

Seed



Seed is a remarkable touchscreen climate control with a user interface that makes managing complex growing environments child's play. Engineered for power; designed for ease.

Introducing Seed V2

Seed's powerful new version 2 has even more capabilities and power than the original.

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Seed

Climate control with accessibility and power

Seed combines the accessibility of an intuitive touchscreen interface with the expansive power of the Seed I/O input and output system, providing exact information at a glance.

“Seed is so easy to use – it’s plug and play.”

*— John McMahon,
Schuyler Greens*

BENEFITS

- Improve the yield and quality of your crop
- Increase labor and energy efficiency
- Intuitive interface accommodates beginners and experts

FEATURES

- Graphic interface provides extensive information at a glance
- Advanced humidity control
- Zone screen displays comprehensive information for each zone including:
 - Current sensor and equipment status
 - Displays explanation for equipment status including anticipated changes
 - Select view to display equipment response based on temperature or humidity
 - Quick access to graphs, setpoints and equipment settings
 - Bulk override allows user to quickly turn on or off multiple equipments
 - Zone profiles save settings for seasonal or crop transitions
- Individual alarms for each sensor
- Graph data can be viewed from weeks to minutes and any thing in-between
- View any zone at your facility, from any Seed control
- Zones in alarm are easily identified on the home screen
- View outside weather data
- Background reflects day, night, rain or snow conditions
- Adjust settings, limits, overrides and view status on individual equipment screen

NEW IN VERSION 2

- Browser-style navigation for quick access
- Easily adjust settings using sliders or direct entry
- HE Anderson Fertigation Interface
 - Configure zone-specific recipes and schedules
- Customize which zones are displayed and sensor readings within each zone
- User Profiles with three different levels of access
- User tracking system logs who made changes and when
- Influences mode allows custom equipment responses specific to your needs
- Custom programmed to include all your equipment
- View and adjust settings from the app, Sphere software or at the control
- Sensor Pools Screen allows calculated responses involving of multiple sensors including:
 - Vapor Pressure Deficit (VPD), Daily Light Integral (DLI), Wet Bulb Dry Bulb Relative Humidity
 - Allows for averaging multiple sensors over time

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Seed Sphere

Make your Seed control more powerful than ever. Seed Sphere expands Seed's capabilities and gives you a better way to see your growing world.

"I am impressed with how tightly Seed can control equipment. Wadsworth has very specific, dialed-in abilities to manage the crop"

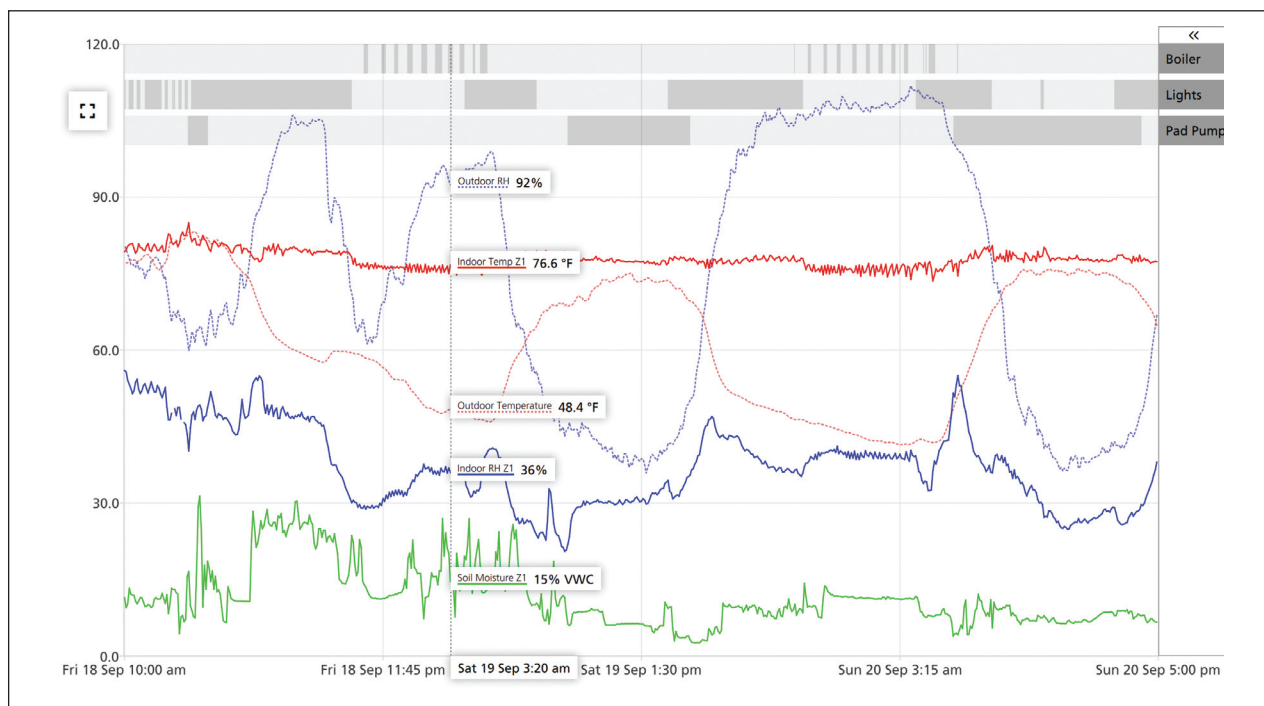
— Anthony Brach,
Local Roots

FEATURES

- View and change any setting using Sphere and your Mac or PC
- Back up and restore your Seed control's settings
- Enhanced graphing functionality including:
 - Quick Reports (User saved reports for easy access)
 - Ability to analyze all zones, sensors, equipment on one graph
- Export data to Excel or CSV, database, or any analysis tool
- Create multiple zone profiles for seasonal changes
- Live data readings
- Customizable alarm notifications

Requirements: Mac OSX or Windows 10 (4-bit)

QUICK REPORTS



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Seed I/O

*Flexible, strong and supportive:
The perfect partner*

The key to Seed's adaptability is Seed I/O. Sensors send readings to the Seed control, which sends directives to equipment based on user settings. Sensors communicate with Seed I/O inputs, equipment communicates with outputs.

"People think greenhouse growers don't think about the weather but it's important to review the graphs and see how the environment is responding to outside conditions."

*— John McMahon,
Schuyler Greens*

FEATURES

- Ports can be assigned to any zone
- Add additional Seed I/Os after the project has been installed
- Pre-wired for easy installation
- Flexible options to meet your needs:
Seed I/O comes in a variety of sizes and configurations
- 0-10v connections
- Lightning protection on both RS485 ports
- Overvoltage protection on all sensor inputs
- Toggle switches for manual override.
- Certified
 - Professionally designed UL Certified Industrial Control Panels
 - NEMA 4 enclosures
- Sensors
 - Temperature and humidity aspirator
 - Weather station with PAR light sensor, wind speed and direction, outdoor temperature and humidity and precipitation.
 - Temperature Probes for Boiler Supply/Return, Chiller Supply/Return, Slab/Water, Soil or Bench temperatures
 - Soil moisture
 - pH/EC & Dissolved oxygen sensors
 - CO₂ & CO sensors
 - Wet bulb/Dry Bulb Relative Humidity
 - VPD & DLI Calculations
 - Light Sensors – Full Spectrum PAR

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Wadsworth.Cloud

Bring the power of Seed control home

FEATURES

- Access your Seed control remotely using iPhone, Android, tablet, or computer
- Same powerful functionality at the control and remotely
- Identical interface on all formats
- Automatically backs up settings and data
- Provides links to download the latest versions of Seed and Sphere
- Manage multiple sites – great for consultants and large growers
- Subscription based
- Choose the number of users and a data tier to suit your needs
- Same secure environment as the Seed control
- Starting at 1 user and 100 MiB for just under \$30

“Just wanted to give feedback on the app. I don’t know how I was operating without it. It’s made my life so much easier, and it’s clear that it will be even more valuable as we continue to grow.”

— Jonathan Nelson,
Greenleaf Gardens, LLC, Ohio



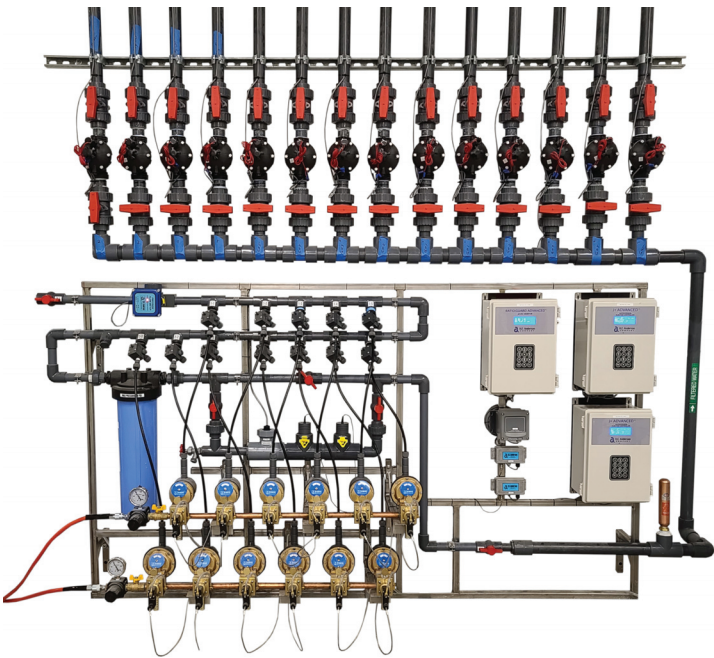
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Fertigation

Dynamic Duo

Wadsworth is teaming up with H.E. Anderson to simplify your crop management. Seed®, Wadsworth's innovative touchscreen control now has the capability to manage fertigation needs with Anderson's J+ Advanced Ratio:Feeder® Controller.



FEATURES

- Option to connect one or multiple fertigation systems to Seed
- Valve grouping allows linking multiple valves into a variety of groups using programming
- Create unlimited recipes, including notes
- Trigger irrigation events based on a schedule, time, VPD, accumulated light, soil moisture or a combination
- Ability to run off a Fill Tank. Can be linked to irrigation for continuous topping off with a specific nutrient recipe.
- Flush valve linking allows flushing lines after an irrigation/fertigation event, reducing bio-film
- Pulse irrigation allows the grower to add pauses during irrigation events to reduce runoff
- Contact us about upgrading your existing system



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Sensors

Seed never sleeps

More information gives Seed more power and you more control. Sensors add value to your Seed control as constant monitoring guides greenhouse climate management. The result is improved crop yield and quality, reduced energy consumption and lower environmental impact. Sensors reduce microclimates, improve pest management effectiveness and result in a consistent crop.

"This is the most intuitive control I've ever seen. It speaks to my generation."

— Andy Sacks,
Ilera

OPTIONS

Use your equipment to its maximum potential by responding to a variety of data sets.

- Temperature – Readings inside and outside the greenhouse provide rapid measurements
- Humidity – Relative humidity readings from indoors and outside the greenhouse allow the controller to make informed decisions about how to regulate humidity
- Anemometer and wind direction – Measures wind speed and direction and data is used to determine when to open and close vents.
- Light PAR – Modulating lights – use PAR sensor at crop level to check amount of light received from the sun – and modulate lights up or down in intensity to provide proper micromole level for the crop. Reduces energy usage of the light as well as your cooling system.
- Precipitation – Combined with temperature sensor to protect structure from heavy snows, informs venting decisions

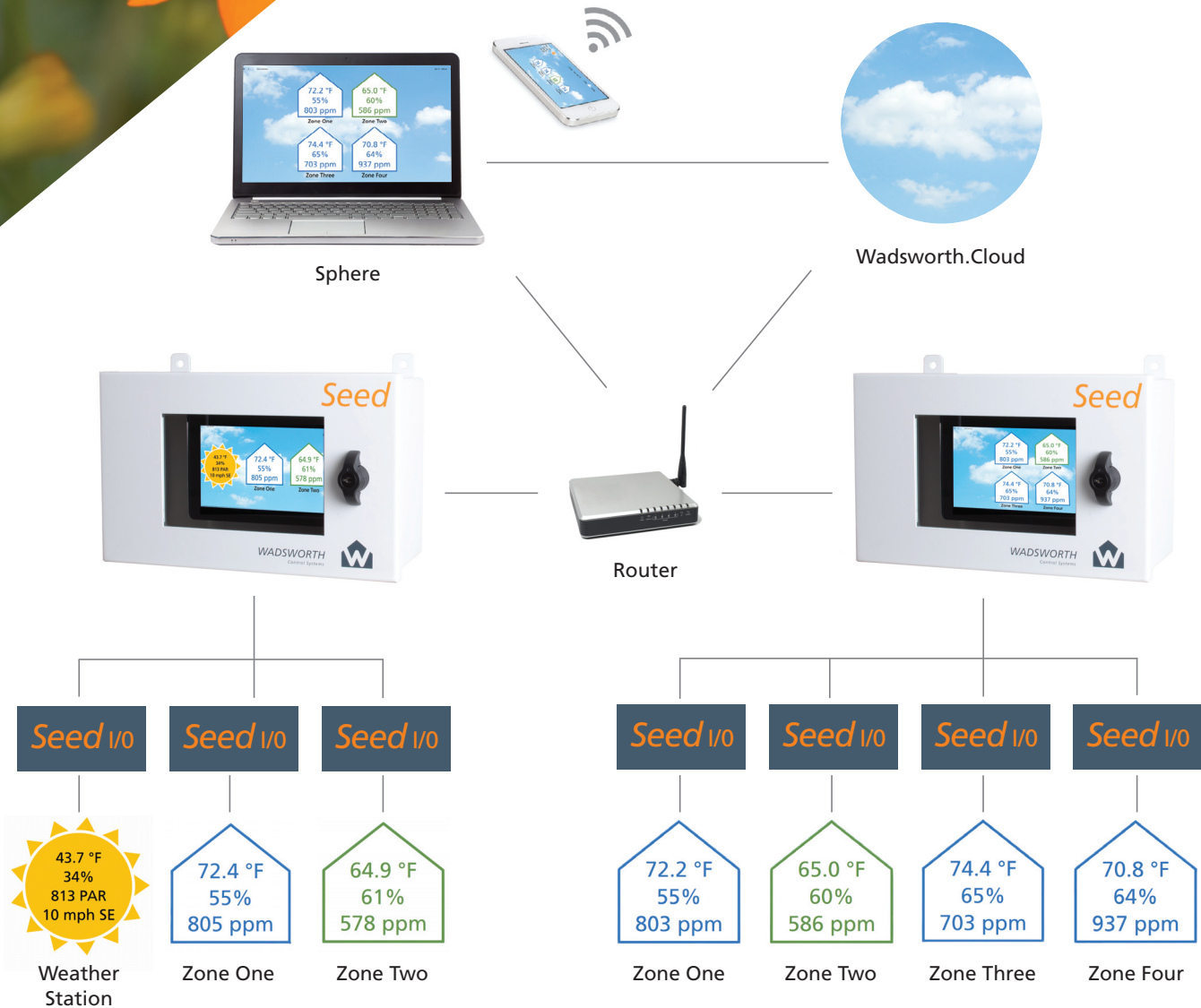
- CO₂ (carbon dioxide) – Essential component of photosynthesis. Needs to be monitored for alarm conditions
- PH (acidity and alkalinity); EC (electrical conductivity); DO (dissolved oxygen) – Used in all mediums including aquaponics and deep water culture for logging, monitoring and alarms.
- Barometric Pressure – Keeps pathogens out or butterflies in by using fans to maintain a positive/negative pressure in zone.
- Soil Moisture – Irrigation trigger or, backup trigger to keep the crop from wilting
- CO (carbon monoxide) – Monitors boiler rooms for alarm status

External sensors – Wadsworth's Weather Station configured to meet your needs with temperature, humidity, wind speed and direction, and light readings. protecting the structure, from wind, poor outside conditions, vacuum and wind, if really cold, but also really cloudy, use sensor to cover crop and turn on grow lights. Use lights as heat and use curtain to maintain temp.

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Seed Configuration



To find out more call 888-334-1440 or email: usgr@usgr.com

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