RAVEN

PRECISION Solutions

FLOWMAX 220 QUICK START GUIDE

OPERATION

Turn on FLOWMAX 220 by pressing [①] key.

> **NOTE:** Without activity, FLOWMAX 220 will shut off automatically after 90 seconds. After power down
>
> depress [①] key to re-start FLOWMAX 220. (Flow pulse will not re-start the display).

METER CAL has been entered at the factory. Changing of the CAL number is required only after field replacement of display assembly and/or flowmeter.

DISPLAY TITLES

Flow -- Flow Rate will flash (vol/min)
US -- Volume in gallons
SI -- Volume in liters
"690" -- Adjustable Meter Calibration #
      (preset at factory)
VOL 1 -- Total Volume #1 gallons [liters]
VOL 2 -- Total Volume #2 gallons [liters]
VOL 3 -- Total Volume #3 gallons [liters]

CLR V1 -- Clear Volume 1
CLR V2 -- Clear Volume 2
CLR V3 -- Clear Volume 3
Lo BAT -- Limited battery life remaining

Depress [①] key to initiate the display. Depress the [▲ TOTAL] key to toggle through VOL1, VOL2, & VOL3.

Depress [▼ RATE] key to display Flow Rate in gallons/min [liters/min].

ENTERING DATA
To Clear Volume Totals:

1. Depress [▲ TOTAL] key until "VOL1" is displayed.

2. Depress [①] key.

3. Display will flash "CLR V1" (depress [▲ TOTAL] key to toggle between CLR V1, CLR V2, or CLR V3).

4. Depress [①] key (VOL1 will re-set to zero).

To Enter Meter Cal:

1. Depress [▼ RATE] key.

2. Depress [①] key.

3. Depress [▼ RATE] key until the METER CAL # is displayed.

4. Depress [①] key ("C" will appear on the right side of the display).

5. Depress [▼ RATE] key to decrease Meter Cal # or depress [▲ TOTAL] key to increase Meter Cal #.

6. Depress [①] key to program adjusted Meter Cal #.

TO CHANGE FROM "US" TO "SI"

1. Depress $\boxed{\blacktriangledown_{\text{RATE}}}$ key.

2. Depress $\boxed{\text{\textcircled{1}}}$ key.

3. Depress $\boxed{\blacktriangledown_{\text{RATE}}}$ key until "US" is displayed.

4. Depress $\boxed{\text{\textcircled{1}}}$ key ("C" will appear on the right side of the display).

5. Depress $\boxed{\blacktriangle_{\text{TOTAL}}}$ key to toggle from "US" to "SI".

6. Depress $\boxed{\text{\textcircled{1}}}$ key to program either "US" or "SI" setting.

CALCULATING "METER CAL"

The Flow Meter calibration number is stamped on the tag attached to each FLOWMAX 220. Write down this number for future reference when programming the FLOWMAX 220.

To convert original METER CAL from gallons to desired units of measure (oz, lbs, or liters), see METER CAL CONVERSIONS. Write down this calibration number for future reference when programming the FLOWMAX 220.

METER CAL CONVERSIONS

To convert the METER CAL number simply divide the original number (number printed on FLOWMAX 220 label) by the desired conversion factor.

FOR EXAMPLE:

$$\frac{\text{Original METER CAL No.}}{128} = \text{METER CAL No. for displays in Fluid Ounces}$$

$$\frac{\text{Original METER CAL No.}}{3.785} = \text{METER CAL No. for displays in Liters}$$

$$\frac{\text{Original METER CAL No.}}{\text{Weight of one gallon}} = \text{METER CAL No. for displays in Pounds}$$

LIQUID CONVERSIONS
U.S. Gallons x 128 = Fluid Ounces
U.S. Gallons x 3.785 = Liters
U.S. Gallons x 0.83267 = Imperial Gallons
U.S. Gallons x 8.34 = Pounds (Water)

BATTERY REPLACEMENT
FLOWMAX 220 is operated with a 3.6 volt lithium AA battery. The battery does not need to be within normal voltage specifications or installed to retain current totals. "Lo BAT" will flash on the display indicating limited remaining battery life.

BATTERY INSTALLATION
1) Remove 4 screws from display screen.
2) Remove battery from back of display screen.
3) Insert new battery in back of display screen (observe polarity).
4) Replace display screen on to FLOWMAX 220 (check o-ring alignment).
5) Re-install the 4 screws.

NOTE:	Battery must be 3.6V, 1.5V batteries will not power the display.

INSTALLATION
Install FLOWMAX 220 in flow line with proper flow direction verified.