

US006287167B1

(12) United States Patent Kondo

(10) Patent No.: US 6,287,167 B1

(45) Date of Patent: Sep. 11, 2001

(54)	DRIVING CIRCUIT FOR TOY CAR	

(75) Inventor: Hirotoshi Kondo, Tokyo (JP)

(73) Assignee: Kondo kagaku Co., Ltd., Tokyo (JP)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35

U.S.C. 154(b) by 0 days.

(21) Appl. No.: 09/370,704

(22) Filed: Aug. 9, 1999

(30) Foreign Application Priority Data

Aug. 10,	1998	(JP)	 10-236593
	100		

(52) U.S. Cl. 446/454; 446/456; 446/484; 463/62

(56) References Cited

U.S. PATENT DOCUMENTS

3,569,969 * 3/1971 Lemon, Jr. 446/456 X

3,705,387		12/1972	Stern et al	446/454 X
4,080,602	*	3/1978	Hattori et al	446/454 X
4,143,307	*	3/1979	Hansen et al	446/454 X
4,275,394	*	6/1981	Mabuchi et al	446/456 X
4,349,986	*	9/1982	Tsukuda	446/484
4,548,584		10/1985	Townsend	446/454 X
4,712,184	*	12/1987	Haugerud	446/454 X

^{*} cited by examiner

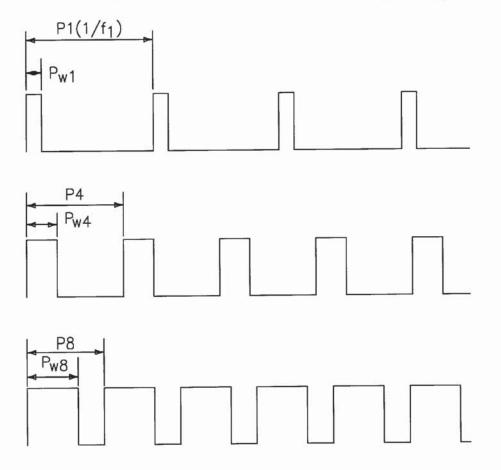
Primary Examiner—D. Neal Muir

(74) Attorney, Agent, or Firm-Dilworth & Barrese LLP.

(57) ABSTRACT

The invention relates to a speed controller able to change a pulse frequency and a pulse width of a pulse signal to control a driving motor. This device is able to change the pulse frequency during the run of the toy car which adjusts the torque of the driving motor in response to the revolution number of the driving motor. The speed controller adjusts the pulse frequency to be large when the pulse width is small, while the pulse frequency is small when the pulse width is large.

20 Claims, 6 Drawing Sheets





Sep. 11, 2001

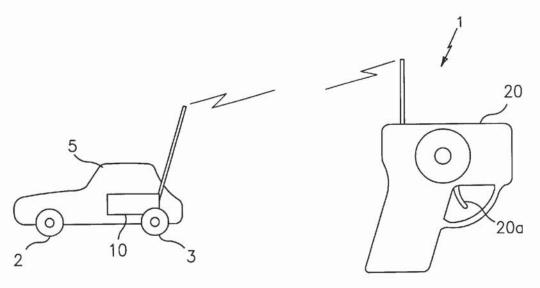
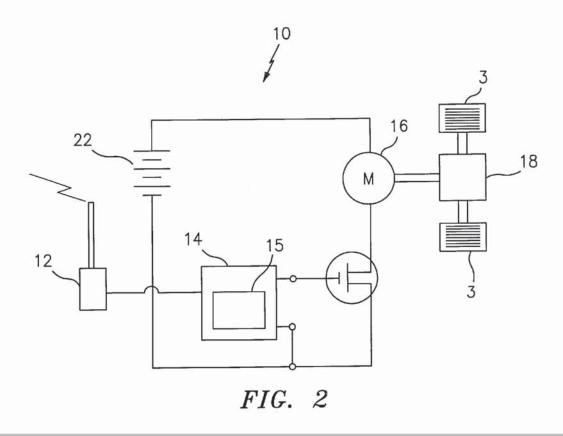
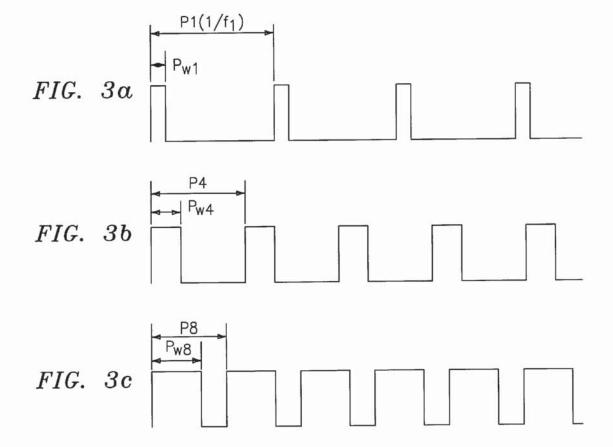


FIG. 1





Sep. 11, 2001



Sep. 11, 2001

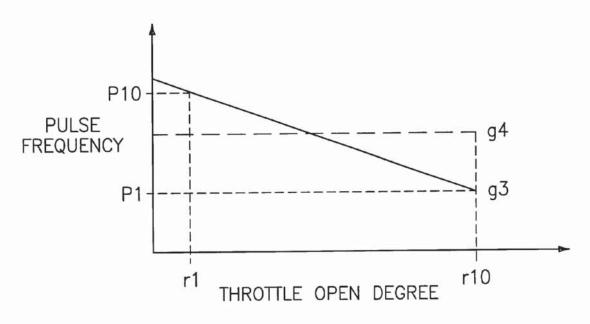


FIG. 4

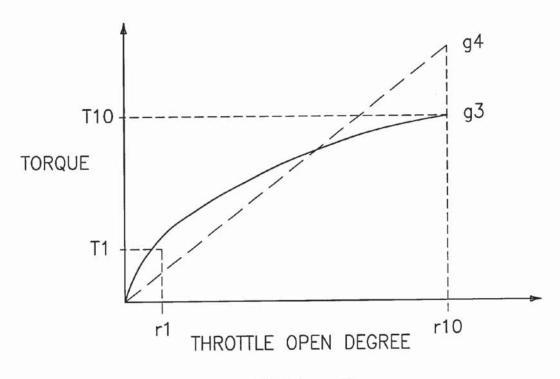


FIG. 5

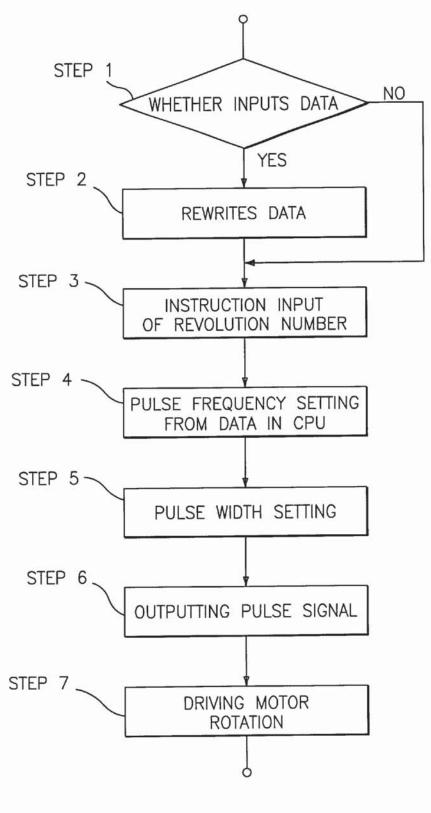


FIG. 6

DOCKET A L A R M

Explore Litigation Insights



Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time** alerts and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.

