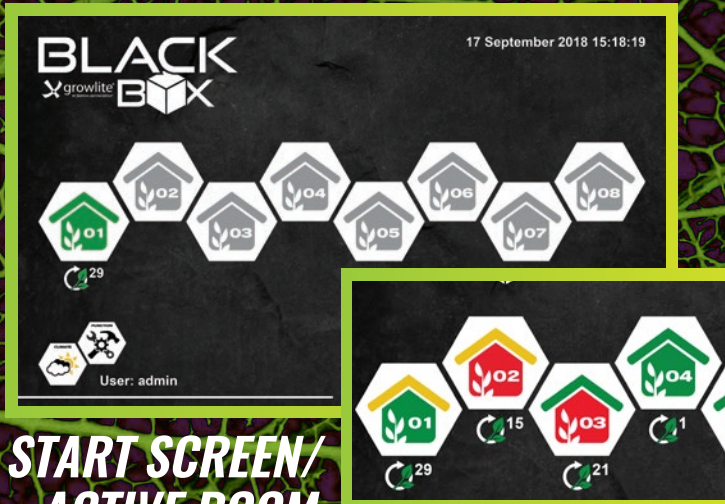# growlite®

APPLICATION GUIDE

BLACK BOX
PROFESSIONAL HORTICULTURE CONTROLS

ROOM ICONS

START SCREEN/ ACTIVE ROOM

The room icon indicates graphically the status of any given room/zone. This icon provides a clear visual signal of whether a room is active, if the lights are on or off, and if any environmental conditions are outside of set parameters.

ALL GREY
Inactive room.

ALL GREEN
Active room with no alarms and lights off.

GREEN WITH YELLOW ROOF
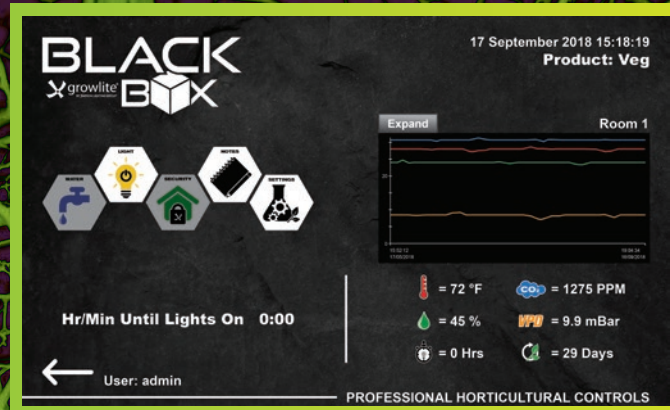Active room with no alarms and lights on.

RED WITH GREEN ROOF
Active room with alarm conditions and lights off.

RED WITH YELLOW ROOF
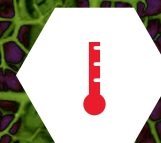Active room with alarm conditions and lights on.

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ENVIRONMENTAL ICONS

ROOM SUMMARY

The environmental icons communicate conditions within the grow space. Individual parameters can be set for each room/zone to allow for alarms to inform growers if temperature, humidity, CO2 or VPD levels are measured either higher or lower than the set parameters. Up to three sensors can be connected to each LPDP.

TEMPERATURE
Correct temperatures are critical for proper plant growth. Ambient temperature is measured from 32°F to 122°F (0°C to 50 C ±1°C).

CO_2
Maintaining proper CO_2 levels increases product yields and qualities. The Growlite Black Box Sensor (P/N GLC-BBTHCS Temp, Humidity, CO_2 Sensor) measures CO_2 levels up to 10,000 ppm ±30 ppm.

RELATIVE HUMIDITY
Managing humidity within a grow space is necessary to maintain rigorous growth and mitigate mold and mildew. A capacitive polymer sensor samples the ambient air and provides 0% to 99% RH readings within ±2.5%.

VPD
Vapor Pressure Deficit measures the difference between the amount of moisture in the air and the total amount of moisture the air can potentially hold. A lower VPD opens a plant's stomata and supports higher transpiration rates, a higher VPD closes stomata and limits transpiration.

LAMP HOUR
A time counter that keeps a running track of the number of hours the lamps have been running to aid in re-lamping at the appropriate times.

CYCLE DAY
This timer keeps track of the cycle day for a particular room/zone and can be reset when a new crop is installed.

ROOM SUMMARY ICONS

LIGHT TIMING, NOTES AND SETTINGS

LIGHT
Access to the light timing controls for the room/zone:
- Shortcut timing buttons for 0/12/18/24 hour light cycles with ability to enter the on time.
- A Custom Hours timing button to allow users to enter custom time cycles with the ability to enter the on and the off time.
- A button to manually turn the lights off in room/zone.

NOTES
Logs communication between the room/zone operator and the head cultivator/facility manager regarding the specific day-to-day information for the room/zone.

SETTINGS
Screen to allow users to customize the room/zone, including:
- Define the environmental parameters for the room/zone (Temp, RH, CO2, VPD).
- Name the room/zone and the product.
- Start/re-start the Cycle Day counter.
- Zero the Lamp Hour counter.
- Disable the alarm functions.

ADMIN

USER ADMIN
Administration interface to setup users and passwords.

CALIBRATE SCREEN
Provides maintenance function for calibrating the touch screen.

ADMINISTRATION ICONS

EMAIL
Allows administration to setup the email(s) that will be notified in the event of an alarm condition. Emails can be setup for each room/zone ensuring notifications are being sent to the appropriate personnel.

LOGIN
Users must login to make any changes to the light timing or environmental parameters.

CLEAN
A function that temporarily disables the touchscreen to allow for cleaning.

EXIT
Exit the Black Box OS and enter MS DOS.

SET TIME
Set current local time.

ADD ROOM
Add a room to your setup.

SUBTRACT ROOM
Subtract a room from your setup.

BACKUP/LOAD
Button to backup all room/zone settings and make updates to the system, then load them back into the system to avoid the need to manually re-enter the information.

LOGOUT
Button to logout of the system.

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