

GTI

Zone Network User Manual

Rev. 02

For GTI Zone Controller Version 2.00

Contents

Home	p3
Config	p6
Alarm Screens	p10
Boomerang Screen.....	p13
Water Screen	p14
Schedule Screens	p17
Log Screens	p19
"Run All" Screen	p23
Test Screen	p24
Appendix A: Quick Tutorial	p26
Appendix B: Troubleshooting Alarms	p30
Appendix C: Screen Map	p31
Appendix D: Contact Information	p32

Home

This is your home screen:



SAT 09:00

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



SAT 08:56 ALARM

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:



SAT 09:00

Day-of-The-Week

Time (24hr format)

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.

Quick Config

To Get There

Starting at the Home Screen

SAT 09:00

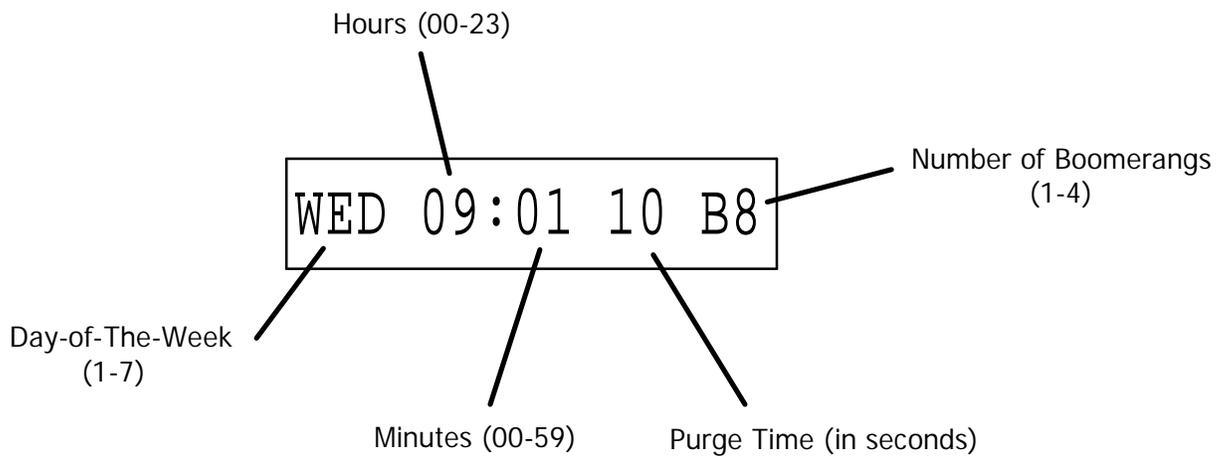
Press



To go to the Config Screen:

WED 09:01 10 B8

What it says:



Each boomerang sprays water (purges) for this long before beginning a watering spin if it starts at 'Home'.

Config

How to Get There

Starting at the Home Screen

SAT 09:00

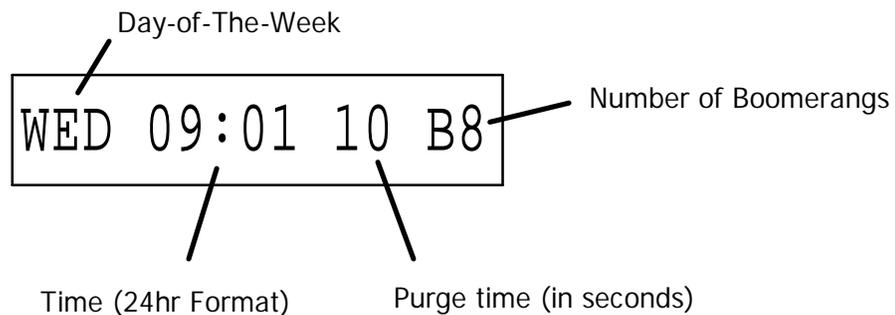
Press



To go to the Config Screen:

WED 09:01 10 B8

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

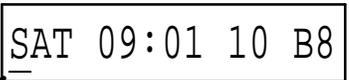


Right now the screen is 'in view mode', so you can't accidentally change anything. In order to change the day, or time, or number of Boomerangs, you have to open the screen for changes.

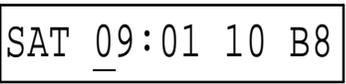
The Underline

press



Underline 

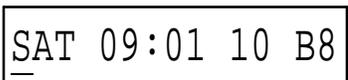
See the little underline under the 'S' in Saturday? This means that the screen is open for changes, or 'in Edit Mode'. Only the right arrow can put a screen in edit mode.

Press  again: 

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

Press  a few more times. If you move the underline past the end of the screen, it loops around to the beginning. You can do the same with the left arrow: 

How to Make and Save a Change

Move the underline back to the 'Day-of-The-Week', 
and press 

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

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

Now press 

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

Now press 

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

Now press  again.



And the underline is under 'Day of the week' again.

Now press



The Day-of-the-week now shows Tuesday

TUE 09:01 10 B8

Now press



The underline is now under 'Number of Boomerangs':

TUE 09:01 10 B8

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

Leave

and you're back in 'view mode'

WED 09:01 10 B8

and the change (from Wednesday to Tuesday) 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

Press



To put the screen in edit mode

WED 09:01 10 B8

Then press



again

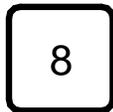
To move the underline to 'Hours'.

WED 09:01 10 B8

Press



,



To change 'Hours' to '58'

WED 58:01 10 B8

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).

WED 09:01 10 B8

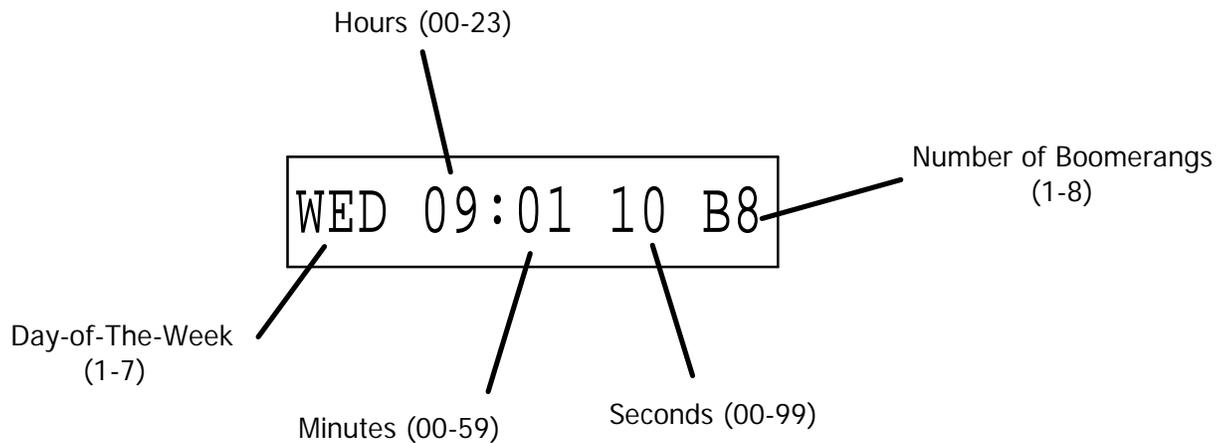
Press



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

WED 09:01 10 B8

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:

SAT 09:00

If you have an alarm indicator, then go to Appendix

Press



WED 09:01 10 B8

To set the time to 17:34 (5:34 PM), press



WED 19:01 10 B8

Then press



WED 17:01 10 B8

(notice that the underline stays under the first character of 'Hours')

If you pressed a button wrong, relax - you can just write over your mistake by pressing more number buttons. For instance, press



and you've written over your '17' with '58'

WED 58:01 10 B8

But 58:01 doesn't exist - times in 24-hour format only go up to 23:59. So the Zone Controller doesn't let you keep this number. Press



to go to another field, and instead, the value reverts back to whatever it was before you started typing numbers:

```
WED 09:01 10 B8
```

Anyway, lets get back on track. Type

1 7

```
WED 17:01 10 B8
```

And then move over to the 'Minutes'.

(Press )

```
WED 17:01 10 B8
```

Just like 'Hours', 'Minutes' doesn't let you enter bogus numbers - if you tried to enter '92', for instance, it wouldn't let you. Just enter '34', and move over to that mysterious number on the far right.

(Press  ,  , )

```
WED 17:34 10 B8
```

This is where you tell the Zone Controller how many Boomerangs are on the Zone Network. This number can be 1, 2, 3 or 4. Change it to '2'.

WED 17:34 #:2

Now press



WED 17:34 #:2

Notice that the underline is gone. Your Config screen is back in 'view mode'. You can also see that the changes you made have 'stuck'. The Zone Controller now believes that it is 5:34 pm on a Wednesday, and that there are 2 Boomerangs on its network.

Now, press



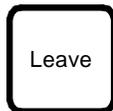
to open the screen back up for editing,

WED 17:34 #:2

move the underline over to 'Minutes' and change the value to '05 so that the time reads '17:05'.

WED 17:05 #:2

Now press



WED 17:34 #:2

Notice that the change you made to the time was canceled, and the screen was put back in 'view mode'. You could have done exactly the same thing by pressing



The same is true for any screen in the Zone Controller. While you are making changes,

Press  or  to cancel your changes and return to view mode; or,

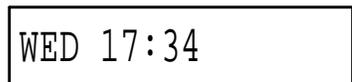
Press  to keep your changes and return to view mode.

Right now, though, you are in Config (view mode)



WED 17:05 #:2

Press  to go back to the home screen.



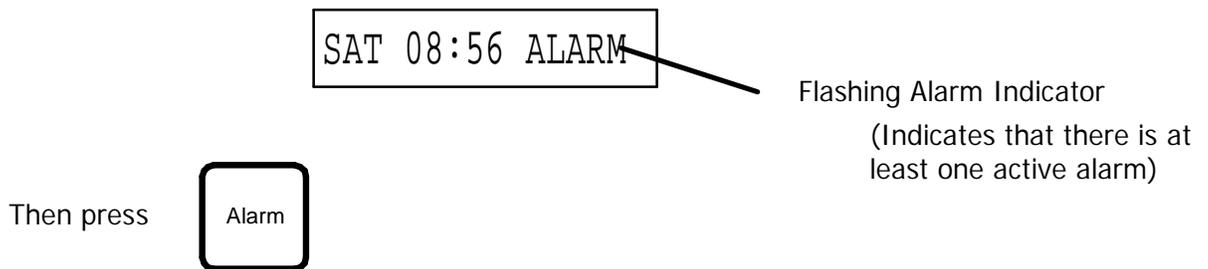
WED 17:34

That is how to Configure your Zone Network. Since your Day and Time and Number of Boomerangs probably don't match what was shown here, go ahead back into Config and change all the parameters to match your circumstances, and don't forget to save them. Always review the 'view mode' of the screen after making changes to make sure that they 'stuck'.

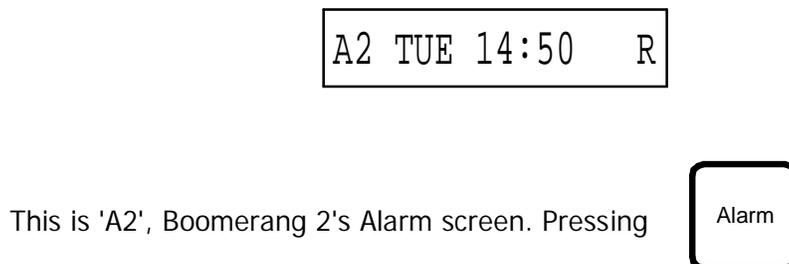
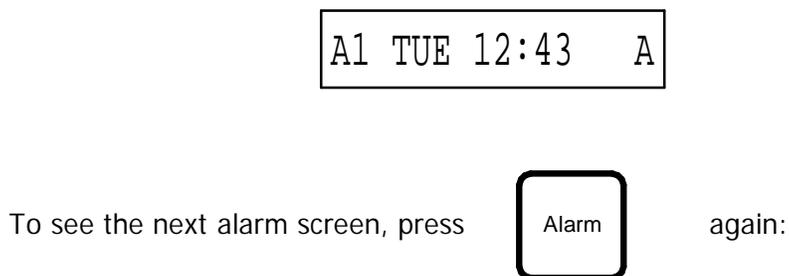
Alarms

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 with the same number. This is the alarm screen for Boomerang 1:



repeatedly will move you through the alarm screens for all eight boomerangs: A1, A2, A3, A4, A5, A6, A7, A8, A1, A2, A3, etc.

More Ways to Get to any Alarm Screen:

By Number:

If you're on any alarm screen:

A3 ALARM CLEARED

Press

7

to see A7

A7 TUE 11:02 R

and then

4

to see A4

A4 WED 00:04 A

You may move between Alarm screens by number.

From Boomerang

If you're at any Boomerang Status Screen:

7 SAT 09:22 H

Press

Alarm

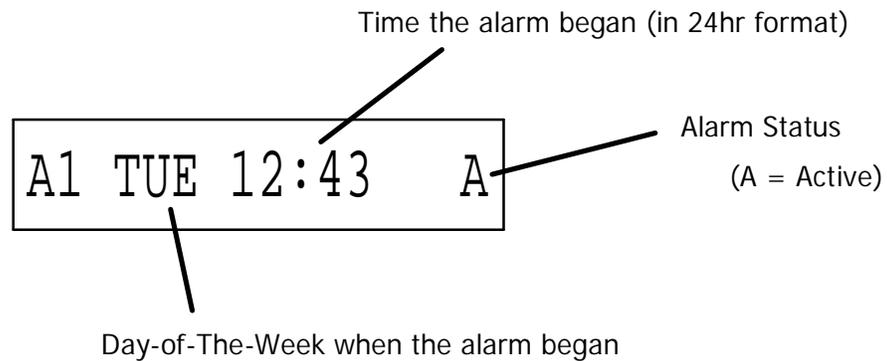
to see that Boomerang's Alarm Screen:

A7 TUE 11:02 R

What the Alarm Screen is Saying:

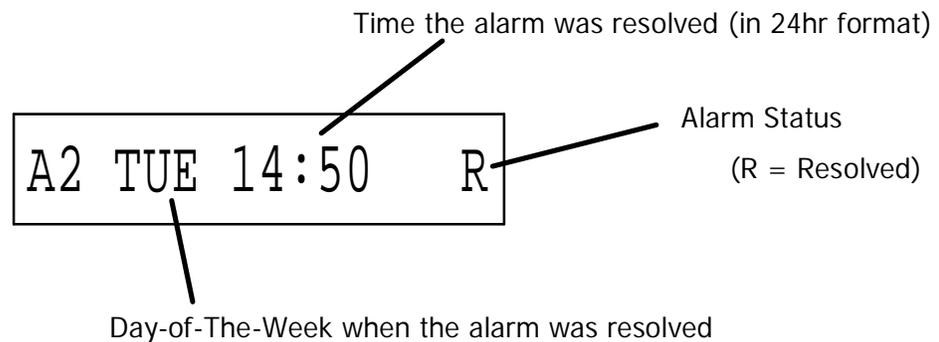
There are two kinds of alarm entry: **active**, and **resolved**. When a boomerang first fails to answer the roll-call, an **active alarm entry** is created, and the alarm remains active until the Boomerang starts responding.

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:

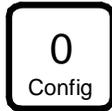


How to Clear the Alarm Screens

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 S

How to Get There

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

start at the home screen,

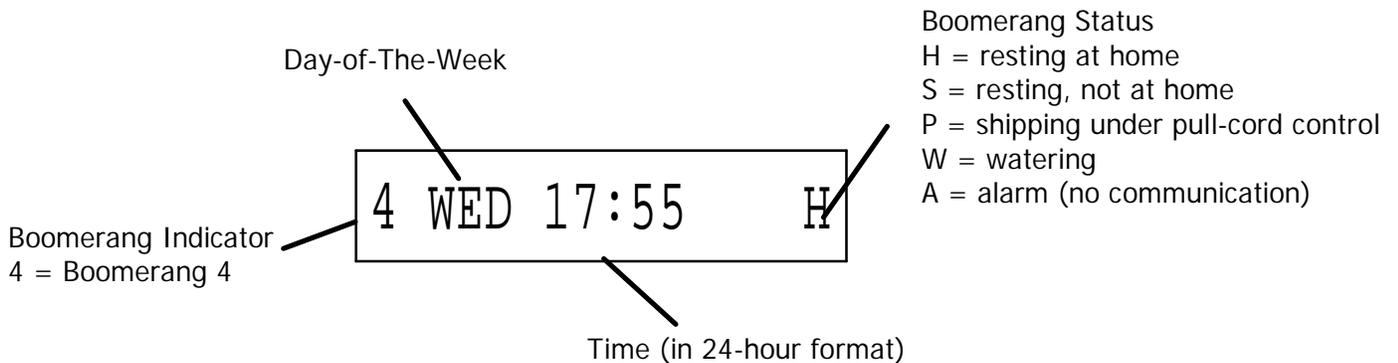
WED 17:55

and press the corresponding number, in this case,

4

4 WED 17:55 H

What Does It Say?



How to Leave It

To go back to the Home screen, just press

Leave

or

Home

Job Screens

How to Get There

Each Boomerang has Four job (watering program) screens. To see any Job screen, say, Boomerang 4's Job #1

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

then press

Job 1

4j1 50 50 12

and you're looking at Boomerang 4 Job 1

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

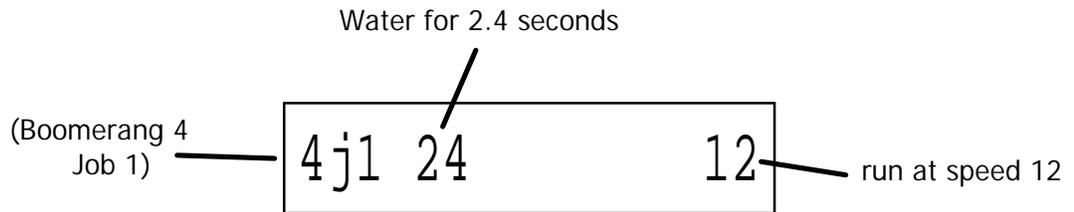
Job 1

to get to Boomerang 4's water screen.

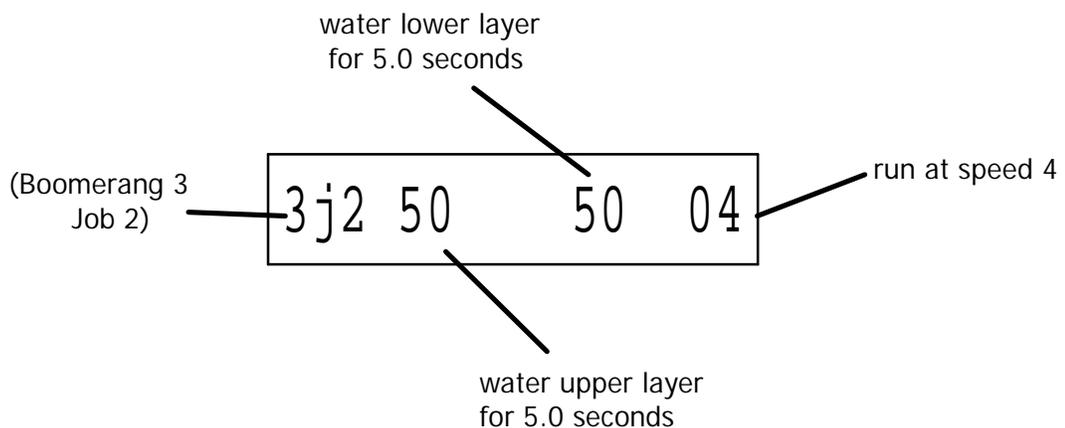
What Does It Say?

This screen is automatically custom-tailored to its Boomerang's layer and water settings. **You don't have to adjust for Layers or Funnels - the Zone Controller senses the Boomerang settings, and automatically adjusts the screen to match** - even if different boomerangs on the same network have different numbers of layers.

1-Layer

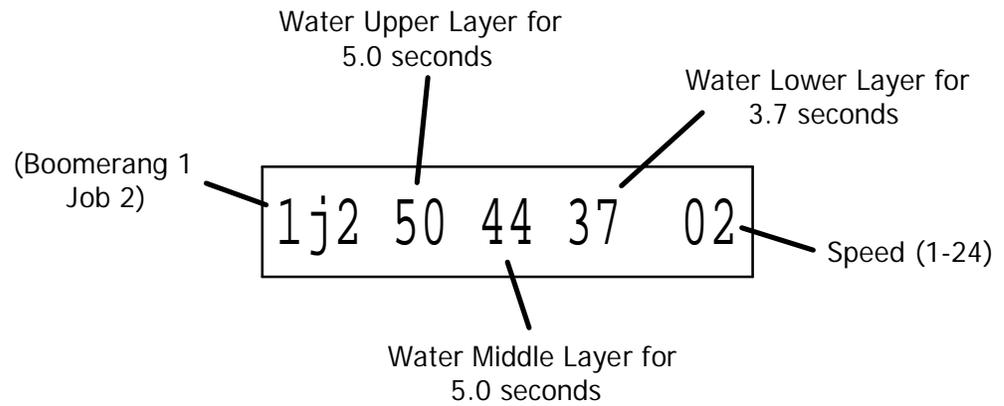


2-Layer

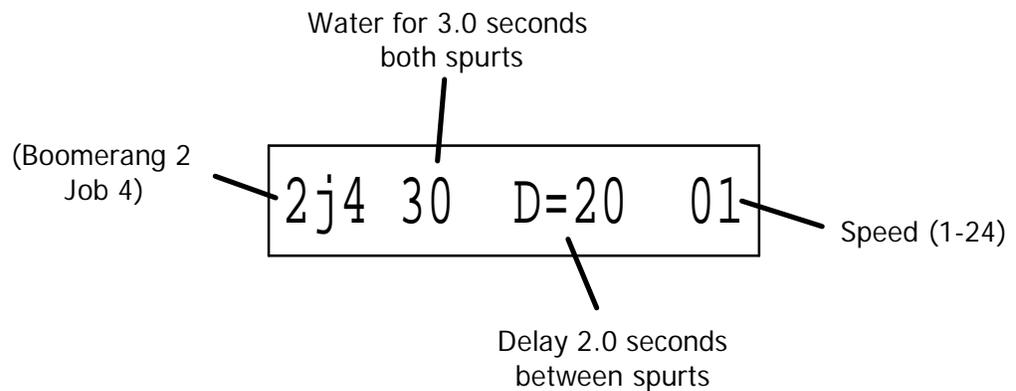


(Note: all water times are 1.0-9.9 seconds. It is possible to enter 0.5 seconds, for instance, but anything less than 1.0 seconds is treated as 0 seconds)

3-Layer



Funnel



(Note: Every Boomerang has 4 Jobs, but only Job 1 may be scheduled)

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

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

press the Schedule B button (

Sched
B

)

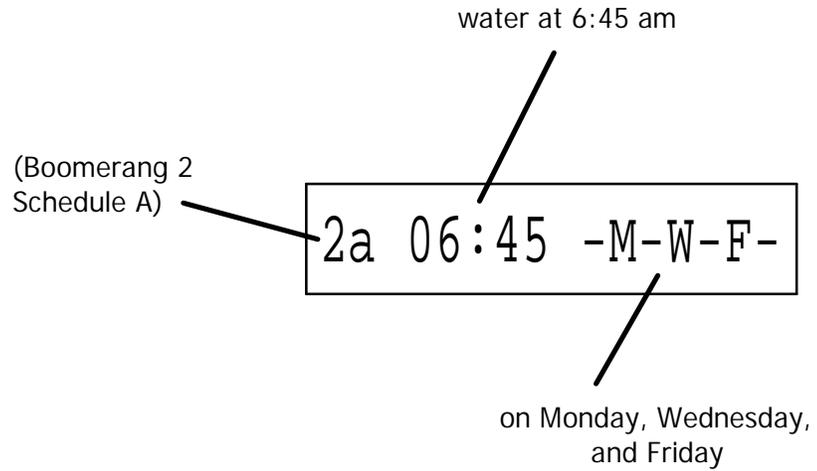
and access Schedule 2b:

2b 00:00 SMTWRFS

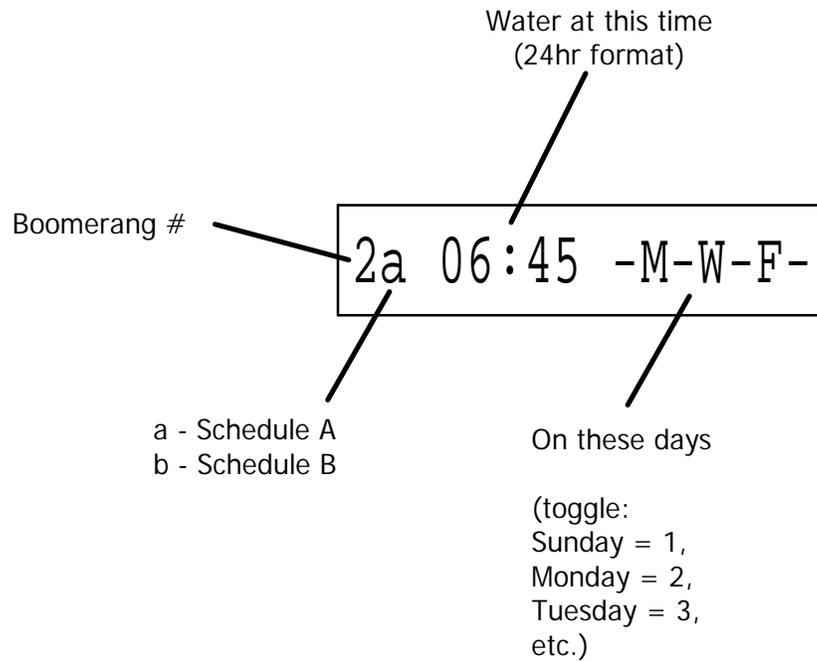
Note: Every Boomerang has 4 Jobs, but only Job 1 may be scheduled

You may use Schedule A to run Job 1 in the morning, and Schedule B to run Job 1 in the evening, or A to run it on some days of the week, and B on others.

What Does a Schedule Screen Say?



In general:



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.

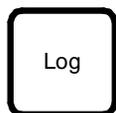
L4 SAT 08:38 C

How to Get There

Start at the Home Screen:

WED 17:34

Press



and you see the log screen for Boomerang 1:

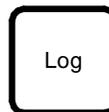
L1 MON 17:45 C

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



again.

L2 SAT 19:32 I

and you see the log screen for Boomerang 2.

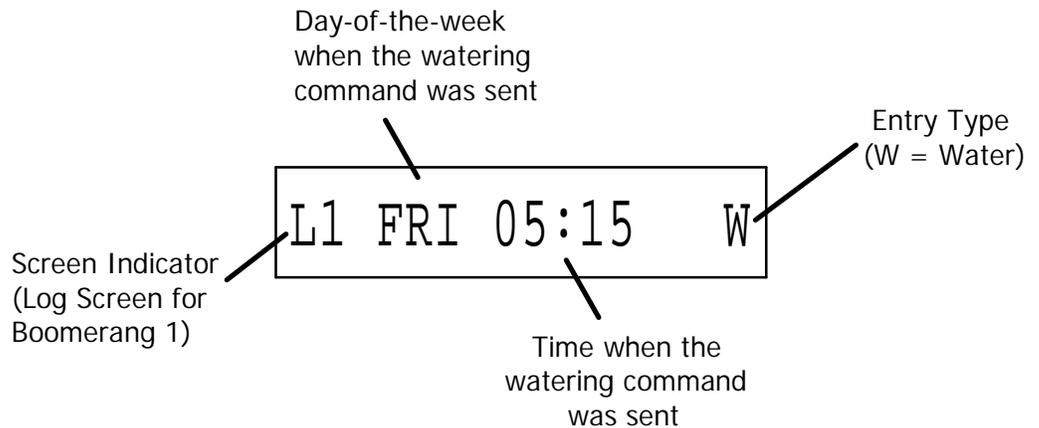
If you keep pressing the Log key, you will cycle through all of the log screens repeatedly: L1, L2, L3, L4,...L7, L8, L1, L2,... etc.

What Do The Log Screens Say?

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

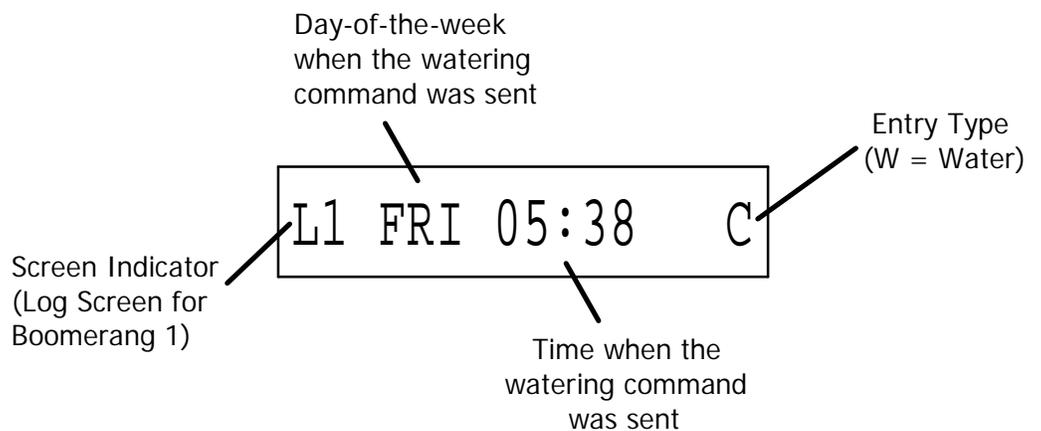
Water

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



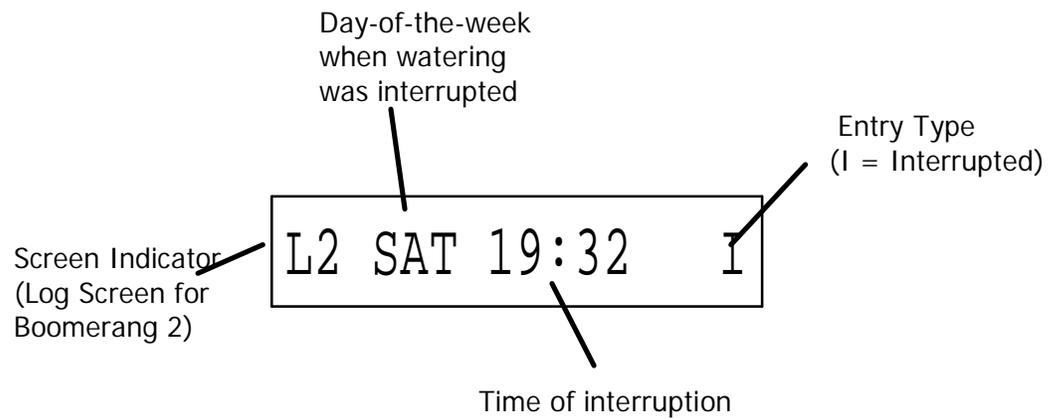
Complete

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



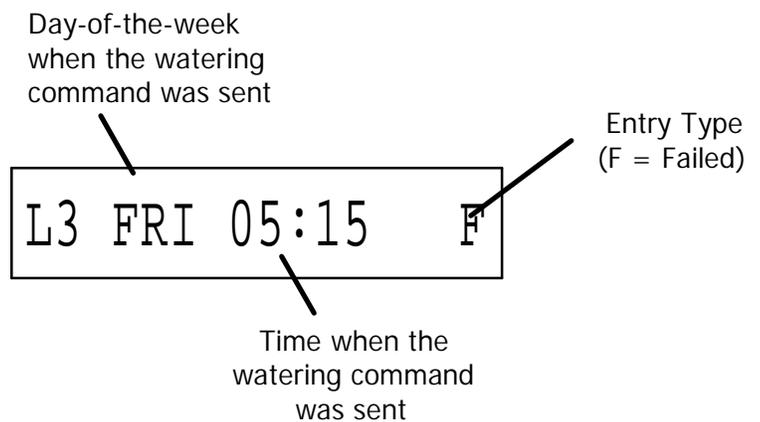
Interrupted

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).



Faster Ways to See Log Screens

To get to a specific Log Screen (for instance L7),

By Number

From any log screen:

L4 SAT 08:38 C

Press

7

L7 SAT 05:22 I

By Boomerang

From the Boomerang 7 Screen:

7 SAT 09:22 H

Press

Log

to see Boomerang 7's Log screen:

L7 SAT 05:22 I

How to Clear the Log Screens

While looking at any log screen,

L1 FRI 05:38 C

Press

0

Config

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

Press or

To go back to the home screen:

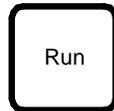
WED 17:34

Run All Screen

To get there, start at the home screen,

WED 17:55

and press

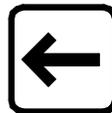


Run All? >=Y <=N

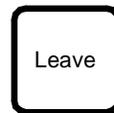
To tell all the boomerangs to run their individual water programs at the same time, choose "Yes" by pressing



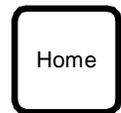
To leave the screen, press



or



or



Global Disable

To Disable

To stop the Zone controller from telling any Boomerangs to water,

Start at the home screen

WED 17:55

and press



There is now a "D" on the far right of the home screen:

WED 17:55 D

If there is also an alarm, then the D flashes alternating with "ALARM"

To Re-Enable

To remove the "Disable" and allow the Zone Controller to send watering commands again, press



WED 17:55

The home screen is back to normal, with no "D" on the far right. If there's an alarm, the "ALARM" indicator is flashing all by itself.

Test Screen

This screen is designed to help you test the keypad. To get there,

start at the home screen:

WED 17:55

press



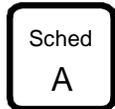
,

and you're there.

TEST:Key =

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

press



to see

TEST:Key = SchA

press



to see

TEST:Key = Run

To leave the screen, press

Leave

or

Home

(Appendices)

Appendix A: Quick Tutorial

Setup a Watering

Start at the home screen,

WED 17:34

Press

1

And you're looking at the Boomerang 1 screen.

1 SAT 09:22 S

Now press

Job 1

And you're at the 'Boomerang 1 Job 1' Screen:

1j1 50 50 12

Boomerang 1 Job 1

Press



1j1 50 50 12

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

3

5

1j1 35 50 12

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

Press  1j1 35 50 05

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

  1j1 35 22 05

and change the speed to 05.

   1j1 35 22 05

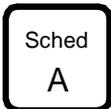
Press  to save your changes.

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

1j1 35 22 05

Schedule the Watering

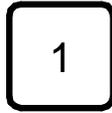
Starting at the water screen you were just viewing: 1j1 35 22 05

Press  1a 00:00 SMTWRFS

to reach the Schedule A screen for this same Boomerang

Note: If you backed out to the home screen after working with your water screen,

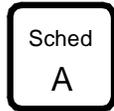
You need to press



to get back to the Boomerang 1 screen,

1 SAT 09:22 S

Then press



to go to the Schedule A screen for Boomerang 1.

1a 00:00 SMTWRFS

press



to put the screen in edit mode:

1a 00:00 SMTWRFS

press



1a 14:00 SMTWRFS

then press



1a 14:30 0SMTWRFS

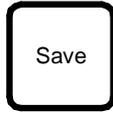
then



1a 14:30 -MTWRF-

to toggle Day 1 (Sunday) and Day 7 (Saturday) off. You've set Boomerang 1 to water at 2:30 pm every weekday, using the parameters you previously entered in the Job1 screen for this Boomerang.

press



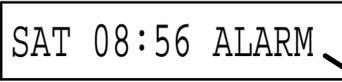
to keep your changes.

1a 14:30 -MTWRF-

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,



SAT 08:56 ALARM

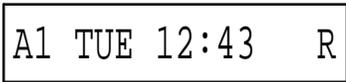
(Alarm Indicator)

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



Alarm

and you see the Alarm screen for Boomerang 1.



A1 TUE 12:43 R

Keep pressing



Alarm

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

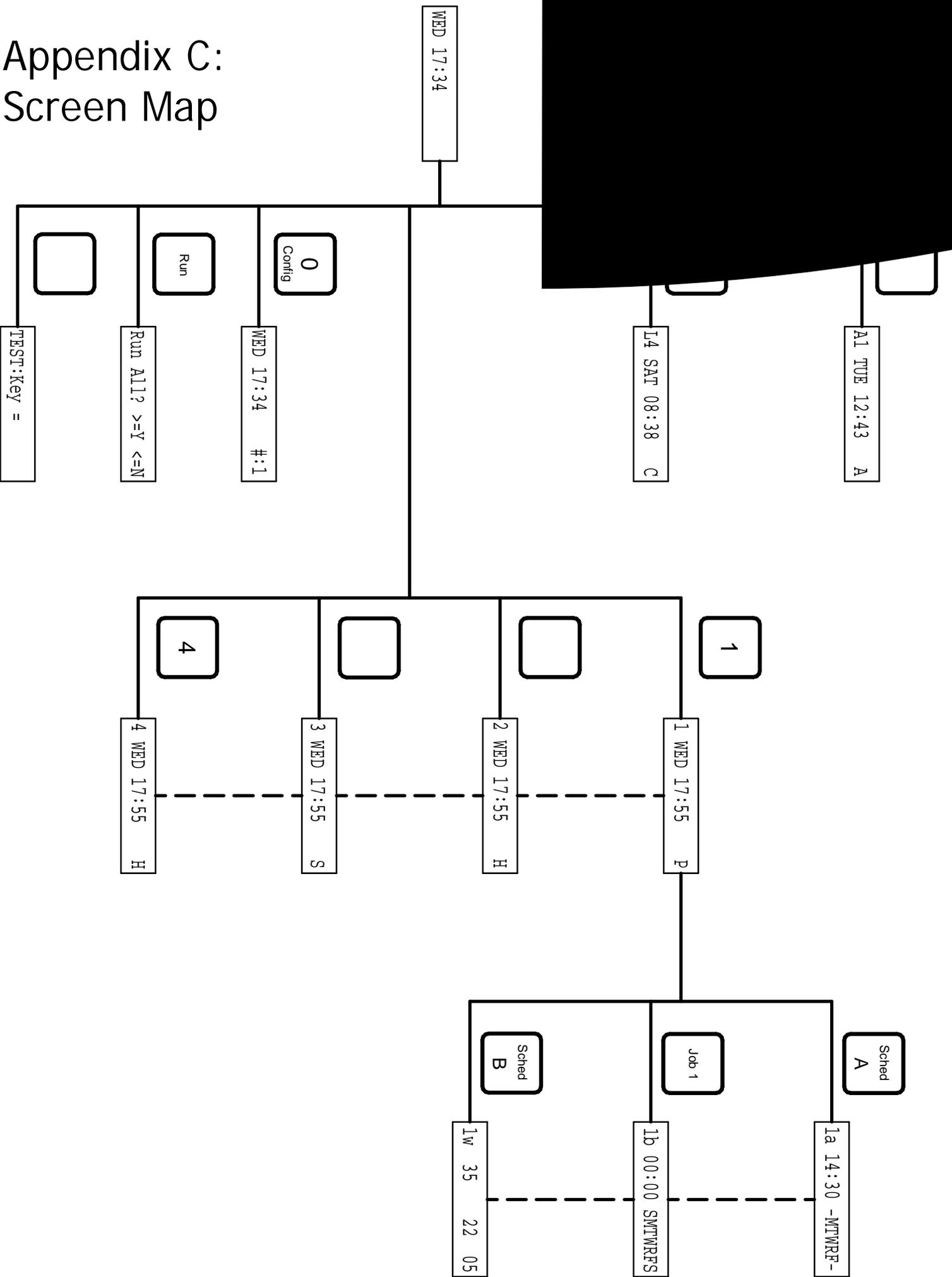
problem Boomerangs (the ones with an 'A' on the far right).

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 D).

Appendix C: Screen Map



Appendix D: Contact Info

Tech Support/Customer Service

Everyday/Business Hours 888.827.5204

..... 859.626.3001

Time Sensitive/Emergency 859.358.9595

Email daniel@greenhousetechnology.com

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