

[54] GPS RECEIVER HAVING A LOW POWER STANDBY MODE

5,291,542	3/1994	Kivari et al.	379/58
5,418,537	5/1995	Bird	342/357
5,448,773	9/1995	McBurney et al.	455/343

[75] Inventors: Chung Y. Lau, Sunnyvale; Dominic G. Farmer, Milpitas; Kreg A. Martin; Eric B. Rodal, both of Cupertino, all of Calif.

Primary Examiner—Gregory C. Issing  
Attorney, Agent, or Firm—David R. Gildea

[73] Assignee: Trimble Navigation, Ltd, Sunnyvale, Calif.

[57] ABSTRACT

[21] Appl. No.: 276,886

[22] Filed: Jul. 18, 1994

[51] Int. Cl.<sup>6</sup> ..... G01S 5/02; G06F 1/00; H04B 1/16

[52] U.S. Cl. .... 342/357; 364/707; 455/343; 455/231

[58] Field of Search ..... 342/357; 455/343, 455/230, 231; 364/707

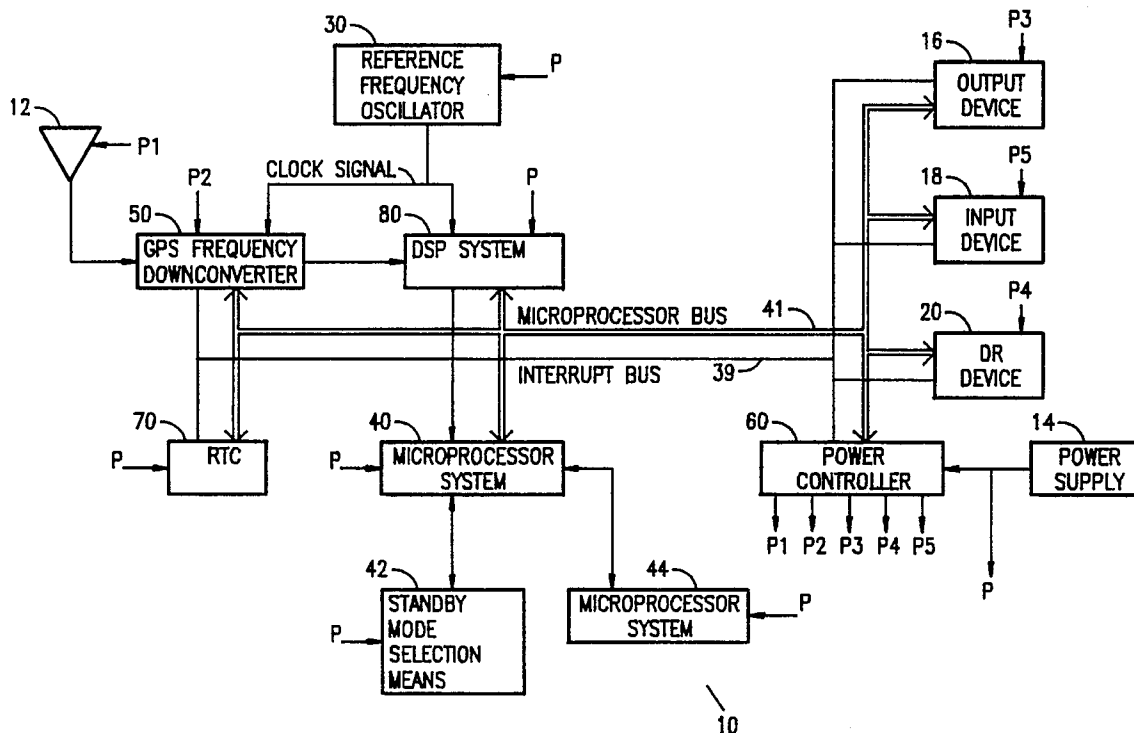
A GPS receiver having a normal mode to receive GPS satellite signals and to provide location information, and a low power standby mode. A microprocessor system in the GPS receiver causes the GPS receiver to alternate between the normal mode and the low power standby mode in order to reduce the average power consumption in the GPS receiver. In the normal mode a GPS antenna receives GPS satellite signals, the GPS frequency downconverter converts the frequency of the GPS satellite signals to an intermediate frequency, a digital signal processing system processes the intermediate frequency to provide GPS satellite signal correlation information. The microprocessor system processes the correlation information and provides location information to a user. In the standby mode, the operating power is inhibited in the GPS antenna and the GPS frequency downconverter, the system clock is inhibited in the digital processing system, and the microprocessor clock is inhibited in the microprocessor system.

[56] References Cited

U.S. PATENT DOCUMENTS

4,449,248	5/1984	Leslie et al.	455/343
5,101,510	3/1992	Duckeck	455/186
5,128,938	7/1992	Borras	455/343

31 Claims, 4 Drawing Sheets



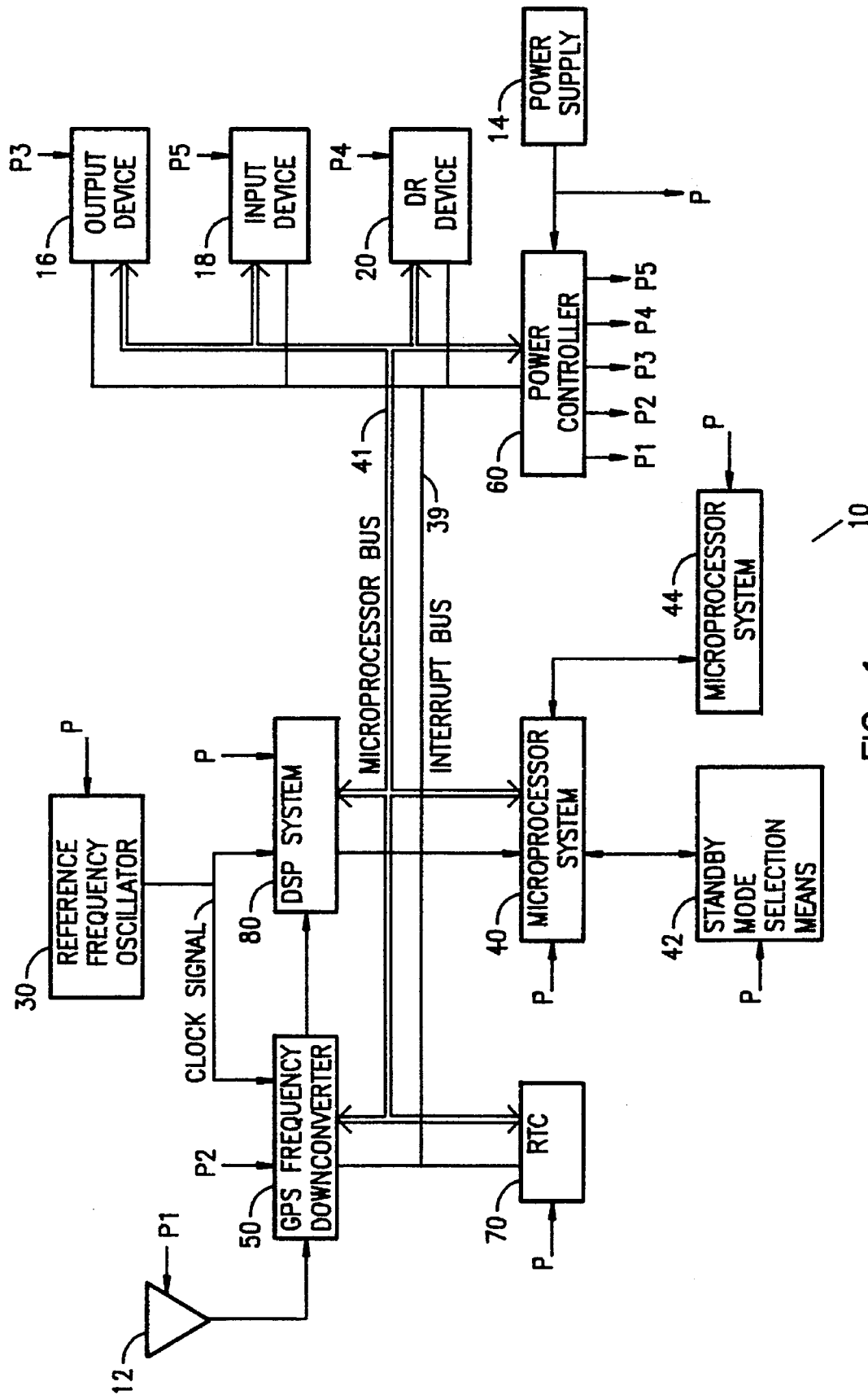


FIG. 1

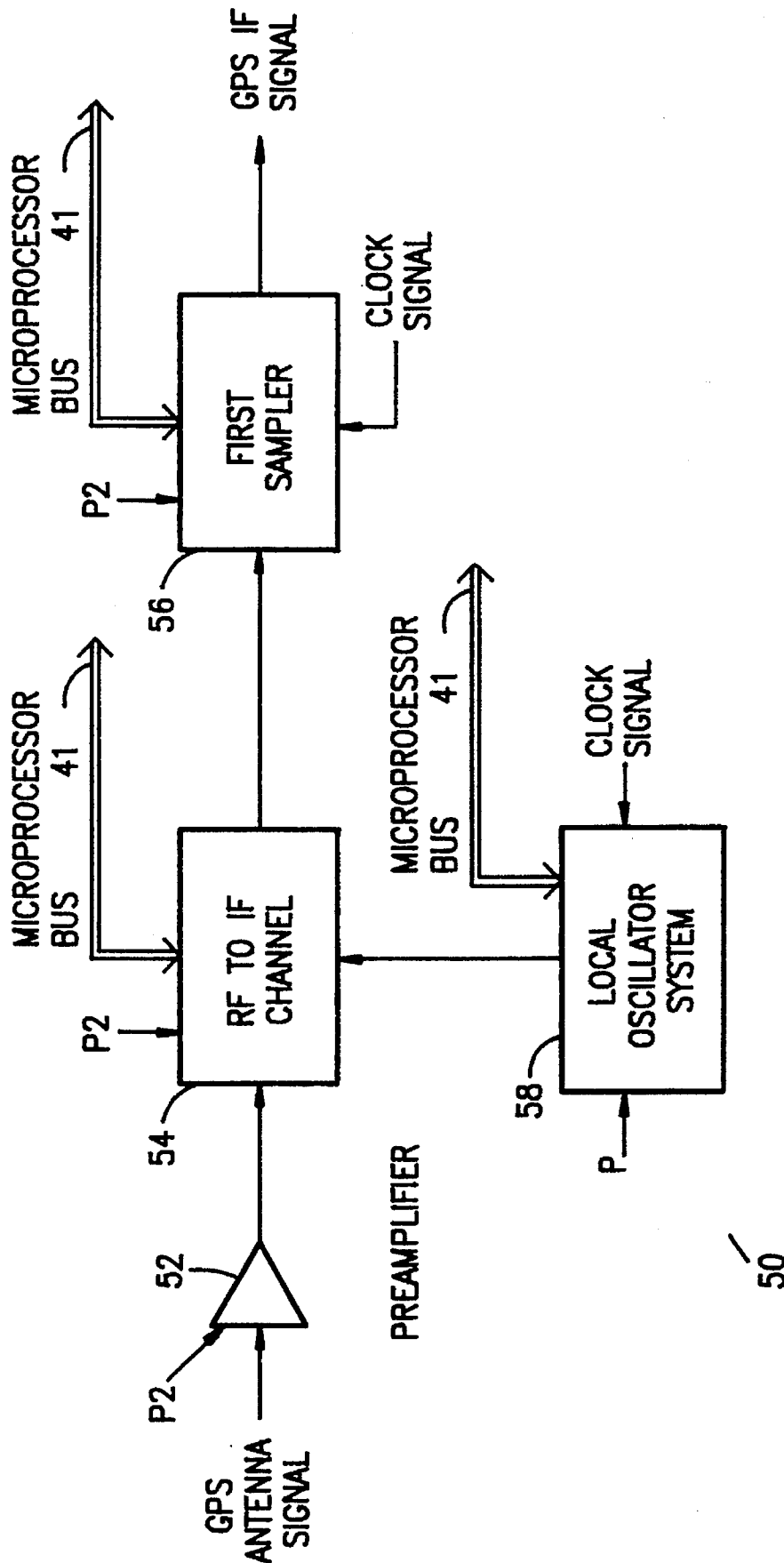


FIG. 2

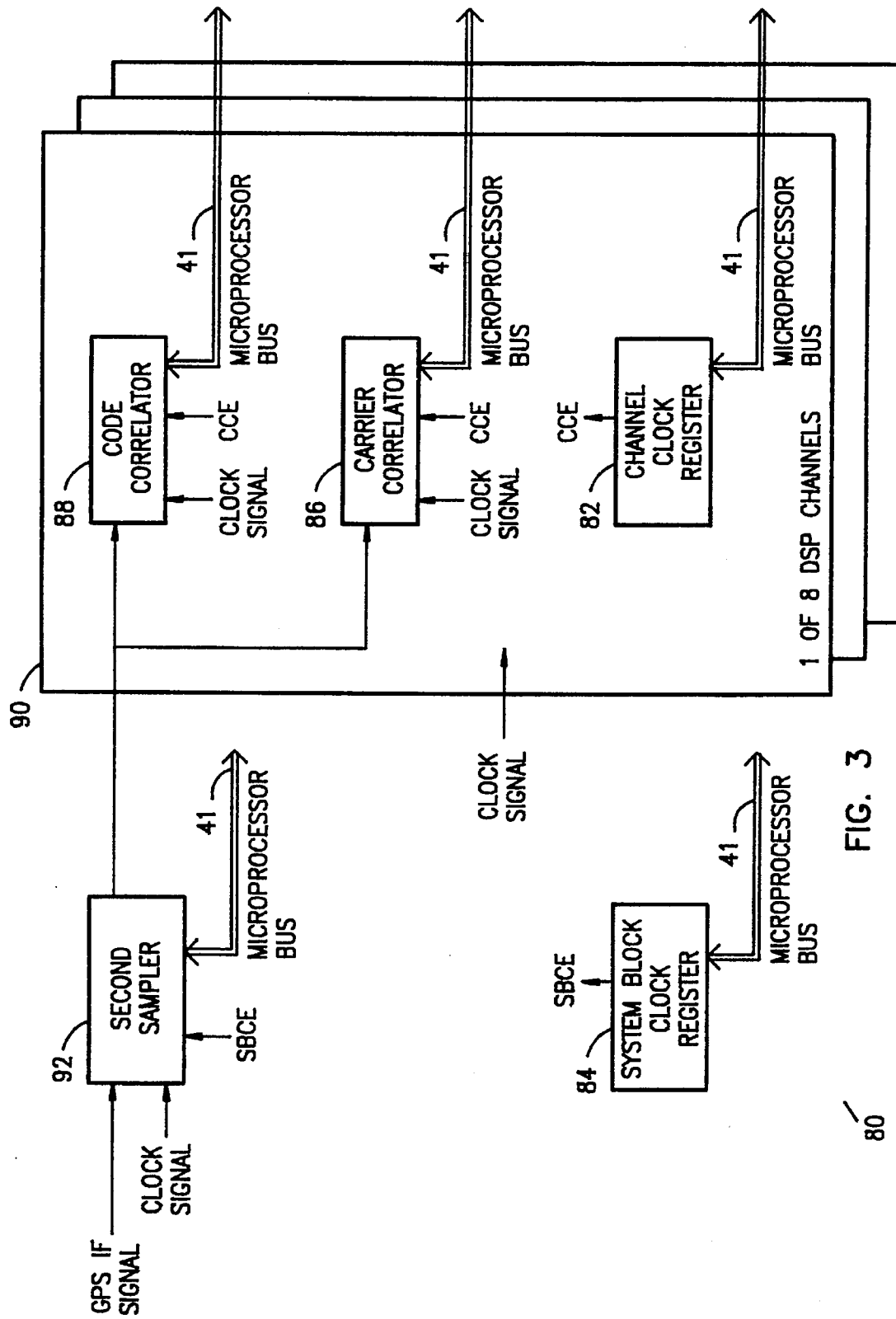


FIG. 3

80

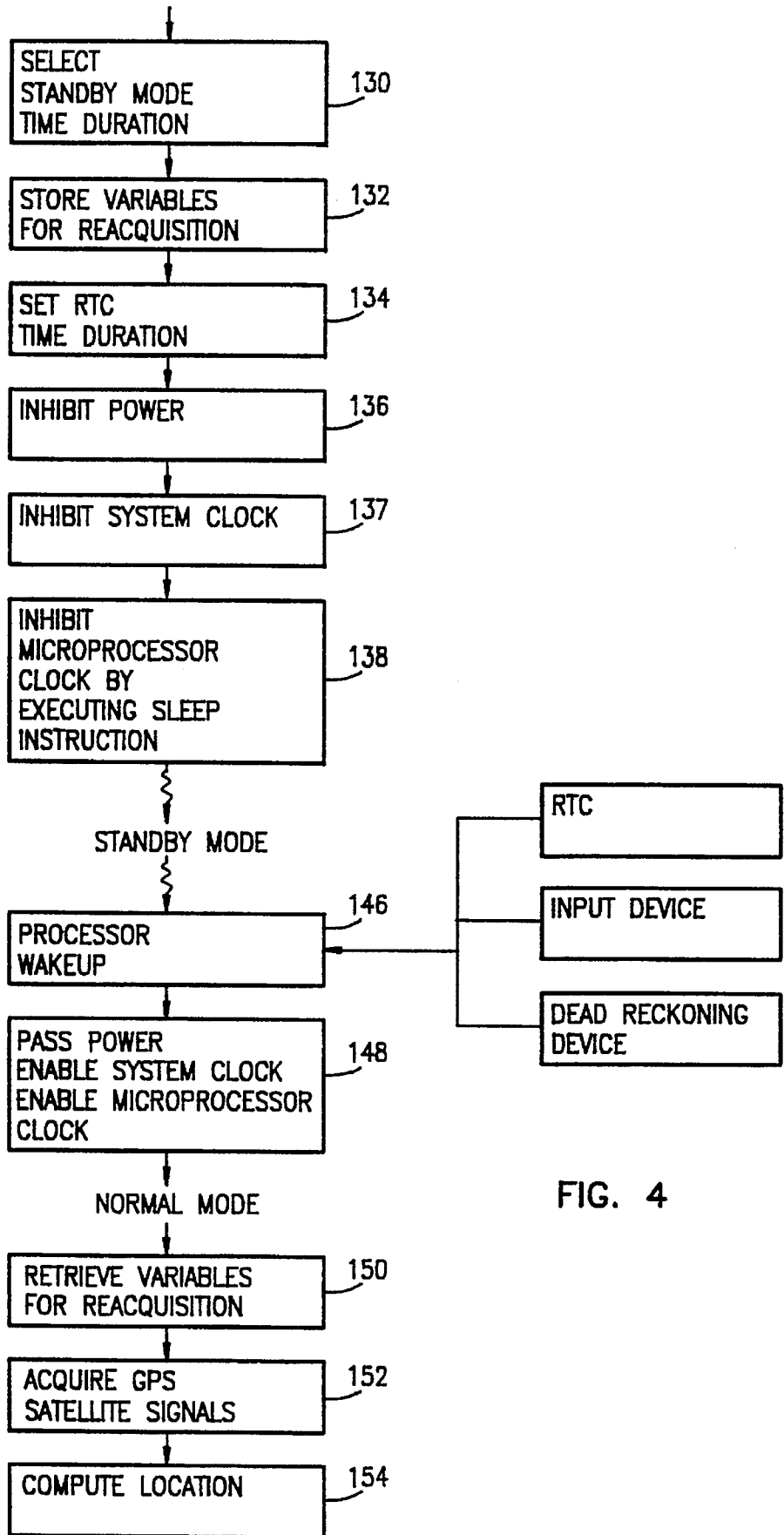


FIG. 4

# 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.