1. Scope
Applies to in-vehicle display systems (factory plant-installed and dealer-installed designated by, or designed by automobile manufactures), auto maker installed in vehicle (and dealer-installed) installed in vehicle (excluding 2-wheeled vehicle) and visible to driver.

2. Effective Date
(1) Paragraph 3: Display location; applies to the following vehicles in which in-vehicle display system is installed.
• Full model change vehicles, including newly developed models, for which a type approval application is submitted on or after January 1st, 2003.
• Vehicles for which new model, excluding full model change, or structural change request is made; modification application is submitted on or after January 1st, 2007.
(2) Paragraphs 4 ~ 7: Display requirement, operational requirement, software and definitions apply to the following image display equipment in-vehicle display systems.
• Factory-installed equipment system: Newly developed or changed and designated by automobile manufactures on or after January 1st, 2000.
• Dealer-installed system equipment established by automaker, newly developed or changed and designated by automobile manufactures on or after January 1st, 2002.
(3) For image display equipment in-vehicle display systems falling outside the above definitions, pre-revision guidelines (SAEJ Publication JAMA Document No. 274 May 25th, 1999) may be applied.

3. Display Location
3.1. Display monitor for in-vehicle display systems for on passenger vehicles car with ten or fewer occupants.
- Commercial vehicles derived from passenger car and similar shaped vehicles.
- Other similar vehicle models:
(2) The display shall be mounted in a position where the downward viewing angle is less than 30 degrees. The Downward Viewing Angle should be set between two lines that project on the vehicle’s Y plane. The first line projected on the Y plane should be drawn from the JIS (Japan Industrial Standard) eye-point parallel to the x-axis and the second line should be drawn from the center of the Display Monitor to the JIS eye-point. The straight line derived from connecting JIS eye-point in a vehicle and the center point of the monitor, is less than 30° when the line is projected on the Y plane of the three-dimensional coordinate in the vehicle.

(1)
(2) In addition, the monitor shall be mounted in the position at which the display monitor shall conforms to the driver's visual range requirements (90/630/EEC) for the lower limit with the forward range of 180 degrees.

3.2. Display monitor for in-vehicle display system on for a vehicle that is not specified in Paragraph 3.1. shall be mounted in the position at which:
(1) The downward viewing angle shall be less than the value of the straight line derived from...
connecting JIS eye point in a vehicle and the center point of the monitor shall not be more than
the value obtained from the formula below, when the line is projected on the Y plane of the three-
dimensional coordinate of the vehicle?
Angle* [degrees] = 0.01303 × (eye point height from the ground [mm]) + 15.07

(2)

The upper edge of the display monitor shall meet the following requirements.
1. When the height of eye point above the ground is less than 1700mm in a vehicle:
   Comply with the lower edge limit requirements for the forward range of 180 degree defined
   in the driver's visual range requirements (90/630/EEC).
2. When the height of eye point above the ground is 1700mm or more in a vehicle:
   Comply with the lower limit requirements for the critical zone A as defined in the de-mister
   requirements (ADR15/01).

4. Display Requirements while Vehicle is in Motion
Displayed screen images shall be easily understood in a short time visible at a glance and shall meet
the following requirements.

4.1. Map Displays
(1) Minor roads in city shall not be displayed on the navigation map screen. It may be
displayed monitor except when the systems does not require the driver’s steady gaze on the
screen and at the same time monitor, or when the further use of the system does not lead the
driver end to search the byroad search as specified below.
   1. Principal roads for transport network and the minor roads that are selected during the
      set-up process of the route search may be displayed on the screen while vehicle is in
      motion.
   2. If the scale of the navigation map is 1: 20,000 or more detailed, minor roads may be shown
      on the displayed monitor when the vehicle is running on that roads, driven in such roads.
      However, when the map on the display screen monitor is manually scrolled (including improved
      and simplified operation as described in Paragraph 54), minor roads cannot be shown on the displayed map.
   3. If the scale of the navigation map is 1: 5,000 or more detailed, minor roads may be displayed
      while vehicle is in motion. However, when the map on the display monitor is manually scrolled
      (including improved and simplified operation as described in Paragraph 5), minor roads shall not be displayed.

(2) However, when the screen scroll is manually operated (including improved and simplified
operation as described in Paragraph 4), Minor Roads cannot be shown on the displayed road map.
The navigation system shall not confuse the driver by scrolling maps according to the vehicle speed.

4.2. Broadcast TV and Recorded Video Images
Televised picture and video images shall not be displayed on the screen monitor of moving while a
vehicle is in motion.

4.3. Other Display for Guidance Information and others
(1) Addresses and telephone numbers shall not be displayed as guidance information when a vehicle
is in motion. However, the mid-search screen in searching process without above
mentioned information, informative contents, may be displayed even when the vehicle is in motion.
(2) Descriptive information for hotels and restaurants shall not be displayed when a vehicle is in motion. However, the screen in searching process without above mentioned information may be displayed when vehicle is in motion.

(3) Relevant and easily recognizable static images for driving may be displayed when the vehicle is in motion.

4.4. Dynamic Traffic Information
(1) When dynamic traffic information is superimposed on a road map, information volume on the map shall be optimized for easier recognition.
(2) Cautionary information (Travel warning) shall be easily distinguished from other information.
(3) Travel time display shall be easily recognized at a glance and obtained without requiring complex calculation by the driver.
(4) If traffic information is displayed in writing, the following shall apply, although, the names of information sources (e.g. broadcasting stations), titles, or time, are not considered part of traffic information.
   ① Characters shall not be scrolled.
   ② Information shall not exceed 30 characters (including Chinese, Japanese and English alphabets). However, numerals, and units such as km/h, shall be counted as one character regardless of the number of digits. Moreover, punctuation and other symbols such as “~” and “,” shall not be counted as characters.

4.5 FM Multiplex Broadcast
The FM multiplex broadcast display on a moving vehicle is set as follows:

<table>
<thead>
<tr>
<th>Program Number</th>
<th>Stationary Vehicle</th>
<th>Moving Vehicle</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>255</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>254</td>
<td>Yes</td>
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</tr>
<tr>
<td>1 ~ 19</td>
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<td>20 ~ 39</td>
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</tr>
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<td>40 ~ 79</td>
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<tr>
<td>80 ~ 99</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>100 ~ 149</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>150 ~ 249</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

5. Operational Requirements while Vehicle is in Motion
In-vehicle display systems shall be easy for the driver to handle. Complex operations such as mentioned below should be prohibited while a vehicle is in motion. However, these operations may be performed upon operational improvement.

- Setting or revising destination by operating cursor switch.
• Map Scrolling.
• **Map selection from hierarchical maps.**
• Map search by area name or POI (Point of Interest).
• Cellular phone ten-key operation.
• Data input of records, address lists, etc.
• Search for guidance in the form of addresses, telephone numbers, or information on restaurants, hotels, etc.
• Display area selection for dynamic traffic information.

Note: The operations listed in paragraphs 4 and 5 may be changed in response to future technical improvements.

### 6. Software Provided by Third Parties

When the software for the system is stored in memory media such as CD-ROM and it is easily replaced or added by same form of memory media provided by third parties, shall be treated complied with as following specifications.

**6.1 Arrangement**

*System provider may disclose the specifications such as CD-ROM to a third party provider on condition that such disclosing system provider shall have the third party provider comply with this guideline.*

**6.2 Structure**

To facilitate secure implementation of the software, it shall includes a structure such as the following.

- **System E** shall have a CD-ROM identification feature so that any CD other than the designated CD-ROM shall not function.

### 7. Definitions

1. **In-vehicle display systems** is a set of equipment that displays graphics, characters, numbers, or images, previously stored or received from outside.

2. **Minor road** means any road less than 5.5 meters wide, excluding major roads such as national highways, major local roads, and prefectural roads.

3. **Main roads** means any road that connects with a road other than minor roads, even if the road is less than 5.5 meters wide, and contributes to the smooth flow of traffic. It also includes any roads, even if less than 5.5 meters wide in places, that connects with a road other than minor roads, if the driver would be confused by omission of the portion less than 5.5 meters wide.

4. **Cursor switch operation** means the operation of displaying a cursor on the display screen and continuously moving it to indicate a specific position.

5. **Data input** means the operation of using keys or cursor switch to input multiple characters, numbers, or symbols into the system.
(6) **Scrolling**” means continuously moving the display content, and includes moving the display of characters.

(7) **Scrolling operation**” means scrolling by continuously operating a switch, etc.

(8) **Improved to constitute easy operation**” refers to an improvement that makes it unnecessary to pay continuous attention to the variation displayed on screen monitor in response to operation. For instance, it includes an operation in which the variation or set value is stored beforehand, so that the designated value can be set without paying continuous attention to the screen monitor.

(9) “Dynamic traffic information” stand for constantly changing traffic information sent into the vehicle from outside using infrared light or radio waves, such as traffic congestion.