

Title (en)

APPARATUS FOR THE PRECISE DATING OF AN EVENT WITH REGARD TO A TIME REFERENCE

Publication

EP 0051531 B1 19850612 (FR)

Application

EP 81401716 A 19811027

Priority

FR 8023404 A 19801031

Abstract (en)

[origin: ES8300207A1] The apparatus gives an indication of the location in time between two successive clock signals of an event to be timed. Such an event may be the arrival of a laser pulse at a satellite. An integrator circuit (C84) is charged by a relatively high charging current from a first current generator (66) during the period of time between the event and the next clock signal. The integrator circuit is then discharged by a smaller current of opposite sign from a second current generator (80). The ratio of the charge and discharge currents "stretches" the inter clock pulse time interval to a length that can be measured by counting clock pulses as the integrator discharges. For this factor to be useful, it is essential that the charging current remains constant during charging and from one charging occasion to the next. This is achieved by keeping the generator (66) generating current constantly and by diverting the current through an integrator circuit by-pass (R78) when not integrating. Switching is done using two transistors (Q71 and Q72) that are as identical as possible, and independently controlled in phase opposition. The by-pass current is detected and used to regulate the generator (66). Provided both transistors deviate in the same manner from nominal characteristics, this provides accurate compensation for variations in the other transistor also.

IPC 1-7

G04F 10/10

IPC 8 full level

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CPC (source: EP US)

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Cited by

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