UgMO™
Technologies

Quick Installation & Start Guide

The UgMO UG1000 Irrigation controller is designed to bring full moisture sensor control to both residential and large commercial landscapes. Available in 12 and 24 zone models, and utilizing its fully digital interface and patented UGMO adaptive watering algorithm, the UG1000 breaks the traditional watering schedule paradigm.

There are no start-times to set and no complex site variables to enter. Just tell it when NOT to water and using the sensor data UgMO does the rest.

- Supports both wired and wireless flow sensors
- Remote configuration and alert reporting
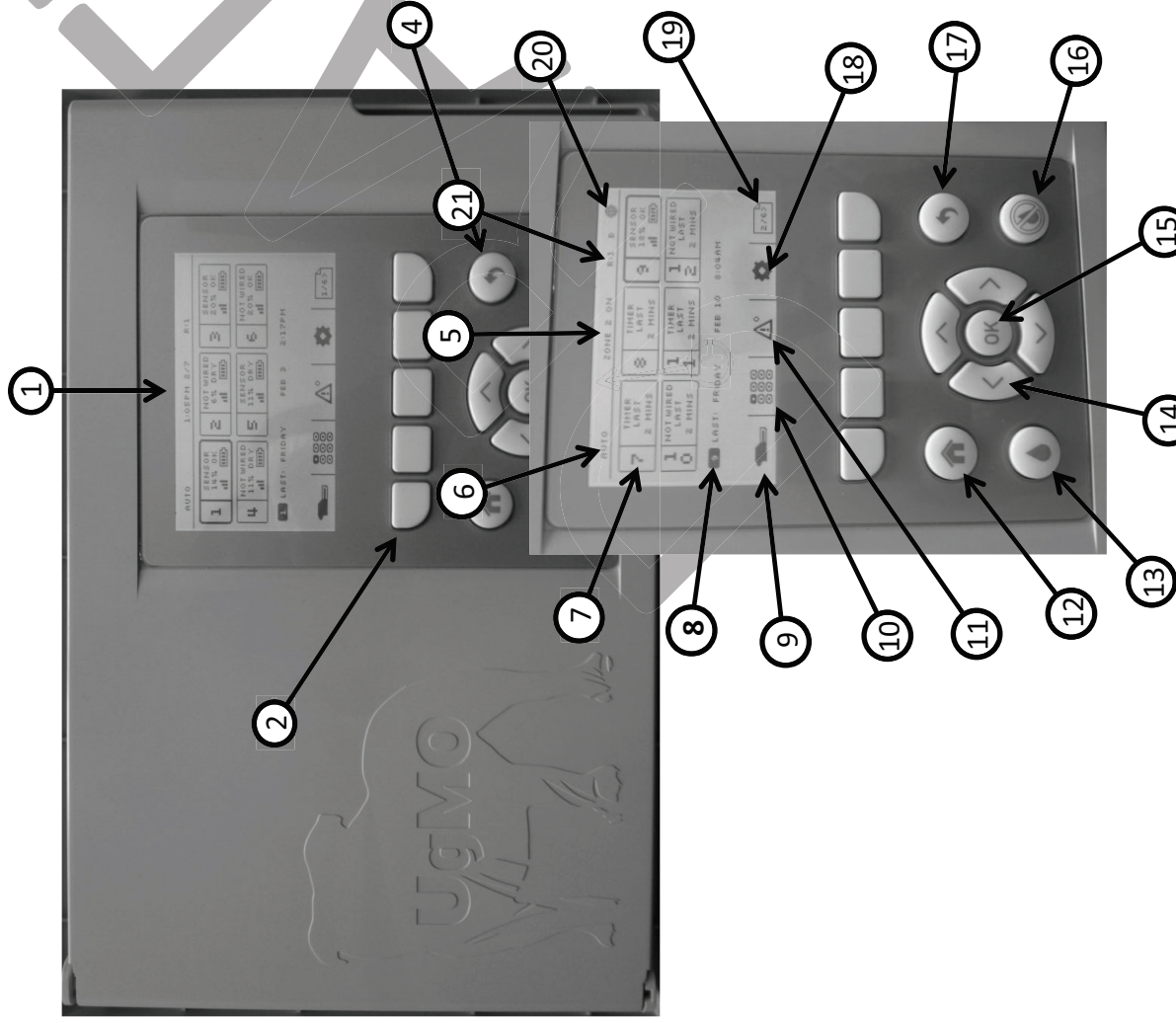- Software upgradeable to allow for future feature expansion
- Embedded Linux processor provides smart device intelligence

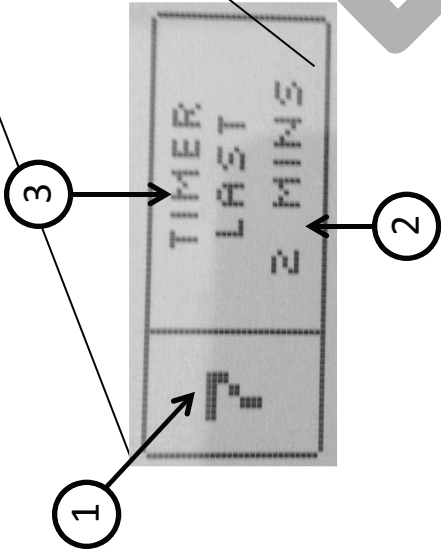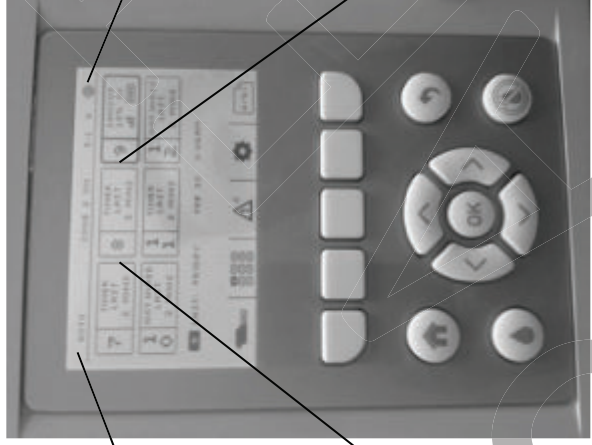PH 200 S

UG1000 Controller
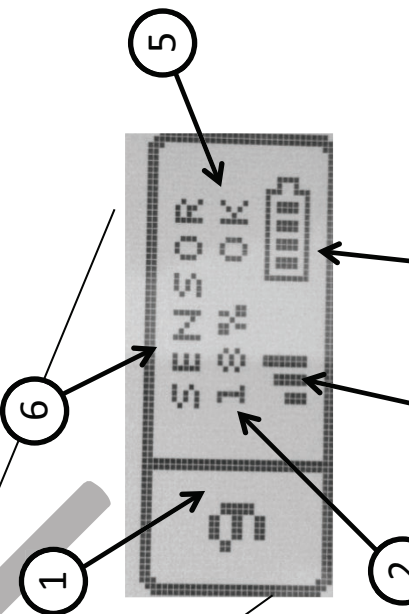## Familiarizing yourself with the UG1000

Components

1. LCD Screen
2. Soft Keys
3. Directional Buttons
4. Menu/Mode/Functional Buttons
5. Current Date and Time
6. Current System Mode
7. Individual Zones
8. Recent Zone Events
9. Device Menu
10. Zone Menu
11. Alerts Menu
12. Home Screen Button
13. System Mode Button
14. Navigation Buttons
15. Selection Button
16. Stop Button
17. Back Button
18. System Settings
19. Page Down
20. Bridge/Internet Icon
21. #of Repeaters in Network

# Familiarizing yourself with the UG1000...continued
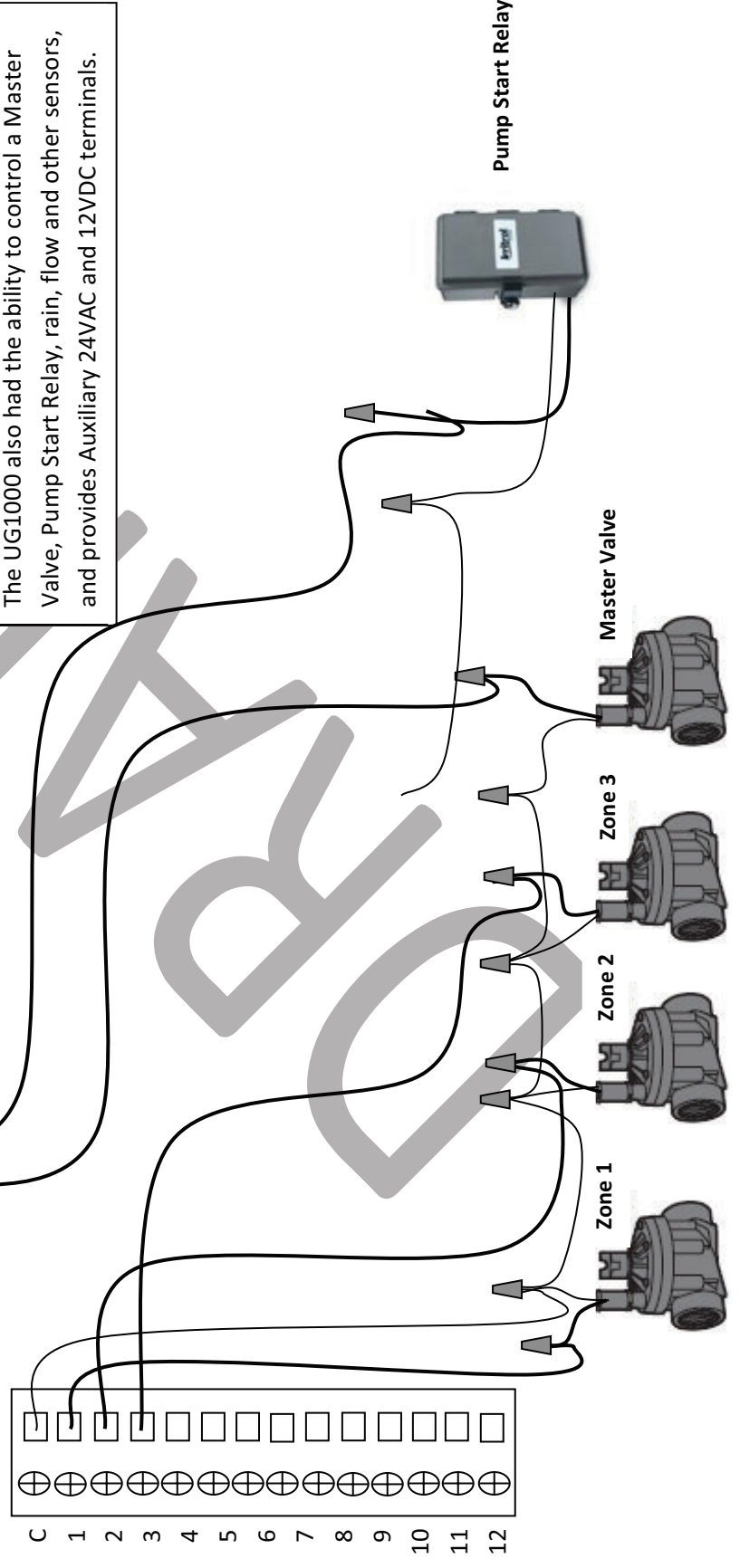

Sensor Controlled Zone
1. Zone Number
2. Soil Moisture Level
3. Signal Strength Indicator (RSSI)
4. Sensor Battery Condition
5. Current Soil Moisture Condition
6. Zone Control Indicator – water cycles are controlled by sensor data

Timer Controlled Zone
1. Zone Number
2. Duration of Last Irrigation Cycle
3. Zone Control Indicator – watering cycles are controlled by timer
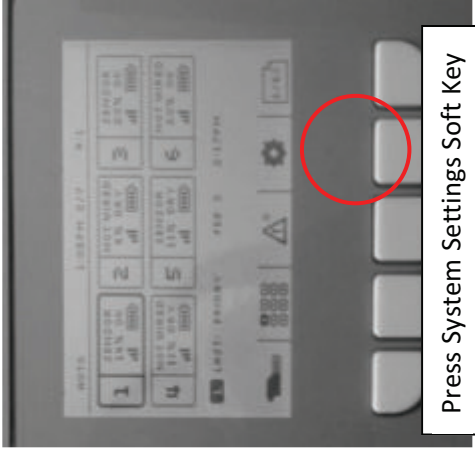
Wiring the UG1000 Controller
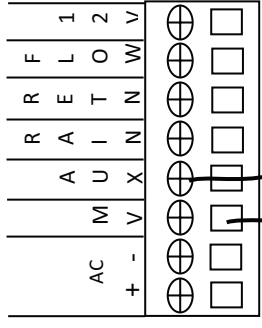
The UG1000 Controller has 12 and 24 zone control capabilities. Simple insert the each valve signal wire into the corresponding zone and splice all commons together and in them into the common terminal found at the top of the vertical set of terminals pictured to the left.
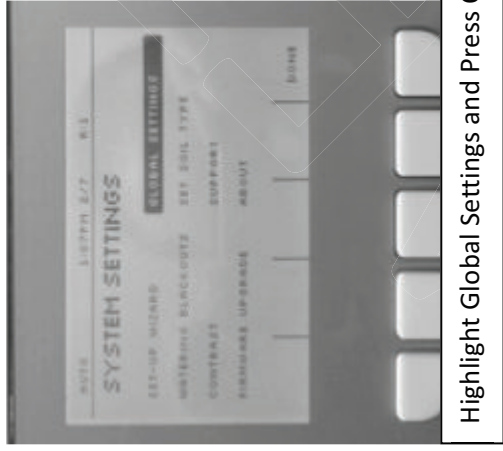
The UG1000 also had the ability to control a Master Valve, Pump Start Relay, rain, flow and other sensors, and provides Auxiliary 24VAC and 12VDC terminals.
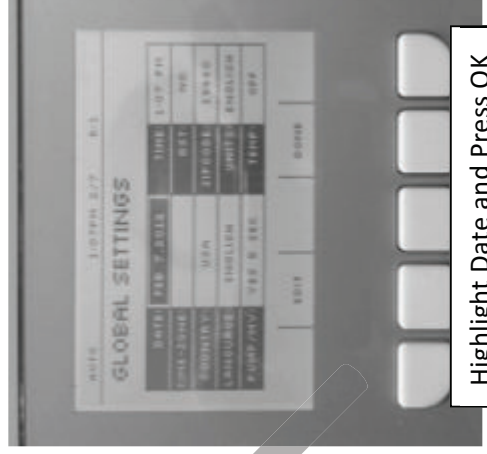
Pump Start Relay

Master Valve

Zone 3

Zone 2

Zone 1

C 1 2 3 4 5 6 7 8 9 10 11 12

AC
+ −
M
V
RAIN
AUX
RAIN
AUX
FLOW
INT
EL
ON
1
ON
2
W
V

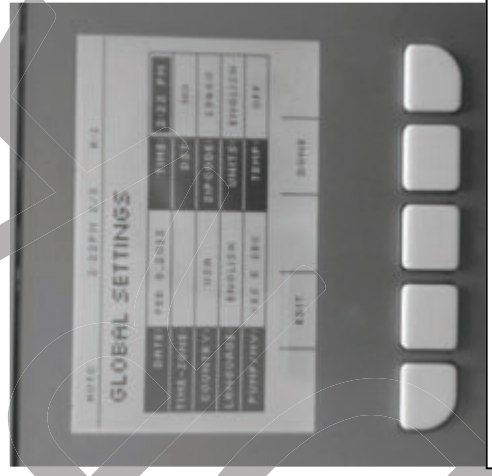# Getting Started...Configuring Global Settings

Press System Settings Soft Key

Highlight Global Settings and Press OK

Using the navigation keys highlight each Month, Day and Year and press OK to change the value. Press Save when finished.

Highlight Date and Press OK

Next, highlight the Time and Press OK

Repeat the same steps followed to change the Date and Press OK when finished

Configuring Global Settings ...Continued

Finish configuring the Global Settings by highlighting each attribute and changing the value using the same process as the Date and Time. Make sure to choose the properties correct;

- Country (location of site)
- Language (spoken by users)
- Pump/MV to activate a Master Valve or Pump if one is present
- DST – to activate Day Light Savings if observed by the location
- Zip Code
- Units to establish Fahrenheit or Celsius among others
- Temp – to activate the cold temperature override feature (page ?)

Setting Watering Blackout Times

To select an All Day Blackout simply highlight ALL DAY and Press OK, then Press Save

Clear soft key can be used to remove Blackouts and the ALL DAY and COPY PASTE can be used for quick configuration.

Default settings for each day will be NO BLACKOUT. To change highlight a given day a Press OK

Choose a START and FINISH time range and press ADD to populate box to the right and Press Save

Return to System Settings and this time Highlight Watering Blackouts and Press

To restrict watering to a range of time during the day, move the cursor to the lower box named START

Assigning Sensors

Turn the sensor on and look for its Net Work Address (NWA) to appear in the list, highlight and press Assign or OK.

Sensors can also be added by pressing the Manual soft key in the image above instead of picking from the list. Just insert the NWA and assign it to a zone

Highlight Moisture Sensors and Press OK

The zone will appear with be highlighted with a thick boarder and will also appear in the box to the right, Press SAVE

Press Device Soft Key on Main Screen

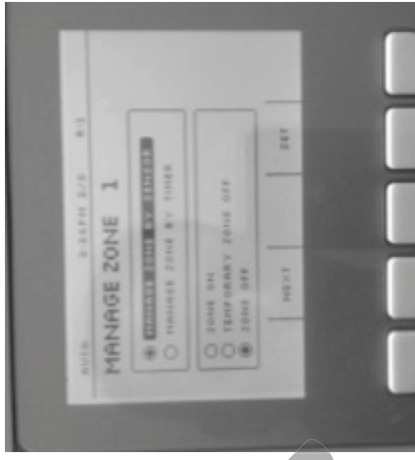Highlight the desired zone that the sensor will manage and Press OK (multiple zones can be chosen)
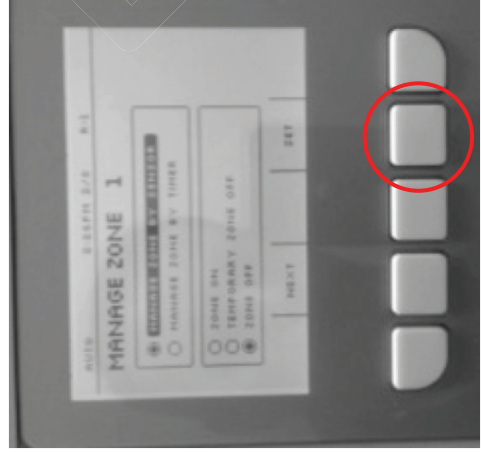
Managing Zones …Sensor Controlled
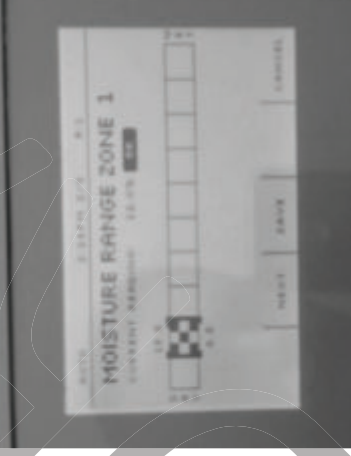

Press the Zones Soft Key

Highlight the desired zone and Press MANAGE

Highlight Manage Zone by Sensor and Press OK. Scroll to the lower box and Highlight Zone On and Press OK

Next, press SET to manually set the soil moisture level (UgMO can do this automatically as well see page ?)

Move the checkered cursor to the desired moisture range. High and Low thresholds are visible above and below the icon
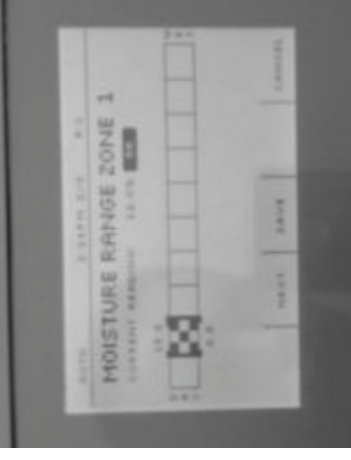
The current reading of the sensor will be displayed along with a Zone condition of OK, WET, or DRY depending on range chosen, press SAVE

Managing Zones...Timer Controlled

Press the Zones Soft

Highlight the desired zone and press MANAGE

Highlight MANAGE ZONE BY TIMER and press OK. Scroll to lower box and highlight ZONE ON and press OK

Press SET to program zone cycle runtimes
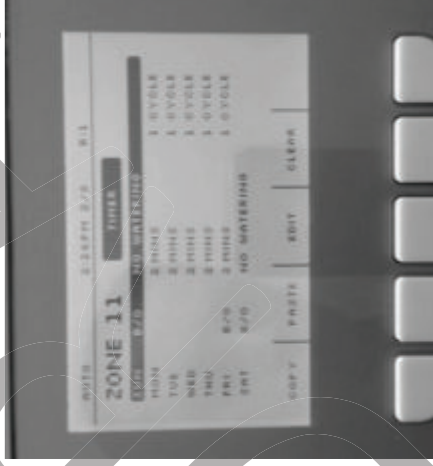
Choose the day of the week that you want to schedule watering and press OK or EDIT. Copy and Paste keys can be used for quick configuration

Choose how many cycle soaks are desired then move cursor to box on the right to set total runtime, press SAVE
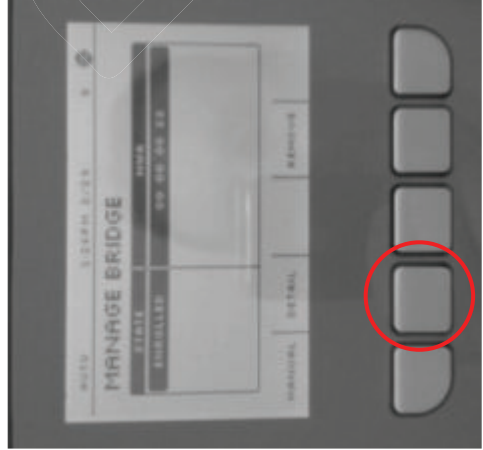
Enrolling the Internet Bridge

The NWA of the Bridge should appear to the right (make sure the Bridge is powered on). Press ENROLL

You can also manually enter the bridge NWA (like a sensor) to enroll by pressing MANUAL in the screen above.

Highlight Internet Bridge from the list and press OK

Highlight Information and Press OK to modify information. Press ADVANCE to view/change the internet settings

Press the Device Soft Key on the Main Screen

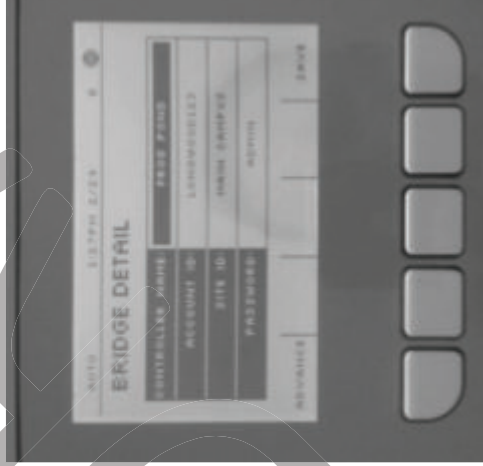ENROLLED will appear in the window on the left. Press the DETAIL button to view/change setting and navigate to ADVANCE settings

Enrolling a Repeater

With the Repeater powered on, look for its NWA to appear in the first column. Highlight and Press ENROLL

You can also manually enter the repeater NWA (like a sensor) to enroll by pressing MANUAL in the screen above.

Highlight Repeaters and Press OK
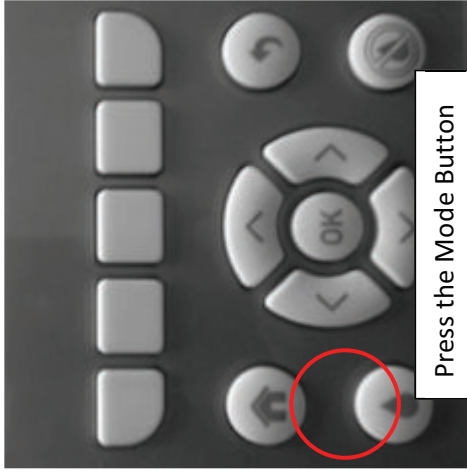
Repeater Detail Screen

Press the Device Soft Key on the Main Screen

ENROLLED should appear in the STATUS window. You can press DETAIL to view wireless signal

Controller Modes

Press the Mode Button

SET MODE
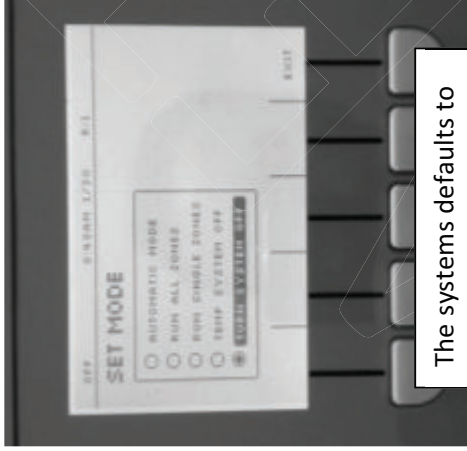
The systems defaults to OFF when first powered

SET MODE
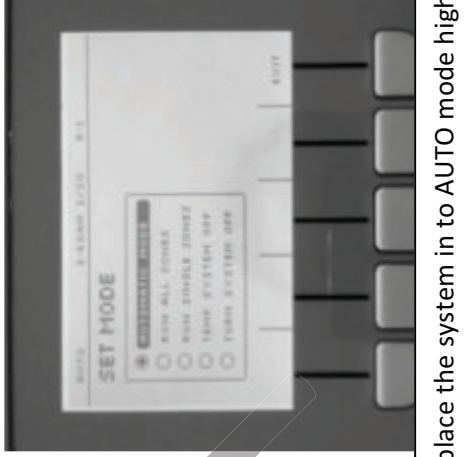
To place the system in to AUTO mode highlight AUTOMATIC MODE and press OK, then exit.

SET MODE

To run all zones, Highlight RUN ALL ZONES, press OK and move the cursor up and down to pick desired runtime and press START

RUN SINGLE ZONE(S)

Highlight zones that you want to run and press OK, then scroll to box on right and scroll up and down to pick desired time, press START

SET MODE

You can temporarily turn the system to OFF, by choosing TEMP SYSTEM OFF and choosing a time in the box on the right

Soil Moisture Setting

The UG1000 controller has the ability to automatically determine your soil characteristics helping it decide on what the soil type setting should be and the moisture range that is optimal for the health and growth of your lawn and landscape. You also have the option of manually configuring the soil type setting and/or adjusting the UgMO determined setting. For best system operation, use the UgMO auto calibration and then make adjustments to the settings if necessary.

How the auto calibration phase works is, each zone will run for a predetermined amount of time with soak times in-between until the soil reaches the saturation point and the field capacity is determined. This is done by measuring the level of the soil moisture over time and how each irrigation cycle affects it. You can expect to see a lot of water running and very wet conditions during this event which should only last a couple of days. Once completed, the UG1000 will begin to water in accordance to soil moisture needs and the availability of allowable water windows by observing the scheduled black out watering times.

The next page will walk you through setting the soil type both automatically and manually.

Soil Moisture Setting ...Continued

Highlight the zones that you wish to calibrate or choose ALL ZONES and decide to calibrate NOW or LATER in auto mode or MANUAL

To manually set the soil type in Global Settings, press the MANUAL soft key in the screen above after selecting one, more or all zones.

Highlight SET SOIL TYPE and press OK

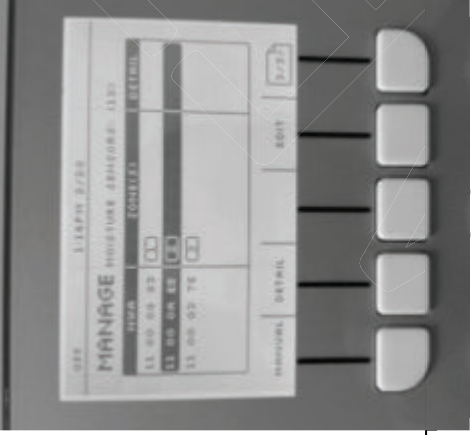When Auto Calibration for soil setting the soil type, LEARNING will appear on the main screen in those affected zones

Press the System Settings soft key

Once auto calibration is started it can be stopped by pressing the STOP soft key or manual setting of the soil type can be chosen by pressing MANUAL

Signal Quality and Sensor Communication

the sensor including NWA, zone assignments and current readings.

Press LONGTERM to see more of a history of communication. The graph represents 4 days with each line = 90 minutes. A full line indicates all packets received.

sensor and press OK or DETAIL

This will show the last 5 transmissions and the time when they were received by the controller. The YES and NO in the Repeater columns denotes that the signal was repeated if it says YES

to Devices and choose Sensors

Press the HISTORY soft key to see last five communication packets from the sensor

Trouble Shooting and Alerts

ERROR LIST

Over Current Valve 2

Water Line break

Highlight error and press DETAIL for more information or press CLEAR to remove it from the list

To view any registered alerts, highlight the Alerts Soft Key and press OK

Regulatory Notices

This device complied with Part 15 of the FCC Rules and Industry Canada License Exempt RSS Standard(s). Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and
(2) This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for Class B Digital Device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

- This device may only be used with the approved internal antenna that is shipped with the unit and installed per installation instructions. The use of any other antennas will invalidate the unit's FCC Part 15 certification.
- To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that permitted for successful communication. Operating the device with the supplied antenna will ensure that this requirement is met.

This equipment generates and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures.

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This Class B digital apparatus complies with Canadian ICES-003.
Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.