Chinastandards.org

JJF

NATIONAL METROLOGY TECHNICAL SPECIFICATION OF THE

PEOPLE'S REPUBLIC OF CHINA

JJF 1922-2021

Calibration Specification for GNSS Signal Record &Playback Instruments

GNSS导航信号采集回放仪 校准规范

(English Translation)

Issued on: October 18, 2021 **Implemented on: April 18, 2022**

Issued by: State Administration for Market Regulation

Preview: page 1 of 4 shown, 23 in the full document. Complete English PDF, instant download:
https://chinastandards.org/standards/jjf-1922-2021

Chinastandards.org

Table of Contents

1 Scope(1)
2 References (1)
3 Terms and Definitions (1)
4 Overview(1)
5 Metrology Characteristics(2)
6 Calibration Conditions(2)
6.1 Environmental conditions (2)
6.2 Measurement standards and other equipment(3)
7 Calibration items and calibration methods (4)
7.1 Calibration items(4)
7.2 Calibration method(4)
8 Expression of calibration results (8)
9 Recalibration interval(9)
Introduction

7.2.2 Acquisition signal input power range(5)

7.2.3 3dB acquisition bandwidth(5)

7.2.4 In-band spurs(6)

9 Recalibration interval(9)

Appendix A Calibration Raw Record Format(10)

Appendix B Calibration Certificate Inside Page Format (13)

Appendix C Example of Uncertainty Assessment of Calibration Results (16)

Introduction

JJF 1071-2010 "Rules for Compilation of National Metrology Calibration Specifications", JJF 1001 "General Metrology Terms and Definitions", JJF 1059.1-2012 "Assessment and Representation of Measurement Uncertainty" together constitute the basis for the preparation of this specification Series Specifications.

This specification is published for the first time.

Preview: page 2 of 4 shown, 23 in the full document. Complete English PDF, instant download:
https://chinastandards.org/standards/jjf-1922-2021

Chinastandards.org

Calibration specification for GNSS navigation signal acquisition and playback instrument

1 Scope

This specification applies to the acquisition and playback of GPS, BDS, GLONASS and Galileo satellite navigation signals Calibration of GNSS navigation signal acquisition and playback instrument (hereinafter referred to as acquisition and playback instrument).

2 Reference documents this specification references the following documents.

GB/T 19391 Global Positioning System (GPS) Terms and Definitions for dated references, only the dated version applies to this specification; for undated references the latest version (including all amendments) applies to this specification.

3 Terms and Definitions the carrier-to-noise ratio calculated by the navigation receiver receiving the navigation simulator signal is the same as the same navigation receiver receiving the acquisition and playback.

The difference between the carrier-to-noise ratios of the navigation signals in a scene.

The navigation receiver receives the positioning deviation calculated by the navigation simulator signal, and receives the acquisition and playback with the same navigation receiver.

The difference between the positioning deviations calculated by the navigation signals in the same scene.

The positioning accuracy calculated by the navigation receiver receiving the navigation simulator signal is the same as that obtained by the same navigation receiver.

The difference between the positioning accuracy calculated by the navigation signal in the same scene.

The navigation receiver receives the navigation simulator signal and receives the acquisition and playback instrument to play back the satellite navigation signal of the same scene.

The consistency of the carrier-to-noise ratios of the last two solutions is represented by the playback carrier-to-noise ratio deviation.

The navigation receiver receives the signal of the navigation simulator and receives the acquisition and playback instrument to play back the satellite navigation signal of the same scene.

The consistency of the positioning deviation and positioning accuracy of the two solutions before and after is determined by the playback positioning deviation and playback positioning accuracy.

Deviation representation.

Preview: page 3 of 4 shown, 23 in the full document. Complete English PDF, instant download:
https://chinastandards.org/standards/jjf-1922-2021

Chinastandards.org

4 Overview

The acquisition and playback instrument can collect satellite navigation signals in the real environment, and store and return the collected signals.

It is mainly used for the test of GNSS navigation terminal. Its principle block diagram is shown in Figure 1, which is mainly composed of filter amplification, down-conversion Frequency, analog-to-digital conversion, central processing unit, storage unit, digital-to-analog conversion, up-conversion, filter attenuation and other units.

Preview: page 4 of 4 shown, 23 in the full document. Complete English PDF, instant download:
https://chinastandards.org/standards/jjf-1922-2021