



# BROADCAST SPRAY-HOOD™



Assembly and Operation  
Instructions



# BROADCAST SPRAY-HOOD™

## TO THE OWNER

Congratulations on your selection of a Redball® BROADCAST SPRAY-HOOD™. Redball® products have earned a reputation of providing a durable spray-hood throughout the U.S. and Canada.

Redball® BROADCAST SPRAY-HOODS™ have been designed to provide many years of profitable and dependable service. To assure maximum performance of your spray-hood, it is mandatory that you thoroughly study the operator's manual and follow its recommendations. Proper operation and maintenance are essential for safety, to maintain performance, and to maximize the life of the spray-hood.

### **It is the owner's responsibility to :**

- Operate and maintain this spray-hood in a safe manner and in accordance with all applicable local, state, and federal codes and/or laws; and in compliance with labeling instructions furnished by the supplier of the chemical being used.
- Make sure each and every operator has read the operator's manual and thoroughly understands safe and correct operating procedures.
- Make sure unauthorized people do not operate and are not in the vicinity of the spray-hood while it is in operation.
- Maintain the spray-hood in accordance with the maintenance recommendations in this manual. Furthermore, as additional technology becomes available, the owner is responsible for improving the safety, and reliability of the system.
- Fulfill all warranty obligations so as not to void the warranties. The warranty section at the back of this manual outlines the warranty policy of Redball, LLC.
- Abuse or modifications to the spray-hood that change the performance other than original factory specifications void the warranty.

Redball, LLC reserves the right to make product improvements to the equipment at any time. It shall not be obligated to make such changes to machines already in service.

*\* The owner, manager and/or operator is responsible for safe, accurate operation and maintenance of the Redball® BROADCAST SPRAY-HOOD™.*

# BROADCAST SPRAY-HOOD™

## General Operating Guidelines



### **IMPORTANT**

Always follow chemical company's recommended application procedures and rates.



### **NOTE**

For best results, adhere to calibrated spraying pressure, travel speeds and nozzle placement.

### **Redball® BROADCAST SPRAY-HOOD™ Kits**

As with all equipment, it is important that proper assembly has been done as per the instructions supplied. Failure to do so will result in unsatisfactory operation of this equipment. The spray hoods are provided with nozzle mounting parts. Spray tips are available from your Redball® Dealer.

### **Hood Height**

The "Broadcast" hoods are not designed to run on the ground. Adjust the height of the hood to the correct height of the nozzle above the target (crop or ground) according to the spray nozzle manufacturer's specifications.

It is important the spray-hood operates level from front to rear so the nozzle applies uniformly.

### **Field Speed Recommendations**

It is recommended the speed of operation be maintained at 6 MPH or less.

### **Redball® Spray Monitors**

**For the best performance of your Redball® BROADCAST SPRAY-HOOD™ and Redball® Hooded Sprayer Systems, Redball® strongly suggests the use of Redball® Spray Monitors.** The Redball® Spray Monitor will visually show if one of the tips on the hood begins to plug up allowing you to verify your application rate. Be sure to follow the instructions when assembling the monitors and choosing the proper balls for use in the monitor columns in relation to the gallons per minute which is flowing through the columns in the monitor. If in question, check the flow rate. Please observe the operating instructions enclosed with the Redball® Spray Monitor.



### **NOTE**

The Redball® Spray Monitor is a flow indicator; it is not a flow regulator.

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## Spray-Hood Calibration

The instructions for the calibration of the spray hood offers you the required information to perform this task. For proper application it is important that you do this to assure that the correct output volume comes from the spray nozzles.



### **IMPORTANT**

Always read and follow label directions provided with chemicals being used.



### **IMPORTANT**

In all cases, the operator must verify the spray pattern covers the desired area and applies at the desired rate.

GPA = \_\_\_\_\_

MPH = \_\_\_\_\_

W = \_\_\_\_\_

GPM = \_\_\_\_\_  
Per Nozzle

## **Calibration Instructions**

1. Refer to Chemical Label or Information and Record:
  - Nozzle Recommendations
  - GPA (Gallons Per Acre of Carrier and Chemical)
2. Select and Measure Ground Speed:  
Drive machine a measured distance (not less than 300 feet) from start to finish at planned operating speed, recording travel time in seconds. In field conditions, perform this 3 times with spray tank 50% full.  
$$\text{MPH (Miles Per Hour)} = \frac{\text{Distance in Feet} \times 60}{\text{Time in Seconds} \times 88}$$
3. **Determine the Effective Sprayed Width (W):**  
Broadcast Spraying:  $W = \text{Nozzle Spacing in Inches}$
4. **Determine Flow Rate:**  
 $\text{GPM (Gallons Per Minute) Per Nozzle}$   
$$\text{(Per Nozzle) GPM} = \frac{\text{GPA} \times \text{MPH} \times \text{W}}{5,940}$$
5. **Selecting Nozzles:**  
For consistent spray application, use the same nozzle configuration throughout the machine. Refer to spray manufacturer's catalog for nozzle type and size:
  - Suitable for applications
  - That will provide desired flow (GPM) at a recommended pressure.Redball® recommends a 110° flat fan nozzle style.
6. **Verify Spray Output:**  
With sprayer operating at the desired pressure, collect flow from a nozzle, checking actual to expected output (GPM). Two or more nozzles should be verified. If necessary, adjust pressure used to achieve optimum output. When checking used nozzles, replace if two or more exceed the desired flow rate by 10% or more.

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## 7. Set Up Spray Bar:

Obtain correct nozzle height. (See nozzle or chemical manufacturer's specifications.) Adjust height of toolbar so nozzle is at the correct height above the target (crop or ground).

## 8. Determine Amount of Chemical to Add to Tank:



### **IMPORTANT**

The required rate of chemical application comes from the chemical label or a chemical company representative. Always read and follow the label directions.

$$\text{Gallons (chemical)} = \frac{\text{Tank Capacity in Gallons} \times \text{Recommended Chemical Rate oz/acre}}{\text{GPA} \times 128}$$

Gallons = \_\_\_\_\_  
of Chemical

## 9. Determine Number of Acres Possible to Treat Per Tank:

$$\text{Broadcast Acres} = \frac{\text{Tank Capacity}}{\text{GPA}}$$

Acres = \_\_\_\_\_  
Possible to Treat



### **NOTE**

Pressure adjustment will affect droplet sizes, impacting drift and coverage. When changing speeds, pressures, configuration, nozzles or formulations, recalibrate the system.



### **NOTE**

Redball, LLC does not claim any responsibility of application rates, type of spray tips used or any equipment that can cause crop injury, ineffectiveness of chemical or any other unintended damages because of weather conditions or application which are all beyond the control of Redball, LLC or the seller. All such risks shall be assumed by the buyer.

## Useful Formulas

$$\text{GPM (Per Nozzle)} = \frac{\text{GPA} \times \text{MPH} \times \text{W}}{5,940}$$

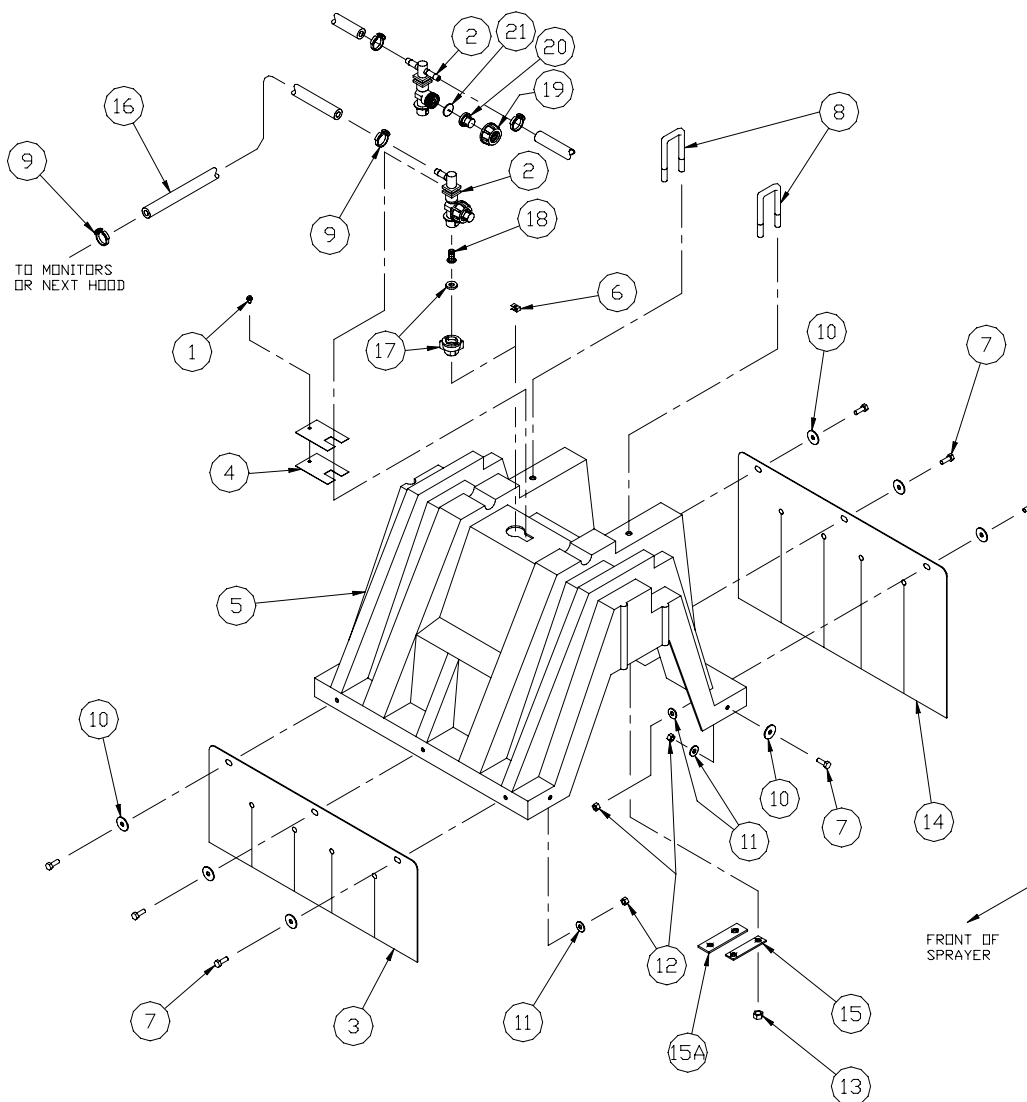
$$\text{GPA} = \frac{5,940 \times \text{GPM (Per Nozzle)}}{\text{MPH} \times \text{W}}$$

- GPM** = Gallons Per Minute  
**GPA** = Gallons Per Acre  
**MPH** = Miler Per Hour  
**W** = Nozzle Spacing (in Inches) for Broadcast Spraying

# BROADCAST SPRAY-HOOD™

## Description: BROADCAST SPRAY-HOOD™ and Plumbing Hood Assembly Instructions

Place the hoods on a level surface. Install the nozzle bodies into the hoods (item 2). Redball® suggests plumbing no more than three nozzle bodies/hoods together to connect to one Redball® Spray Monitor. If you do not do this, plumb the same number of nozzles together to get the most accurate reading on all the spray monitors. Use the elbows and street tees nozzle bodies supplied to provide for this plumbing later. Secure the nozzle body to the hood with the nozzle lock and self tapping screw (items 1 and 4). Install the spray nozzle and screen into the nozzle body with the cap and gasket (items 17 and 18). Attach the front and rear curtains (items 3 and 14) with the mounting hardware provided (items 7, 10, 11 and 12). Use a fender washer (item 10) between the bolt head and curtain. Attach the hood assembly to your toolbar with the u-bolts and plate and hardware provided (items 8, 13 and 15). The heavier u-bolt backing plate (item 15a) is used on the outer 3 hoods on each end of toolbar with the slot assembled towards the rear of unit. Each hood attaches to the hood next to it with two bolts on each side of the hood, front and back (item 7), except for the left and right end hoods which only attach on the opposite side of the closed side of the hood. If possible, attach the hoods together for the purpose of preventing a possible gap where spray could escape the hood. Do not attach hoods together at a fold or breakaway hinge point.



# BROADCAST SPRAY-HOOD™

## Description: BROADCAST SPRAY-HOOD™ and Plumbing

| Item# | Part #         | Description                         | Quantity |
|-------|----------------|-------------------------------------|----------|
| 1     | 1008KV         | #10 x 1/2" Self Tap Screw           | 1        |
| 2     | 413211         | Ell; 3/8 Diaphragm Hose Shank       | 1        |
|       | 413221         | Tee; 3/8 Diaphragm Hose Shank       |          |
| 3     | 9000-0016      | ATV Broadcast 20" Bars Curtain      | 1        |
| 4     | 002989         | Lock, Hood Nozzle (Stainless)       | 2        |
| 5     | 9000-3R-BC *   | Hood; Broadcast 20" Redball         | 1        |
|       | 9000-3R-BCRC * | Hood; B/C 20" Right Closed          |          |
|       | 9000-3R-BCLC * | Hood; B/C 20" Left Closed           |          |
| 6     | 9030-0041      | Tinneman Clip (All Hoods)           | 1        |
| 7     | BH-025-075-2   | Bolt; 1/4" x 3/4" Hex. Gr. 2        | 8        |
| 8     | BU031-200-275  | U-Bolt; 5/16" x 2" x 2 3/4" Sq. Gr. | 2        |
|       | BU031-300-400  | U-Bolt; 5/16 x 3" x 4" Sq. Gr. 2    |          |
| 9     | F              | Speedy Clamp (Fits 3/8" Hose)       | 2        |
| 10    | FE-025         | Fender Washer; 1/4"                 | 6        |
| 11    | FW-025         | Flatwasher; 1/4"                    | 10       |
| 12    | LN-025-NI      | Locknut; 1/4" Nylon Insert          | 8        |
| 13    | LN-031-NI      | Locknut; 5/16" Nylon Insert         | 4        |
| 14    | 001486         | 12" Broadcast Curtain               | 1        |
| 15    | 9400-0052      | Plate; U-Bolt Plate, #14            | 2        |
| 15a   | 007683         | Plate; U-Bolt 1/8" (See Note)       |          |
| 16    | 000612         | 3/8" 150# EPDM, L85 Hose            |          |
| 17    | 402900-1       | Cap & Gasket; QT, Black             | 1        |
| 18    | 8079-PP-50     | Strainer; S Tip, 50 Mesh, SS, PP    | 1        |
| 19    | 200030         | Nut                                 | 1        |
| 20    | 005860.130     | Check; Red                          | 1        |
| 21    | 005860.036     | Diaphragm, EPDM                     | 1        |

Notes: \* - Specify color for hood (item 5)

2. - 110° flat fan spray tip recommended suggested tip - XR11002VS

3. - The heavier u-bolt backing plate (item 15a) is used on the outer 3 hoods on each end of toolbar with the slot assembled towards the rear of unit.

# BROADCAST SPRAY-HOOD™

## **Application Guideline Summary**

- Redball® Spray Monitor functions as flow indicator only, not as flow regulator.
- Be sure that the front and rear wear wind curtain is in place and in good condition.
- Adjust the hood to desired height for optimum chemical coverage.
- Always read and follow chemical company's recommended application procedures and rates.
- Application speed not to exceed 6 MPH.
- Application speed should fit ground conditions and tip size calibration speed.

**Here are some helpful hints to follow to achieve top performance with your Redball® Hooded Sprayer and Spray-Hoods.**

- Redball® Spray Monitors are recommended for use with the spray-hoods. It is important that they be used to detect plugged spray tips.
- When equipment is not in use, cover the monitors with a dark plastic or other sun protective material if equipment is not stored inside. This will help prevent the poly body of the monitor from premature darkening.



### **IMPORTANT**

Always calibrate your sprayer to determine for certain that the sprayer is giving the proper volume from the spray nozzles. Please follow the calibration instructions provided in this booklet.

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- The maximum suggested field operating speed for the hooded sprayer is 6 MPH. Maintaining speeds at 6 MPH or lower than this limits the potential of drift and the possibility of getting onto the plant row with the equipment.
- Be sure that the toolbar is operated in a level position front to rear. This will ensure that the spray hoods run level for proper application.
- Always operate the hoods with front and rear wind curtains in place. Replace them as wear or damage occurs.
- On wing model hooded sprayers, fold down the wings when the bar is stored or parked. This will limit premature twist and stress on the swing arms, hoods, and mounting channels.
- Always read and follow label directions provided with chemicals being used.



## **NOTE**

Redball, LLC does not claim any responsibility of application rates, type of spray tips used or any equipment that can cause crop injury, ineffectiveness of chemical or any other unintended damages because of weather conditions or application which are all beyond the control of Redball, LLC or the seller. All such risks shall be assumed by the buyer.

# BROADCAST SPRAY-HOOD™

## NOTES:

# BROADCAST SPRAY-HOOD™

## NEW PRODUCT WARRANTY

Redball, LLC warrants each new Redball® product to be free under normal use and service from defects in workmanship and materials for a period of one (1) year from the date of first use. This warranty shall be fulfilled by the repairing or replacing free of charge any part that shows evidence of defect or improper workmanship, provided the part is returned to Redball, LLC within thirty (30) days of the date that such defect or improper workmanship is discovered, or should have been discovered. Parts shall be returned through the selling representative and transportation charges must be prepaid by the buyer. No other express warranty is given and no confirmation, by words or action, shall constitute a warranty.

Redball, LLC limits its warranty to only those products manufactured by Redball, LLC and does not warrant any part or component not manufactured by Redball, LLC, such parts or components are subject to their manufacturer's warranties, if any. This warranty shall not apply to parts which are subjected to accident, alteration, or negligent repair or use.

Redball, LLC will not be responsible for repairs or replacements which are necessitated, in whole or part, by the use of parts not manufactured by or obtainable from Redball, LLC.

Customer acknowledges that he is not relying on Redball, LLC's skill or judgment to select or furnish goods for any particular purpose and that there are no warranties which are not contained in this agreement.

In no event shall Redball, LLC, contract or warranty liability exceed the purchase price of the product.

REDBALL, LLC SHALL NOT BE LIABLE FOR DAMAGES, INCLUDING SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING FROM OR IN CONNECTION WITH THE PERFORMANCE OF THE EQUIPMENT OR ITS USE BY CUSTOMER, AND REDBALL, LLC SHALL NOT BE LIABLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING FROM OR IN CONNECTION WITH REDBALL, LLC'S FAILURE TO PERFORM ITS OBLIGATIONS HEREUNDER. REDBALL, LLC'S ENTIRE LIABILITY AND THE CUSTOMER'S EXCLUSIVE REMEDY SHALL BE REPAIR OR REPLACEMENT OF PARTS COVERED UNDER THIS WARRANTY. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED.



would like to thank you for purchasing this Redball®  
BROADCAST SPRAY-HOOD™. We are proud of our quality  
and believe this product will exceed your expectations!

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