Notes:

1 Square = ____ Foot/Feet

Sunlight Supply, Inc.
National Garden Wholesale
VANCOUVER, WASHINGTON U.S.A.
www.titancontrols.net

TITAN® CONTROLS

SATURN™ 5

Digital Environmental Controller with CO_2 Timer

Instruction Manual

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Saturn™ 5

- Warnings & Cautions
- Saturn™ 5 – Digital Environmental Controller with CO_2 Timer
- Instructions for Operation
- Troubleshooting Tips
- Controller Specifications
- Installation Example
- Warranty Information
- Service and Repair Program

Warnings & Cautions

- Read all instructions before operating controller.
- Do not put your controller in an area where it can get wet or sprayed.
- Mount your controller securely to the wall.
- When using “bug bombs” in area, cover controller and sensor completely to avoid corrosion.
- There are no serviceable parts in controller. Do not attempt to repair the unit.
- Do not put paper clips, tools, etc. into unit. Possible electrocution may occur.
- Plug controller into surge protector to avoid potential damage to the unit.
- Confirm that your power source is 120 Volts/15 Amps prior to plugging controller into outlet.
- Check that all equipment that will be activated by this controller is the proper voltage(s).
- Verify that the equipment you are controlling does not exceed a total of 14.5 Amps.
- This controller is designed for “inside use” only.
- Avoid placing the controller near heat generating sources such as a CO_2 Generator.
- Use caution if operating controller in extremely humid environments (90% and above).
- Do not use controller for purposes other than the unit was designed to function.
- Use controller within defined environmental specifications.
- Ask your Dealer for tips and techniques regarding the use of this controller.
- Be conscientious when disposing of any products.
- Enjoy your Titan Controls® environmental controller for years to come.

CAUTION: DO NOT install your controller near electronic/digital ballasts, ozone generators and other devices that emit large amounts of electromagnetic interference (EMI) & radio frequency interference (RFI), it will disable the controller. Maintain a minimum distance of 8 feet between the controller & sensor, and all high EMI/RFI devices.

WARRANTY SERVICE: Please read warranty information first

If after reviewing the troubleshooting tips the unit will still not work, you should return it to the Dealer where you purchased it. They may be able to further evaluate the unit and test its various components and quite possibly will be able to identify and/or fix any problems. If the Dealer is unable to fix the unit, they will return it to us for factory repair.

If there are no Dealers in your area, you may contact us directly for technical support. If we cannot help you resolve the problem over the phone, we will issue you a Return Merchandise Authorization (RMA) number authorizing you to return the unit to us for factory reconditioning (if the controller is currently under warranty). Contact the number below for a RMA number and shipping address. Please complete the form below and include it with your unit, and write the RMA number clearly on the outside of the box.

Please package the unit in its original packaging. If it is damaged in shipment we cannot be held responsible. Insuring the parcel is recommended.

Once we receive the unit back, we will repair it within 48 hours (business) and return it to you freight prepaid via UPS ground shipment.

Include the following if returning directly to Titan Controls®

• Proof of purchase • This completed form • RMA # on the outside of the box

Return Merchandise Authorization Number (Required): _____

Dealer/Customer Name: _____

Dealer/Customer Contact Name: _____

Shipping Address: _____

_____

Phone #: _____

Email address: _____

What is the nature of the problem? Please provide as much information as possible. _____

_____

_____

_____

_____

_____

Shipping address will be given when the RMA # is issued.

TITAN® CONTROLS

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For technical assistance call 1-888-80-TITAN or 1-888-808-4826.

Warranty Information

- Titan Controls® warrants the original purchase of this product against defects in material and workmanship under normal use for three (3) years from the date of purchase.
- During the warranty period, Titan Controls® will, at our option, and without charge, repair or replace this product if the controller or any of its components fail or malfunction.
- All returns or repairs must be accompanied by a Return Merchandise Authorization (RMA) number prior to any service of the product.
- This warranty is in lieu of all other warranties, expressed or implied, including the warranties of merchantability and fitness for use, and of all other obligations or liabilities on the part of the seller.
- This warranty shall not apply to this product or any part thereof which had been damaged by accident, abuse, misuse, modification, negligence, alteration or misapplication.
- Controllers with serial numbers or date tags that have been removed, altered or obliterated; broken seals that show evidence of tampering; or nonconforming parts, are excluded from coverage.
- Titan Controls® makes no warranty whatsoever in respect to accessories or parts not supplied by Titan Controls®.
- Monetary refunds of the warranty will not be given.
- The Buyer assumes all responsibility regarding the proper use & installation of this controller.
- All warranty service is provided through the Titan Controls® factory.
- This warranty shall apply only to the United States, including Alaska, Hawaii and territories of the United States and Canada
- Defective controllers are required to be returned with the **"proof of purchase/receipt"** for warranty coverage.
- For additional warranty information, contact the Titan Controls® Technical Service Representative at 888-808-4826 or your local Dealer.
- **NOTE**: Titan Controls® is a Manufacturer of environmental, timing, lighting, ventilation and CO_2 controls. All sales offerings to the public are done through a nationwide group of Dealers. No sales offerings will be made directly to the general public.

Service & Repair Program

- For all service and repairs, please contact by our Technical Service Representative for troubleshooting your gear and attaining a Return Merchandise Authorization (RMA) number, if applicable.
- All factory service & repairs will be completed within 48 hours of receipt of controller at the factory.
- Titan Controls® will, at its discretion, repair or replace the controller.
- Factory calibration services are available for all Titan Controls®.
- Returning Units: Please contact your retail store for information regarding returns.

Saturn™ 5 – Digital Environmental Controller with CO_2 Timer

The Saturn™ 5 is a digitally based environmental controller featuring a short cycle timer for CO_2 enrichment. It utilizes a 15 foot remote sensor to operate your temperature, humidity, CO_2 system and nighttime gear. This controller gives you the ability to set day and night temperature levels. The Saturn™ 5 has an LCD display and push buttons for easy programming. This device also offers min/max data logging capabilities for temperature and humidity.

Operation Instructions

1. Securely mount your Saturn™ 5 in your grow area and away from any moisture, spray, pesticides or other materials that could harm the unit.
2. Verify that when the Saturn™ 5's is mounted in your grow room the PHOTOCELL is exposed to your grow lights and not shaded or covered.
3. Ensure that all of the devices being connected to the controller are 120 Volt only and will not exceed the maximum amperage rating for the Saturn™ 5.
4. Connect your gear (exhaust fan, CO_2 controller, night circulation fan, dehumidifier, etc.) to the Saturn™ 5.
5. The sensor has a quick connect cord set to easily connect or move the sensor. Secure the quick connect cord to the Saturn™ 5 by plugging it in and securing the QD screw to the unit.
6. Place the sensor in an area with good air movement, preferably plant height. Avoid placing the sensor in direct sunlight or under direct HID lighting. **NOTE**: Do not place sensor anywhere it might get wet. SENSOR IS NOT WATER PROOF.
7. Plug the power coble into a standard 120 Volt wall outlet.
8. Using the buttons, select the Temp, Humidity & CO_2 parameters to program the Saturn™ 5.
9. The Saturn™ 5 should now activate and deactivate your equipment based on the preferred settings you selected.

COOLING OUTPUT:
This outlet is intended to active an exhaust fan to ventilate the garden due to high temperature conditions. Do not exceed 5 Amps when using this output.

CO_2 OUTPUT:
This outlet is for a CO_2 device and powers ON during the daytime period only. It will deactivate when the 'Cooling Output' is activated. By achieving this, you are not ventilating the CO_2 as you're enriching your grow area and wasting your CO_2.

NIGHTTIME OUTPUT:
The outlet can be used for a variety of devices that only require power at night. This outlet activates only during the nighttime period.

HUMIDITY OUTPUT:
This output is for use with a humidifier or dehumidifier. Do not exceed 5 Amps when using this output.

FAHRENHEIT - CELSIUS:
To change the temperature from °F to °C, press and hold the UP & DOWN buttons for 2 to 3 seconds at the same time.

PHOTOCELL SENSITIVITY:
By pressing and holding the Enter/Reset and UP buttons for 3 seconds, you can change the sensitivity of the photocell. The current photocell setting will appear on the LCD. Press the DOWN button to decrease the sensitivity of the photocell (will require more light to activate the photocell). Press the UP button to increase the sensitivity of the photocell (will require less light to activate the photocell).

There are 15 buttons located on the front face plate of the unit that control all functions. Pressing each button will display a function and/or current setting(s) in the green LCD window. Some buttons are programmed to perform more than one function.

The small **green** LED lights or status indicators located on the front panel will light up to show the selected function when certain buttons are pushed.

UP – Press this button to increase setting.

DOWN – Press this button to decrease setting.

Enter/Reset – Press button, hold for 3 seconds to enter new setting and to reset the Min/Max range.

TEMPERATURE BUTTONS

Temp Day Setting – Press button to set day cooling set point. Press Enter/Reset to accept setting.

Temp Night Setting – Press button to set night cooling set point. Press Enter/Reset to accept setting.

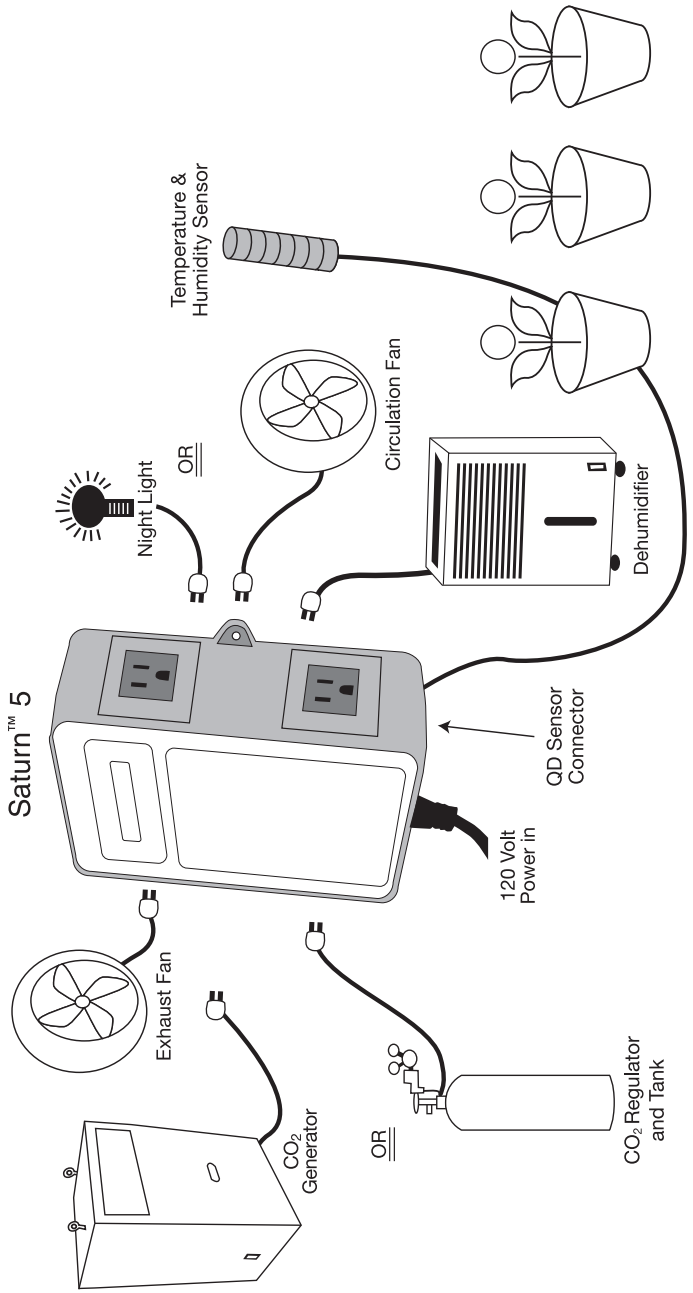
Temp Deadband – Press button to set the cooling deadband range. Press Enter/Reset to accept setting. This button is used to determine the number of degrees above/below for when the cooling outputs will activate. **Example**: If your cooling function is set at 85°F and the deadband is 3°F, the output will activate your exhaust fan when the temperature is above 85°F and deactivate your exhaust fan when the temperature is below 82°F.

HUMIDITY BUTTONS

Humidity Setting – Press button to set Day and Night Humidity settings.

Humidity Mode – Press button to select humidification (**rH Incr**) function or dehumidification (**rH dECr**) function.

Installation Example



Troubleshooting Tips

1. **Why doesn't the Saturn™ 5 have any power?** Verify power source is providing 120 Volts. Reset the circuit breaker on the Saturn™ 5 by turning OFF the unit, then turn ON.

2. **What if the CO_2 timer is not keeping the right time?** The CR1220 (3 Volt Lithium battery), located on the internal circuit board that is connected to the inside of the front faceplate, may need to be replaced. The normal lifespan of the batteries is approximately 5 years.

3. **Why are the Error LED's on the front lit?** The sensor or connected device are malfunctioning. See ERROR LED's section for more information.

4. **Why is the display showing, 'Err SEn'?** The remote sensor is not connected or not communicating with the Saturn™ 5. Verify that the cable is not compromised and that the remote sensor has power.

5. **Does the humidity and temperature sensor need to be calibrated?** No. The humidity and temperature sensor is digital and there is no need for calibration.

6. **Why is my temperature is reading quite high?** Verify that the sensor is not in a location with direct exposure to intense light and that there is air circulating freely around it.

Controller Specifications

- Size = 9"H x 7"W x 3 ¾ "D
- Input Voltage = 120 Volts A/C
- Output Voltage =120 Volts A/C
- Maximum Amperage = 14.5 Amps
- Remote Probe Cable Length = 15 feet
- Temperature Control Range = 41°F to 113°F
- Temperature Accuracy = +/- 2% °F
- Temperature Deadband (hysteresis) = Adjustable
- Humidity Control Range = 5% to 95% rH (non-condensing)
- Humidity Accuracy = +/- 3% rH
- Humidity Deadband (hysteresis) = Adjustable
- CO_2 ON Time = 1 second to 12 hours
- CO_2 OFF Time = 1 second to 96 hours

Humidity Deadband – Press button to set the Humidity Deadband setting. This Humidity Deadband determines when the humidity output will function based on how many percentage points above or below the set point that the humidity will be. **Example**: If the Saturn™ 5 is set to Dehumidify and your Deadband is 5%rH, the output will activate your equipment at 50% and deactivate your equipment at 45%.

CO_2 BUTTONS

CO_2 Mode – Press button to change the CO_2 Mode from **dAYLOCK** to **dAYFrEE**. Select **dAYLOCK** to disable the CO_2 Output when the Cooling Output is activated. Choose this mode when you are using exhaust fans to cool your garden. Or you may select **dAYFrEE** to allow the CO_2 Output and Cooling Output to be activated at the same time. Use the **dAYFrEE** mode in sealed room situations or when using an air conditioner to cool your grow room.

CO_2 ON Time – Press this button to determine the amount of time that the CO_2 Output will be activated to enrich your garden.

CO_2 OFF Time – Press this button to determine the amount of time that the CO_2 Output will be de-activated and NOT providing CO_2 to your garden.

NOTE: The CO_2 ON Time and CO_2 OFF Time can be used as a daytime recycle timer (**dAYFrEE** mode) to run a pump,etc. if you choose not to use CO_2 in your garden.

SPECIAL BUTTONS

Temp & Humid Lock – The temperature and humidity may be set to operate in locked (**connECt**) or split (**SPLit**) modes. This button allows you to run your temperature and humidity gear either at the same time or independently.

Min/Max Temp – Press this button to recall the stored high and low recorded temperature levels. Press and hold the Enter/Reset button while this setting is displayed to reset them.

Min/Max Humid – Press this button to recall the stored high and low recorded humidity levels. Press and hold the Enter/Reset button while this setting is displayed to reset them.

If you ever want to return to the factory settings do the following: Press and hold the Enter/Reset & DOWN buttons at the same time until the LED reads (**f.Set**). Press the Enter/Reset button again to restore the Saturn™ 5 to the factory settings. Once the Saturn™ 5 reset is complete, the LED screen will read (**doNE**).

Your Saturn™ 5 has been pre-set at the factory with the following settings:

- Temp Day Setting = 80°F
- Temp Night Setting = 70°F
- Temp Deadband = 3°F
- Day/Night Humid Setting = 50% rH
- Humid Mode = Decrease (**rH dEcr**)
- Humid Deadband = 5% rH
- CO_2 Mode = Dayfree (**dAYFrEE**)
- CO_2 ON Time = 1 minute
- CO_2 OFF Time = 30 minutes
- Temp & Humid Lock = Split (**SPLit**)

ADJUSTING THE SETTINGS:

To adjust your Saturn™ 5 to your own customized settings, do the following:

- Temp Day Setting – PressTemp Day button and the LCD will display **COOL_F**. To adjust the daytime temperature use the UP and DOWN buttons. Press Enter/Reset to lock in the new setting.

- Temp Night Setting – Press the Temp Night button and the LCD will display **COOL_F**. To adjust the nighttime temperature use the UP and DOWN buttons. Press Enter/Reset to lock in the new setting.

- Humidity Setting – Press the Humidity setting button one time and the LCD will display **day_rH**. To adjust the daytime humidity use the UP and DOWN buttons. Press Enter/Reset to lock in the new setting.

- Humidity Setting – Press the Humidity setting button two times and the LCD will display **nit_rH**. To adjust the nighttime humidity use the UP and DOWN buttons. Press Enter/Reset to lock in the new setting.

- Humidity Deadband Setting – Press the Humidity Dead-Band button to display the current humidity deadband setting. To adjust the setting use the UP and DOWN buttons then press Enter/Reset to lock in the new setting.

- CO_2 Mode Setting – Press the CO_2 Mode button and the LCD will display the current mode, either **dAYLOCK** or **dAYFrEE**. To adjust the CO_2 Mode use the UP and DOWN buttons. Press Enter/Reset to lock in the new setting.

- CO_2 ON Time – Press the CO_2 ON Time button to display the current setting. The first two digits (hours) will blink. To adjust the hours, use the UP and DOWN buttons to set how many hours the CO_2 Output will be activated. Then press the Enter/Reset button to lock in the new setting. Now the middle two digits (minutes) will be blinking. To adjust the minutes, use the UP and DOWN buttons to set how many minutes the CO_2 Output will be activated. Press the Enter/Reset button to lock in the new setting. Finally, the last two digits (seconds) will blink. To adjust the seconds, use the UP and DOWN buttons to set how many seconds the CO_2 Output will be activated. Press the Enter/Reset button to lock in the new setting.

- CO_2 OFF Time – Press the CO_2 OFF Time button to display the current setting. The first two digits (hours) will blink. To adjust the hours, use the UP and DOWN buttons to set how many hours the CO_2 Output will be deactivated. Then press the Enter/Reset button to lock in the new setting. Now the middle two digits (minutes) will be blinking. To adjust the minutes, use the UP and DOWN buttons to set how many minutes the CO_2 Output will be deactivated. Press the Enter/Reset button to lock in the new setting. Finally, the last two digits (seconds) will blink. To adjust the seconds, use the UP and DOWN buttons to set how many seconds the CO_2 Output will be deactivated. Press the Enter/Reset button to lock in the new setting.

- Temp & Humidity Lock – Press Temp & Humidity Lock to display the current setting. Use the UP and DOWN buttons to select the new setting. Press Enter/Reset to confirm the new setting.

1. To operate in the locked mode, select **connECt** and use an exhaust fan for cooling or dehumidifying your garden. The exhaust fan will activate when heat or humidity exceeds your pre-set levels and deactivate when both the temperature and humidity are under your pre-set levels.
2. To operate in the split mode, select **SPLit** and use an exhaust fan for cooling and a dehumidifier to reduce your humidity level. The exhaust fan will activate when the temperature exceeds your pre-set level and deactivate when the temperature is under your pre-set level. The dehumidifier will activate when the humidity exceeds your pre-set level and deactivate when the humidity is under your pre-set level.

NOTE: Select split mode (**SPLit**) if using a exhaust fan or AC unit to cool and a humidifier to increase humidity in your grow area. The cooling device will turn ON when the temperature rises above the set point and the humidifier will turn ON when the humidity drops below the set point.

ERROR LED's

The Saturn™ 5 regularly monitors the temperature and humidity levels and will alert the grower if there is an issue. If the Saturn™ 5 does not detect a slight change in the temperature or humidity in your grow area in one hour, it will deactivate the Output and the associated green LED will be blinking to acknowledge the possible problem. This safety feature is critical to eliminate 'runaway' conditions that could result in crop damage or other serious issues. If you have a blinking LED, stop and check that your equipment is running properly and verify that the remote sensor has not been compromised.

Error LED Reset – To reset an Error LED, simply press the Enter/Reset button.