

Virtual Buoys

User Guide

April 20, 2022

Part 1 - Getting Started

So, you've purchased Virtual Buoys and you're ready to start using the app. Whoa, not so fast. Let's take this one step at a time and spend a couple of minutes to get familiar with the app.

A well-designed app should be self-explanatory. I think Virtual Buoys is simple to use. But despite its simplicity, it contains many helpful features. This guide will help to familiarize you with the use of Virtual Buoys.

There are really two distinct aspects of using Virtual Buoys. The configuration or setting up the app and the actual use of the app during a race or river trip. By setting up the app correctly prior to the race, the use of Virtual Buoys during the actual river trip is fairly simple.

Screen shots are from an iPhone 13 Pro.

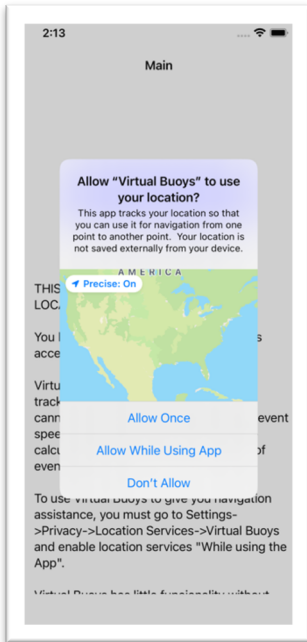


Figure 1

Step 1 – The first screen that you will encounter will probably be similar to the screen depicted in Figure 1 to the left. Since you will be using Virtual Buoys to track your location, you should click “Allow While Using App”. Make sure “Precise” is set to “On”. To allow Virtual Buoys to function correctly, you must select “Always Allow” or “Allow While Using App” and precise location services must be turned “On”.

These settings can always be changed later under privacy settings.

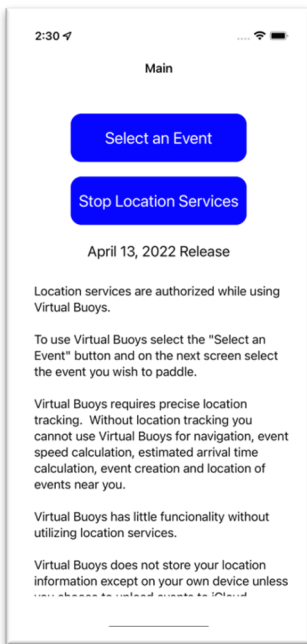


Figure 2

Step 2 - After you select location services as indicated in Step 1, you will notice that Virtual Buoys is using Location Services. This is the main screen (Figure 2), and information concerning the use of Virtual Buoys is contained on this screen. You can scroll the text up for additional information. Later, if you are not going to be using Virtual Buoys for some time, then you should click “Stop Tracking”. This will terminate location services for Virtual Buoys.

After you have read the warnings and you want to start using Virtual Buoys, click “Select an Event”. You can always return to this screen later.

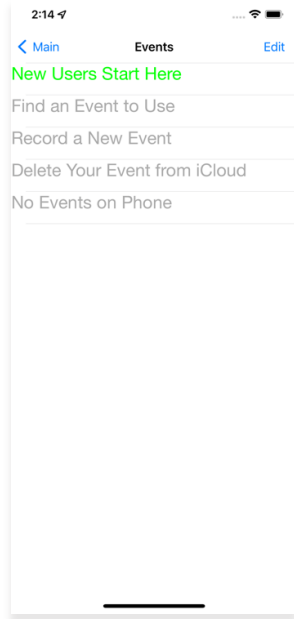
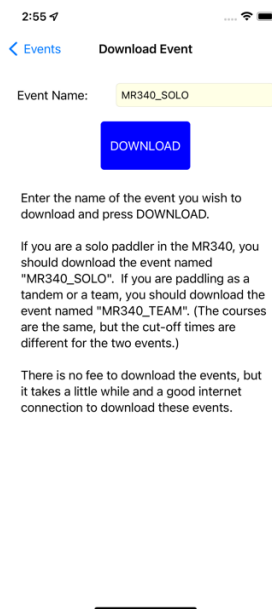


Figure 3

Step 3 - You will now be presented with the “Events” screen. This is where you will select an Event to paddle. To do so, you should click on “New Users Start Here”. The first time you use Virtual Buoys, you will see that there are no events listed.

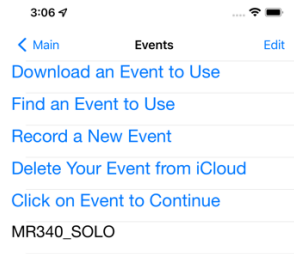


Step 4 - Enter the name of the event. Event names are not case sensitive so you could enter “mR340_sOLo” or “MR340_solo”, but you must make certain to type the underscore character and not the hyphen between “MR340” and “SOLO”. If you are participating as part of a tandem or team boat you should type “MR340_TEAM”. Make sure you are connected to the internet and click download.

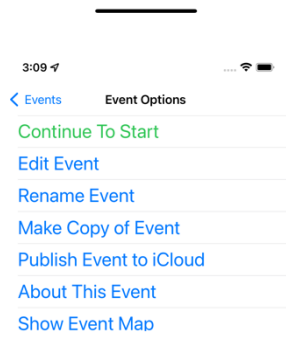
The download may take a little while. There are 3493 buoys marking the channel on the Missouri River between Kaw Poiint and St. Charles.

To paddle an event, the event must be located on your iPhone.

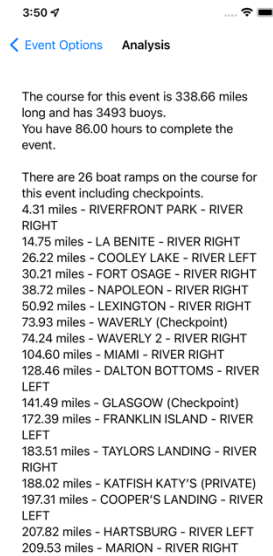
After the event is downloaded, click “Events” in the upper left hand corner of the screen to return to the Events screen.



Step 5 - You will now see an event named “MR340_SOLO” is included on your device. Let’s set up this event. Click on MR340_SOLO. If you downloaded the MR340_TEAM event, then you should click on that event.

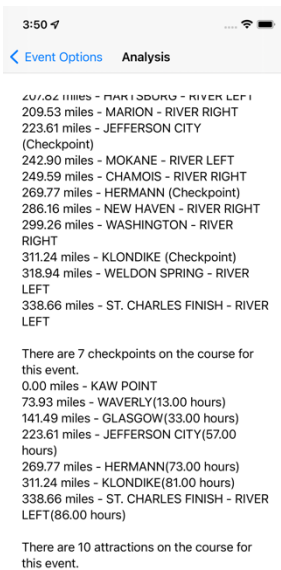


Step 6 - These are the actions you can perform on the event called “MR340_SOLO”. We’re anxious to get on the river, but before we move on, let’s take a little detour. Click “About This Event”.



Step 6a – You don’t have to take this step, but I think it’s always a good idea to make sure you are paddling the correct event. First of all we verify that there are indeed 3493 buoys on the course we have just downloaded, and we have 86 hours (85 hours for Team participants) to complete the event. We see a listing of 26 boat ramps on the Missouri River.

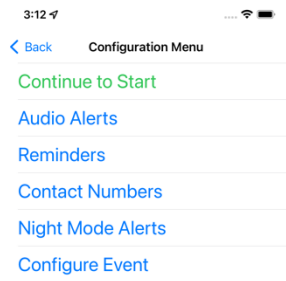
However, something is wrong. We know the race doesn’t end at Marion. And we know this isn’t the MR209.53 race. That should be a clue that this text field contains more information. To access this information, swipe the screen upwards to see the rest of the information provided.



Step 6b - This is what the screen looks like after you scroll up.

This screen is not accessible during the race itself, but similar information is available to you during the race.

This is just a good way to double check that you have selected the correct event.

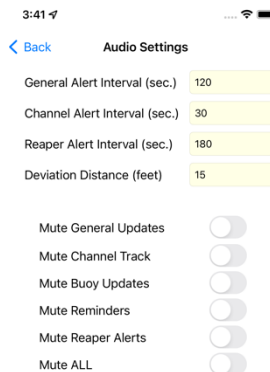


Step 7 – Now we must configure the event. This is an important step in using Virtual Buoys. Let's start with "Audio Alerts".

Step 8 – Configuring Audio Settings. Virtual Buoys is designed so that you usually do not have to view the screen while you are paddling. It will provide you with necessary information on a regular basis.

First there is the General Alert Interval. Virtual Buoys will notify you of the closest river mile, your current speed, your segment speed and how far you are from the next boat ramp (if you are closer than 2.0 miles to the next ramp). As this screen is currently configured, these notifications will occur no more frequently than once every 120 seconds.

I am a slow paddler and worry about beating the Reaper to Waverly. I know that I must paddle more than 5.69 miles per hour to beat the Reaper to Waverly. So this is an important update for me. If my segment speed is greater than 5.7 mph, then I'm okay. I think I would want my phone to tell me this information every couple of minutes. So I'd leave the general alert interval at 120.



The channel alert works together with the deviation distance to provide information to help the paddler stay in the channel. Virtual Buoys will notify you when you are a distance greater than the deviation distance from the center of the channel, but it will not provide this information more often than the channel alert interval. These numbers are a matter of preference. I like to know my position with respect to the channel accurately, so I will ask for channel alerts not more frequently than every thirty seconds and I don't want those notifications unless I am more than 15 feet from the center of the channel.

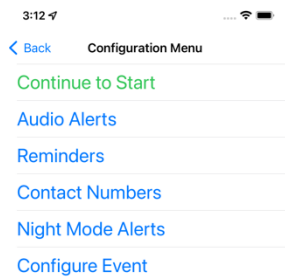
Lastly, there is the reaper alert interval. If your speed decreases below the average speed that is necessary for you to reach the next checkpoint ahead of the reaper, you will be alerted. These alerts would occur no more frequently than the reaper alert interval. So the way this is currently configured, if you paddled less than the necessary speed, you would only receive notifications every 180 seconds (3 minutes).

In 2021, I capsized around Hills Island. As I was hanging on to my boat floating down the river, my phone announced, "You must paddle at least 3.1 miles per hour to reach the next

checkpoint ahead of the reaper. Your current speed is 3 miles per hour.” That was my point of calling in a safety boat.

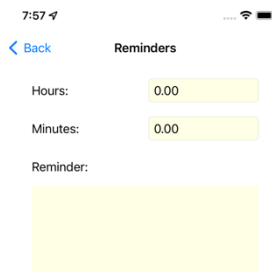
You also receive a notification at each buoy. These buoys are located about every tenth of a mile. At most of the buoys, the channel turns slightly, so the notification will tell you something like “The channel turns 3 degrees to the left.” I like to know which way the channel is turning so I know if I’m on the inside of the channel center line as it turns, or if I am on the outside of the channel center line as the channel turns. You don’t have to set an interval for these notifications because they occur automatically when the channel turns.

You can also mute any one of these notifications by clicking on the respective switch on the bottom part of this screen. So if I wanted to receive all notifications, except for reaper alerts, I would click the switch called “Mute Reaper Alerts”. Click on the “Back” button in the upper left hand corner of the screen to return to the “Configuration Menu” screen.



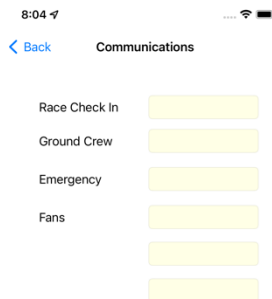
Step 9 - You may have noticed on the previous screen that you could “Mute Reminders”. A reminder is a message notification to you that occurs with a regular frequency.

Click on “Reminders” to set up this feature.



Step 10 - It is important that you drink water and eat food regularly during the MR340. I use a reminder to drink water. Every 20 minutes I have Virtual Buoys remind me to drink water. So I would enter 20 in minutes, and for my notification I would enter "Drink Water."

Click "Back" to return to the Configuration Menu that we saw in Step 7 and Step 9 above. On that screen click "Contact Numbers"

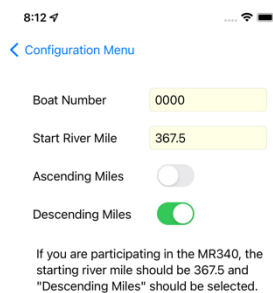


Step 11 – This is the screen upon which you enter contact information. You will be provided with a number to use to text information to race officials when you check-in or check-out at a specific checkpoint. Virtual Buoys will compose this text message, and when you send it, it will be sent to the number you specify in the Race Check in box. iOS does not allow an app to send a text message directly without the user pressing the send button on the text message screen.

You should also enter the phone number where you can send texts to keep you ground crew notified of your positions.

The emergency number is a number you will be provided by race officials that you should call if you need immediate assistance during the race.

And finally, you can add the phone numbers of three "fans". These notifications will be similar to the ground crew messages. Let's return to the "Configuration Menu" screen from Steps 7 and 9, and click on "Configure Event".

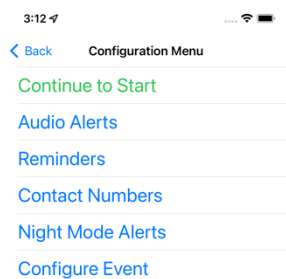


Step 12 – You should enter your four digit boat number on this screen. This is used by Virtual Buoys to create your check-in and check-out messages.

The starting river mile for the MR340 and any other event that starts at Kaw Point is 367.5 and river miles on the Missouri River are descending as you head downstream. You may change these settings, but Virtual Buoys will try to persuade you not to change them.

If you use a different starting river mile, then the calculation of your position by Virtual Buoys will be incorrect. As you head down the river, you will notice mileage marker along the river. These markers should coincide closely with your position as calculated by Virtual Buoys.

Click the button in the upper left hand corner of the screen to return once again to the configuration menu.



The only remaining menu selection is for Night Mode Alerts. This allows you to make a different set of audio alerts like those you set up in Step 8. If you want to have a different set of alerts for night paddling you could enter them by clicking on “Night Mode Alerts”. For now we will skip this step.

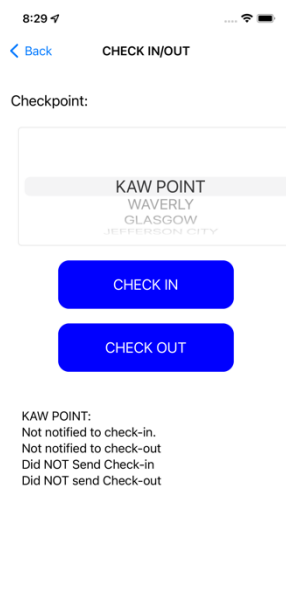
You might be thinking that this is a somewhat tedious process for setting up and configuring Virtual Buoys. It is, but Virtual Buoys needs this information to correctly provide you with the information you need to paddle the MR340 successfully. All of this information is saved by Virtual Buoys for future paddling so configuration will not be as difficult the next time.

Click on “Continue to Start” to go to the “Control Center” screen.



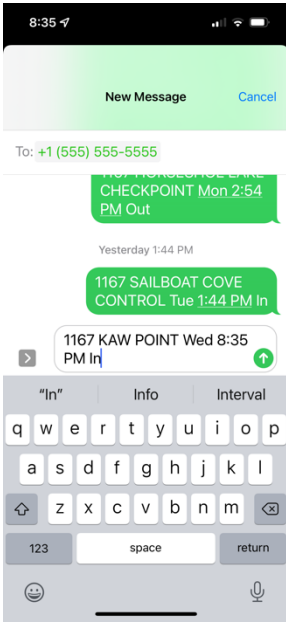
Step 13 - This is the "Control Center" screen. It is the screen that you will use during the race.

Do not press "START EVENT" at this time. MR340 rules require you to check-in at Kaw Point on the day prior to the event. So when you go to Kaw Point and they ask you at check in to demonstrate that you know how to check-in, you should press the "CHECK IN/OUT" button on this screen.



Step 14 – This is the "CHECK IN/OUT" screen and will compose the text messages that you will use throughout the MR340. Make sure "KAW POINT" is selected and click the "CHECK IN" button.

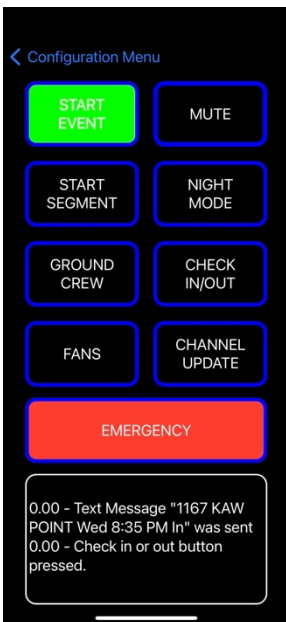
This will compose the text message that you need to send to race officials.



Step 15 – To send this text message, click the small green (or blue) arrow next to the text message you want to send. My boat number (1167) is displayed along with the time and day of week that I prepared this message.

The number in the recipient field is obviously incorrect. This is the number that you entered in Step 11 in race check in. By setting up Virtual Buoys correctly, it is easy to use during the race itself.

After this message is sent you will return to the “Control Center” screen



Step 16 – After you send the check-in text message, you automatically return to the “Control Center” screen.

Note the information provided in the text box at the bottom of the screen. This is called the transcript window and it contains all the announcements that were made to you.

We have successfully configured Virtual Buoy and we are now ready to race.

When the race starts click the green button called “START EVENT”. This starts the timer and tracking functions of Virtual Buoys.