



REDUCTION OF THE ACQUISITION AND TRACKING THRESHOLDS FOR CARRIERS

Procedure for the reduction of acquisition and tracking thresholds for carrier waves in orbit

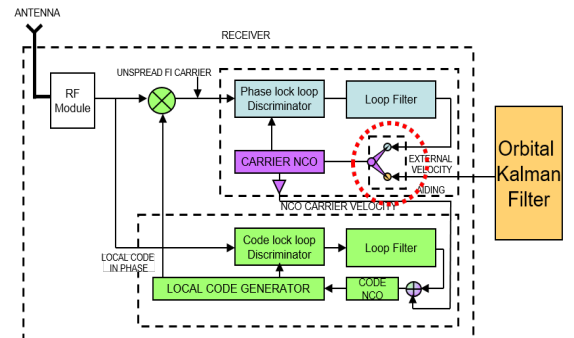
Technological advantages

Improved carrier acquisition

- Significant reduction of the acquisition and tracking threshold for carrier waves
- Reduced acquisition time
- Improved robustness of geostationary satellites and satellites in survival mode

Compatible with all types of satellite

Compatible with LEO, MEO, GEO or HEO geostationary satellites.



Specific algorithm for tracking carrier waves

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Summary of the invention

Reduction of the carrier wave acquisition and tracking thresholds received in orbit by a satellite receiver accessing an orbital navigator, such as a Kalman filter which can be installed directly inside the receiver or ECU of the carrier satellite

The receiver is installed with a code loop, responsible for carrier acquisition or tracking. The orbital navigator is the source of the precise accuracy of the satellite receiver speed and enables the acquisition and tracking threshold to be reduced.

Commercial benefits

Instant installation and benefits

Compatible with existing and future receivers: GPS, GLONASS, Globalstar, Immarsat, Iridium, Galileo, Compass, Egnos, IRNSS, GNSS and DORIS

Compatible with remote control receivers used in ground stations or relay satellites

No modification to equipment is required.

TRL: 4

Patented invention, available under licence

Potential applications

Space industry: orbitography, radio occultation, reflectometry, altimetry