

CLAIMS

What is claimed is:

1. A tracking system for a ride vehicle, the tracking system comprising:
 - a contact switch sensor including a plurality of contact closure switches, the contact switch sensor being situated on the ride vehicle; and
 - a plurality of location indicator devices situated on or proximate to a path of the ride vehicle, each location indicator device of the plurality of location indicator devices configured to communicate location information to the contact switch sensor via the plurality of contact closure switches when the ride vehicle passes by each location indicator device of the plurality of location indicator devices.
2. The tracking system of claim 1, wherein the contact switch sensor further includes a plurality of switch levers configured to physically contact at least some location indicator devices of the plurality of location indicator devices, each switch lever of the plurality of switch levers configured to open or close a corresponding contact closure switch of the plurality of contact closure switches.
3. The tracking system of claim 1, wherein the plurality of contact closure switches are magnetically controlled contact switches, and wherein each location indicator device of the plurality of location indicator devices includes one or more magnetic trigger elements.
4. The tracking system of claim 1, wherein the plurality of location indicator devices correspond to different zones of the path of the ride vehicle.
5. The tracking system of claim 4, wherein the location information is communicated to the contact switch sensor with:
 - a unique combination of actuations and non-actuations applied with a physical contact, or
 - a unique combination of magnetic triggers and non-triggers applied without the physical contact.

6. The tracking system of claim 5, wherein the contact switch sensor is configured to output a unique n-bit binary word based on the unique combination of actuations and non-actuations or the unique combination of magnetic triggers and non-triggers, and wherein the unique n-bit binary word corresponds to one of the different zones.

7. The tracking system of claim 1, further comprising a ride vehicle indicator device situated on the ride vehicle and configured to communicate ride vehicle information to a contact switch sensor of an off-board ride system.

8. The tracking system of claim 7, wherein the contact switch sensor of the off-board ride system is situated on or proximate to the path of the ride vehicle, and wherein the ride vehicle information is a k-bit binary word that corresponds to the ride vehicle.

9. A ride vehicle, comprising:

a contact switch sensor including a plurality of contact closure switches, the contact switch sensor configured to receive location information from a plurality of location indicator devices via the plurality of contact closure switches; and

a processing circuit configured to determine a location of the ride vehicle on a path based on the location information.

10. The ride vehicle of claim 9, wherein the contact switch sensor includes a plurality of switch levers configured to physically contact at least some location indicator devices of the plurality of location indicator devices, each switch lever of the plurality of switch levers configured to open or close a corresponding contact closure switch of the plurality of contact closure switches.

11. The ride vehicle of claim 9, wherein the plurality of contact closure switches are magnetically controlled switches, and wherein each location indicator device of the plurality of location indicator devices includes one or more magnetic trigger elements.

12. The ride vehicle of claim 9, wherein the plurality of location indicator devices correspond to different zones of a path of the ride vehicle, and wherein the contact switch

sensor is configured to output an n-bit binary word based on the location information, wherein the n-bit binary word corresponds to a zone of the different zones.

13. The ride vehicle of claim 12, wherein the n-bit binary word includes binary outputs from the plurality of contact closure switches.

14. The ride vehicle of claim 9, further comprising a ride vehicle indicator device situated on the ride vehicle and configured to communicate ride vehicle information to a contact switch sensor of an off-board ride system.

15. The ride vehicle of claim 14, wherein the contact switch sensor of the off-board ride system is situated on or proximate to the path of the ride vehicle, and wherein the ride vehicle information is a k-bit binary word that corresponds to the ride vehicle.

16. A method for tracking a ride vehicle, the method comprising:
receiving location information at a contact switch sensor from at least one location indicator device of a plurality of location indicator devices situated on or proximate to a path of the ride vehicle, the contact switch sensor including a plurality of contact closure switches configured to receive the location information when the ride vehicle passes by the at least one location indicator device of the plurality of location indicator devices; and
determining a location of the ride vehicle on the path based on the location information.

17. The method of claim 16, wherein the contact switch sensor further includes a plurality of switch levers configured to physically contact at least some location indicator devices of the plurality of location indicator devices, each switch lever of the plurality of switch levers configured to open or close a corresponding contact closure switch of the plurality of contact closure switches.

18. The method of claim 16, wherein the plurality of contact closure switches are magnetically controlled contact switches, and wherein each location indicator device of the plurality of location indicator devices includes one or more magnetic trigger elements.

19. The method of claim 16, wherein the plurality of location indicator devices correspond to different zones of the path of the ride vehicle, and wherein the contact switch sensor is configured to output an n-bit binary word based on the location information, wherein the n-bit binary word corresponds to a zone of the different zones.

20. The method of claim 16, further comprising:
operating one or more on-board devices of the ride vehicle based on the location of the ride vehicle on the path.