**HELPFUL HINTS: READ THE DIRECTIONS BEFORE ASSEMBLY**

- If your spreader does not spread evenly, be sure the FRONT on the gear box points to the front of the spreader. The impeller must turn clockwise. Reversing the gearbox will cause the impeller to turn counter clockwise. Clean the impeller plate after each use. Fertilizer stuck on the impeller blades will cause uneven spreading.
- Your spreader is designed to be pushed at three miles per hour, which is a brisk walking speed. Slower or faster speeds will change the spread patterns. Wet fertilizer will also change the spread pattern and flow rate. Clean and dry your spreader thoroughly after each use. Coat all metal surfaces (inside & outside of chassis) with light oil or silicon spray to help prevent corrosion. Wash between the shut off plate and bottom of the hopper. **Do not use powdered materials.**
- Gears are permanently lubricated at the factory. Do not open the gearbox or dirt may enter.

**IF YOUR SPREADER COMES SEMI ASSEMBLED, SKIP TO STEP #7**

**ROCK SALT and POWDERED MATERIALS** should not be used in this spreader as it will damage gearbox and can void warranty. Use only granular materials.

1. Remove and identify all loose parts from carton.

2. Position hopper on side. Install frame using (4) 1/4-20 x 1-1/2” Pan Head Phillips bolts and (4) 1/4-20 nylon insert locknuts. First put bolts through holes in frame then through holes in bottom of hopper. Secure with locknuts. **TIGHTEN THESE LOCKNUTS NOW - DO NOT TIGHTEN WITH POWER TOOLS.** **TIP:** coat stainless steel bolts with wax or grease before tightening to prevent them from seizing.
3. Install impeller onto pinion shaft. Insert 1/8" x 1¼" cotter pin through impeller then through pinion shaft. Use hole closest to the gear box. Spread cotter pin to prevent from falling out.

Next insert Cross Brace thru the Gearbox Brace as shown above. Finish by sliding the Axle into the Gearbox as shown above. **NOTE: Ensure that the Axle is exactly as shown above.**

4. Install gear box by inserting the pinion shaft into hole in center of hoppers bottom. The word “FRONT” on the gearbox must point to **Front** of the hopper. Follow label instructions on hopper.

5. Install axle bearings to both lower handles. **NOTE: Notch on bearings and lower handles. Bearings must go through flat side of lower handle.**

6. A - Install lower handles onto axle to both sides as shown. Insert 2¼” bolt through second hole in lower handle and through first hole in frame install locknut. **DO NOT TIGHTEN.**

B - Now insert 1½” bolt through first hole in lower handle. Then through frame brace. **NOTE: Numbers on frame brace must be facing toward gear box as shown. Next into threaded connector in cross brace. DO NOT TIGHTEN.**

C - Next insert 1½” bolt through other end of frame brace and through second hole in frame install locknut.

**NOW GO BACK AND TIGHTEN ALL NUTS AND BOLTS STARTING WITH FIRST STEP. DO NOT OVER TIGHTEN.**
7. Slide axle bushing over axle and into axle bearing to both sides as shown.

8. Install drive wheel onto the axle and align with the cotter pin hole nearest to lower handles as shown. Insert 2” cotter pin through wheel and through axle. Bend with pliers to prevent pin from falling out.

9. Install coast wheel onto the axle fully, then using outside cotter pin hole, insert 1” cotter pin through axle *not thru the wheel*. Bend with pliers to prevent pin from falling out.

**TURN SPREADER UPRIGHT ON TO WHEELS.**

10. **NOTE:** BEFORE INSTALLING GAUGE AND UPPER HANDLES TO HANDLE SHAFT, UPPER HANDLES FEATURE THREE POSITIONS FOR OPERATOR’S COMFORT. Select one of the three positions for comfortable use. If operator chooses middle or upper positions, use handle spacer in hole nearest to handle grips as shown to the right. Insert 2” bolt through upper handle, then through handle spacer through other upper handle and secure with locknut.

**DO NOT TIGHTEN LOCKNUT YET. TIGHTEN THIS NUT LAST.**

Now slide the upper handle assembly over the handle shaft *(on the end with the bolt holes closer to the end)*. Install gauge & lever using (2) 2” bolts. Be sure gauge is on left hand side. Tighten locknuts to gauge first. **TIGHTEN ALL HARDWARE NOW.**

11. Insert pivot rod into shut-off plate as shown. Turn to lock in place.

12. Insert other end of pivot rod into pivot and bracket assembly as shown. Turn to lock in place.
13. Install handle shaft to lower handles and pivot & bracket assembly as shown. Using 1/4-20 x 2” bolts and locknuts. **TIGHTEN BOLTS AND NUTS NOW.**

14. Install (1) 1/4-20 Hex nut (not a locknut) on to control rod as shown.

15. Install flattened end of control rod in to lever on gauge as shown. Turn to lock in place. Next push lever forward to setting “0”. Align control rod with hole in pivot bracket, pull lever backward to insert control rod through hole in pivot bracket. Now install 1/4-20 Hex nut on to control rod.

16. Pull lever back to setting “30” as shown. Next push pivot & bracket forward so that the shut off plate in the hopper is in the full open position. **REMEMBER SETTING “30” ON THE FLOW CONTROL LEVER MUST PLACE THE SHUT-OFF PLATE IN THE FULL OPEN POSITION TO BE PROPERLY CALIBRATED.** Now tighten the nuts against the pivot bracket to prevent change in calibration.

17. Tension on the flow control lever may be adjusted by tightening or loosening the tension nut as shown.

18. Insert agitator to pinion shaft on inside of hopper. **Note:** the position of flat side of the agitator. This pin should be installed as shown.

19. Install debris screen into hopper, then insert 1/4-20 x 1” Stainless Steel Hex Bolt thru the hole in the side wall of the hopper. Secure with Stainless Steel lock nut - **TIGHTEN WITH HAND TOOLS ONLY**
The settings furnished on the Rate Setting Matrix are intended as a guide only. Variations in physical characteristics of material applied, walking speed, and roughness of ground surface may require slightly different spreader settings. Due to the above conditions, the manufacturer makes no warranty as to the uniformity of coverage actually obtained from the settings listed.

HOW TO ORDER SPARE PARTS
All spare parts listed herein may be ordered direct from the manufacturer. Be sure to give the following information when ordering.
✓ Model Number
✓ Part Number
✓ Part Description
Call (574) 848-7491, 800-294-0671, or order online at www.earthway.com/parts
### 2170 Broadcast Spreader – Parts List

<table>
<thead>
<tr>
<th>KEY #</th>
<th>PART #</th>
<th>DESCRIPTION</th>
<th>KEY #</th>
<th>PART #</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>40003</td>
<td>SQUARE SCREEN</td>
<td>21</td>
<td>36208</td>
<td>#6 X 3/8&quot; TYPE 25 PHPS S.S.</td>
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<tr>
<td>2</td>
<td>60335</td>
<td>HOPPER ASSEMBLY</td>
<td>22</td>
<td>12317</td>
<td>SHUT OFF PLATE</td>
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<tr>
<td>3</td>
<td>33117</td>
<td>AGITATOR</td>
<td>23</td>
<td>25222</td>
<td>LOWER HANDLE</td>
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<tr>
<td>4</td>
<td>12209</td>
<td>HOPPER BUSHING</td>
<td>24</td>
<td>25106</td>
<td>FRAME</td>
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<tr>
<td>5</td>
<td>36214</td>
<td>1/4-20 X 1 1/2&quot; PHPMS S.S.</td>
<td>25</td>
<td>44249</td>
<td>FRAME BRACE</td>
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<tr>
<td>6</td>
<td>32103</td>
<td>1/4-20 NYLON INS LOCKNUT ZINC</td>
<td>26</td>
<td>24704</td>
<td>CROSS BRACE (11.125&quot;)</td>
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<tr>
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<td>36210</td>
<td>1/4-20 X 1&quot; HHMS S.S.</td>
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<td>31106</td>
<td>1/4-20 X 2 1/4&quot; HHCS ZINC</td>
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<td>31120</td>
<td>1/4-20 X 2&quot; HHCS ZINC</td>
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<td>12109</td>
<td>IMPELLER (9&quot; DIA)</td>
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<td>9</td>
<td>60300</td>
<td>PIVOT &amp; BRACKET ASSEMBLY</td>
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<td>36105</td>
<td>1/8&quot; X 1 1/4&quot; COTTER PIN S.S.</td>
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<tr>
<td>10</td>
<td>12147</td>
<td>SPACER</td>
<td>30</td>
<td>12274</td>
<td>REPLACEMENT GRIP</td>
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<td>11</td>
<td>44251</td>
<td>PIVOT ROD</td>
<td>31</td>
<td>60334</td>
<td>GEAR BOX &amp; AXLE ASSEMBLY</td>
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<td>12</td>
<td>60298</td>
<td>GAUGE &amp; LEVER ASSEMBLY</td>
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<td>AXLE BEARING</td>
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<td>13</td>
<td>60175</td>
<td>UPPER HANDLE SQUARE W/GRIP</td>
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<td>AXLE BUSHING</td>
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<td>14</td>
<td>12344</td>
<td>HANDLE SPACER</td>
<td>34</td>
<td>33109</td>
<td>3/16&quot; X 2&quot; COTTER PIN ZINC</td>
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<td>15</td>
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<td>1/4-20 X 1 1/2 HHZS ZINC</td>
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<td>70138</td>
<td>PNEUMATIC DRIVE WHEEL STUD</td>
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<td>25223</td>
<td>HANDLE SHAFT</td>
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<td>3/16&quot; X 1&quot; COTTER PIN ZINC</td>
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<td>17</td>
<td>42256</td>
<td>CONTROL ROD</td>
<td>37</td>
<td>11927</td>
<td>SHUTOFF SUPPORT- LARGE</td>
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<tr>
<td>18</td>
<td>31138</td>
<td>#8 X 3/8&quot; PMT #8 HD COARSE BLACK</td>
<td>38</td>
<td>60027</td>
<td>WING NUT ASSEMBLY BLACK</td>
</tr>
<tr>
<td>19</td>
<td>36300</td>
<td>1/4-20 NYLON INSERT LOCKNUT S.S.</td>
<td>39</td>
<td>37100</td>
<td>1/4-20 X 1&quot; CARRIAGE BOLT ZINC</td>
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<tr>
<td>20</td>
<td>32100</td>
<td>1/4-20 HEX NUT ZINC</td>
<td>40</td>
<td>24500</td>
<td>AXLE</td>
</tr>
</tbody>
</table>

You can find replacement nuts & bolts at your local hardware store.

Earthway Products, Inc.
P.O. Box 547
Bristol, IN 46507
Phone: 800-294-0671
www.earthway.com
Broadcast Setting Matrix
EV-N-SPRED® Calibration Techniques

**How to ensure your spreader is properly calibrated**

Make sure the drop holes in the bottom of the hopper are fully open when the Rate Control handle is on #30. If not, please adjust control cable or control rod to allow for a full open hopper position at #30.

**Rod Type Adjustment**

1. Open the shut-off so that the drop holes are completely open as illustrated to the right.
2. Review the Control Lever position - if it is set so that the forward edge is at #30, you are calibrated. If not you need to adjust the control rod at the pivot bracket shown in Fig 1.
   A. If your shut-off is not able to open fully as in step #1. Loosen the top nut a few turns, then loosen the lower nut so that it allows you to push the shut-off open fully. Next tighten each nut so that they contact the pivot bracket without moving it, and then carefully tighten each nut fully so they do not loosen during use. Recheck adjustment as outlined in #1 above.
   B. If your shut-off is able to open fully as in step #1, but the Control Lever is not at #30. Loosen the top nut a few turns, then loosen the lower nut so that they contact the pivot bracket without moving it. Carefully tighten each nut fully so they do not loosen during use. Recheck adjust as outlined in #1 above.

**Cable Type Adjustment**

1. Open the Control Lever so that the shut-off and drop holes are completely open as illustrated above right.
2. Review the Control Lever position so that the indicator is pointed to #30, if it is your calibration is correct. If not you need to adjust the control cable at the cable clamp on the underside of the hopper as shown in Fig 2.
   A. If your shut-off is not able to open fully as in step #1. Loosen the cable clamp screw slightly so that you can slide the outer cable out so that the shut-off is fully open. Next tighten the cable clamp screw securely. Recheck adjustment as outlined in #1 above.
   B. If your shut-off is able to open fully as in step #1, but the Control Lever is not at #30. Loosen the cable clamp screw slightly so that you can slide the outer cable in so that the Control Lever opens to #30. Next tighten the cable clamp screw securely. Recheck adjustment as outlined in #1 above.

If you have any questions regarding the operation or assembly of your spreader please call us at 800-294-0671 or 574-848-7491 Monday - Friday 9:00am - 4:00pm Eastern. Accessories and Repair Parts are also available at these numbers.

---

**SPREAD PATH**

- **FULL Rate** (one pass)
- **HALF Rate** (two passes)

**Fig 1**

- Insert Control Rod into the Pivot Bracket
- Notice the position of the double bend point. It must be at this location
- Attach 1/4-20 Regular Hex Nuts at these points.

**Fig 2**

- Slide Outer Control Wire to Calibrate
- Shut-Off Fully Open
- Tighten Screw
- Cable Type Adjustment
  - Loosen/tighten screw on cable clamp then slide outer cable in/out for calibration

**Pt. #53192**
**ESTABLISHING A SETTING RATE**

**Step 1:** Use Chart 1 to estimate the number of LBS/1,000 square feet of coverage (Example: 20 LB bag with 10,000 square foot coverage = 2.0 LBS/1,000 square feet)

**Step 2:** Find the closest LBS/1,000 square feet in Chart 2 that you estimated using Chart 1 (Example: 2.0 LBS/1,000 square feet = Spreader Setting of 13)

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**METRIC RATE SETTING**

**Determining a Setting Rate**

Use chart below to determine the **Setting Rate** based on Grams/Square Meter of coverage as directed on the bag.

**Spread Width for Different Particle Sizes**

<table>
<thead>
<tr>
<th>Particle Size</th>
<th>English</th>
<th>Metric</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small/Fine (Sand)</td>
<td>5-7ft.</td>
<td>1.5-2.1m</td>
</tr>
<tr>
<td>Medium (Half BB)</td>
<td>7-9ft.</td>
<td>2.1-2.7m</td>
</tr>
<tr>
<td>Large (Full BB)</td>
<td>9-12ft.</td>
<td>2.7-3.7m</td>
</tr>
</tbody>
</table>

**Spread Width for Different Size Grass Seed**

<table>
<thead>
<tr>
<th>Seed Size</th>
<th>English</th>
<th>Metric</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fine</td>
<td>5-7ft.</td>
<td>1.5-2.1m</td>
</tr>
<tr>
<td>Coarse</td>
<td>7-10ft.</td>
<td>2.1-3.1m</td>
</tr>
</tbody>
</table>

---

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