

transit data which record of the transit data after it is not performed, but are memorized by EEPROM44 by then will be maintained, transit data just before a vehicle will be in an abnormal condition can certainly be saved.

[0053] Especially distinction of whether according to the operation gestalt of a graphic display, the vehicle is in the unusual condition is performed by steps 50-70. Since distinction of whether the vehicle would be in the idle state is performed within the predetermined time amount T_c from the event of the absolute value of the condition that the absolute values of the order acceleration G_x are one or more reference values G_x , or lateral acceleration G_y being in the condition of being one or more reference values G_y , in step 50 After the magnitude of acceleration becomes very large by the collision of a vehicle etc., the unusual condition that the vehicle stopped can be judged certainly.

[0054] Moreover, since a vehicle is in a idle state, respectively, distinction and the vehicle of whether the absolute values of the vehicle order acceleration G_x are two or more reference values G_x are in a idle state in steps 60 and 70 and distinction of whether the absolute values of the lateral acceleration G_y of a vehicle are two or more reference values G_y is performed An abnormal condition toward which the installation condition of the order acceleration sensor 30 or the lateral acceleration sensor 32 became unusual by the collision of a vehicle etc., or the vehicle itself inclined unusually can be judged certainly.

[0055] Although this invention was explained above about the specific operation gestalt at the detail, probably this invention will not be limited to an above-mentioned operation gestalt, and it will be clear for this contractor its for other various operation gestalten to be possible within the limits of this invention.

[0056] For example, it sets in an above-mentioned operation gestalt. Although distinction of whether the vehicle would be in the idle state is performed within the predetermined time amount T_c from the event of the absolute value of the condition that the absolute values of the order acceleration G_x are one or more reference values G_x , or lateral acceleration G_y being in the condition of being one or more reference values G_y , in step 50 The acceleration G_{xy} of a vehicle calculates as a square root $(G_x^2 + G_y^2)^{1/2}$ of the sum of the square of the order acceleration G_x , and the square of lateral acceleration G_y . Distinction of whether the vehicle would be in the idle state may be performed within the predetermined time amount T_c from the event of the absolute value of the acceleration G_{xy} of a vehicle being in the condition of being more than reference-value G_{xy1} (forward constant).

[0057] It sets in an above-mentioned operation gestalt similarly. Step 60 And although a vehicle is in a idle state in 70, respectively, distinction and the vehicle of whether the absolute values of the vehicle order acceleration G_x are two or more reference values G_x are in a idle state and distinction of whether the absolute values of the lateral acceleration G_y of a vehicle are two or more reference values G_y is performed A vehicle is in a idle state and distinction of whether the absolute value of the acceleration G_{xy} of a vehicle is more than reference-value G_{xy2} (forward constant) may be performed.

[0058] Moreover, although it is distinguished whether the vehicle speed is 0 and a vehicle is in a idle state in an above-mentioned operation gestalt by whether sum $\sum V_i$ of V_i is 0 whenever [wheel speed / of each wheel] Distinction of whether a vehicle is in a idle state may be performed by whether sum $\sum V_i$ of whenever [wheel speed] is below the reference value V_0 (forward constant near 0), and may be performed by whether the maximum of the $V_i(s)$ is below the reference value V_{w0} (forward constant near 0) whenever [wheel speed / of each wheel].

[0059] Furthermore, in an above-mentioned operation gestalt, although EEPROM54 has three storage areas M1-M3 and the ID number consists of a figure of 0-9, these numbers may be the number of arbitration, and the transit data of the vehicle recorded on EEPROM54 may also be data of arbitration.

[0060]

[Effect of the Invention] According to the configuration of claim 1 of this invention, the case where the magnitude of acceleration becomes comparatively large at the time of the usual transit of a vehicle and a stop can be distinguished, the abnormal condition of a vehicle can be judged certainly, and transit data just before a vehicle will be in an abnormal condition by this can certainly be saved so that more clearly than the above explanation.

[0061] Moreover, since it is not necessary to set up the reference value of an acceleration judging of a

vehicle highly according to the configuration of claims 2 and 3, the abnormal condition of a vehicle can be judged certainly, and according to the configuration of claim 4, it can prevent certainly being judged with the abnormal condition of a vehicle in the situation that the magnitude of acceleration becomes comparatively large at the time of usual transit of a vehicle.

[0062] Moreover, according to the configuration of claim 5, it can prevent certainly that the data after the event of a vehicle being in an abnormal condition are overwritten by the storage means, and can prevent certainly that transit data just before a vehicle will be in an abnormal condition by this are eliminated.

[Translation done.]

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PRIOR ART

[Description of the Prior Art] The data recorder constituted so that the transit data of a vehicle might be recorded on a storage means by carrying out sequential overwriting, it might judge with the vehicle having been in the abnormal condition when the magnitude of the acceleration of a vehicle was beyond a reference value and the overwriting to a storage means might be stopped is conventionally known as indicated as one of the data recorders of vehicles, such as an automobile, by JP, 7-249137, A concerning application of an applicant for this patent.

[0003] Since it is recorded by carrying out sequential overwriting of the transit data of a vehicle at a storage means according to this data recorder, the large storage means of storage capacity is unnecessary, and since the overwriting to a storage means is stopped when the magnitude of the acceleration of a vehicle becomes beyond a reference value, transit data just before the magnitude of the acceleration of a vehicle becomes beyond a reference value can certainly be saved.

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EFFECT OF THE INVENTION

[Effect of the Invention] According to the configuration of claim 1 of this invention, the case where the magnitude of acceleration becomes comparatively large at the time of the usual transit of a vehicle and a stop can be distinguished, the abnormal condition of a vehicle can be judged certainly, and transit data just before a vehicle will be in an abnormal condition by this can certainly be saved so that more clearly than the above explanation.

[0061] Moreover, since it is not necessary to set up the reference value of an acceleration judging of a vehicle highly according to the configuration of claims 2 and 3, the abnormal condition of a vehicle can be judged certainly, and according to the configuration of claim 4, it can prevent certainly being judged with the abnormal condition of a vehicle in the situation that the magnitude of acceleration becomes comparatively large at the time of usual transit of a vehicle.

[0062] Moreover, according to the configuration of claim 5, it can prevent certainly that the data after the event of a vehicle being in an abnormal condition are overwritten by the storage means, and can prevent certainly that transit data just before a vehicle will be in an abnormal condition by this are eliminated.

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TECHNICAL PROBLEM

[Problem(s) to be Solved by the Invention] However, in the conventional data recorder like ****, since it is judged with the vehicle having been in the abnormal condition when the magnitude of the acceleration of a vehicle is beyond a reference value, even if a vehicle will be in an abnormal condition, the abnormal condition may be unable to be judged. namely, since the acceleration of a vehicle may become a comparatively high value also at the time of usual transit of a vehicle, when the abnormal condition of a vehicle is judged only based on the magnitude of the acceleration of a vehicle the reference value of an abnormal-condition judging -- a comparatively high value -- not setting up -- transit data just before it does not obtain, therefore the abnormal condition will not be judged even if the abnormal condition like the collision of a vehicle arises, therefore a vehicle will be in an abnormal condition may be unable to be saved

[0005] This invention is made in view of the problem like **** in the conventional data recorder constituted so that the overwriting of transit data to a storage means might be stopped, when the magnitude of the acceleration of a vehicle is beyond a reference value, and the main technical problems of this invention are certainly saving transit data just before a vehicle's will be in an abnormal condition by judging that certainly, when a vehicle will be in an abnormal condition.

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