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# Intelligent and connected vehicles - Symbols for controls, indicators and tell-tales

智能网联汽车 操纵件、指示器及信号装置的标志

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#### **Foreword**

This document was drafted in accordance with the provisions of GB/T 1.1-2020 "Directives for standardization - Part 1: Rules for the structure and drafting of standardizing documents".

Please note that some contents of this document may involve patents. The issuing agency of this document does not assume the responsibility for identifying patents.

This document was proposed by the Ministry of Industry and Information Technology of the People's Republic of China.

This document shall be under the jurisdiction of the National Technical Committee for Automobile Standardization (SAC/TC 114).

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## Intelligent and connected vehicles - Symbols for controls, indicators and tell-tales

## 1 Scope

This document specifies the basic requirements for the symbols of the controls, indicators and tell-tales unique to intelligent and connected vehicles and the display colors of tell-tales.

This document is applicable to intelligent and connected vehicles.

#### 2 Normative references

The contents of the following documents constitute the essential terms of this document through normative references in the text. Among them, for dated references, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies to this document.

GB 4094 Motor vehicles - Symbols for controls, indicators and tell-tales

GB/T 4782 Road vehicles - Controls, indicators and tell-tales - Vocabulary

GB 5768.2 Road traffic symbols and markings - Part 2: Road traffic signs

GB/T 39263 Road vehicles - Advanced driver assistance systems - Terms and definitions

GB/T 40429 Taxonomy of driving automation for vehicles

GB/T 44373 Intelligent and connected vehicle - Terms and definitions

#### 3 Terms and definitions

The terms and definitions as defined in GB 4094, GB/T 4782, GB/T 39263, GB/T 40429, GB/T 44373, as well as the following terms and definitions, apply to this document.

3.1

#### **Control**

Components manually operated by the driver to change the working state or function of a vehicle or a device of the vehicle.

Note: Controls include physical component controls and non-physical component controls. Non-physical component controls are components that are manually operated by the driver to change the working state or function of a vehicle or a device of the vehicle, which are non-deformable or non-displaced relative to the vehicle body. For example: touch switch, check switch, etc.

[Source: GB 4094-2016, 3.1, modified]

#### 3.2

#### **Symbol**

Graphics used to identify controls, indicators and tell-tales.

Note: It includes graphic symbols and dynamic graphic symbols. Dynamic graphics are symbols of light tell-tales that identify the operating state of a system or function on the vehicle by deformation, displacement, addition, etc. of graphic elements.

[Source: GB 4094-2016, 3.4, modified]

#### 3.3

#### **Initial state**

The initial form of the dynamic graphic within the complete prompt cycle.

#### 3.4

#### Final state

The final form of the dynamic graphic within the complete prompt cycle.

#### 3.5

#### **Basic elements**

The collection of graphic elements that constitute the dynamic graphic.

## 4 Requirements

**4.1** If the intelligent and connected vehicle is equipped with the intelligent and connected vehicle controls, indicators and tell-tales listed in Table 1; their graphic symbols shall be marked and comply with the provisions of Table 1.

- The outline of the symbol is colored; the virtuality and reality of the graphics are adjusted and colored (except for those clearly prohibited in the requirements of this document);
- For symbols used to represent the shape of the whole, part or component of the vehicle, the outline of the symbol can be modified to be close to the actual shape of the vehicle and its components;
- Mirror images of the symbols specified in this document can be used.
- **4.8** For dynamic graphic symbols, see Appendix A.
- **4.9** The symbols of non-physical component controls shall meet the requirements of this document and can only be marked with text information.
- **4.10** Other requirements for symbols shall comply with the provisions of GB 4094.

### 5 Display colors of tell-tales

- **5.1** If there are no other requirements in this document, the colors of tell-tales indicating the on/off, activation, alarm and fault/failure of each function shall be distinguished.
- **5.2** Graphic symbols indicating tell-tales may not be fully colored, unless otherwise it will cause confusion to the driver.
- **5.3** The color of text information indicating tell-tales is not required, unless otherwise it will cause confusion to the driver.
- **5.4** In addition to complying with the colors specified in this document, the symbols of tell-tales given in this document are also allowed to use other colors specified in GB 4094, to express different working conditions or meanings according to different functional requirements.

## 6 Shape of symbols

The shapes of symbols used only for intelligent and connected vehicle controls, indicators and tell-tales are shown in Figures  $1 \sim 22$ .

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