“Break barrier” sign proposal for rail/road level crossings

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Introduction

After decisions taken by the Expert Group at the 15th session, the sign proposal presented at the 9th session was developed further, results are provided in the following.
1 General characteristics

- Sign is of the emergency escape category, therefore of green main colour

- Horizontal rectangular shape to fit on barrier without protruding

- Distinctive white contrast rim for maximum conspicuity

- Design for maximum discriminability (legibility). Prepared for use on screen displays.
2 Comprehension

Number of graphical components kept low for easy understanding and learning.

Almost all components are familiar to road user, supporting comprehension of sign’s meaning.
Graphical components

- Ground
- Contrast edge
- Inscription
- Breaking barrier
- Barrier stand
- Crash
- Car

SOS?
3 Graphical components

“SOS”: Known from facilities to provide support in case of need or danger. Typeface scientifically tested for legibility.

“?”: To further emphasize the meaning, an question mark is added (“Are you in need to escape? – then break gate”)
3 Graphical components

“Crash”: Known from indications on emergency escape windows that need to be broken to pass through.

“Breaking barrier”: Entirely red design chosen. Other designs of 2 alternating colours possible. Element “Barrier stand” of lesser importance, therefore rendered in outlines.

“Car”: Known from various signs in the convention.
Every component is calculable for discriminability distance. Drivers of eyesight of visus 0.73 clearly distinguish the smallest graphical detail (SGD) of importance (in “inscription” an “car”) from a distance of 8.36 m, leading to a sign dimension of 232.5 mm (max.) x 75 mm.

Since obtaining a driving permit requires a lower eyesight (visus 0.5 both eyes added when glasses are worn), a greater dimension should be chosen:

At 465 mm (max.) x 150 mm, SGD is discriminated from 16.72 m (visus 0.73).
4 Decisions to be taken by the Expert Group

1) Chose sign model A) B) or C)

2) If B) or C) is chosen, decide if inscription should be abandoned 10 years after introduction (reverting to A)

3) Chose design of component “breaking gate”: mono coloured, as in A) B) or C), or two coloured as in D).

Comment: The Convention should state that the sign’s dimension should be 15 cm in height.
Thank you!

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