



# ONE SHOT®

Tree Recognition System

***Spray the trees,  
not the spaces between!***

- Minimize spray drift
- Save on chemicals and costs
- Save time with less fill-ups
- Simple yet dependable design
- Easy to operate and adjust
- Install on any sprayer
- Very low price!



▲  
NELSON  
HARDIE  
4000P with  
ONE SHOT  
system.

▼  
Control  
modules turn  
spray valves  
on and off  
when sensors  
see a tree.

►  
Two  
waterproof  
photoelectric  
sensors are  
mounted near  
front of  
sprayer on  
either side.



# ONE SHOT®

## Tree Recognition System

The Nelson **ONE SHOT** Tree Recognition system is a simple yet rugged kit that fits to NELSON HARDIE orchard sprayers\* and is designed to save considerably on chemicals by spraying *only* the trees and not the spaces between. The system dramatically reduces spray drift and the resulting chemical ground deposits so it is beneficial to the environment.

### HOW IT WORKS

The state-of-the-art **ONE SHOT** uses two waterproof photoelectric sensors, mounted near the front of the sprayer (one on each side), and two compact control modules (in a protective enclosure) that keep the spray valves normally in the "Off" position. Once a sensor recognizes a tree, a pre-set delay turns the valve on at the right time, holds it in the "On" position to spray the tree, and then shuts the valve off again.

### SIMPLE DESIGN

The **ONE SHOT** is made up of very few components which makes the unit very easy to understand and to operate. There are only four adjustments: "Aim", "Sensitivity", "Delay" and "Hold". "Aim" is simply moving the sensor up and down to read the trees properly; "Sensitivity" is how far the photoelectric sensor "sees" the tree from the sprayer; "Delay" is the wait time between when the sensor sees the tree and when the control module turns on the spray valve; "Hold" is how long the control module holds the valve in the "On" position before turning it off (tree canopy width).

That's it! By keeping it simple the **ONE SHOT** system is easy to teach and quickly learned. The components can be operated by anyone and are easily adjusted using only a small screwdriver.



The **ONE SHOT** is a simple design and is very easy to operate. Kit includes 2 of each: Sensors, Cables, Control Modules, Spray valves and Module enclosures (Valves & Enclosures not shown).

### HUGE SAVINGS

Not only does the **ONE SHOT** system provide a significant reduction in spray drift but, in the same way, the farmer will benefit from substantial savings in chemical use and costs. Of course, chemical savings vary with orchard row spacing, distance between trees within the rows, and branch canopy width. The largest return on investment is realized with new plantings where there are large spacings between trees and the spray valves are mostly in the "off" position.

Time savings are another considerable factor as the sprayer will cover more acres before requiring a refill.

### DEPENDABLE CONSTRUCTION

True to Nelson Mfg. design in all of its products, the **ONE SHOT** components were chosen with dependability in mind. The rugged **ONE SHOT** is designed and built to withstand high-moisture spraying environments. Sensors and cables are sealed and the control modules are protected in an enclosed housing to ensure that the system will last and continue to function normally for many years.

### \*INSTALL ON ANY SPRAYER

The **ONE SHOT** tree recognition system is offered by Nelson Manufacturing and is therefore most commonly installed on NELSON HARDIE sprayers. The kit can easily be installed on any brand of orchard sprayer.

### LOW COST SOLUTION

Another great feature of the **ONE SHOT** is that it is very inexpensive which is achieved by using very few components. The low price means that tree recognition is affordable to virtually any orchard farmer! The **ONE SHOT** is not only the logical choice for our environment, but this tough yet simple kit will pay for itself very quickly and provide continued savings for many years.

### SPECIFICATIONS:

Sensor type	Photoelectric, waterproof
Sensor quantity:	Two (R & L)
Sensor indicators:	LED (Green & Red)
Sensor size:	1"W x 1-3/4"D x 3"T
Control module:	Solid state with "Delay" & "Hold" adjust
Module quantity:	Two (each in its own enclosure)
Module size (each):	1-1/2"W x 2-3/4"D x 4-1/2"T
Enclosures:	6"W x 4"D x 5"T
Spray valves:	1" Electric ball valves
Valve quantity:	Two (R & L)
Voltage:	12 Volts
Module/Sensor life:	20,000,000 operations

**WARNING:** The **ONE SHOT** control module does NOT include the self-checking redundant circuitry necessary to allow its use in personnel safety applications. Never use the **ONE SHOT** for personnel protection.

**ONE SHOT** is a trademark of Nelson Mfg. Co., Inc., Yuba City, CA



**NELSON MFG. CO., INC.**  
2860 Colusa Hwy.  
Yuba City, CA 95993  
Tel: (530) 673-0919  
Fax: (530) 673-2072  
Toll Free: 1-877-673-0919  
[www.NelsonHardie.com](http://www.NelsonHardie.com)