

FV-D, FVWP-D, FW-D

Mechanical Scale
Conversion

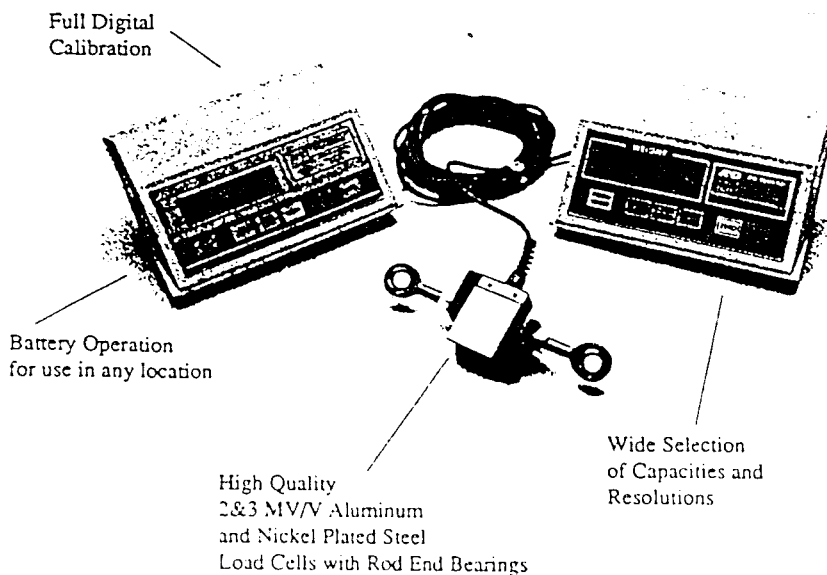
FV, FVWP and FW Mechanical Scale Conversion

Product Description

The FV/FW Digital Weight Indicators have been in use for years on the FV/FW portable scales. These indicators have proven to be reliable and efficient and are being used by thousands of companies. Now, the FV and FW indicators can be used to convert mechanical scales into electronic scales that have the same features as the FV and FW portable scales. These features include Full Digital Calibration, Comparator Functions and selectable weighing modes which include kg, lb, oz, counting, percentage weighing and even interface to an A&D 8121 printer.. This conversion allows your customers to gain all of the benefits of a fully electronic scale with a small investment.

Mechanical scale conversion is accomplished by selecting either the FV or FW indicator and connecting it to the proper A&D load cell. Standard eye bolts are connected to each end of the A&D load cell and the load cell assembly is placed in line with the connecting rod that connects the mechanical scale platform to the mechanical scale indicator. The mechanical scale indicator is removed and replaced with either the FV or FW indicator. Determine the mechanical advantage that the original mechanical scale had. For instance, 100 kgs placed on the mechanical scale base exerts 10 kgs of force on the connecting rod. This is a 10:1 ratio. The FV or FW indicators should be calibrated according to this mechanical advantage.

Components Required to Complete the Mechanical Scale Conversion



**Mechanical Scale Conversion Table
using
A&D Load Cells & Indicators**

FV

| DESIRED INDICATOR CAPACITY | MECHANICAL ADVANTAGE RATIO | | | | |
|-------------------------------|----------------------------|-----------------|-----------------|-----------------|-----------------|
| | 1:1 | 10:1 | 20:1 | 50:1 | 100:1 |
| 150 KG X 0.05 KG | LC-1122 L300 | LC-1220 L050 | N/A | N/A | N/A |
| 300 KG X 0.1 KG | LC-1320 L750 | LC-1220 L100 | LC-1220 L050 | N/A | N/A |
| 600 KG X 0.2 KG | LC-1320 KL002 | LC-1220 L200 | LC-120 L100 | LC-1220 L050 | N/A |
| 1,500 KG X 0.5 KG | LC-1320 KL005 | LC-1122 L300 | LC-1220 L200 | LC-1220 L200 | LC-1220 L050 |

FW

| DESIRED INDICATOR CAPACITY | MECHANICAL ADVANTAGE RATIO | | | | |
|-------------------------------|----------------------------|-----------------|-----------------|-----------------|-----------------|
| | 1:1 | 10:1 | 20:1 | 50:1 | 100:1 |
| 100 KG X 0.01 KG | LC-1122 L200 | LC-1220 L050 | N/A | N/A | N/A |
| 150 KG X 0.02 KG | LC-1320 L300 | LC-1220 L050 | N/A | N/A | N/A |
| 300 KG X 0.05 KG | LC-1320 L750 | LC-1220 L100 | LC-120 L1050 | N/A | N/A |
| 600 KG X 0.1 KG | LC-1320 KL002 | LC-1220 L200 | LC-1220 L100 | LC-1220 L050 | N/A |
| 1,200 KG x0.2 KG | LC-1320 KL005 | LC-1320 L500 | LC-1220 L200 | LC-1220 L100 | LC-1220 L050 |

Note: For higher capacities please contact factory

**FEATURES & BENEFITS
FV SERIES
MECHANICAL SCALE CONVERSION**

| FEATURES | BENEFITS |
|---|---|
| Rugged Construction | Exceptional durability. Low maintenance costs. |
| Built in Comparator Function | Display notifies user of Hi, Lo, Go Status. |
| Battery Operation Standard, AC Adapter Optional | Provides total mobility for use in any location with approximately 200 hours battery life. |
| Full Digital Calibration | Simplifies calibration by eliminating repetitive loading and unloading calibration weights when setting zero and span. |
| Parts Counting Function | Saves time and extra steps for inventory control. |
| RFI Shielding of A/D Converter | Provides reliability in high interference areas. |
| Optional AD-8951 comparator Lights | Can be used in simple automatic filling systems. |
| Optional RS-232C & Comparator Buzzer/Relay Board | Audible buzzer can be set to sound when using comparator. |

**FEATURES & BENEFITS
FW SERIES
MECHANICAL SCALE CONVERSION**

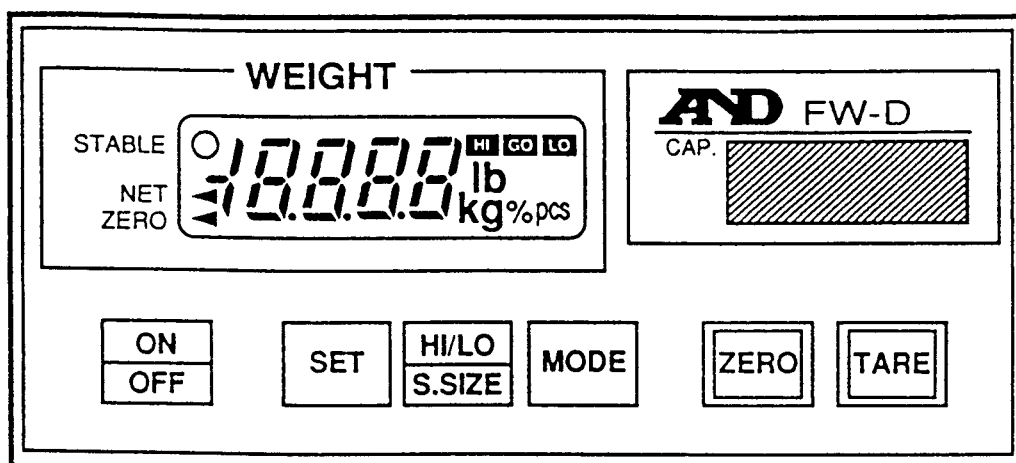
| FEATURES | BENEFITS |
|---|--|
| Rugged Construction | Provides years of service with minimal downtime.. |
| High Resolution of up to 1/10,000 | Meets most demanding applications. |
| Battery Operation Standard, AC Adapter Optional | Provides total mobility for use in any location with approximately 200 hours battery life. |
| Optional RS-232C & comparator Buzzer/Relay Board | Audible buzzer can be set to sound when using comparator. |
| Built-in comparator Function | Display notifies user of Hi, Lo, Go Status |
| Full Digital Calibration | Simplifies calibration by eliminating repetitive loading and unloading calibration weights when setting zero and span. |
| Piece Counting and Percentage Function | Saves time and extra steps for check weighing applications. |
| Optional AD-8951 Comparator Lights | Gives visible display of Over/Under status of goods being weighed. |

FV-D, FVWP-D, FW-D

Understanding
the Display



Understanding the Display



The FV-D, FVWP-D & FW-D indicators have a sharp, 17mm high LCD display. You can make sure that all the display segments are working properly by pressing the ON/OFF key.



The ON/OFF Key

After pressing the ON/OFF key, you will see all segments appear for a couple of seconds. (Note: In some countries "lb", "oz", "%" or "pcs" will not be available)

- Starting at the left end of the display you will see a circular stability indicator, a minus weight display symbol, a triangular NET indicator and ZERO indicator. Next you can see the main display "18.8.8.8".
- On the upper right you will see the abbreviations 'HI', "GO", "LO" for the comparator. Below those are displayed "lb", "kg", "oz", "%" or "pcs".
- After a few moments the circular stability indicator, zero indicator, main display (reading zero) and a unit ("lb", "kg", "oz", "%" or "pcs") will remain.
- The scale will switch off automatically if the display remains at zero for three minutes, but this function can be deactivated.
- Also, "Lb" will be displayed on the main display if the power in the batteries is too low for reliable weighing and "E" ("lb", "kg", "oz", "%" or "pcs") will be displayed if the scale is overloaded.



The SET Key

To the right of the **ON/OFF** key is the **SET** key. The **SET** key has three different uses:

- 1) In the Weighing Mode, it is pressed to activate or deactivate the comparator function (If the comparator has been deactivated, it will not be possible to access the high and low setpoint values with the **MODE** (or **UNITS**) key).
- 2) In the Counting Mode ("pcs"), it is pressed to register the unit weight of the sample (5, 10, 20, 50 or 100 pieces) in non-volatile memory.



The HI/LO-S.SIZE Key

Next to the **SET** key is the **HI/LO-S.SIZE** key, it has two different uses:

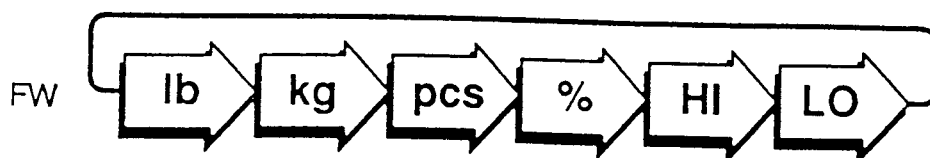
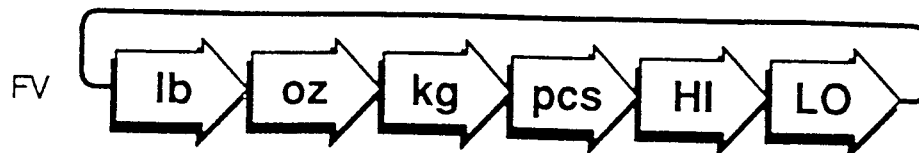
- 1) In the Comparator Mode, it is used to input setpoint values in conjunction with the **SET** key.
- 2) In the Counting Mode the sample size is normally 5, but by pressing **HI/LO-S.SIZE** you may select a sample size of 10, 20, 50 or 100 pieces.



The MODE (or UNITS) Key

Next, this key may be labeled **MODE** or **UNITS** depending on the model and location. It also has two different functions:

- 1) The **MODE** (or **UNITS**) key can be used to change as below. *Note: HI and LO are displayed only when the Comparator function is on (they are for setting the high/low setpoint limits when the scale is acting as a check weigher).*



- 2) When the Comparator function is on (HI and LO setpoints are entered) the **MODE** (or **UNITS**) key can be used to set the values of these settings.



The ZERO Key

The **ZERO** key returns the scale to the center of zero when the weighing pan is empty, and should not be confused with the **TARE** key which re-zero's the display and places the scale in NET mode.

When the display shows a small deviation from zero and the weighing pan is empty (and the tare function is not being used), then press the **ZERO** key to return the display to "0.00". If there is a large deviation from zero, than there may be something else wrong, like the weighing pan touching something.

If "----" is displayed when the power is turned on, or if the **ZERO** key will not set the display to zero, then you should carry out ZERO CALIBRATION (see page21)



The TARE Key

The **TARE** key re-ZERO'S the display up to the maximum capacity of the scale, places the scale in NET mode, and should not be confused with The **ZERO** key which returns the scale to the center of zero when the weighing pan is empty. The TARE weight (container weight) subtracts from the range of the scale.

Load Cell
Connection



Specifications

- 1) Load Cell Excitation 5V±10%
- 2) Load Cell Drivability FV-D/FVWP-D : up to 2 Load Cells (350Ω)
FW-D : up to 4 Load Cells (350Ω)

3) Input Signal range*

| SIGNAL | FV-D/FVWP-D | FW-D |
|----------------------|-------------|---------|
| Zero Input Voltage ≥ | 1mV | 0.5mV |
| Full Input Voltage ≤ | 12.5mV | 12.5mV |
| Input Sensitivity ≥ | 1.2μV/D | 0.4μV/D |

D = "Min.Division" or "scale interval"

* the formulas for ascertaining zero input voltage, full input voltage and input sensitivity may be found on page11.

- 4) Temperature Coefficient Zero: ±(0.3μV+0.0008% of dead load)/°C (typ.)
Span: ±0.0008%/°C of reading (typ.)
- 5) Non-linearity FV-D/FVWP-D : 0.03% of full scale
FW-D : 0.01% of full scale
- 6) Input Impedance 10MΩ
- 7) A/D Conversion Method Integration Type
- 8) A/D Conversion Rate Approx. 4times/second
- 9) Power Requirements DC9V ('C' size batteries X 6) or AC adaptor (OPTion)
AC100~120V type or AC200~240V type
50/60Hz
- 10) Operating Temperature -5°C~40°C



Calculating for Load Cell Compatibility

In order to be sure that a load cell will work with a given indicator, the formulas listed below should be worked using the specifications of the load cell in question.

- A = Load cell capacity
- B = Rated output of the load cell
- C = Max. capacity of the platform
- D = Minimum division
- E = Excitation voltage
- F = Dead load (Zero Offset)

| SIGNAL | FV-D/FVWP-D | FW-D |
|---------------------------|---------------|---------------|
| Zero Input Voltage \geq | 1mV | 0.5mV |
| Full Input Voltage \leq | 12.5mV | 12.5mV |
| Input Sensitivity \geq | 1.2 μ V/D | 0.4 μ V/D |

D = "Min.Division" or "scale interval"

FORMURAS

Zero Input Voltage: $B \times E \times (F/A)$

Full Input Voltage: $B \times E \times (C + F) / A$

Input Sensitivity: $B \times E \times 1000 \times (C/A) \times (D/C)$

EXAMPLES

A = 100Kg

B = 2mV/V

C = 60Kg

D = 0.02Kg

E = 5V

F = 20Kg

Solving for zero input voltage:

$$2(\text{mV/V}) \times 5 (\text{V}) \times \{ 20 (\text{Kg}) / 100 (\text{Kg}) \} = 2\text{mV}$$

As 2mV is greater than the 1mV specification given in the Input Signal Range table above, the zero input voltage is O.K.

Solving for full input voltage:

$$2(\text{mV/V}) \times 5 (\text{V}) \times \{ 60 (\text{Kg}) + 20 (\text{Kg}) \} / 100 (\text{Kg}) = 8\text{mV}$$

As 8mV is smaller than the 12.5mV specification given in the Input Signal Range table above, the full input voltage is O.K.

Solving for input sensitivity:

$$2 (\text{mV/V}) \times 5 (\text{V}) \times 1000 \times \{ 60(\text{Kg}) / 100 (\text{Kg}) \} \times \{ 0.02(\text{Kg}) / 60(\text{Kg}) \} = 1.2 \text{ [insert sign for micro] V}$$

As 2 μ V is larger than the 1.2 μ V given in the Input Signal table above, the input sensitivity is O.K.

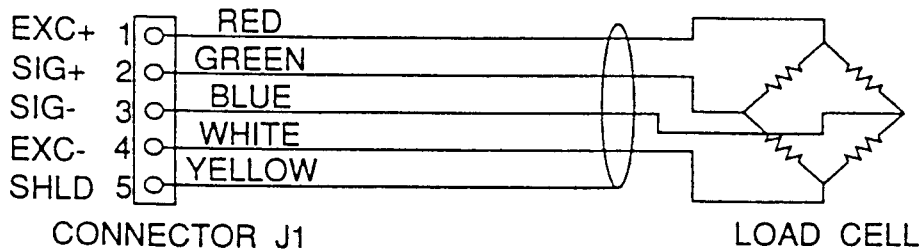


Load Cell Connection

- Use a four wire cable with shield as a load cell cable.
- The analog output from the load cell and RS-232C signals are sensitive to electrical noise. Do not place these cables together as it could result in cross-talk interference. Please also keep them away from AC power cables.



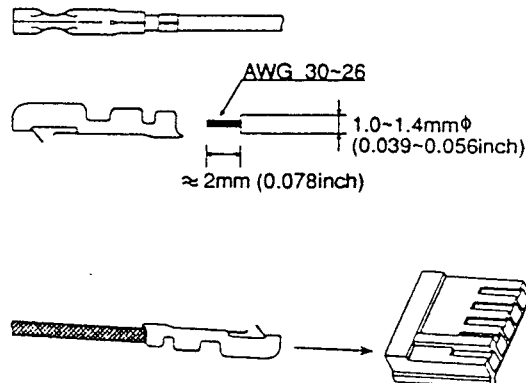
Load Cell Cable Connection



Load Cell Connections

| Pin No. | Signal | |
|---------|-----------------------------|--------|
| 1 | Positive Excitation Voltage | (EXC+) |
| 2 | Positive Signal Voltage | (SIG+) |
| 3 | Negative Signal Voltage | (SIG-) |
| 4 | Negative Excitation Voltage | (EXC-) |
| 5 | Shield | (SHLD) |

Attach pin contacts to each wire carefully, and insert the pin contacts to the receptacle housing. Please be sure to connect the correct signals.





Connecting the Load Cell Cable to the Display Pod

1

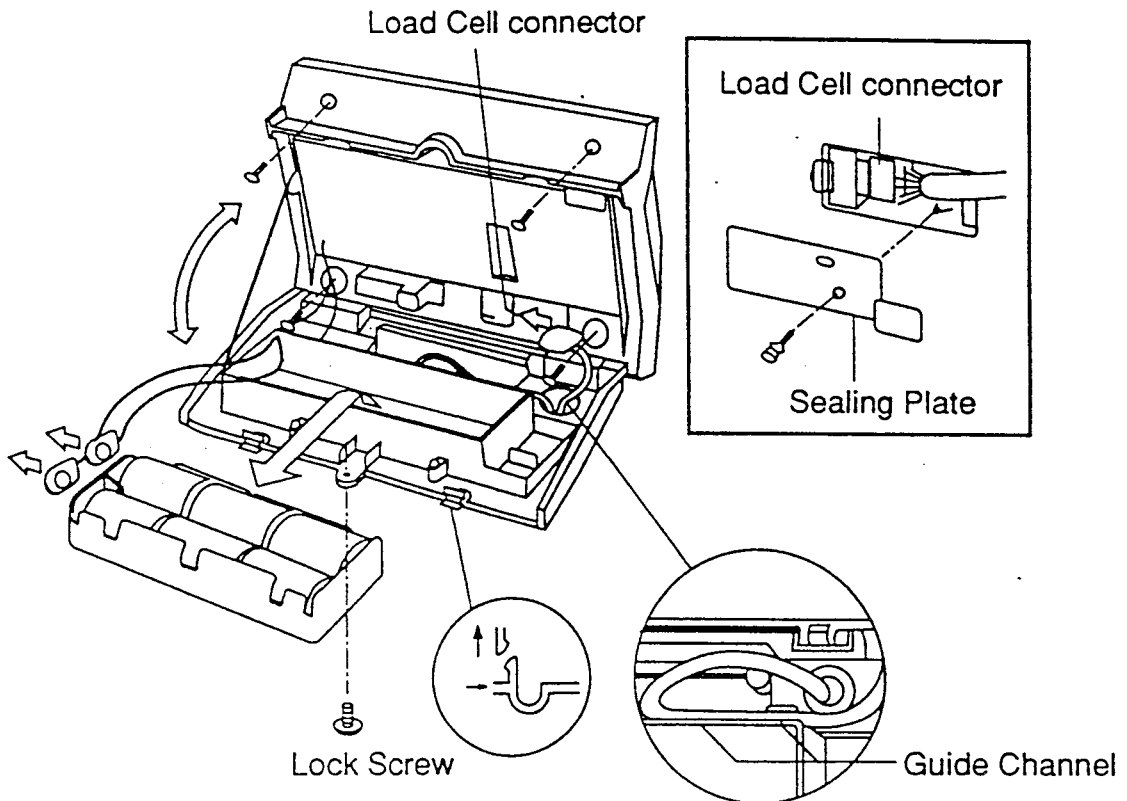
Remove the lock screw and open the Display Pod by pressing the two latch clips and lifting.

2

Thread the load cell cable through the rubber blanking plug or the bottom of the Display Pod, and lay the cable in its guide channel.

3

Connect the load cell cable to the connector of the Display Pod, and attach the sealing plate.



FV-D, FVWP-D, FW-D

Function Parameter
Settings



Function Parameter Settings

This section describes the selection of capacity and some functions. Be sure to set the capacity (F4) and the weight unit (F3) according to the specifications of the platform used. If necessary, set the other function parameters as well.



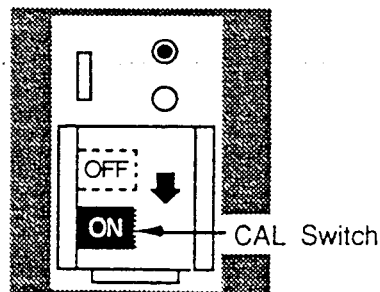
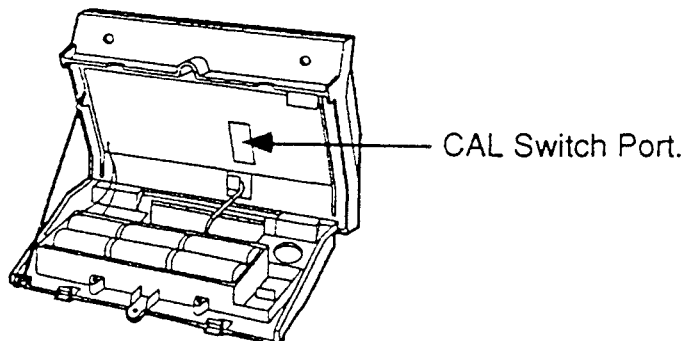
Function Parameter Settings Procedure

Note: The use of each key as you move through this procedure is listed below.

| | |
|--|---|
| | <ul style="list-style-type: none"> The ZERO key enters settings into memory. "F0", "F1", "F5" and "F6" are entered individually, "F2" - "F4" are entered together. At the end of the "F" cycle ("F6 x") it is used to enter, then move to "END", the completion of the cycle. |
| | <ul style="list-style-type: none"> Use the MODE or UNITS key to view settings, move through the settings, and escape a setting if you have made a mistake. You cannot enter settings with the MODE or UNITS key, it will only move you through the settings with no change. |
| | <ul style="list-style-type: none"> Once in the "F" group, use this key to move incrementally through the settings available in each group, ie: <p style="text-align: center;">F1 0 → F1 1 → F1 0</p> |

1

With the Scale OFF, remove the calibration plate - Slide CAL switch ON.



2



▶ Press and hold the **MODE** or **UNITS** and **ZERO** keys.

3



or UNITS

▶ While holding the **MODE** or **UNITS** and **ZERO** keys, press the **ON/OFF** keys.



○ "F0 1" or "F0 0" will be displayed.

4

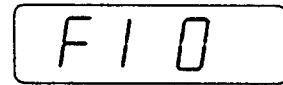


▶ Use the **HI/LO | S.SIZE** key to move among the settings, stopping at the setting desired.

5



▶ Press the **ZERO** key to enter the setting.



○ "F1 @" (@=0,1 or 2) will be displayed.

6

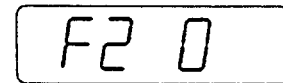


▶ Use the **HI/LO | S.SIZE** key to move among the settings, stopping at the setting desired.

7



▶ Press the **ZERO** key to enter the setting.



○ "F2 @" (@=0, 1 or 2) will be displayed.

8



▶ Use the **HI/LO | S.SIZE** key to move among the settings, stopping at the setting desired.

Note: "F2 @" through "F4 @" are entered in as a block, in other words you will need to make any change in "F2 @" through "F4 @" - and then when you press **ZERO** key, they will all be entered. If there is no change in a "F" group, then press **MODE** or **UNITS** key to move you without change.

9



- ▶ Press the **MODE** or **UNITS** key to move to F3.

F3 0

- "F3 @" (@=0,1,2,3 or 4) will be displayed.

10

or UNITS



- ▶ Use the **HI/LO | S.SIZE** key to move among the settings, stopping at the setting desired.

11



- ▶ Press the **MODE** or **UNITS** key to move to F4.

F4 0

- "F4 @" (@=0,1,2,3 etc.) will be displayed

12



- ▶ Use the **HI/LO | S.SIZE** key to move among the settings, stopping at the setting desired.

13



- ▶ Press the **ZERO** key to enter the settings (F2 thru F4).

F5 0

- "F5 @" (@=0,1 or 2 will be displayed.

NOTE: FV-D and FVWP-D will show "F6 @". Go to page 16.

14



- ▶ Use the **HI/LO | S.SIZE** key to move among the settings, stopping at the setting desired.

15



- ▶ Press the **ZERO** key to enter the setting.

F6 0

- "F6 @" (@=0, 1, 2 or 3) will be displayed.

16



- ▶ Use the **HI/LO | S.SIZE** key to move among the settings, stopping at the setting desired.

17



- ▶ Press the **ZERO** key to enter the setting.

End

- "END" will be displayed.

NOTE: You may also go back to the beginning of the cycle "F0 @" by pressing **MODE** or **UNITS** key, and not **ZERO** key.

18

Slide CAL switch OFF.

.....End of function parameter settings procedure.

Function Parameter Table

| | |
|-------------|--|
| F0 @ | Automatic power off function - this turns the main display OFF after three minutes. It only works if the display shows zero ("0.00kg" etc.). |
| F0 0 | Function disabled |
| F0 1 | Function enabled |

| | | |
|-------------|---|---|
| F1 @ | Counting / % / comparator function - enable / disable. ("% is for FW-D only.) | |
| SETTING | FV-D, FVWP-D | FW-D |
| F1 0 | Counting / comparator function enabled | Counting / % / comparator function enabled |
| F1 1 | counting function disabled | Counting / % / function disabled |
| F1 2 | Not available | Counting / % / comparator function disabled |

| | |
|-------------|---|
| F2 @ | Zero band - this function decides the zero band where the ZERO key can return the scale to the center of zero when the display shows a small deviation from zero. |
| F2 0 | Approx. 10% of maximum capacity |
| F2 1 | Approx. 5% of maximum capacity |
| F2 2 | Approx. 2% of maximum capacity |

| | | |
|-------------|---|-------------|
| F3 @ | F3 permits the display of "lb" and "oz.", and sets the TARE and ZERO conditions. | |
| SETTING | TARE & ZERO | WEIGHT UNIT |
| F3 0 | TARE does not work when zero is displayed. | kg |
| F3 1 | TARE does not work when zero is displayed. | lb, oz., kg |
| F3 2 | If the display is not at the center of zero, TARE will work - even the display shows zero. | kg |
| F3 3 | Same with F3=2 as for the TARE. After TARE, the ZERO and NET indicators will switch on simultaneously. While TARE is entered, ZERO does not work. | kg |
| F3 4 | TARE does not work when zero is displayed. While TARE is entered, ZERO does not work | kg |

NOTE: "oz." is for FV-D/FVWP-D only.

F3=0: Most countries, F3=1:USA, F3=2:New Zealand, F3=3:Australia

| | |
|-------------|---|
| F4 @ | F4 sets the maximum capacity and the minimum division of the scale. |
|-------------|---|

See "CAPACITY & MINIMUM DIVISION" (page 3).

| | | |
|-------------|----------|---|
| F5 | @ | F5 sets the communication mode of the optional RS-232C interface of the FW-D. FV-D and FVWP-D do not have these settings. |
| F5 0 | | STREAM mode |
| F5 1 | | COMMAND mode, terminator of the command is <CR>+<LF>. |
| F5 2 | | COMMAND mode, terminator of the command is <CR>. |

NOTE: FV-D and FVWP-D have the STREAM mode only. (see page41)

| | | | |
|-------------|----------|---|------------------------------------|
| F6 | @ | F6 sets the comparator mode enviroment. | |
| SETTING | | Comparator function is ON or OFF when scale is powered ON | Comparator Buzzer and Relay Output |
| F6 0 | | OFF | Always |
| F6 1 | | OFF | Prohibited Near Zero |
| F6 2 | | ON | Always |
| F6 3 | | ON | Prohibited Near Zero |

NOTE: Near Zero = -4 to +4 weight display divisions.

Calibration



Calibration

The FV/FVWP/FW-D indicators use a calibration system called "FDC™" for Full Digital Calibration. This means that zero point and maximum capacity points are entered digitally through the keyboard making the calibration method very easy to remember. The indicators can be calibrated using "lb" (pound avoirdupois) or "kg"(kilogram). Calibration weights at maximum capacity or at 2/3 of maximum capacity can be used. Maximum capacity calibration is preferred to reduce the risk of span errors at weights above 2/3 of the full scale point.



Calibration Mass Required

In the calibration procedure, you will select the calibration weight from "CAL 1", "CAL 2", "CAL 3" or "CAL 4".

① FV-D/FVWP-D

| FUNCTION PARAMETER F4= | CAPACITY kg/lb | CALIBRATION WEIGHT kg | | CALIBRATION WEIGHT lb | |
|------------------------------|-------------------|--------------------------|--------|--------------------------|--------|
| | | CAL 1 | CAL 2 | CAL 1 | CAL 2 |
| 0 | 31kg/60 lb | 30kg | 20kg | 60lb | 40lb |
| 1 | 60kg/120 lb | 60kg | 40kg | 120lb | 80lb |
| 2 | 150kg/300 lb | 150kg | 100kg | 300lb | 200lb |
| 3 | 70kg/120 lb | 60kg | 40kg | 120lb | 80lb |
| 4 | 310kg/600 lb | 300kg | 200kg | 600lb | 400lb |
| 5 | 600kg/1200 lb | 600kg | 400kg | 1200lb | 800lb |
| 6 | 1500kg/3000 lb | 1500kg | 1000kg | 3000lb | 2000lb |
| (Blank) | 700kg/1200 lb | 600kg | 400kg | 1200lb | 800lb |
| L | 3.1kg/6 lb | 3kg | 2kg | 6lb | 4lb |
| n | 6kg/12 lb | 6kg | 4kg | 12lb | 8lb |
| A | 15kg/30 lb | 15kg | 10kg | 30lb | 20lb |
| b | 7kg/12 lb | 6kg | 4kg | 12lb | 8lb |

② FW-D

| FUNCTION PARAMETER F4= | CAPACITY kg/lb | CALIBRATION WEIGHT kg | | CALIBRATION WEIGHT lb | |
|------------------------------|-------------------|--------------------------|-------|--------------------------|--------|
| | | CAL 1 | CAL 2 | CAL 1 | CAL 2 |
| 0 | 30kg/60 lb | 30kg | 20kg | 60lb | 40lb |
| 1 | 60kg/120 lb | 60kg | 40kg | 120lb | 80lb |
| 2 | 150kg/300 lb | 150kg | 100kg | 300lb | 200lb |
| 3 | 15kg/30 lb | 15kg | 10kg | 30lb | 20lb |
| 4 | 100kg/199.98 lb | 100kg | 60kg | 200lb | 150lb |
| 5 | 10kg/19.998 lb | 10kg | 6kg | 20lb | 15lb |
| 6 | 300kg/600 lb | 300kg | 200kg | 600lb | 400lb |
| 7 | 600kg/1200 lb | 600kg | 400kg | 1200lb | 800lb |
| 8 | 1200kg/3000 lb | 1200kg | 800kg | 3000lb | 2000lb |
| 9 | 31kg/60 lb | 30kg | 20kg | 60lb | 40lb |
| A | 60kg/120 lb | 60kg | 40kg | 120lb | 80lb |
| b | 150kg/300 lb | 150kg | 100kg | 300lb | 200lb |
| C | 31kg/60 lb | 30kg | 20kg | 60lb | 40lb |
| d | 300kg/600 lb | 300kg | 200kg | 600lb | 400lb |
| E | 600kg/1200 lb | 600kg | 400kg | 1200lb | 800lb |
| F | 1200kg/3000 lb | 1200kg | 800kg | 3000lb | 2000lb |



Zero and Span Calibration

1

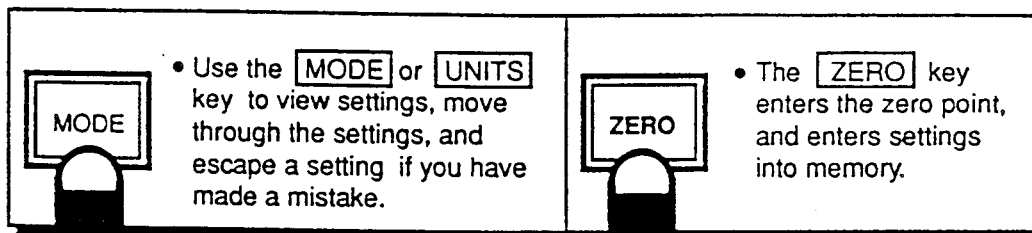
Warm up the scale for at least 10 minutes before making adjustments. You must be careful of the auto-off function, which turns off the display after 3 minutes. This can be avoided by:

- Placing an object on the weighing pan,
- Setting the Tare function so the display shows a negative number after the container weight is set and the container removed,
- Disable the auto-off function.

2

With the display ON, remove the calibration plate - Slide **CAL** switch ON ↓.

DISPLAY: You will now see a display of "9.798" or "9.XXX" (X denoting any other three numbers already set into memory). This is the value of "g", or gravity.



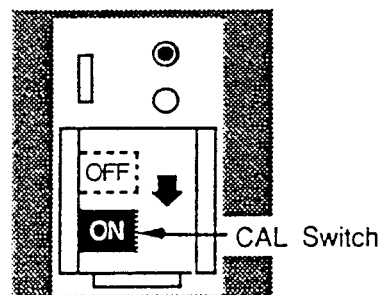
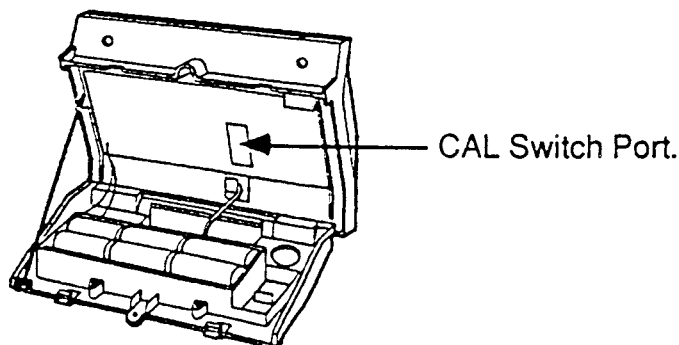
1

Press the **MODE** or **UNITS** key.

DISPLAY: You should now see a display of "CAL 0", with the circular "O" stability indicator on, if not, please turn off the scale and restart at the beginning of this section.

2

Press the **ZERO** key to enter the zero point.



DISPLAY: You will now see a display of "CAL 1".

3

Select the desired "CAL 1" , "CAL 2", "CAL 3" or "CAL 4" by pressing the **MODE** or **UNITS** key to move the display.

Table B. Calibration Capacity Settings

| | |
|--------------|--|
| CAL 1 | Means span calibration at maximum capacity in kilograms |
| CAL 2 | Means span calibration at 2/3 of maximum capacity in kilograms |
| CAL 3 | Means span calibration at maximum capacity in pounds |
| CAL 4 | Means span calibration at 2/3 of maximum capacity in pounds |

4

Place the correct calibration weight on the weighing pan.

5

After the circular stability indicator comes on, press the **IZEROI** key to enter the setting.

NOTE: If "-CAL E" is displayed when you press the **IZEROI** key, the scale cannot enter the maximum capacity (or 2/3) value because the calibration mass is under-weight (minus Calibration Error). Check everything is correctly set.

DISPLAY: "End" will be displayed.

⚠ If you are going to set the value of gravity ("g") for a customer at a different geographical location (see the GRAVITY COMPENSATION FUNCTION section), please go to Step 2., SETTING THE VALUE OF "g" section.

6

Slide the calibration switch OFF while "END" is displayed, and turn off the scale **IV**

Attention *Before customer delivery:*



In areas where the scale is registered for commercial use, the calibration port cover and the load cell connector cover must be sealed (which extends to deny access to one of the screws which holds the top of the display pod on). Also, the end-user will not be permitted to remove the top of the display pod as he could thereby switch on the calibration switch. Thus, the comparator buzzer dip-switch settings on the optional RS-232C output board must also be set by the dealer/authorities. The scale must be shipped to the end-user fully assembled for commercial use.