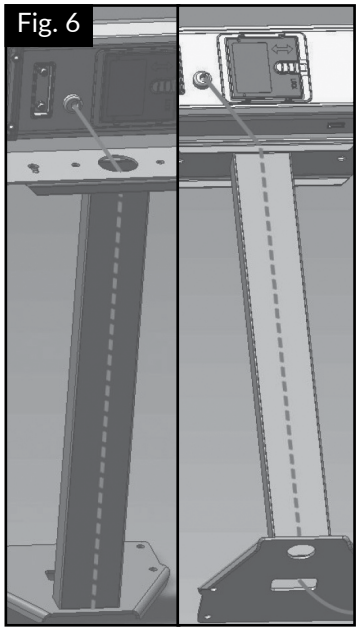
5. Fix the indicator to the U-shape bracket with (2) rotary knobs. (Fig. 4)
6. Install the indicator assembly to the pole with (2) screws and nuts. (Fig. 5)
7. Insert the indicator cable into the pole. (Fig. 6)
8. Attach the pole onto the scale platform by fixing the (4) screws (removed in step 4c), then fix the cable with a cable stopper. (Fig. 7)
9. Lead the cable into the base cavity and connect the two plugs. (Fig. 8)
10. Put the cavity cover back and fix the (2) screws.
11. Put the stainless steel platform back.
12. The scale is ready for use.

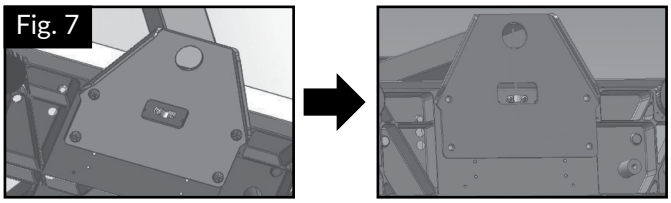


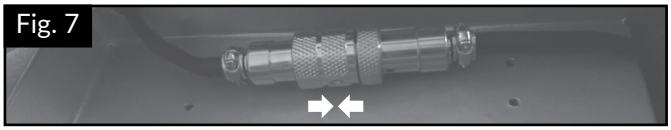




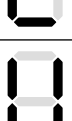




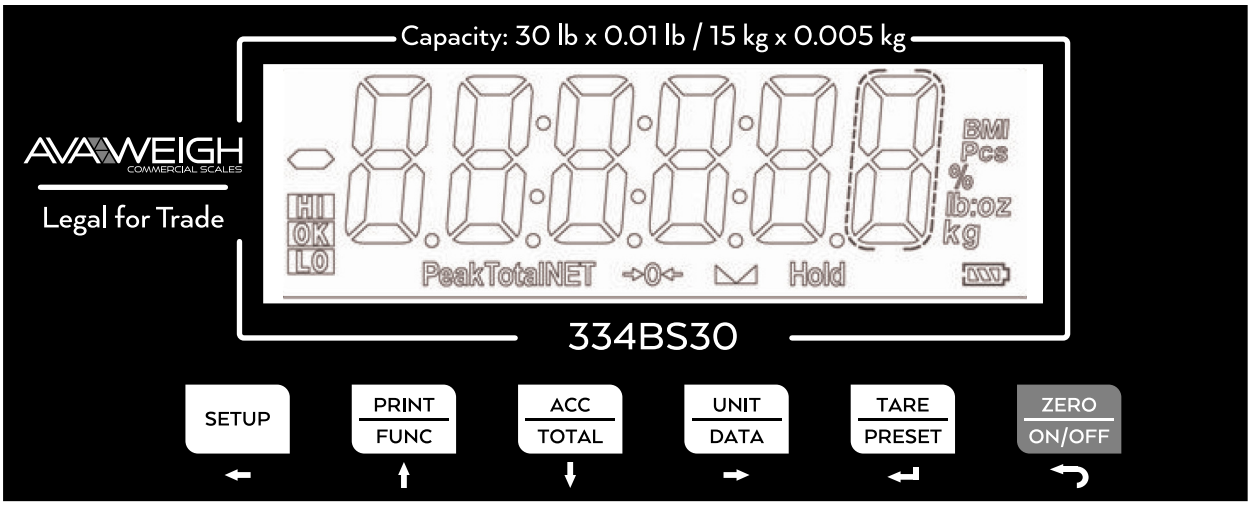




DISPLAY CHARACTERS

SYMBOL	DIGIT	SYMBOL	DIGIT	SYMBOL	DIGIT
0		A		N	
1		B		O	
2		C		P	
3		D		Q	
4		E		R	
5		F		S	
6		G		T	
7		H		U	
8		I		V	
9		J		W	
		K		X	
		L		Y	
		M		Z	

INDICATOR DISPLAY



- →0← - Scale is zeroed, gross weight is 0, tare is 0.
- ◣◢ - Scale is stable.
- **NET** - Display reading is net weight; tare is not 0.
- **Total** - Display data is accumulated total times, weight, pieces, or percentage.
- **Hold** - Scale is in dynamic weighing mode.
  - **Hold flashes:**
    Actual fluctuating weight displayed.
  - **Hold solid:**
    Locked weight is displayed.
- **Peak** - Scale is in dynamic weighing mode. Hold type is PEAK-HOLD.
- **lb** - Measure unit is lb. or lb.: oz.
- **oz** - Measure unit is oz. or lb.: oz.
- **kg** - Measure unit is kg.
- **%** - Measure unit is % (in % weighing mode).
- **Pcs** - Measure unit is pieces (in counting mode).
- ▭ - Battery level.
- **HI** - Data compare (check weighing) is enabled.
  Current data (weight, pieces, or percent) is above the specified upper limit.
- **OK** - Data compare is enabled.
  Current data is between the specified upper and lower limits.
- **LO** - Data compare is enabled.
  Current data is below the specified lower limit.

FUNCTION KEYS

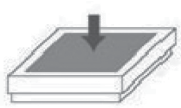
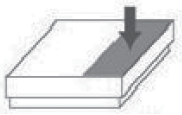
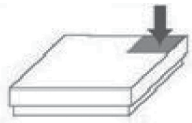
NOTE: Normally, the 2nd function of a key needs to be pressed down for > 3 sec. to be activated.

KEY	MODE	PUSH TIME	DEFINITION
HOLD / SETUP ←	Weighing, Counting, or Percent Mode	<3 Seconds	Enters or exits **HOLD** Mode
		>3 Seconds	Enters **SETUP** Mode
	Input Data Mode	<3 Seconds	Returns to last sub-menu
		>3 Seconds	Inputs decimal point
	Menu Selection Mode		Returns to last sub-menu
PRINT / FUNC ↑	Weighing, Counting, or Percent Mode	<3 Seconds	Sends output data via the serial port
		>3 Seconds	Selects Mode: Weighing, Counting, or Percent
	Input Data Mode		Increases the digit in the flashing data entry position by 1
	Menu Selection Mode		Returns to last item of current sub-menu
ACC / TOTAL ↓	Weighing, Counting, or Percent Mode	<3 Seconds	Adds accumulation values to memory; displays instances and totals
		>3 Seconds	Displays accumulation instances and totals
	Input Data Mode		Decreases the digit in the flashing data entry position by 1
	Menu Selection Mode		Goes to the next item of current sub-menu
UNIT / DATA →	Weighing Mode	<3 Seconds	Changes weighing unit of measure
	Counting or Percent Mode	<3 Seconds	Enters the sub-menu to input piece weight for counting or to enter reference weight for percent weighing
	Weighing, Counting, or Percent Mode	>3 Seconds	Enters the sub-menu to input the comparative data range for check weighing
	Time or Date Mode	>3 Seconds	Enters time or date setting mode
	Input Data Mode		Shifts the flashing data entry position from right to left
	Menu Selection Mode		Goes to next item of current sub-menu
TARE / PRESET ↵	Weighing, Counting, or Percent Mode	<3 Seconds	Tare the weight
		>3 Seconds	Enters pre-determined tare input mode
	Input Data Mode		Confirms the input data and forwards to next step
	Menu Selection Mode		Confirms the input data and forwards to next step
ZERO / ON/OFF ↩	Power Off		Powers on
	Weighing, Counting, or Percent Mode	<3 Seconds	Zeroes the platform weight
		>3 Seconds	Powers off
	Input Data Mode		Ignores the modification
	Menu Selection Mode		Exits from current working mode

OPERATIONS & SETTINGS

NORMAL WEIGHING MODE

1. Power on the scale by pressing the **ZERO/ON/OFF** key.
2. If the display stabilizes but doesn't show zero, press the **ZERO/ON/OFF** key to set new zero point.
3. Place the objects on the scale platform and read the weight on the indicator.
   Note: Objects should be placed at the center of the platform. Corner or side loading heavy objects may risk overloading an individual load cell and damaging the scale.

 **YES**  **NO**  **NO**

4. To change the weight unit of measure, press the **UNIT/DATA** key.
5. To send data to another device via the serial port, press the **PRINT/FUNC** key.
6. Power off the scale by pressing the **ZERO/ON/OFF** key for 4 seconds.

ZERO FUNCTION

1. If the display does not show 0, and there is no object on the platform, press the **ZERO/ON/OFF** key to zero the reading.

- Zero range: ±2% * full capacity.
- The zero function is unavailable when the displayed reading is out of the zero range and the indicator will show the error message 0------ or 0------, meaning the scale is over or under the zero range.

TARE FUNCTION

This scale allows for both a manually entered pre-set tare weight, as well as a "weighed" tare weight.

WEIGHED TARE

1. Zero the scale as described above.
2. Place an empty container on the platform and press the **TARE/PRESET** key. The display will return to zero, eliminating the weight of the container. **NET** will be lit on the display.
3. Place the material or object to be weighed in the container. The net weight will be displayed.
4. To exit tare mode, remove all weight from the scale. The display will show a negative weight. Press the **TARE/RESET** key to return the display to zero.

PRE-DETERMINED TARE

1. Zero the scale as described above.
2. Press and hold the **TARE/PRESET** key until PrEtAr is displayed, then the tare weight will be displayed. The first digit and **NET** will flash in the display.
3. Input the tare weight using the ↑ ↓ → keys. After inputting the tare weight, press the **TARE/PRESET** key to confirm. **NET** will be lit in the display.
   Note: Tare weight must be greater than zero and no more than the scale's max capacity.
4. Place the material or object to be weighed onto the scale platform. The net weight will be displayed.
5. To exit tare mode, remove all weight from the scale. The display will show a negative weight. Press the **TARE/RESET** key to return the display to zero.
   Note: The indicator can only save 1 tare weight. Entering a new tare weight will automatically replace the old one.
   Note: Pre-set tare weight will be lost after the scale is powered off.

CHECK WEIGHING (DATA COMPARE)

The check weighing or data compare function allows the user to input a pre-set range. The display will indicate whether the weighed value is within that range or if it is too high or too low.

1. Press and hold the **UNIT/DATA** key for 4 seconds to input the comparative data range.
2. UNITLB or UNITKG will be displayed first. Use the **UNIT/DATA** keys to select the comparison unit of measure. Press the **TARE/PRESET** key to confirm.
3. After HI.LM is shown quickly, the last **Hi** limit value will be displayed (the default value is 000000).
4. **HI** on the display will be lit. Use the ↑ ↓ → keys to input the upper limit of the range and press the **TARE/PRESET** key to confirm and move to the next step.
5. LO.LM will be displayed quickly. The last **Lo** limit value will be displayed (the default value is 000000). **LO** on the display will be lit. Use the ↑ ↓ → keys to input the lower limit of the range and press the **TARE/PRESET** key to confirm. Press **ZERO/ON/OFF** key to exit and go back to the normal weighing mode.
   NOTE: If the upper limit is 0, or if it is less than the lower limit, check weighing mode will automatically be exited.
6. After an acceptable range has been set, check weighing may begin. If the weighed value is within the specified range, **OK** will be displayed on the indicator and an audible beep will sound. If the value is outside the specified range, **HI** or **LO** will be displayed with no audible beep.
7. To turn check weighing off, follow the above instructions and change the upper limit to zero.

ACCUMULATION MODE

The accumulation function allows storage of weighed values and the summation of those values. This function can accumulate weights, piece counts, and percentages in normal weighing mode, counting mode, and percent weighing mode respectively.

1. With a load on the scale, press the **ACC/TOTAL** key to add the displayed value to the accumulated total. The indicator will first display the times of accumulation (e.g. if this is the 5th accumulated value, it will display AC 005), and then display the accumulated sum total thus far. It will display the load weight.
   NOTE: Only loads exceeding the minimum weight (default of 10d, where d = the scale's readability; see specifications) can be accumulated. This setting (**USER-OTHER-NLD.RNG**) can be modified from its default within **USER SETUP** mode, but changes will impact other functions, such as **HOLD**.
2. Remove the load and place another load to continue accumulating. Press and release **ACC/TOTAL** to add the new value.
   NOTE: To avoid duplicating a value for a same load, the accumulation function requires the original load to be removed before a new value can be accumulated.
3. To view the total accumulated data at any time, press and hold the **ACC/TOTAL** key for 4 seconds. It will alternatively display the accumulation times and the accumulated sum total thus far (weight or quantity), until the **ACC/TOTAL** key is pressed again. Accumulated times and total values can be displayed or sent to another device via the serial port by pressing and releasing the **PRINT/FUNC** key.
4. To clear and reset the accumulated data, press and release the **ZERO/ON/OFF** key while total accumulated data and the accumulated sum total are alternatively displayed.

COUNTING MODE & CHECK COUNTS IN COUNTING MODE

Disabled for Legal-for-Trade applications.

WORK WITH UPS WORLDSHIP

Set scale port to NCI3835 in UPS worldship.

TROUBLESHOOTING

SYMPTOM	PROBABLE CAUSE	SOLUTION
Scale does not turn on	AC adapter is not connected securely.	Re-plug the AC adapter or rotate the plug to securely connect it to the scale.
	Low battery.	Replace the batteries.
	Indicator is damaged.	Replace with a new indicator and perform calibration.
	The cable from the platform to indicator is not correctly connected, is disconnected, or has short circuited.	Check connections. If damaged, return the scale for repair.
	Indicator is damaged.	Replace with a new indicator and perform calibration.
	Load cell cable is broken.	Return the scale for repair.
	Load cell is damaged.	Return the scale for repair.
	Weight reading exceeds Power On Zero limit.	1. Ensure scale platform is empty. 2. Perform zero calibration. 3. Reduce the weight on the platform until the indication is within the key zero range.
	Indication is out of key zero range.	
	Weight reading below Power On Zero limit.	1. Install platform on the scale. 2. Check for objects stuck between the load cell and the scale base; remove if present. 3. Perform zero calibration.
	Weight reading exceeds overload limit.	Reduce load on scale until the weight value is displayed.
	Weight value can't be displayed in the current unit of measure because it exceeds 6 digits.	Use an appropriate unit of measure.
	Weight reading below Under Load Limit.	1. Install platform on scale. 2. Perform zero calibration.

SYMPTOM	PROBABLE CAUSE	SOLUTION
EEPE1	**CONFIG** parameters are not correctly set.	Reset **CONFIG** parameters per the manual.
	CAL parameters are not correctly set.	Recalibrate the scale.
EEPE2	**USER** parameters are not correctly set.	Reset **USER** parameters per the manual.
CALEr	Input data or loaded weight is too small or too big.	Input correct data, load correct weight onto platform.
	Weight signal is unstable, non-linear.	Return the scale for repair.
StbEr	When in **HOLD** mode, weighing object does not become stable in 9 seconds, and the weight variation is more than 5d.	1. Stabilize the object in under 9 seconds. 2. Set a larger **HOLD** parameter.
Can't zero the display	Load on scale exceeds allowable limits (2%FS).	Remove load on scale.
	Load on scale is unstable.	Wait for load to become stable, then press the **ZERO/ON/OFF** key to zero the display.
PuLEr	Weight on the platform is too small to define a valid reference weight.	Use a greater weight for the sample.
Max capacity is not same as marked on overlay	**CONFIG** parameters are not correctly set.	Reset **CONFIG** parameters per the manual.
Any function invalid		
Any measuring units missed		
Incorrect counting result or percent weighing result when using SPL to enter a piece weight or unit-percent weight	Sampling quantity is too small.	Increase the sampling quantity.
	Calculated piece weight or unit-percent weight is a little different from the real value.	
Weighing is not accurate	An object is stuck between the load cell and scale base.	Remove the object.
	Load cell received a heavy impact.	Perform linearity calibration.
	The scale is in a location far from Chicago.	Perform GEO calibration.
LobAt 	Low battery.	Replace the batteries.

HOW TO RESET THE AUTOMATIC SHUTOFF TIMER

DIRECTIONS	DISPLAY
Press and hold the SETUP button until "CONFIG" is displayed.	
Press the ↓ button. "USER" will be displayed.	
Press the ↵ button to confirm. "RESET" will be displayed.	
Press the ↑ button. "OTHER" will be displayed.	
Press the ↵ button to confirm. "NLD.RNG" will be displayed.	
Press the ↓ button 2x until "A.OFF.T" is displayed.	
Press the ↵ button. Default auto off time "005" will be displayed.	
Now use the buttons below to reset the auto off time. • **Press the → button to move the digit from right to left.** • **Press the ↑↓ buttons to change the number from 0-9.** • **Press the ↵ button to confim.**	
When "A.OFF.T." is displayed again, press the ZERO ON/OFF button.	
When "EXIT" is displayed, press the ZERO ON/OFF button again to exit the mode.	
Note: • 0 = Disable the auto off function. • 1-255 = Auto off after 1-255 minutes without operation or weight change.	