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

GB/T 12649-2017

Replacing GB/T 12649-1990

Measuring methods for meteorological radar parameters

气象雷达参数测试方法

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009. This standard replaces GB/T 12649-1990 "weather radar parameter testing methods." This standard and GB/T 12649-1990 compared to the main technical content changes are as follows:

- Increased the terms of the test items (see 5.4,5.6,5.7,5.8,5.13,5.16,5.17,5.29,5.32,5.34,5.35,5.45,5.48, 5.49, 5.50).
- By GB/T 3784 modified terms and definitions.
- The main technical parameters of the test method According to the current weather radar typical test methods were revised.
- The original test items 41, after an increase, deletion, revision of a total of 51 test items.
- Terms related to the change of name of the clauses are as follows: "Tracking speed" to "Maximum tracking speed" (see 5.3,.1990 version 5.3); "Operating frequency range (working bandwidth)" "Operating frequency" (see 5.5),.1990 version 5.12; "radome attenuation" to "radome loss" (see 5.9.10,.1990 edition) 5.5); "Crossing level" to "Lobe crosspoint level" (see 5.1.1,.1990 version 5.6); "Receiver sensitivity and sensitivity are stable Qualitative "to" Receiver sensitivity "(see 5.24,.1990 version 5.17);" Self-frequency tracking accuracy "to" Self-frequency tracking fine Degrees "(see 5.33,.1990 version 5.24);" Plane Position Indicator (PPI), Slope Height Indicator (RHI) and high horizontal distance DHI, REI, A/R Display, Photo Display, Digital Video Point Processing System (DVIP), data processing system "to" weather radar signal processing/data processing terminal "," wind profiler radar data processing terminal End "," high altitude weather radar data processing terminal "(see 5.36, 5.37, 5.38,.1990 edition of 5.25,5.26,5.27,5.28, 5.29,5.30,5.32); "The working method of antenna control system" is replaced by "Antenna control method" (see 5.440,.1990 version 5.33); "The frequency characteristics of the weather system" was replaced by "The amplitude-frequency characteristics of the antenna control subsystem" (see 5.33, version 5.37 of.1990); " Feedback Depth "to" Tachograph Feedback Depth "(see 5.447,.1990

version 5.40).

--- Removed "Plane Position Indicator (PPI)" (1990 version 5.25), "Slope Height Indicator (RHI) and Horizontal Distance Height Display (DHI)" (1990 version 5.26), "Slope Angle Elevation Display (REI)" (1990 version 5.27), "A/R Display" (1990 version 5.28), Photographic Displays (1990 version 5.29), Digital Video Integrator System (DVIP) (1990 Version 5.30). This standard proposed by the Ministry of Industry and Information Technology of the People's Republic of China. This standard by the China Electronics Standardization Institute centralized. This standard was drafted .081 Electronic Group Co., Ltd.. The main drafters of this standard. Xiao Chunhua, Hu Rong, Zhao Yu Guo, Xie Liuqing, Zhang Qiang, Li Shouqin, Yang Jianping, Wu Bin. This standard replaces the standards previously issued as.

--- GB/T 12649-1990. Weather Radar Parameter Test Method

1 Scope

GB/T 12649-2017 is the Chinese national standard on measuring methods for meteorological radar parameters, in the field of telecommunications and audio-video engineering. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 31 July 2017 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 February 2018. Classification: ICS 33.200, CCS M50. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This standard specifies the main technical parameters of the weather radar (hereinafter referred to as radar, including wind measurement radar, weather radar, cloud detection radar, etc.) method. This standard applies to the weather radar production and acceptance of the main technical parameters of the test.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version applies to this article Pieces. For undated references, the latest edition (including all amendments) applies to this document. Electrotechnical terminology radars General Specification for GJB74A-1998 Military Ground Radar SJ/T 2534.2 Antenna test method Antenna test field design

3 Terms and definitions

GB/T 3784-2009 defined and the following terms and definitions apply to this document.

3.1 Meteorological radar The general term used to detect meteorological elements such as atmospheric wind, temperature, pressure and humidity as well as meteorological targets such as clouds and precipitation, including wind measurements Radar, weather radar and cloud detection radar. [GB/T 3784-2009, Definition 2.1.2.25]

3.2 Wind-finding radar Radars used to detect meteorological elements such as wind, temperature, pressure and humidity in the atmosphere include high altitude weather radar, wind profile radar and Doppler laser wind measurement radar. [GB/T 3784-2009, definition 2.1.2.26]

3.3 Weather radar weatherradar Used to detect atmospheric Cumulonimbus, thunderstorms and other precipitation systems, the intensity, scope and changes, the average radial velocity of cloud and precipitation particles and Speed spectrum radar. Also known as rain radar. Including co-ordinated weather radar and non-co-ordinated weather radar. Coherent weather radar also known as Doppler days Gas radar, non-co-ordinate weather radar is also known as conventional weather radar. [GB/T 3784-2009, Definition 2.1.2.30]

4 Test the general requirements

4.1 Instrumentation The instrumentation and test equipment used to control or monitor the test parameters shall be within the valid test period with a precision not less than that of the test strip