LINE FOLLOWER BOT

Problem statement:

BOT SPECIFICATIONS:-

1. Dimension 20cm Max(width) x 20cm Max (length) x20cm Max(height) and 1 kg limits for bots shall be strictly enforced.
2. Bots must have passed inspection prior to competing.
3. The bot cannot be constructed using readymade Lego kits or any readymade mechanism. But you can make use of readymade gear assemblies. Violating this clause will lead to the disqualification of the machine.
4. There can only be a single power source which should be included in the bot and should not exceed **12 volts** at any time during competition.
5. Use of LiPo battery in any case is not allowed.

Course time:-

1. A bot is deemed to have crossed the line when the forward most wheel,track, or leg of the bot crosses over the line. Time shall be measured by a judge with a stopwatch.
2. Once a bot has crossed the starting line it must remain fully autonomous.

Course Specifications:-

1. The line following course shall traverse a white arena. The line shall be a black 30 mm (20% tolerance) wide line traversing the arena from end to end. There may be crossovers (e.g. places where the line crosses itself). adjacent sections of the line shall be no closer together than 15cm when measured from the center of each line.
2. The track may contain bends (both acute and obtuse angles), curves, T-joints and breaks.
3. Line course will contain some check points. Team will be awarded points (decided by the organizer during the event) for crossing each checkpoint.

Levels:

Round 1:-

1. In this round the bot has to complete a simple track.
2. This will be time-based round.
3. You will be given 2 chances to reach the end point and best of the two will be considered.
4. There will be no checkpoints in this round.
5. If the bot losses the line in any case.It can restart at the cost of a chance.
6. The bots that are selected for Round 2 will be declared after the completion of round
7. Once the list is declared ,Round 1 will not be conducted in any case.

Round 2:-

1. In this round the bot has to complete a complex track having crossovers,T-joints and breaks.
2. There will a certain number of checkpoints on the track.
3. If the bot losses the track(at most 3 times) then it will be allowed to start the race from the previous checkpoint.

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