Department for Transport

Traffic Advisory Leaflet 4/91
November 1991

AUDIBLE AND TACTILE SIGNALS AT PELICAN CROSSINGS

SUMMARY
This leaflet gives advice on the provision of audible and tactile signals to assist visually impaired people at Pelican crossings. It also introduces a new audible signal developed for use at staggered Pelican crossings, where previously audible signals could not be used. A staggered Pelican crossing is the arrangement of independent crossings across the two halves of a divided carriageway, illustrated above.

Advice on the use of tactile and audible signals at traffic signalled junctions is given in Traffic Advisory Leaflet 05/05.

INTRODUCTION
The Traffic Signs Regulations require that any tactile or audible signals provided to assist visually impaired people at a pedestrian crossing must be a type approved by the Secretary of State for

Transport. This leaflet describes the devices which are approved, and available for highway authorities to purchase and install.

AUDIBLE SIGNALS

Two types of audible signal are available. The standard unit, located in the pedestrian push button box, produces a series of bleeps when activated, and is used at single Pelican crossings. It should not be used where there is another crossing nearby because of the risk that visually impaired people may mistake the sound of the nearby crossing for the one they wish to cross. In particular, standard audible signals should not be used at staggered Pelican crossings.

A new audible signal, popularly called "Bleep and Sweep" because of its distinctive sound (four bleeps followed by a longer rising tone), is now available for use at staggered Pelican crossings. The loudness of the new signal is automatically adjusted to just above that of the measured ambient traffic noise, so that a pedestrian standing in the vicinity of the loudspeaker can hear the signal clearly, but someone waiting at the other crossing will hear it only faintly, if at all. Advice on application of the new signal is given on the back page of this leaflet.

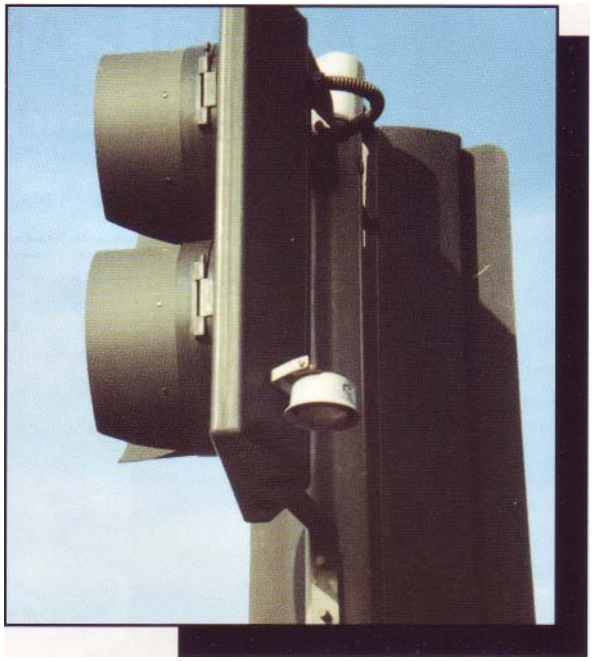
TACTILE SIGNALS

The standard tactile signal consists of a small rotating cone protruding from the underneath of the push-button box. Although in general tactile signals are not so useful to visually impaired people as audible signals, they are essential where there is a need to cater for pedestrians who are both deaf and blind. At single Pelican crossings tactile signals may be provided in addition to audible signals, although the push-button boxes may have to be modified to accept both units. At staggered Pelican crossings tactile signals may be provided in addition to Bleep and Sweep audible signals. Where the layout of the staggered crossing is such that Bleep and Sweep signals cannot be provided (see pack page) tactile signals should always be provided.

USING AUDIBLE AND TACTILE SIGNALS

All audible and tactile signals at Pelican crossings are activated while the steady green pedestrian signal is lit. If the signals are already sounding when a visually impaired person arrives at the crossing, it is safer if he or she presses the button again (after the audible signal has ceased) and waits for the next crossing signal.

Visually impaired pedestrians need to become familiar with the "Bleep and Sweep" audible signal before using it unaided, because of its distinctive sound and varying loudness. After crossing a few times whilst escorted they should subsequently have no difficulty in distinguishing the sound of the correct crossing.



SITE PREPARATION

Before installing audible or tactile signals at any crossing, a critical examination of the site should be made, bearing in mind the special needs of visually impaired people.

(i) The signal equipment must incorporate a facility which will disable the tactile and audible signals if the red lights to traffic fail.

(ii) Dropped kerbs and appropriate tactile surfaces should be provided in accordance with the advice given in DU Circular 1/91, issued by the Departments Disability Unit.

(iii) Push-button boxes should be readily accessible to pedestrians waiting to cross, especially if tactile signals are provided. Ensure that a visually impaired person does not have to negotiate a path around an intervening guard rail after the tactile cone is activated. (The photo shows an example of bad practice.)

(iv) At some sites, particularly those which are heavily trafficked and where the 85 percentile speed exceeds 35mph, it may be observed that vehicles consistently overrun the amber stopping signal, and often also the red. The red to traffic, red to pedestrian period at such sites should be set to the maximum value of 3 seconds. Consideration should be given to making the traffic signals more conspicuous by providing additional signals, perhaps mounted overhead.

The opinion of local visually impaired residents should be sought through the local mobility officer, before any decision is made to provide tactile and/or audible signals at such sites.

NOISE NUISANCE

Nearby residents sometimes object to the sound of audible signals, which can be disturbing especially during the quiet hours. Reducing the sound output from a standard bleeper unit by fitting a baffle plate can often provide an acceptable solution. Alternatively a time switch may be incorporated to cut off the sound altogether at night. In this case it would be useful to provide tactile signals in addition to the audible signals. The "Bleep and Sweep" unit is less likely to cause nuisance because its sound level automatically reduces with the level of traffic noise. The unit can be modified to produce a standard bleeper sound for use at single Pelican crossings.

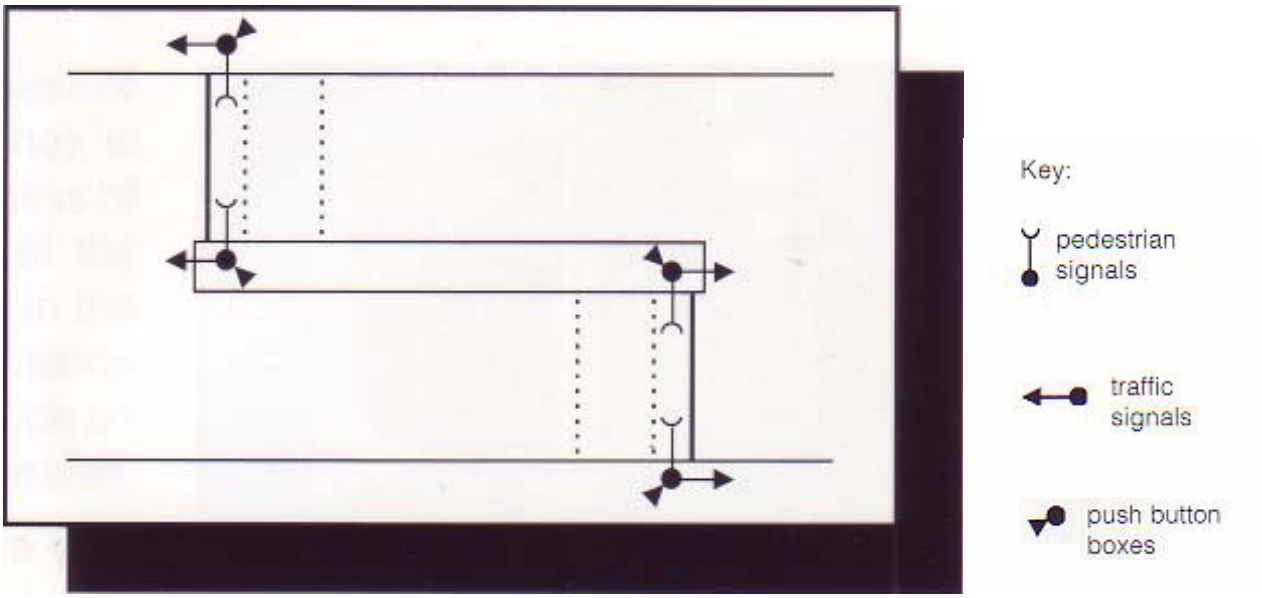
NEW AUDIBLE SIGNAL INSTALLATION

One audible signal is provided at each end of both crossings, as shown in diagrams A, B and C below. Loudspeakers must be mounted above the push-button boxes, at a height of approximately 2.5m above the ground. It will be convenient, but not essential, if the pedestrian signal head containing the control unit is located on the same pole assembly as the push-button and speaker. The opportunity should be taken to ensure that all the facilities provided at the crossing (e.g. guard rails, dropped kerbs) are up to standard.

If the minimum distances between loudspeakers on the central island, given in A, B and C below, cannot be achieved, then audible signals should not be provided.

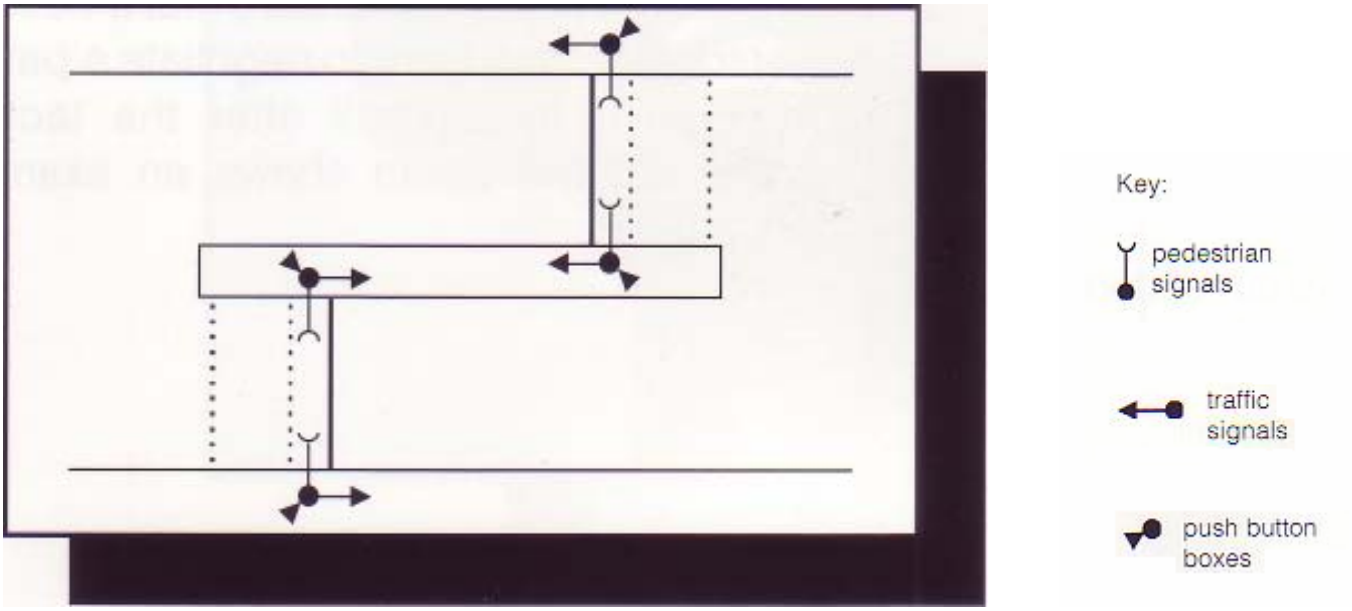
A. LEFT-HAND STAGGER

Minimum distance between loudspeakers on central island is 7m. If additional signals are provided, they should not be fitted with push button boxes. At existing sites it may be necessary to relocate and/or remove push button boxes to achieve this.



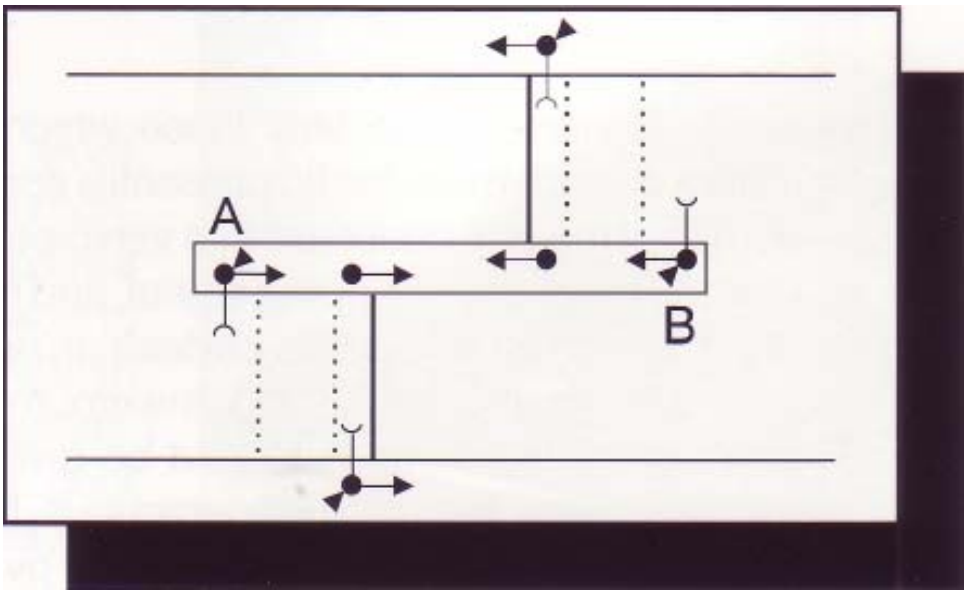
B. RIGHT-HAND STAGGER (1)

Minimum distance between loudspeakers on central island is 7m, unless speakers are mounted on backs of traffic signal heads, and backing boards are used. The baffle effect between adjacent crossings achieved by this arrangement allows the minimum distance between loudspeakers on the central island to be reduced to 5m, but see C below.



C RIGHT-HAND STAGGER (2)

If additional signals at A and B are provided, the units may be mounted on these signals. The minimum distance between loud-speakers on the central island is 7m. Additional push-button boxes on other poles should not be provided. At existing sites it may be necessary to relocate and/or remove push-button boxes to achieve this.



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