

## The Redball® Spray Monitor

The Redball® Spray Monitor is an effective flow indicator for an operator applying liquid chemicals and fertilizer. Once the monitor is set up, the operator observes the location of the balls. If there is no change in the ball location, then the flow rate has not changed. The amount of change needed for a ball to change can be found in the flow chart (Figure #2).

## Installation Instructions

**Mounting:** Assemble and mount the monitor on your equipment in a position easily visible to the operator.

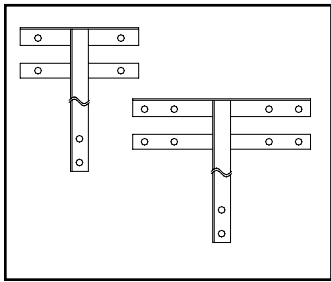


FIGURE #1

1. Fabricate a mounting bracket similar to the one in Figure #1. An example of typical material would be 3/4" x 1/8" steel strips and a 1" x 1" angle iron. Drill holes as shown and as needed to mount the bracket to the implement. Monitors should be connected in with center feed or multiple lines. Do not connect the monitors in series.
2. Check the flow tables (Figure #2) to see which balls are required for your desired rate of flow. For best results, pick out balls to be used so that they will operate at Level C or D of the Monitor.

FLOW TABLE FOR WATER				FLOW TABLE FOR LIQUID FERTILIZER				
	Green Plastic Balls	Red Plastic Balls	Red Glass Balls	Steel Balls	Black Plastic Balls	Red Plastic Balls	Red Glass Balls	Steel Balls
	GPM	GPM	GPM	GPM	GPM	GPM	GPM	GPM
Level A	0-.03	0-.07	0-.13	0-.35	Level A	0-.02	0-.03	0-.09
Level B	.03-.07	.07-.13	.13-.22	.35-.59	Level B	.02-.04	.03-.05	.09-.18
Level C	.07-.13	.13-.21	.22-.32	.59-.78	Level C	.04-.08	.05-.12	.18-.34
Level D	.13-.16	.21-.29	.32-.43	.78-1.09	Level D	.08-.11	.12-.20	.34-.48
Level E	.16-.23	.29-.38	.43-.61	1.09-1.67	Level E	.11-.15	.20-.30	.48-.66
Level F	.23-UP	.38-UP	.61-UP	1.67-UP	Level F	.15-UP	.30-UP	.66-UP

FIGURE #2

### ASSEMBLY INSTRUCTIONS

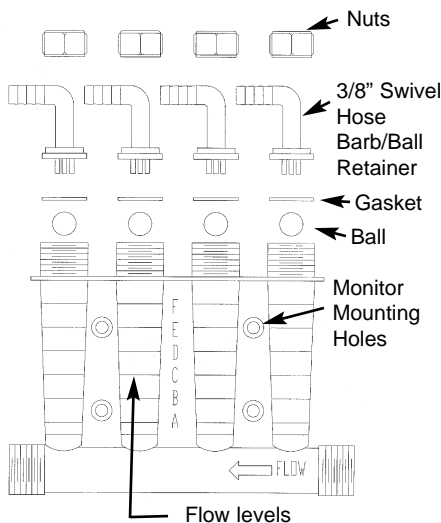


FIGURE #3

3. To change to a different set of balls, remove the nuts, the swivel hose barb/ball retainers, gaskets and balls and install the proper balls. See Figure #3.
4. Bolt the monitor to the bracket with 1/4" diameter bolts.
5. If one of the columns is not used, remove the hose barb and insert one of the discs.

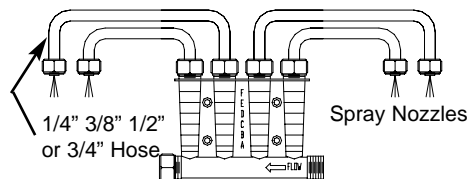


FIGURE #4

6. Insert the other disc in the cleaning nut.
7. Connect the hoses as shown in Figure #4. Tighten all nuts and hose connections.

## Operating Instructions

1. Turn on liquid to the desired pressure, all the balls should be at the same level. If so, proceed to step #5.
2. If all the balls are not at equal levels, check for leaks and obstructions in the lines.
3. If one of the balls remains at a different level, clean the nozzle and screen on the line that has the improper output.
4. If all of the balls cannot be made to come up to the same level, check the flow in the lines to see if the flow is equal in all lines. The Redball® Spray Tip Tester may be purchased separately to evaluate this problem. This spray tip tester will also indicate if the tips are operating correctly.
5. When the balls are at the same level, then all the lines are putting out approximately equal amounts of liquid.
6. To calibrate your sprayer, first check the nozzle on the sprayer and the nozzle manufacturer's information sheet. Establish the correct pressure, flow, and speed to make sure that the desired gallons per acre will be applied.

## Cleaning

It is important that spraying equipment is cleaned and flushed before discontinuing use for an extended period of time. To facilitate cleaning, remove the cleaning nut and allow the liquid to drain out. To flush, attach a hose directly to the hose barb. Flush with clean water.

## Please Read

- **IMPORTANT:** When using different balls in fertilizer and water, it is important to use the correct ball, so as not to let it rotate at the very top of the monitor. The ball could restrict flow in that position.
- **IMPORTANT:** Use red glass or stainless steel balls with acid fertilizer.
- Conversion of the US gallons per minute to liters per minute is  $G.P.M. \times 3.75 = L.P.M.$
- Each fluid used will vary in flow rate due to the different density and viscosity of each chemical and fertilizer used. This necessitates that the user checks for an accurate flow rate.
- The system should operate at a minimum of 10 PSI for equal distribution.
- Redball® Monitors are flow indicators, not flow regulators.

### INCLUDED IN THIS PACKAGE:

1 Redball® Monitor	4 Black Plastic Balls
4 Red Glass Balls	2 Blank Discs
4 Red Plastic Balls	4 90° 3/8" Hose Barbs
4 Green Plastic Balls	5 Nuts
4 Steel Balls	6 Gaskets

*\* Different colored balls are used for different flow rates.*

For more information about the



call your Redball® Representative at  
toll free 1-877-332-2551.