# PARKING STATIONS

## FIELD OF THE INVENTION

The present invention relates to vehicle parking stations including heavy vehicle and bus depots. The present invention also relates to demarcation apparatus for vehicle parking stations.

## BACKGROUND OF THE INVENTION

Vehicle parking stations at shopping centres, community and social centres, hotels, railway stations etc. typically comprise rows of opposed parking bays. The sides and end of each parking bay is usually marked by white lines.

During parking most drivers are unable to see the end boundary from the entry lane. Thus a driver has to approximate or guess at the position of the end boundary. This may lead to the vehicle protruding into the opposed parking space and/or bumping a vehicle in the opposed bay and causing damage. A parked vehicle may also be damaged by another parked vehicle in an opposed bay as a result of handbrake failure.

In addition to the above, damage may also be caused by drivers departing their space through a opposed parking bay which is vacant. This results in vehicles departing at excessive speeds and risking collision with another vehicle approaching the opposed vacant space.

The instance of damage to vehicles left in parking stations is well known and it deters some people with expensive cars from using shopping centres.

Also, parking stations which have unsupervised entry and access provide little security against vehicle theft.

A further disadvantage of most parking stations is that they provide a large open area without obstructions. They provide an invitation to irresponsible drives to speed with resulting danger to pedestrians or other vehicles. Unattended runaway vehicles can also pose a danger.

## SUMMARY OF THE INVENTION

It is therefore an object of this invention to ameliorate one or more of the aforementioned disadvantages or at least provide a parking station which will be more efficient in use. Accordingly a vehicle parking station is disclosed having entry lanes and at least two opposed vehicle bays with respective entrances thereto from said entry lanes and a demarcation device located on or adjacent to an end boundary of the opposed parking bays, wherein said demarcation device supports a visible panel portion of a size and disposition that a seated vehicle driver can decipher information thereon.

Preferably the panel has an upper edge disposed at about

1200 mm above the parking station floor and a lower edge at about 800 mm above the floor whereby the centre of said panel is disposed about at eye level for car drivers. Typically the panel could range in width between about 600 mm and 800 mm. While invention is not limited to such dimensions it is in any event preferably not so large as to form a visual barrier to a driver's view of other parked vehicles or pedestrians.

While the panel may be suspended from a roof or a roof support of the parking station it preferably is supported from the floor by a post to provide a physical barrier at bumper bar height.

The demarcation device may also be provided with proximity sensors or the like for sensing the presence of a vehicle in the parking bay and may be in communication with a remote display at say the station entrance to provide an indication of parking availability. Such proximate sensors may also be used in conjunction with a keypad mounted on the demarcation device for keying-in a user selected code upon entry to the parking bay. Such arrangement would provide a security alarm or gate closure in the event that the vehicle is removed from the parking bay without first re-entering the code.

In another aspect the invention also discloses a

demarcation device for a vehicle parking station of the type having at least two opposed parking bays with end boundary and entrances thereto from respective spaced apart entry lanes, said demarcation device including an indicator means and a mounting means for mounting said indicator at a location in said parking station which enables a driver of a vehicle entering one of said opposed parking bays to locate the position of the end boundary when said end boundary is obscured by said vehicle.

Preferably the indicator is a panel in the form of a sign having instructions, notices or advertising thereon. Alternatively, the indicator may be a housing for holding a plant, artistic or other decorative work. The indicator may also be illuminated or be fitted with a light to illuminate the parking bay.

## BRIEF DESCRIPTION OF THE DRAWINGS

Two currently preferred embodiments of the invention will now be described with reference to the attached drawings in which:-

figure 1 is schematic plan view of a parking station with opposed parking bays,

figure 2 is a schmetic elevation view of a demarcation device according to this invention,

figure 3 is a perspective view of a portion of the

parking station of figure 1 when fitted with demarcation device as shown in figure 2,

figure 4 is a schematic elevation view of a second embodiment of a demarcation device, and

figure 5 is a perspective view of a portion of the parking station of figure 1 when fitted with demarcation device as shown in figure 4.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

As illustrated in figure 1 there is a vehicle parking station having a plurality of rows of opposed parking bays 10 each extending away from a respective entry lane 11. More particularly there are spaced parallel rows of entry lanes 11 arranged at the opposite sides of the opposed parking bays with each entry lane leading from a common access road 12.

As beat shown in figures 2 and 3 a demarcation device 13 is disposed centrally along the common end boundary 13A of each pair of opposed parking bays 10 so as to provide a prominent eye height visual indication of said end boundary to a driver. Each demarcation device comprises a post 14 with a mounting base plate 16 whereby it may be bolted securely to the parking station floor.

The upper end of the post 14 supports an indicator display panel at a position that is clearly visible to a driver

seated behind the wheel of a vehicle such as a passenger car. The display panel may comprise a base wall 21, opposed transparent side walls 22 extending upwardly from the base wall 21 and opposed end walls 24. One of the end walls 24 is preferably removable to allow access to be gained to the inside of the display panel.

Respective pairs of upper and lower tracks provide support for slidably removable display sheets which in use fit adjacent the transparent side walls 22.

The upper wall of the display panel 23 may also be recessed to provide a container in which plants may be grown in order to beautify the parking station.

With this embodiment the height of the demarcation device is 1200 mm with the post 14 being 845 mm in length. The plant container may be 35 mm in depth, 710 mm in width and be of sufficient thickness to extend between opposite sides of the post.

In use of the device a driver enters the parking bay set out for example by painted lines 24. As the vehicle approaches the end of the bay the bonnet or boot lid would obscure the end boundary 13A. Using the clearly visible demarcation device 13 as a guide however the driver would be able to pull fully into the bay without protruding into

the opposed bay.

For parking stations serving retail shopping centres the removable display sheets may contain advertising for selected retailers. In this respect the panels would provide the first point of advertising for drivers and passengers of incoming vehicles. The advertising space may be leased out to finance or subsidise the operation of the parking station.

In accordance with another aspect of the invention a method is disclosed of promoting retail outlets in shopping complexes by providing vehicle parking stations and leasing or selling the advertising space provided by such demarcation devices.

A second embodiment of a demarcation device is shown in figures 4 and 5. In this case the device 30 has a lower inclined portion 31 which supports a buffer plate 32 at bumper height and a wrap around upper portion 33 which supports the display 35. The relationship of the demarcation device 30 to a vehicle 40 is also shown in figure 4.

It will thus be appreciated that this invention at least in the form of the examples disclosed provides a novel and unique improvement to vehicle parking ststions. Clearly

however the embodiments described are only the currently preferred forms of the invention and a variety of modifications may be made which would be apparent to a person skilled in the art. For example the shape and configuration of the demarcation devices may be changed according to design preference. The invention is also not limited to any particular material for constructing the demarcation devices although structural strength steel for the mounting post and plastic for the display sheets is currently preferred.

The claims defining the invention are as follows:

1. A demarcation device for use in a vehicle parking station of the type having at least two opposed parking bays separated by an end boundary and with entrances thereto from respective spaced apart entry lanes, said demarcation device including an indicator means and mounting means for supporting said indicator means at a location in said parking station which enables a driver of a vehicle entering one of said opposed parking bays to locate the position of the end boundary when said end boundary is obscured by said vehicle.

2. The demarcation device as claimed in claim 1 wherein said indicator is supported by said mounting means from the floor of the parking station.

3. The demarcation device as claimed in claim 2 wherein the indicating means is adapted to carry graphic or written information.

4. The demarcation device as claimed in claim 3 wherein the indicating means includes a panel with removable display sheets.

5. The demarcation device as claimed in claim 4 wherein said mounting means is a post and base plate and said

indicating means is disposed at about eye level of the driver.

6. The demarcation device as claimed in claim 5 wherein said device includes a buffer plate at the bumper height of said vehicle.

7. The demarcation device as claimed in claim 6 wherein the display sheets carry advertising.

8. The demarcation device as claimed in claim 2 wherein said indicating means is adapted to hold a plant or artistic work.

9. The demarcation device as claimed in claim 1 wherein said device includes means for sensing the presence of said vehicle in said one of the parking bays and said means for sensing is in communication with a remotely located display for indicating the availability of parking in the station.

10. A vehicle parking station of the type having at least two opposed parking bays with entrances thereto from respective spaced apart entry lanes, said parking station having a demarcation device fitted as claimed in claim 1.

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