

ICS 47.020.70; 03.220.40  
CCS R 28



**NATIONAL STANDARD OF THE  
PEOPLE'S REPUBLIC OF CHINA**

**GB/T 17424-2019**

---

**Technical requirements of differential global navigation satellite  
system**

**Issued on: May 10, 2019**

**Implemented on: December 1, 2019**

---

**Issued by: State Administration for Market Regulation, China National  
Standardization Administration**

## Table of Contents

Foreword

1 Scope

2 Normative references

4

Shipborne DGPS and DGLONASS maritime radiobeacon receiver equipment-Performance requirements

3 terms and definitions, abbreviations

3.1 Terms and definitions

### Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard replaces GB/T 17424-2009 "Difference Global Navigation Satellite System (DGNSS) Technical Requirements". And GB/T 17424-

Compared with.2009, the main technical changes except editorial changes are as follows.

--- Revised scope (see Chapter 1, Chapter 1 of the.2009 edition);

--- Revised the normative reference document (see Chapter 2, Chapter 2 of the.2009 edition);

--- Removed 8 terms (see Chapter 3 of the.2009 edition) and added 8 terms (see Chapter 3);

---Modified the basic structure of the system (see Chapter 4, Chapter 4 of the.2009 edition);

--- Revised the site selection of the broadcaster (see Chapter 5 of the.2009 edition) and incorporated it into the broadcaster (see Chapter 5.2 of the 5.2,.2009 edition);

---Modified technical requirements (see Chapter 5, Chapter 6 of the.2009 edition);

--- Revised the general requirements (see 6.1 of the.2009 edition), some of which were moved into Chapter 8 (see 5.1, 8.10);

--- Modified the GNSS receiver requirements for the reference station (see 5.2, 6.2 of the.2009 edition);

--- Increase control center requirements (see 5.3);

--- Combine DGNSS technical characteristics into RBN-DGNSS emission characteristics (see 8.1, 8.2, 8.3, 8.4, 8.5, and 8.6,.2009 edition)

6.3);

--- Increase the general DGNSS receiver requirements (see 5.4.1);

--- Revised the technical requirements for shipborne radio beacon receivers (see 5.4.2.1, 5.4.2.3, 5.4.2.4, 5.4.2.5 and 5.4.2.6,.2009)

Version 6.4);

---Modified message types 3, 4 and 27 (see 6.2.3, 6.2.4 and 6.2.10, 7.4, 7.5 and 7.15 for.2009);

--- Increased message types 15, 37, 41, 42 and 43 (see 6.2.8, 6.2.16, 6.2.17, 6.2.18 and 6.2.19);

---Modified the message broadcast process (see Chapter 7, Chapter 8 of the.2009 edition);

--- Modified coastal radio DGNSS (RBN-DGNSS) emission characteristics (see 8.2, 8.3, 8.4, 8.6, 8.9, 8.10, 8.13,.2009 edition)

Chapter 9).

This standard uses the redrafting method to refer to ITU-R M.823-3.2006 "Marine radio beacons in Zone 1 to 283.5kHz~

Technical characteristics of the 315 kHz band and the transmission of differential GNSS data in the 2, 3 zone from 285 kHz to 325 kHz, with ITU-R

The degree of consistency of M.823-3.2006 is non-equivalent.

## 1 Scope

This standard specifies the basic composition of the Differential Global Navigation Satellite System (DGNSS), the location of the broadcast station, technical requirements, message format and electricity.

Text type, message broadcast process and coastal radio beacon - differential global satellite navigation system launch characteristics.

This standard applies to the design, development and use of water DGNSS broadcasters and receivers.

## 2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article.

Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 19391 Global Positioning System (GPS) terms and definitions

GB/T 28588 Global Navigation Satellite System Continuous Operation Base Station Network Specifications

Maritime navigation and radiocommunication equipment and systems - Global navigation systems - Part 4. Shipboard DGPS and

DGLONASS maritime radio beacon receiving equipment performance requirements, testing methods and test results requirements (Maritime navigation

and radiocommunication equipment and systems - Global navigation satellite systems (GNSS) - Part

#### 4

### **Shipborne DGPS and DGLONASS maritime radio beacon receiver equipment - Performance requirements -**

Methods, methods of testing and required test results)

Maritime navigation and radiocommunication equipment and systems - Digital interface - Part 1. Single talkers and receivers

(Maritime navigation and radiocommunication equipment and systems - Digital interfaces - Part 1.

Single talker and multiple listeners)

Maritime navigation and radiocommunication equipment and systems - Digital interface - Part 2. Single talkers and multi-receivers,

High-speed transmission

(Maritime navigation and radiocommunication equipment and systems - Digital interfaces -

Part 2. Single talker and multiple listeners, high-speed transmission)

Technical characteristics of the automatic identification system using time division multiple access in the VHF maritime mobile band in Recommendation ITU-R M.1371-5

(Recommendations - Technical characteristics for an automatic identification system using time-division multiple access in the VHF maritime mobile band)

RTCM 10401.2 Differential GPS Reference and Performance Monitoring Station Standard

(Version 1.2) [RTCM 10401.2 Standard for

Differential Navstar GPS Reference Stations and Integrity Monitors (Version 1.2)]

### **3.1 Terms and definitions**

The following terms and definitions as defined in GB/T 19391 apply to this document.

3.1.1

Radio beacon radiobeacon

A land-based radio transmitter that operates in the low-mid range for user orientation.

chinastandards.org · PREVIEW