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(54) **DATA CARRIER APPARATUS,
COMMUNICATION SYSTEM, AND
REPLACEABLE UNIT**

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(57) **ABSTRACT**

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In a data carrier apparatus, a first determination unit determines a duty ratio of each pulse of a pulse signal received from a data carrier driving apparatus, and a second determination unit determines a frequency of each pulse of the received pulse signal. A calibration unit performs calibration of a reference value to be used for determination performed by the second determination unit, during a calibration period. A demodulation unit demodulates data conveyed by the received pulse signal. The demodulation unit performs first demodulation based on a determination result of the first determination unit during the calibration period, and start second demodulation based on the determination result of the first determination unit and a determination result of the second determination unit when the calibration period ends.

