

Operators Manual



scales4planes.com

(479) 751-7225

Distributed by:

Weigh-Systems Inc.
3086 Coachlite Lane
Springdale, AR. 72764
United States

Safety Notice

It is important that your new scales are installed and operated in such a way that all applicable safety requirements are met. It is your responsibility as a user to ensure that you identify the relevant standards and comply with them. Failure to do so may result in damages to equipment and personal injury. In particular, you should review the contents of this Operators Manual before operating this equipment.

This equipment is not designed for placement in hazardous or explosive environments that require Factory Mutual Approval. This equipment is not to be used around water or rain, as it is not water proof by any means.

Under no circumstances will the supplier of the equipment be liable for any incidental, consequential, or special damages of any kind whatsoever, including but not limited to lost profits arising from or in any way associated with the use of the equipment or this operation manual.

Technical Specification

- Accuracy: Class III 5000d (Not type approved)
- A/D conversion speed: 40 samples/sec.
- Internal resolution 400,000 counts
- Maximum displayed resolution: 1:15,000
- Non-linear error: <0.016% F.S
- Transistor input range: 1-3 mv/v
- Load Cell Excitation: +5VDC
- Maximum number of loadcells: (4) 350 ohm
- Power: 6VDC 1.2Ah lead acid re-chargable battery (Included) or
AC adapter - 12 VDC 300 mA output (Included)
- Display: LCD six characters .88in tall / .4in wide
- Power consumption

Your new scale runs on a 6 volt rechargeable battery. To recharge the battery just plug in the 12 volt charger using the jack located just to the left of the display. Utilizing an on-board voltage regulator we change the voltage to an amount that will safely recharge your battery in a few hours. It will be fine to leave it on overnight, but it is not recommended to leave it recharging all the time. Leaving it on too long causes the battery life to be shortened. We are using a sealed lead acid battery that requires no maintenance. This battery also does not develop a memory, so it is alright to recharge even when it is only slightly down.

Your unit can operate continuously from the charger, and the battery could be completely eliminated, but it is much more convenient to operate with no cords or cables. The battery should power up (1) one load cell for 6 to 8 hours when new. Units that have adjustable legs have 4 load cells & will operate only a couple of hours before needing a recharge. As the scale is first powered up, one of the bits of displayed info is a percentage of charge. This display also occurs as the unit is powering down, While charging it will show 99% or close to it, but after using it for a while (off the charger) it will display a lower number that will be more realistic.

A built-in backlight is also available for your scale. This backlight may be manually turned on or off by pressing the **MODE** button and continuing to hold for a couple of seconds. When on, the backlight does shorten the operating time of your battery. It is fairly efficient and the battery time is long enough to where you can feel free to use the backlight when needed. The mode button is also how to switch **LB/KG** if your unit was set-up to do that.

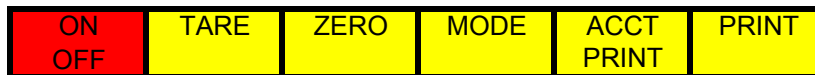
It is necessary to keep the battery charged up and not ever let it go completely dead. Your scale is consuming battery power even when it is turned off. If you plan on not using the scale for a long time, you will either need to establish a re-charge interval of once every 4 to 6 weeks, or you can simply pull one wire off the battery. There is an auto shut down timer that you can turn on, but this only helps by turning off the display. Your unit is still consuming a small amount of battery voltage. To service or replace your battery, turn unit on its face. Remove the (2) two bolts from the bottom. **Never go into your unit from the side with a display.** This will allow you access without wires being at risk.

ENUNCIATORS



- . BAT (Battery): Indicates low Battery
- . STB (Stability): Indicates the displayed weight is stable
- . GROSS: Indicates the displayed weight has no tare subtraction
- . Net: Displayed weight has Tare weight subtracted
- . Tare: Indicates a Tare weight is available
- . Zero: Indicates center of zero
- . KG: Indicates the weight is displayed in kilograms
- . LB: Indicates the weight is displayed in pounds

Buttons



- . ON/OFF: Turns the indicator on or off. A momentary press will turn the unit on if it is powered down. To turn the unit off press and hold the ON/OFF button for 1.5 seconds. As the unit powers down it will display the battery charge as a percentage. "bpt 99" is the full charge.
- . TARE: Establishes the current gross weight as a tare value
- . ZERO: Establishes the current gross weight as zero. The allowable zero range is +/- 2% of full capacity.
- . Mode: Toggles the weight mode between LB and KG if the unit switching is enabled. Press and hold this button to turn backlight on or off
- . ACC Print: This button is not used in operate mode and is reserved for future use.
- . Print: This button is not functional in the operate mode and is reserved for future use.

Power Down Timer and Buzzer Setting

- . Press Tare button for 1.5 seconds
- . The indicator will display "off X X", where X X denotes the power down setting 3, 10, 15 or 30 minutes or 0 to keep this feature turned off. Leaving this feature off is Recommended. Press "Print" to scroll until the desired setting is displayed then press "Mode" to accept. With the power down time enabled the unit will automatically power down if there is not weight change or a key pressed in the selected period of time.
- . The indicator will display "bp on" or "bp off" indicating the current buzzer status. Press "Print" to select the desired buzzer mode then "mode" to accept.(Note:) Buzzer is optional and may not be installed in your unit.
- . The indicator will resume the normal weighing mode.

Backlight

- . To toggle the display backlight on and off press and hold the "Mode" key for 1.5 seconds. Note that enabling the backlight will shorten the battery life.

A/C Operation / Battery Charging

- . Insert the 12V AC adapter jack into the 12V socket on the overlay just to the left of the LCD display.
- . Plug the AC adapter into the wall socket. (INSURE THE A/C ADAPTER IS APPROPRIATE FOR THE SUPPLIED LINE VOLTAGE, 120 OR 220 VAC)
- . The internal battery is charging while the AC adapter is connected.

Installation Considerations and Restrictions

- . Avoid installation in direct sunlight.
- . Avoid installation in dusty environments.
- . Avoid installation in areas where serious vibrations are present.
- . Do not operate on battery power if the "Bat" enunciator is illuminated.
- . Do not get wet. Unit is not water resistant and will not survive.
- . Return all failures to factory as there are no user serviceable parts.

Servicing Your Battery

Place scale on its face. Take precautions not to allow display to be scratched or damaged. Remove (2) bolts or Allen head screws from bottom cover. Sit bottom cover aside. Check for loose pieces of styrofoam that may have come loose in shipping. Locate battery and make sure wires are plugged in. Red is plus 6V and Black is ground. When not using your scale for long periods of time you will either need to recharge monthly or disconnect the wire from the plus side of the battery. Unit will completely discharge the battery in just a few months of neglect. Unplugged the battery will store for long periods with no problems.

This section is not to be used by non-licensed personnel. It is provided to assist Scale companies or FAA inspectors who may need the information:

Parameter settings

With lower half removed (see **Servicing Your Battery**) find the jumper shorting plug on back side of PCB. Move from its home position to enable Setup & Calibration. Do not attempt with less than half capacity weights for best accuracy. We recommend and use weights to full capacity with checks at regular intervals, but encourage span adjustments at 50%

Enter Setup

Press and hold "TARE" until "CALSP" is displayed on screen. Press Mode button to enter into setup mode. Screen will show "set", press "ACC Print" to enter menu.

Graduation (increment size or Count-by)

Either "d1 X.XXX or d2 X.XXX" will be displayed.

"d1" is the graduation size for single range display

"d2" is the smaller graduation size of the dual range display

Press ACC Print to switch between d1 and d2

Press Print to change graduation size

Press Mode to confirm and advance to next step.

Note: If d1 is set, scale will only be in the single range mode and d2 will be ignored.

If d2 is set, scale will only be in dual range display mode and d1 is ignored.

Please refer to table 1 for graduation size values of d1 and d2

Display Resolution

n XXX.XX will be displayed on screen. The value shown is the display resolution.

Display resolution = (Graduation) kg / Full Capacity)kg

For dual range display, please refer to Table 1 for value of n

Ignore the decimal point shown and treat the value as a whole number.

Example: n 060.00 will be 6000 and n 120.00 will be 12000

Press ACC PRINT to select digit position. Selected digit will flash.

Press PRINT to change value of the selected digit.

Press MODE to advance to next step.

Important: Please calibrate scale again if you change anything in setup.

Units

Unit YX will be displayed, X denotes the basic unit of the display and Y denotes the secondary unit.

Unit 00 = kg only

Unit 10 = kg as basic unit lb as secondary unit. Switchable in normal mode.

Unit 01 = lb only

Press PRINT to change basic unit and press ACC Print to change secondary.
Press MODE to confirm

Baud Rate

Your software is set up here for future options.

A/D display

In normal weighing mode press and hold TARE unit will display CALSP

Press Mode and SET will be displayed on screen.

Press Mode again and A-D will be displayed on screen.

Press ACC PRINT and display will show the A/D value.

Typically, an empty scale will have an A/D value of about 35000 and a fully loaded scale will have a value of about 210000. (Sensitivity of 2.0 mv/v)

Press Mode to return to normal weighing mode.

Calibration:

Assuming the shorting jumper is still in ON position

1. Press and hold TARE button. Display will show CALSP. Press ACC PRINT button to enter calibration mode. CAL 00 will be displayed.
2. Remove all weight from platform and press MODE. Display will show "-----" for a few seconds and then will go to previously used test weight value. Skip the next step if this is the value you are still using.
3. Key in the required weight value by pressing ACC PRINT to select digit and Print to change value of flashing digit.
4. Load test weight on to platform. Wait until stable then press Mode button to confirm. Display will show "-----" for a second then will return to normal weighing mode.
5. Check zero & several points and take unit to full range. Repeat until all readings are correct.

Please remember to set the shorting jumper to off position after setup.

Table 1

No.	Capacity	Graduation D1	Graduation D2
1	10,000	1, 2, 5	1(0~5000) 2(5000~10000)n=10000
2	8,000	1, 2, 5	1(0~4000) 2(4000~8000)n8000
3	5,000	.5, 1, 2	.5(0~2500) 1(2500~5000)n= 10000
4	3,000	.2, .5, 1	.2(0~1500) .5(1500~3000)n=15000
5	2,000	.2, .5, 1	.2(0~1000) .5(1000-2000)n=10000
6	1,000	.1, .2, .5	.1(0~600) .2(600~1000)n=1000

Warranty Statement

Weigh-Systems warrants your scale to be free of defects in material or workmanship for a period of (12) months from the date of purchase while in normal usage. Your battery and A/C adapter is warranted for only 90 days as these are considered expendable items. Even though expendable, with proper care you should get about three years of service from the battery. Failure to change your battery when it is weak will overwork your charger and is not recommended. We do not cover damage caused by shipping nor the cost of shipping. Recalibration may be performed by any licensed scale company but we strive to perform this service so inexpensively that you will always send your unit to us.

Thank-you for your purchase of this weighing equipment. Call if you need us.

Weigh-Systems Inc.
3086 Coachlite Lane
Springdale, AR 72764

1-479-751-7225 Voice
1-253-369-8733 Fax
mpruett@weigh-systems.com
www.scales4planes.com