

ADVANCED SPRAY TECHNOLOGY
AIM COMMAND® & AIM COMMAND PRO™ SPRAY SYSTEMS

CASE IH
AGRICULTURE



PRECISION. ACCURACY. FLEXIBILITY.

ADVANCED SPRAY TECHNOLOGY TO MEET THE DEMANDS OF TODAY'S AGRICULTURE.

Every growing season is another chance to get it just right—selecting the right seed, planting for maximum agronomic advantage and applying the appropriate inputs at the correct rates within the optimum windows. In today's agriculture, it's important to get the full value from every tankful and every acre. That's where advanced spray technology from Case IH comes in. It's all about giving the producer the best shot at the ultimate goal: the best possible yield at harvest time.

BE READY.





AGRONOMIC DESIGN

ADVANCED SPRAY TECHNOLOGY

AIM COMMAND

AIM COMMAND PRO

4-5

6-7

8-9

10-11

BUILDING MACHINES THAT BUILD THE BOTTOM LINE.

Maximizing yield potential means understanding and addressing eight key agronomic needs: timeliness, crop residue management, soil tilth, seed bed conditions, seed placement accuracy, plant food availability, crop protection and harvest quality. Case IH equipment is engineered and built with an eye to those key areas, to help producers get the best return on their investment. For a sprayer, that means accurate rates, precision placement, consistent droplet size and the ability to cover more acres in narrow application windows. Because every plant is important, and every hour counts.



GIVE EVERY SEED ITS BEST SHOT.

Today's premium seeds deserve the best growing environment they can get to reach their potential and return full value at harvest. An applicator's goal is always to be in a field at the right agronomic moment to minimize nutrient competition from weeds, pests and other factors that may limit yield. Consistency of the application is equally important to ensure that the right rate and recommended droplet size is uniformly applied over every acre of the field. Finally, the application equipment must be designed to handle rough terrain or tough field conditions without compromising application consistency.



MAKE THE MOST OF TIME AND RESOURCES.

Timing is everything. That's why it's so important to have equipment that helps you apply product at the right time and as quickly as possible. The distinctive Patriot® cab-forward, rear-engine design provides optimal weight distribution across the machine getting you into wet fields earlier for more timely application with less rutting and soil compaction – without compromising power and performance. With boom lengths up to 120 ft. and tank capacities up to 1,200 gallons, you'll find a Patriot sprayer that fits your needs and maximizes your productivity. The AIM Command spray systems deliver constant application rates and spray pressures – even with speed changes and in turns and irregular-shaped fields. With independent control of speed, pressure and flow, average field speed can increase by up to three miles or more per hour.



TREAT EVERY PLANT THE SAME.

Accuracy and precision are critical elements to get right to avoid wasting costly products. It is also imperative to achieve the right rate, at the right droplet size, to optimize each plant's performance and yield potential.



REAP THE REWARDS OF AGRONOMIC DESIGN AT HARVEST.

Giving every plant in every row its best shot can bear significant results, and advanced spray technology can be a big help. Accuracy and precision in chemical application can pay off in better harvests and a stronger bottom line.



A TECHNOLOGY INVESTMENT THAT YIELDS RESULTS.

It used to be, the only way to maintain constant rate and droplet size was to maintain a steady field speed. If field speed changed, application rate and droplet spectrum were affected. Sprayer rate control helped some, offering a constant rate over a 2:1 speed range. But droplet size still varied with speed changes. Advanced spray technology eliminates that limitation, providing both constant rate and the desired droplet size over a wider speed range. The right application rate, at the right droplet size, independent of travel speed means better coverage, greater efficacy, and more acres covered every day.



IT'S LIKE CHANGING THE TIP WITHOUT LEAVING THE CAB.

Once a standard tip is selected based on application rate and maximum travel speed, Case IH spray systems use Pulse Width Modulation (PWM) to control the flow at each boom section or nozzle. Working at 10 pulses per second, the nozzle valves vary the duty cycle to maintain the correct application rate as the speed of the sprayer changes.

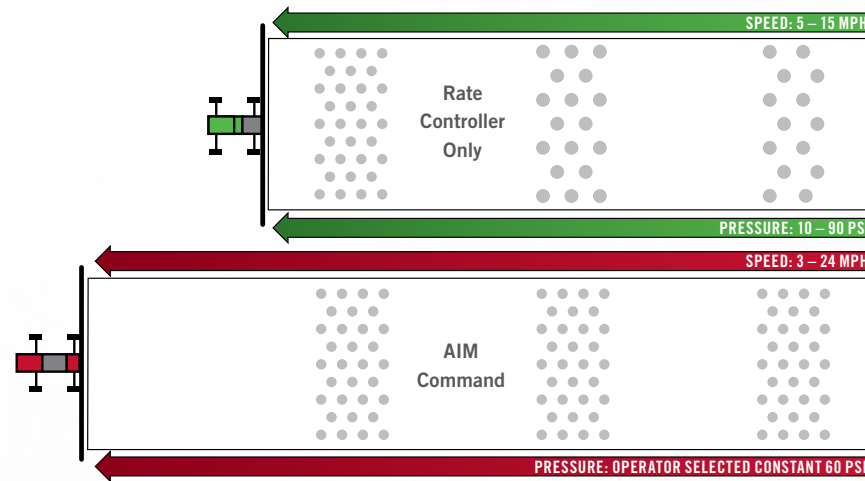
Example: Using a 08 Flat Fan Tip

Example: Using a 08 Flat Fan Tip			75% Duty Cycle Acts like a 06 tip
25% Duty Cycle Acts like a 02 tip	50% Duty Cycle Acts like a 04 tip		100% Duty Cycle Acts like a 08 tip (NO PULSING)
One Pulse: 0.1 second			
25% Duty Cycle Acts like a 02 tip	50% Duty Cycle Acts like a 04 tip	75% Duty Cycle Acts like a 06 tip	

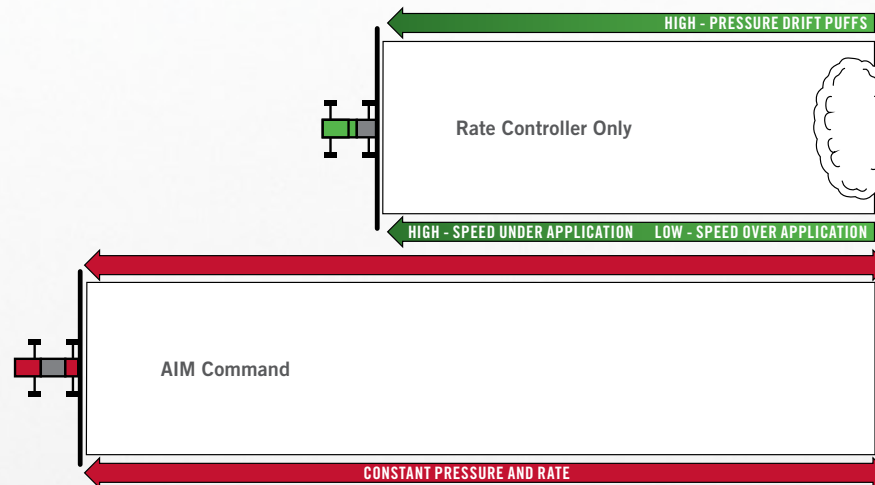
BETTER APPLICATION QUALITY ACROSS THE FIELD.

With conventional rate controller-only technology, it's tough to achieve consistent coverage. When turning, coming out of a corner or slowing for an obstacle, low-speed over-application can waste product and create crop damage. At faster speeds, boom pressure increases, droplet size decreases and drift potential becomes a concern. Because the AIM Command and AIM Command PRO spray systems hold constant pressure independent of ground speed, you get optimum droplet size and accurate rate control over a wide speed range—automatically.

Consistent Coverage Everywhere

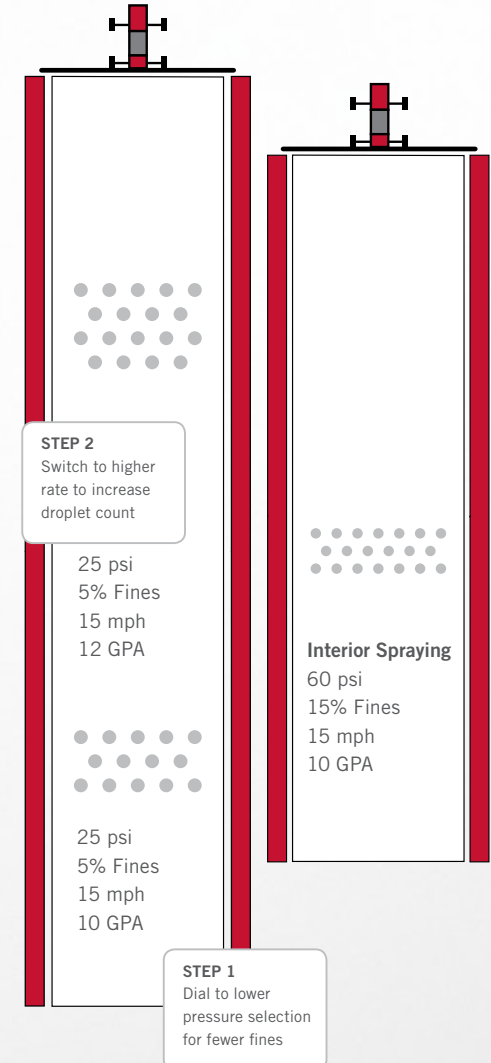


Out of the Corner Control



Drift Control

- On demand
- With a single tip
- At pre-selected pressures
- Independent of speed and rate



AIM Command

TAKING ACCURACY TO THE NEXT LEVEL.

Get the most out of every tankful of product, every hour of the day, and every acre of ground. AIM Command spray systems can maximize your Patriot series sprayer's effectiveness by optimizing application rates and droplet sizes in every spraying condition, in every part of the field.





INSTANTLY CONTROL FLOW RATE.

AIM Command automatically adjusts the pulse width via a solenoid at the nozzle body for a constant application rate at a constant pressure as sprayer speed and field conditions change.

INDEPENDENT PRESSURE CONTROL.

Constant spray pressure at the boom is maintained by the system's independent pressure control. The system's computer uses the sprayer's product pump to control pressure independent of application rate and ground speed.



PROVEN PRODUCTIVITY.

Because pressure stays constant, you can choose the speed that fits the field or conditions—which may lead to an increase in average fields speed of up to three or more miles per hour faster. With independent control of the speed, pressure and flow, AIM Command increases the sprayer's production potential and reduces the cost per acre of running your Patriot sprayer.

ELIMINATE UNDER-/OVER-APPLICATIONS.

Over-application can lead to crop damage, and under-application may fail to provide adequate control. Constant application rate over an 8:1 speed range means better coverage on every acre.

The AIM Command spray system uses Pulse Width Modulation (PWM) to control the flow at each nozzle section. When a boom section is commanded to be off, the flow stops instantaneously, reducing over application. When commanded to be on, the flow starts immediately with the correct rate and pressure for better coverage and efficacy.



EASE OF OPERATION.

Three conveniently placed switches in Patriot sprayers put true application control right at your fingertips, letting you choose the AIM Command system or conventional spraying and control pressure settings.

IMPROVED DRIFT CONTROL.

Changing weather and wind can make spray patterns difficult to control. AIM Command lets you toggle between two preset spray pressures for on-the-go drift control.



AIM COMMAND PRO: THE LOGICAL NEXT STEP.

Starting with all the benefits of AIM Command, AIM Command PRO adds critical refinements that make your Patriot sprayer even more effective. Interfacing with GPS for mapping, AIM Command PRO offers the ultimate in accuracy and precision. It helps you realize the highest value from every acre of ground and every tank of product.



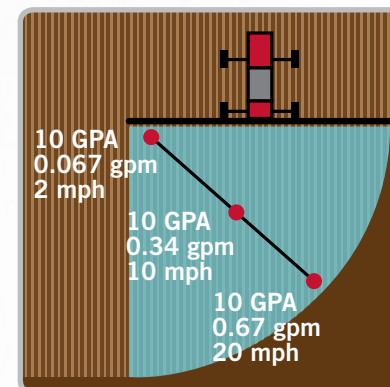
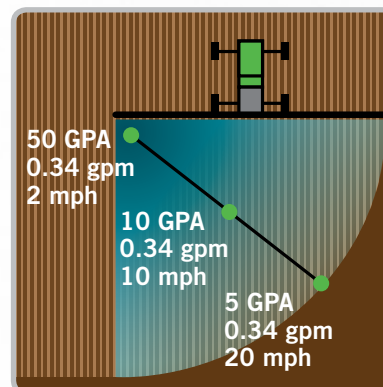
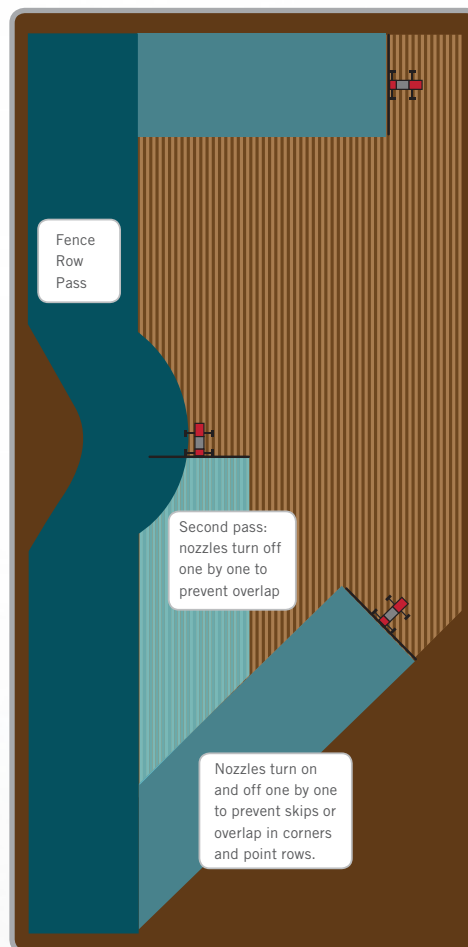
INDIVIDUAL NOZZLE CONTROL.

AIM Command PRO features nozzle-by-nozzle flexibility across the boom. Computer-controlled Pulse Width Modulation (PWM) allows each nozzle to produce independent 8:1 “virtual tip” variability while maintaining steady rate and droplet size. As the nozzles pass over previously applied or unapplied areas, each individual nozzle will turn on or off as needed for the application specified offering more savings than ever before on costly inputs.



PUSH BUTTON SPRAY SYSTEM CONTROL.

The AIM Command PROView display interfaces between the rate controller and the sprayer itself. This display allows the operator to engage or disengage turn compensation and overlap control, select the appropriate values for those settings and visually monitor total system and individual nozzle duty cycles and pressure settings.



AIM Command PRO offers turn compensation, adjusting for different speeds across the boom to provide consistent, accurate application rate during turns.

THE RIGHT RATE, EVEN IN CURVES AND TURNS.

When your sprayer is headed in a straight line, every nozzle moves over the field at the same speed. But in a turn, ground speed across the boom varies; the outside of the arc covers more ground in the same period of time. AIM Command PRO offers computer-controlled turn compensation that maintains accurate rate control across the length of the boom. The graphic above left shows a tight turn in which the inside part of the boom is travelling slower, or possibly backwards, which results in over-application. Conversely, the outside of the boom is under-applying. The graphic above right illustrates that, when using AIM Command PRO, the rate per nozzle can be held constant relative to its position on the boom. This means that the proper rate is sprayed through each nozzle based on that nozzle's relative speed through the field.



THE REAL REASON YOU CHOOSE A SPRAYER.

The bottom line is, it's all about time and money. Application windows are short, input costs keep going up, every row needs to yield its best. Only Case IH offers AIM Command PRO. Nobody else can equip a sprayer like this, to make each hour and every acre as productive as possible. The payback is in the harvest—getting a better yield from every field.

Capstan Ag Systems, Inc. is a technology-based company specializing in creating new proprietary systems for the agricultural industry, particularly with chemical and fertilizer applications. Headquartered in Topeka, Kansas, Capstan Ag's inventive process involves research, engineering design, and lab and field testing, often working in concert with other experts in the field, including agricultural departments in a number of North American universities. In 1992, the University of California - Davis was awarded a patent for research on basic Pulse Width Modulation technology relative to application equipment. Capstan Ag Systems was born when it licensed and commercialized this technology. Capstan Ag's first product, Synchro, was a blended-pulse spray system for chemical applications, exclusively distributed in 1998 as AIM Command® through a marketing alliance with Tyler Corporation, later purchased by Case Corporation and then CNH. AIM Command is known across North America for its comprehensive impact on chemical spray quality, drift management, standard and variable rate applications and operator convenience. Capstan and Case IH continue to partner in bringing new spray technology to market. Capstan developed the next evolution of the Synchro product, bringing to market a system capable of turn compensation, individual nozzle overlap control and nozzle diagnostics, now available from Case IH as the AIM Command PRO™ spray system.



SAFETY NEVER HURTS!™ Always read the Operator's Manual before operating any equipment. Inspect equipment before using it, and be sure it is operating properly. Follow the product safety signs, and use any safety features provided. CNH Industrial America LLC reserves the right to make improvements in design and changes in specifications at any time without notice and without incurring any obligation to install them on units previously sold. Specifications, descriptions and illustrative material herein are as accurate as known at time of publication, but are subject to change without notice. Availability of some models and equipment builds varies according to the country in which the equipment is used.

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