Using the System for Tricks

The system has an "EVENT/MODE" select button. It displays the 'active' mode, as well as the current lens setting on the GoPro. Clicking on that button cycles through the possible 'Modes' (and some sub modes)

- SLALOM
    - Set to NARROW
    - Set to LINEAR
    - Set to WIDE
- TRICK
- TRICK PRACTICE
- MANUAL

In the SLALOM mode, there are three 'sub modes' to make it easier to change the GoPro lens setting directly from the App. Event though these are as part of the SLALOM 'mode' the lens setting applies to any of the modes. To choose the lens, click on the Skier ICON on the upper left of the screen. It takes a few seconds, but the lens status updates in the display

The automatic recording START/STOP is determined by position and speed relative to trip points that are defined for the detected Lake. See appendix 1 table that describes START/STOP/CLEARED trip point (phone position in the boat) for the various modes relative to a Slalom course

Often a Trick course is set with the start at the Gates, and the end at the far 1 or 6 ball, re-using the Slalom buoy locations. This is not symmetrical, and currently there is no correction for this. The system assumes that the course starts at either GATE, so on the side that starts at 1/6 ball there will be a longer recording leading up to the start of the pass.

Typically, you do not place a Trick Camera on a Pylon Tracker, as it gets in the way of the Trick release, this means that the Camera is either mounted on the boat (Typically the Bimini), or could be handheld.
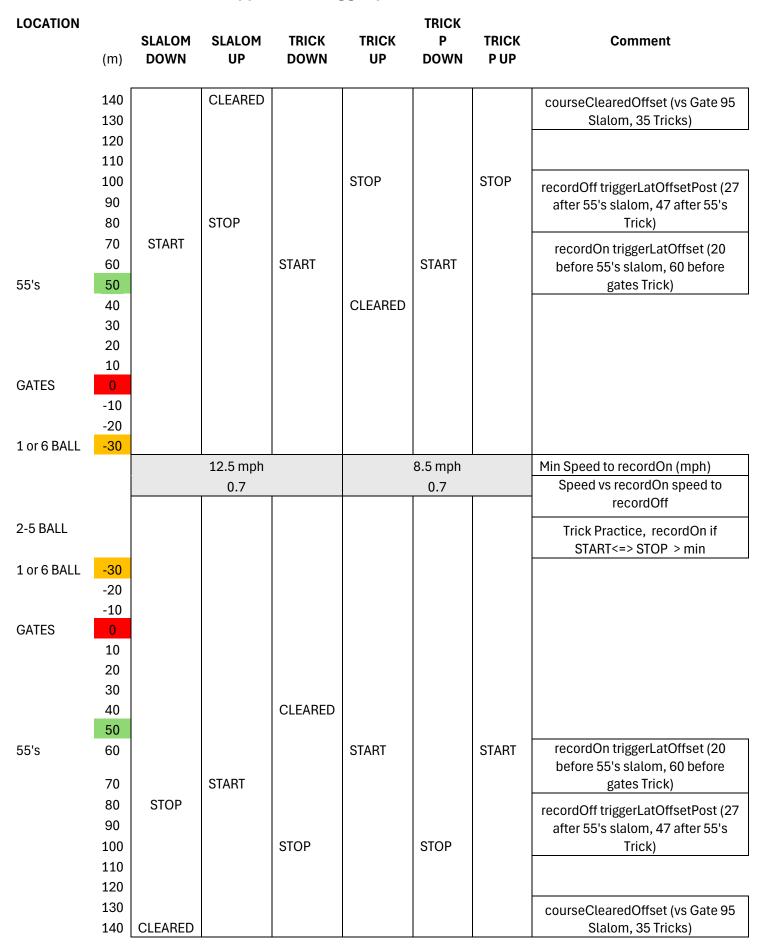
If mounted on the Bimini, you need a sufficiently wide field of view, so that you can record the Skier at either extreme. You should experiment and make sure that the judges are satisfied with the image 'Zoom' factor that can be provided by a fixed camera

Tricking in Slalom mode, you get a Shorter record time (and faster upload), but you need to be careful with "CLEARED" triggering. If you require the drivers to go around the island, you will be safe

Tricking in Trick mode, you end up with Longer record time, but "CLEARED" is not a concern. Boat should be able to spin in front of the island and start recording at the start of the pass.

You should experiment with the system ahead of a tournament, as every lake will behave a little differently. The video load time will be longer for Tricks as the record times are longer, but if that is a concern you could reduce Video quality to 30fps for Tricks, as that will cut the file sizes in half, and plenty for judging. Make sure the Trick timing system understand the FPS of the video.

In Trick you often run multiple boats, so if a boat is just waiting, keep the camera and the phone out of direct sun. The main reliability issues we have had have mainly been about things getting too hot and cameras running out.

Appendix 1 Trigger points vs Slalom course

LOCATION	(m)	SLALOM DOWN	SLALOM UP	TRICK DOWN	TRICK UP	TRICK P DOWN	TRICK P UP	Comment
	140		CLEARED					courseClearedOffset (vs Gate 95 Slalom, 35 Tricks)
	130							
	120							
	110							
	100				STOP		STOP	recordOff triggerLatOffsetPost (27 after 55's slalom, 47 after 55's Trick)
	90							
	80		STOP					
	70	START						recordOn triggerLatOffset (20 before 55's slalom, 60 before gates Trick)
	60			START		START		
55's	50							
	40				CLEARED			
	30							
	20							
	10							
GATES	0							
	-10							
	-20							
1 or 6 BALL	-30							
		12.5 mph			8.5 mph			Min Speed to recordOn (mph)
		0.7			0.7			Speed vs recordOn speed to recordOff
2-5 BALL								Trick Practice, recordOn if START<=> STOP > min
1 or 6 BALL	-30							
	-20							
	-10							
GATES	0							
	10							
	20							
	30							
	40			CLEARED				
	50							
55's	60				START		START	recordOn triggerLatOffset (20 before 55's slalom, 60 before gates Trick)
	70		START					
	80	STOP						recordOff triggerLatOffsetPost (27 after 55's slalom, 47 after 55's Trick)
	90							
	100			STOP		STOP		
	110							
	120							
	130							courseClearedOffset (vs Gate 95 Slalom, 35 Tricks)
	140	CLEARED						