

Road 1 Course Modifications For Recumbent Tricycles

This is a compilation of lessons learned while taking a Road 1 course, getting LCI certification, and personal experience. Many of the practical exercises had to be modified or were not as useful to a cyclist on a recumbent tricycle. Many of these depend on the type of trike and equipment configuration.

Slow riding – A balance maneuver that has no applicability to a tricycle. A trike can easily win a snail race.

Scanning – Possible, but may require extreme twisting to get the head around to look behind while in a reclined position. It depends on the trike as well. A mirror is a must for some trikes and my dealer provides one with every recumbent he sells. However, looking over the shoulder still provides a visual indication of an upcoming turn or lane change.

Rock Dodge – This exercise, while it can be accomplished, did not have much applicability. Balance isn't an issue when striking an obstacle with one front wheel on a trike. Trikes can easily avoid small debris without losing control. Three wheels can make it difficult to avoid larger obstacles.

Quick turns – This maneuver can be modified to apply to a trike. Rather than using balance, this maneuver on a trike involves leaning into the turn, steering into the turn, and applying the inside brake if differential brakes are installed. However, at high enough speeds this maneuver can tip the trike over, resulting in a more dangerous condition to the cyclist. Tipping the trike over throws the cyclist into the obstacle, such as a car, whereas on an upright the bike would slide out from under and send the cyclist away from the obstacle. It was concluded that a quick stop would be more appropriate since it does not put the cyclist's head or torso at as much of a risk as tipping the trike over in a quick turn.

Tipping – Knowledge of when a trike will tip is useful. Ride the trike on a grass field & experiment on how fast and how quickly you can turn without tipping. Different trikes, especially between delta and tadpole designs, have different levels of stability. Familiarity with the limitations of the particular trike is needed to avoid a crash.

Quick stops – An appropriate maneuver but shifting body weight back on the bike is irrelevant. However, on a trike you can have left & right brakes. Differential braking helps in turns, but learning to do a quick stop with only one brake is a possible modification to this drill (say you have a water bottle in the other hand?). The goal of quick stops with one brake is not to lose control. It should be tried at progressively higher speeds to retain control while braking.



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Lane positioning – Since a tricycle takes up more road width than an upright, different rules apply to lane positioning. Even at a right hand lane position, the trike takes up enough road width to essentially take the lane. Bike lanes also cause a problem if they are not wide enough. The conclusions on lane position were: Right lane position should be based on the right wheel thus providing adequate clearance for the right wheel compared to the edge of the roadway. When taking a center lane position, the center wheel should be used. When taking a left lane position, such as when making a left turn on a two-lane street, the left wheel should be used.

Since trikes can be low to the ground, visibility hazards should be emphasized. The cyclist should position the trike at such a point that other traffic can see them. This may mean staying further back from traffic ahead at a stop light, moving ahead of traffic so you are not right beside them, or moving left or right in a lane to get better sight angles.

Cyclists should watch out in parking lots or entering traffic with on street parking.

Cyclists should also watch out for earthen berms, mounds, walls, landscaping or other obstacles that make visibility, both seeing and being seen, difficult. Reportedly the new AASHTO design guidelines are to account for recumbents & trike in design of bicycle facilities.

Hand signals – Since my left arm is paralyzed, standard hand signals are almost impossible since my right hand is required to steer. When riding in a group, verbal signals must be used for turns, slowing or stopping to prevent collisions with other riders.

Cadence – For a recumbent or trike, a cadence of up to 120 rpm can be used depending on the preference of the rider.

Visibility – One feature my dealer includes is a windsock. It includes bright colors with motion as a way to get drivers attention despite the profile of a recumbent or trike.

Group Riding – Care should be taken when riding in a group due to the different nature of riding a recumbent or trike. Going uphill the tendency will be to go slower than uprights. Going downhill the tendency will be to go faster than uprights due to the lower drag of the recumbent/trike. Be careful with changing position since other cyclists may not see you in their blind spots.

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