

ICS 33.160
CCS M 61



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

GB 3174-1995

Replacing GB 3174-1982

Characteristics of the PAL-D television broadcasting system

PAL-D制电视广播技术规范

Issued on: December 20, 1995

Implemented on: December 1, 1996

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine;
Standardization Administration of the PRC**

Table of Contents

- 1 Scope
- 2 Normative references
- 3 General characteristics
- 4 Video signal characteristics
- 5 Colour encoding
- 6 Sound signal characteristics
- 7 Radio frequency channel characteristics
- 8 Transmitted signal requirements
- About this edition
- Classification and status
- How a Chinese national standard is set out
- About this English translation

1 Scope

This standard specifies the characteristics of the PAL-D television broadcasting system, including the video signal, the colour encoding, the sound, the radio frequency channel arrangement and the requirements on the transmitted signal.

It applies to the terrestrial broadcasting of PAL-D television.

What it fixes

The whole chain. The 625 line, 50 field per second raster with its scanning, blanking and synchronising parameters. The luminance and chrominance signals, the colour subcarrier, and the phase alternation line by line that gives the system its name and its tolerance to the phase errors that plagued its predecessor.

Then the D variant specifically: the channel plan with its 8 MHz spacing and the vestigial sideband arrangement that distinguishes it from the B and G variants used in western Europe, the negative video modulation, and the frequency modulated sound carrier with its offset.

Why the tolerances are the substance

A broadcast standard is a contract between an unlimited number of transmitters and an unlimited number of receivers, none of which can be adjusted to suit the others. Everything

therefore has to be specified with a tolerance, and it is the tolerances rather than the nominal figures that make the system work in the field.

The document is a historical one now, superseded in practice by the digital terrestrial system of GB 20600-2006, but it remains the reference for the legacy plant still in service, for the archives recorded to it, and for anyone who has to interpret material or equipment from the analogue era.

About this edition

GB 3174-1995 is the current edition. It was issued on 20 December 1995 and has been in force since 1 December 1996, replacing GB 3174-1982.

GB 3174-1982 has been superseded: a specification that still cites it is citing a withdrawn edition.

The interval between issue and effect is the transition period. It exists so that producers, laboratories and buyers can requalify products, revise procedures and use up documentation before the new text becomes the one that applies. The date on this page is the official one from the record of the Standardization Administration.

Classification and status

GB 3174-1995 is classified under ICS 33.160. ICS is the International Classification for Standards, the same scheme used by ISO and by the national bodies of most countries, which is what allows a Chinese standard to be placed beside its foreign counterparts on subject rather than on number.

Its Chinese Standard Classification code is CCS M 61. CCS is the domestic scheme, a letter for the sector and two digits for the subject within it, and it is the code by which the standard is filed and searched in China.

The GB prefix marks a mandatory national standard. Compliance is required by law within China: it applies to what is made, sold or imported there, and an inspection body will judge a product against it whether or not a contract names it.

How a Chinese national standard is set out

Chinese national standards are drafted to the rules of GB/T 1.1, which fixes the order in which a standard is set out. The document opens with a foreword recording the issuing bodies, the relationship to any previous edition and the technical committee responsible for it. Clause 1 is the scope. Clause 2 lists the normative references - the other standards that have to be applied together with this one, and without which its requirements cannot be met. Clause 3 gives the terms and definitions. The technical clauses follow: the requirements themselves, the test or measurement methods by which conformity is

established, the inspection rules that say how a lot is sampled and judged, and, for a product standard, the provisions on marking, packaging, transport and storage. Annexes, normative or informative, come last.

GB 3174-1995 runs to 15 pages in the English translation. What is delivered is the complete document in that order: every clause, every table, every figure and every annex of the Chinese original, with the same numbering, so that a reference to a clause number in a contract or a test report points to the same place in both languages.

About this English translation

The English edition of GB 3174-1995 is a full translation of the official Chinese text, not a summary, an abstract or a machine rendering left unchecked. Clause and subclause numbers, table and figure numbers and annex letters are those of the original, because they are what a specification, a purchase order or a test report cites.

Technical terms are translated against the vocabulary standards of the same field, so that a term used in GB 3174-1995 reads the same way as in the other Chinese standards it is used beside. Where a term has an established English form in an ISO or IEC document on the same subject, that form is used; where China's term has no foreign counterpart, it is translated literally and the Chinese is kept alongside it rather than replaced by an approximation.

Quantities, units and symbols are carried over unchanged. Chinese standards use SI, so a value in the translation is the value in the original document, not a conversion, and a limit read from the English text is the limit that will be applied by a Chinese inspection body reading the Chinese one.

This page is compiled from the official publication record: the standard number and both titles, the issuing bodies, the dates of issue and effect, the edition it replaces, the ICS and CCS classification. The requirements, limits, tables and test conditions are in the document itself.