

# AMERICAN FORKLIFT SCALES LLC

4804 Granite Dr. Bldg. F-3 Suite 293  
Rocklin, CA 95677

## Calibrating the TI-500 Indicator and LTWS-1 Patriot Hydraulic Scale

Calibration of the **LTWS-1 Patriot Weighing System** with the **TI-500 Indicator** is a simple, two-part process, requiring only a known **Test Weight**. The process is identical for either forklift or bucket-loader operations. Any factor which affects hydraulic pressure will affect the accuracy and repeatability of the weighing system.

### Overview:

The **F1** setting instructs the Indicator electronics to create a block of increments. **F9** selects a constant (**1, 2** or **5**), which is combined with **F10** (**0.0, 0, 00**) to create the value of each increment established by **F1**. This process establishes the maximum weight which can be displayed by the Indicator. Maximum actual display capacity is **999999** Units (pounds or kilos)

#### Example 1:

**F1 = 500**

**F9 = 2**

**F10 = 0.0** (one digit plus one decimal)

Capacity =  $500 \times 0.2 = 100$  lb/k

Display increments by 0.2 Units

i.e. 0.0, 0.2, 0.4, 0.6, etc.

#### Example 2:

**F1 = 500**

**F9 = 2**

**F10 = 0** (one digit)

Capacity =  $500 \times 2 = 1,000$  lb/k

Display increments by 2 Units

i.e. 0, 2, 4, 6, etc.

#### Example 3:

**F1 = 500**

**F9 = 2**

**F10 = 00** (Two digits)

Capacity =  $500 \times 20 = 10,000$  lb/k

Display increments by 20 Units

i.e. 00, 20, 40, 60, 80, etc.

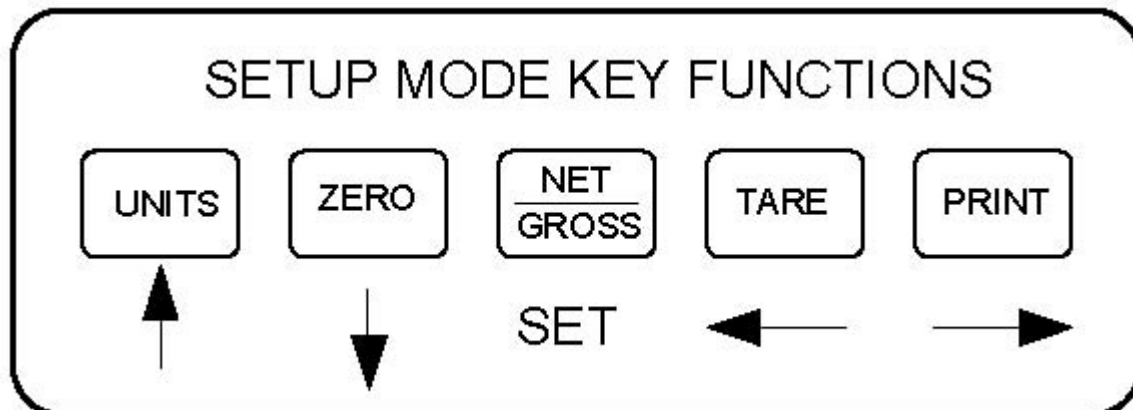
The basic scale calibration requires only that the empty forks or bucket be lifted off the ground and **F16 SET** to "0", (setting the **ZERO** Reference Number) and the actual weight of the Test Weight preset at **F17** and **SET** when the Test Weight is lifted and held (setting the **SPAN** Reference number). These steps are the complete **Basic Calibration**.

**F19** is a manual entry which will replace the calculated **ZERO (C0)** reference number.

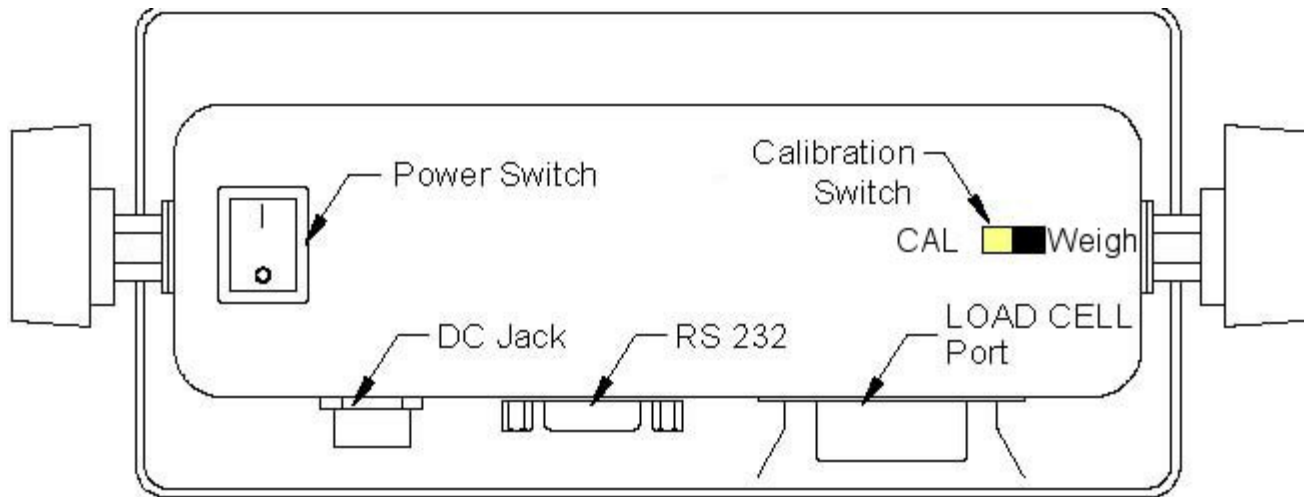
**F20** is a manual entry which will replace the calculated **SPAN (C1)** reference number.

When the displayed weight is less than the actual weight, calculate a new reference number by reducing the **CAL 1** reference number by the same percentage that the displayed weight differs from the actual weight. Then, select **F20**, enter the adjusted reference number and Press **SET** to store the number.

\*\*\*\*\*



Front Panel Operating Buttons



**Rear Panel**  
\*\*\*\*\*

## Calibration Process for the Model LTWS-1 Patriot Weighing System with the TI-500 Indicator

### BASIC CALIBRATION:

Prepare a known **Test Weight**.

#### Setting ZERO

Switch to **CAL**(ibration) Mode with the rear-panel switch. Turn Power **ON** to the Indicator. [ **F1** ] will be displayed on the Indicator Display.

Select **F16** by pressing the **TARE** or **PRINT** buttons.

Press the **ZERO** button one time to enter the **F16** mode. The Indicator will display [ **C0** ] for a moment and then a number will be displayed.

#### Quick Sensor Installation Test:

Note the displayed number. Lift the forks or bucket and stop for a moment. The number on the display should increase significantly. Return the forks or bucket to the ground. The displayed number should return to approximately the original reading. If the number did not change significantly, you may have to relocate the sensor to the lift cylinder side of the high pressure plumbing. Please contact Tech Support (800-472-6921 or 805-236-7406) for trouble-shooting assistance to resolve this problem.

Lift the empty forks or bucket off the ground to the "**Sweet-Spot**". Allow a second or so for the hydraulic pressure to stabilize and press the **ZERO** button again. The Indicator should flash and display **0**.

Immediately press the **SET/NET/GROSS** button to store the **F16 (ZERO (C0) Reference Number)**.

The Indicator will display [ **END C0** ] for a moment, then revert to [ **F16** ] to indicate that the **ZERO** setting has been saved. If the process does not complete, press the **ZERO** button again. If the display shows **ERR (?)**, record the error and refer to the manual or contact Tech Support for assistance to resolve the problem.

#### Setting SPAN with a Test Weight

Press the **PRINT** button to change to **F17** and press the **ZERO** button one time to enter the **F17** mode. The display will show [ **C1** ] for a moment then will have a flashing **0**.

Enter your Test Weight value using the two right-hand buttons, **TARE** and **PRINT** to select a digit and the two buttons to the left of

