# GTI

# Zone Network User Manual

1st Ed.

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# Home

This is your home screen:

SAT 08:56

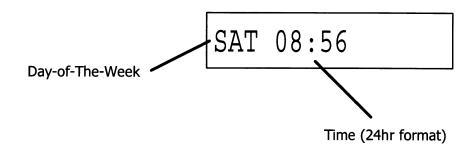
Your home screen is the screen that your Zone controller displays after booting up, and whenever nobody is using it. If you walk by your zone controller, you will usually see the home screen.

If the alarm indicator



is flashing, disregard it for now.

When there are no alarms (or when all alarms have been resolved), your screen should look like this:



You can reach the Home screen from any screen by pressing

Home

If you are in the middle of changing something, you will need to press it twice: once to cancel the change, and once more to reach the Home screen.

# Config / Beginner Tutorial

#### How to Get There

Starting at the Home Screen

SAT 08:56

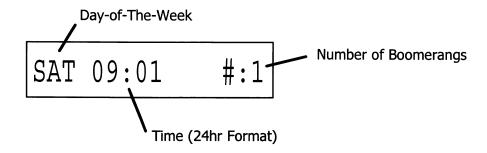
**Press** 



To go to the Config Screen:

SAT 09:01 #:1

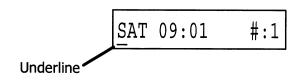
Here you can view the day, time and number of Boomerangs in the zone network.



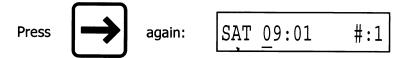
Right now the screen is 'in view mode', so you can't accidentally change anything. In order to change the day, or time, or number of Boomerangs, you have to open the screen for changes.

### The Underline

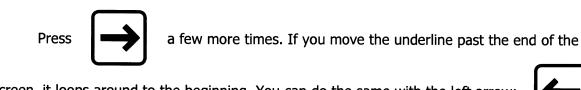




See the little underline under the 'S' in Saturday? This means that the screen is open for changes, or 'in Edit Mode'. Only the right arrow can put a screen in edit mode.



Did you see how the underline moved? Wherever the underline is, you can make changes.



screen, it loops around to the beginning. You can do the same with the left arrow:



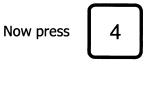
# How to Make and Save a Change

and press

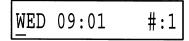
Move the underline back to the 'Day-of-The-Week', SAT 09:01 #:1

Nothing happened. This is because each day has a number:

- 1 = Sunday
- 2 = Monday
- 3 = Tuesday
- 4 = Wednesday
- 5 = Thursday
- 6 = Friday
- 7 = Saturday



The 'Day-of-The-Week' changes to Wednesday:



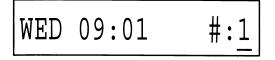


And the underline disappears!

Your config screen is back in 'view mode'. Whenever you make changes and save them, you automatically return to view mode so you can review your changes.

# How to Cancel a Change





And the underline is under 'Number of Boomerangs'.

Now press 3

There is now a '3' in 'Number of Boomerangs'

WED 09:01 #:3

Now press



The underline is now under 'Minutes':

Now that you've made a change, you're ready to cancel it - press



and you're back in 'view mode'

and the change (from 1 Boomerang to 3 Boomerangs) has been cancelled!

You can press



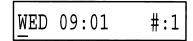
to cancel changes as well.

Whenever you cancel changes, the screen reverts back to the way it was before you put it in edit mode. So it doesn't matter how many changes you've made or how many times you changed something while you were in edit mode, the result is still the same.

#### **Bad Values**



To put the screen in edit mode

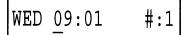


Then press



again

To move the underline to 'Hours'.



Press





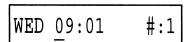
To change 'Hours' to '58'

24-hour time runs from 00:00 (midnight) to 23:59 (11:59 pm) so 58:01 doesn't exist. So what does the Zone Controller do?

Press



It erases everything you've just entered in 'Hours', and leaves the underline there just in case you made a mistake and really wanted to put in a reasonable value (00-23).

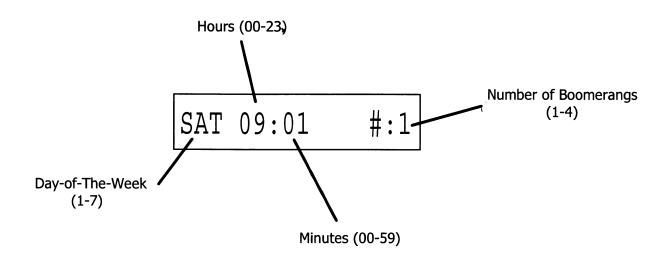


Press



Since there's a good value there, you were able to move the underline:

So what values are 'good values' for the config screen?



### Configure Your Zone Controller!

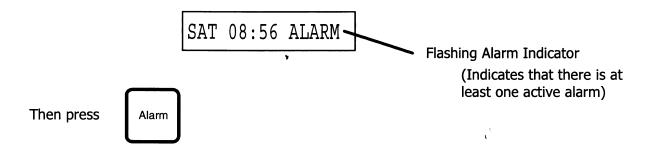
Go ahead and change the Config screen to match your day of the week, your current time, and however many Boomerangs you have on your zone network. Then save your changes and go back to the home screen:

If you have an alarm indicator, then keep going - the section on Alarm Screens starts on the next page - and also visit Appendix B, "How to Troubleshoot an Alarm" (pg 30).

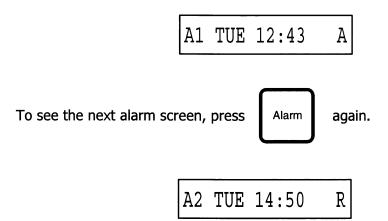
# **Alarms**

Your Zone controller goes through a roll-call of all the boomerangs in the network a few times a second. If one (or more) of the boomerangs fails to answer, then the Zone Controller alarms, and we say that the boomerang has 'lost communication' with the Zone Controller.

To see your alarm screens, start at your home screen,



Each boomerang gets its very own alarm screen, and the first alarm screen you see is always Boomerang 1's alarm screen.



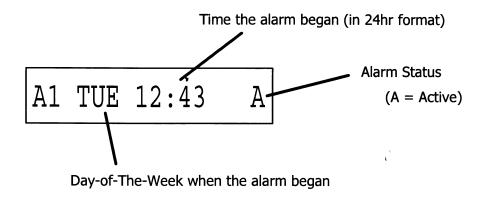
This is 'A2', Boomerang 2's Alarm screen. If you have four boomerangs in your zone network, pressing



repeatedly will move you through the alarm screens for all four boomerangs: A1, A2, A3, A4, A1, A2, A3, etc.

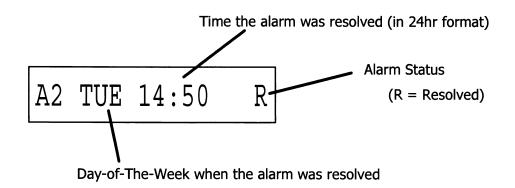
There are two kinds of alarm entry: **active**, and **resolved**. When a boomerang first fails to answer the roll-call, an **active alarm entry** is created, and the alarm remains active until the Boomerang starts responding.

What an **active** alarm entry tells you:



When a Boomerang with an active alarm starts responding again, the alarm is **resolved** and a **resolved alarm entry** replaces the earlier active entry.

What a **resolved** alarm entry tells you:



#### How to Clear the Alarm Screens

While looking at any alarm screen,

A3 WED 08:38 A

Press



to clear ('zero out') all the alarm screens:

A3 ALARM CLEARED

Clearing the alarm screens gives the Zone Controller a clean slate. Any alarms which were already resolved stay cleared

A2 ALARM CLEARED

But any Boomerangs which had active alarms will fail the next roll-call and get a new alarm entry, with the time and day when you cleared the alarms. Cycle back through the alarm screens (or leave and then re-enter the alarm screens) to see these new entries:

A3 THU 12:25 A

### How to Leave the Alarm Screens

While looking at any alarm screen,

A2 ALARM CLEARED

**Press** 



or



To go back to the home screen:

WED 17:34

# **Boomerang Screen**

Each Boomerang has its own screen:

3 WED 17:55

#### How to Get There

If you want to get to a Boomerang screen, say, the Boomerang 4 screen,

start at the home screen,

and press the corresponding number, in this case,

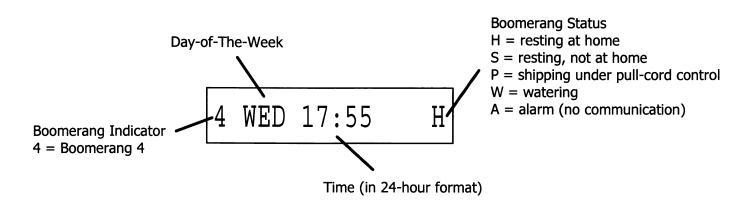


4 WED 17:55

and you're there.

You can do the same thing starting at any other boomerang screen - just press the number of the boomerang whose screen you want to view.

# What Does It Say?



#### How to Leave It

To go back to the Home screen, just press

or

# Water Screen

#### How to Get There

Each Boomerang has a watering screen, in which you can see and change its whole watering program. To reach it,

start at the home screen WED 17:55

and press the number of the boomerang that you want to work with, say,

4

4 WED 17:55 H

and you're looking at the Boomerang 4 Screen (almost there)

Now press Job 1 (the water key).

4w 50 50 12

and you're looking at Boomerang 4's Water Screen.

Nifty Shortcut: if you're looking at Boomerang 4's Schedule A or Schedule B screen (4a or 4b), you can just press

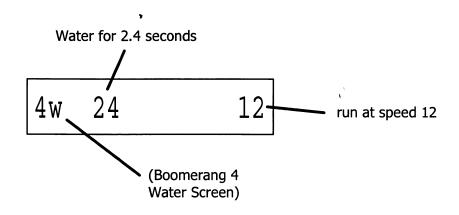
Job 1

to get to Boomerang 4's water screen.

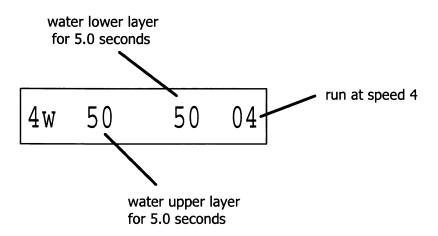
# What Does It Say?

This screen is automatically custom-tailored to its Boomerang's layer and water settings. You don't have to do anything - the Zone Controller senses the Boomerang settings, and adjusts the screen to match.

### 1-Layer

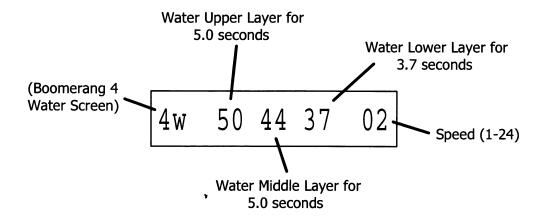


### 2-Layer

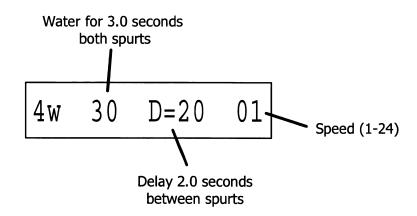


Note: Acceptable Values for Water Times are 00-99 (0.0 - 9.9 seconds). **However, any values less than 10 (1.0 seconds) are treated as 0 seconds.** 

### 3-Layer



### **Funnel**



Note: Acceptable Values for Water/Funnel Delay Times are 00-99 (0.0 - 9.9 seconds). **However, any values less than 10 (1.0 seconds) are treated as 0 seconds.** 

# Schedule Screens

Each Boomerang has two schedule screens, A & B. In each one, you can set a time and days of the week for the boomerang to water. When the boomerang waters, it waters according to the water screen, so make sure to set that up first.

#### How to Get There

Starting at your home screen:

WED 17:55

Press the number key for the Boomerang you want to schedule, for instance,

2

then press the key for the schedule that you want to use, for instance,

Sched A

and you're there:

2a 00:00 SMTWRFS

You could easily substitute the Schedule B button (

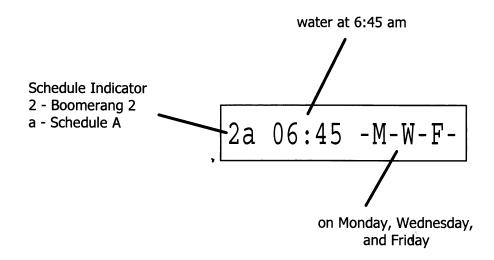
Sched B

)

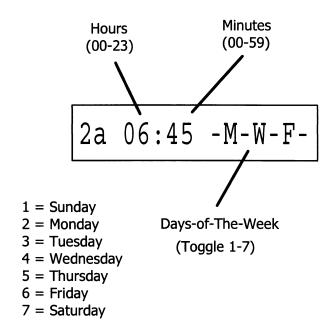
and access Schedule 2b:

2b 00:00 SMTWRFS

# What Does A Schedule Screen Say?



#### **Acceptable Values:**



# Log Screens

Each Boomerang has its own Log Screen. The Log screen records what is going on with the most recent watering command sent to that Boomerang.

L4 SAT 08:38 C

#### How to Get There

Start at the Home Screen:

WED 17:34

Press Log

and you see the log screen for Boomerang 1:

L1 MON 17:45 C

If your network is brand new and your Zone Controller hasn't sent a watering command yet, or if you've cleared your logs, then your L1 screen might look like this:

L1 LOG CLEARED

which just means that it doesn't have any information.

To see the log screens for the other Boomerangs on the network, press



L2 SAT 19:32 I

and you see the log screen for Boomerang 2.

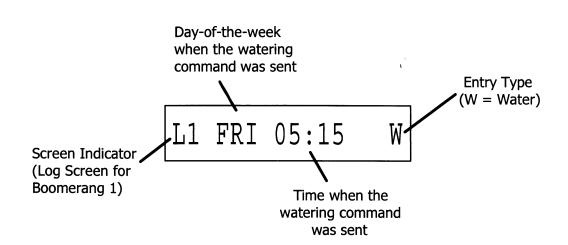
If you keep pressing the Log key, you will cycle through all of the log screens repeatedly: L1, L2, L3, L4, L1, L2,... etc.

### What Do The Log Screens Say?

There are 4 different kinds of Log entries: Water, Interrupted, Complete, and Failed.

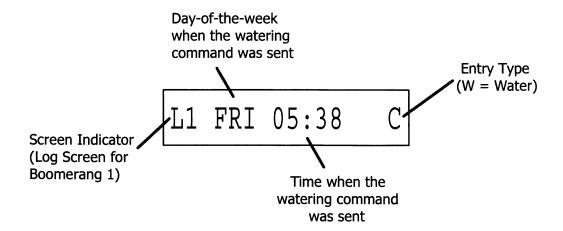
#### Water

A 'Water' entry appears in the log when the zone controller sends a water command and the Boomerang begins watering successfully.



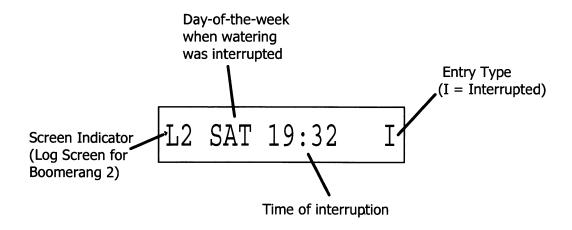
#### **Complete**

Once a Boomerang successfully finishes a zone-controller-ordered watering, the 'water' log entry is replaced by a 'complete' log entry



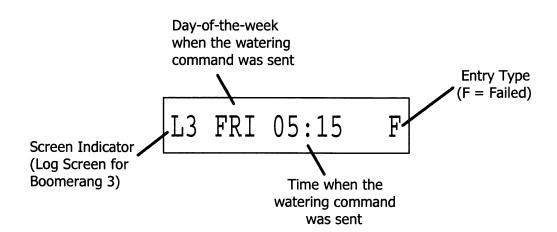
#### <u>Interrupted</u>

When the Zone Controller sends a watering command, and the Boomerang begins watering, but then someone interrupts the watering in progress, then the 'watering' log entry is replaced by an 'interrupted' log entry.

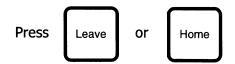


#### **Failed**

A 'Failed' entry appears in the log when the zone controller sends a water command and the Boomerang either doesn't respond (is alarming) or is busy (is already watering or is under pull-cord control).



### How to leave the Log Screens



# How to Clear the Log Screens

While looking at any log screen,

L1 FRI 05:38 C



To clear all the log screens.

L1 LOG CLEARED

They should remain empty until more watering commands are sent.

# How to Leave the Log Screens

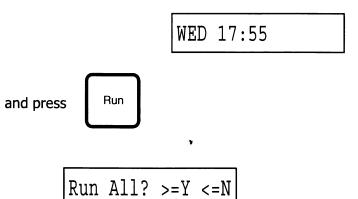


To go back to the home screen:

WED 17:34

# Run All Screen

To get there, start at the home screen,



To tell all the boomerangs to run their individual water programs at the same time, choose "Yes" by pressing



# **Test Screen**

To get there, start at the home screen,

WED 17:55

press 9

and you're there.

Press a key to see its name pop up; for instance,

press A to see TEST: Key = SchA

press Run to see TEST: Key = Run

To leave the screen, press



(Appendices)

# Appendix A: Quick Tutorial

# Setup a Watering

Start at the home screen,

WED 17:34

**Press** 



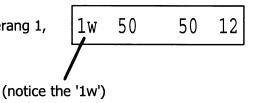
And you're looking at the Boomerang 1 screen.

1 SAT 09:22

Now press



And you're at the water screen for Boomerang 1,



**Press** 



You've just put the screen in 'Edit Mode' so that you can make changes. See the underline? You can make changes wherever it is.

**Press** 



You've just changed the water time for your Upper Layer of baskets from 5.0 seconds to 3.5 seconds.

1w <u>3</u> 5	50	12
---------------	----	----

Press



Change the water time for the lower layer from 5.0 seconds to 2.2 seconds.

and change the speed to 05.

**Press** 

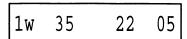


to save your changes.

You just put the screen back in View mode - see, the underline is gone!

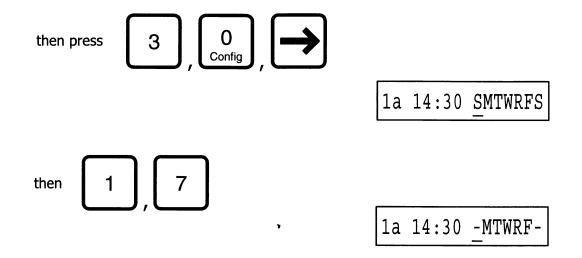
# Schedule the Watering

Starting at the water screen you were just viewing:

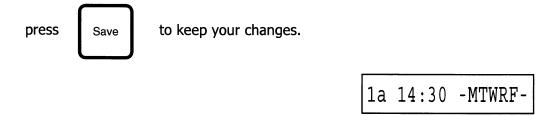


You're looking at the Schedule A screen for Boomerang 1 - see the '1a'? 1a 00:00 SMTWRFS Note: If you backed out to the home screen after working with your water screen, You would need to press to get back to the Boomerang 1 screen, 1 SAT 09:22 Sched Then press to go to the Schedule A screen for Boomerang 1. 1a 00:00 SMTWRFS to put the screen in edit mode and make some changes. press 1a 00:00 SMTWRFS press

1a 14:00 SMTWRFS



You've set Boomerang 1 to water at 2:30 pm every weekday, using the parameters you previously entered in the water screen.



You've programmed your first Boomerang. You can do even more - like setting up schedule B, so your Boomerang waters twice a day, or at a different time on different days, but you've got the basics down.

# Appendix B: Troubleshooting Alarms

If you have an alarm indicator flashing on your home screen,



it means that at least one of your Boomerangs is not communicating with the Zone Controller. The first thing you need to do is find the problem Boomerang(s). Press



and you see the Alarm screen for Boomerang 1.

A1 TUE 12:43 R

Keep pressing



until you have seen all of the Alarm screens, and found the

problem Boomerangs (the ones with an 'A' on the far right).

First, consult the GTI Zone Network Setup Manual and look at the Boomerangs which are not communicating; examine:

Wiring Jumpers Network Chip Program Chip Dipswitches

Try to make sure everything matches the Manual. If you still can't resolve the problem, contact GTI Tech support (See Appendix E).

# Appendix C: Nifty Tricks

# Moving Between Boomerang Screens

Starting at any Boomerang Screen

2 SAT 09:22 A

Press the number of another Boomerang:



To go directly to that Boomerang's screen

Without having to go back to the Home screen.

### Moving Between Schedule/Water Screens

Starting at the Schedule A, Schedule B, or Watering screen for any Boomerang, you can move between these screens by

pressing 
$$\begin{bmatrix} Sched \\ A \end{bmatrix}$$
 ,  $\begin{bmatrix} Sched \\ B \end{bmatrix}$  , or  $\begin{bmatrix} Job\ 1 \end{bmatrix}$ 

For instance, beginning at Boomerang 1's Schedule B screen

1b 00:00 SMTWRFS

Press Job 1

to move to Boomerang 1's water screen

1w	50	50	12
ł			

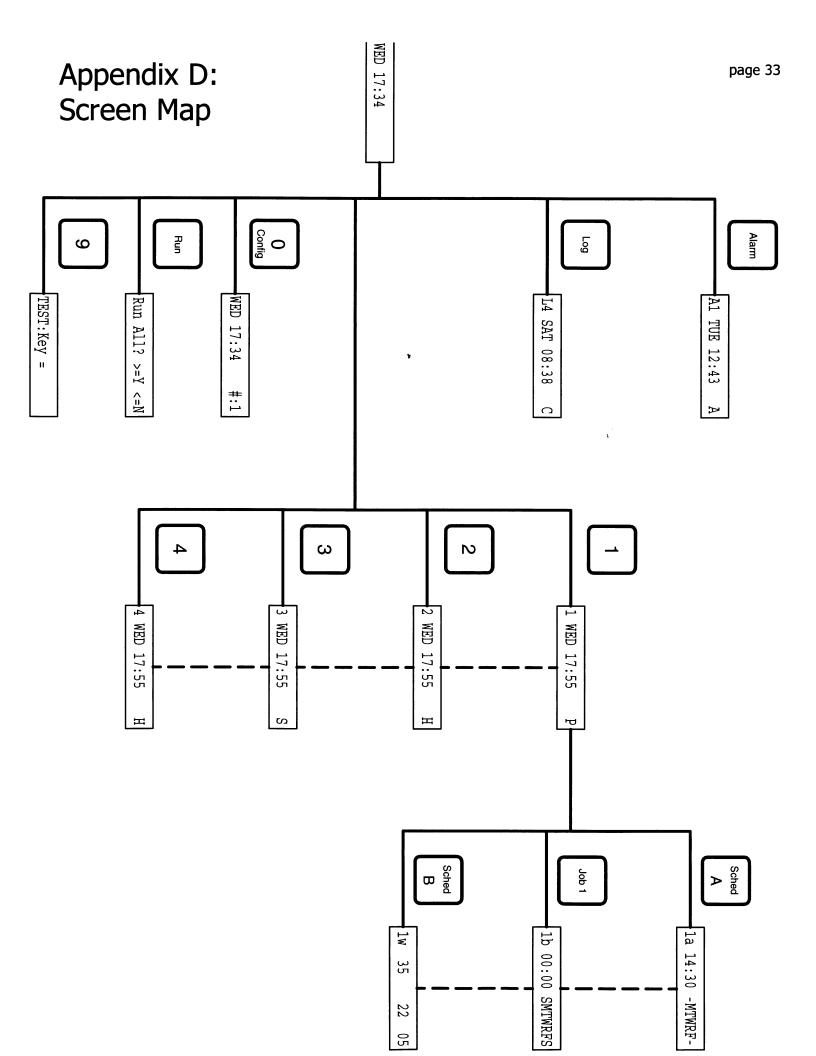
Then press



to move to Boomerang 1's Schedule A screen

You can likewise move between the Schedule and Water screens for Boomerang 2:

And of course it's the same for Boomerangs 3 & 4.



# **Appendix E: Contact Information**

#### Tech Support/Customer Service

#### Sales

#### **Address**

Greenhouse Technology Inc. 141 Hanger Circle Richmond, KY 40475