

SIGNAL DEVICE

The present invention relates to a signal device for transmitting messages, particularly but not exclusively for transmitting messages in a restaurant.

A signal device for use in a restaurant is known from United States Patent No. 2,465,426. The device comprises a housing arranged on a table and a light located at the top of the housing. The light is activated by a customer when service is required at the table. Although such a device is useful for attracting waiting staff it has a disadvantage in that the waiting staff must still attend the table to take an order from the customer.

A more technologically advanced system, as disclosed in United States Patent No. 4,701,849, utilises data links between various service points and a master unit for transmission of service requests. Such a system is, however, comparatively more expensive and complicated. It also requires some technical knowledge to operate. Moreover, places without electrical power supply may have difficulties operating the system.

It is an object of the present invention to provide a simple, convenient, low cost signal device which is adapted to transmit a plurality of different messages in, for example, a restaurant or any one of many other different areas other than a restaurant.

In accordance with the present invention, there is provided a signal device including:

- a housing adapted to fit a plurality of lights therein; and
- a plurality of associated light switches, wherein the lights are adapted to be selectively operated by the switches to transmit a plurality of different messages.

Preferably, the device includes a base component adapted to be mounted on a table.

Preferably, the housing is collapsible relative to the base component so that the device is adapted to move between an extended condition and a collapsed condition.

Preferably, the housing is formed of at least two elongate parts arranged concentrically for telescopic movement between the extended and the collapsed condition. Alternatively, the elongate parts are hingedly connected intermediate the free end of the housing and the base component.

Preferably, the base component is secured at or adjacent an edge of an object, such as a table top, and the housing is pivotably coupled to the base component so as to pivot between a first position, where the housing is located above the table top, and a second position, where the housing is removably stored substantially below the table top, or any one of a number of intermediate positions where the housing is angled so as to enhance visibility of the lights.

Preferably, the first position corresponds to the housing being in the collapsed condition.

Preferably, the switches are provided on the base component and the base component is provided with a clamp for attachment of the device to an object, such as a table top.

Preferably, the device includes a battery compartment arranged to receive a battery pack for powering the lights. Alternatively, the device may be powered by an AC power source.

Preferably, the plurality of lights are differently coloured and preferably configured so that at least one of the lights is adapted to strobe or blink. Preferably, the device includes a printed circuit board for electrical coupling with said at least one of the lights, the circuit board having a component to effect blinking of the at least one light.

The invention is more fully described, by way of non-limiting example only, with reference to the accompanying drawings, in which:

Figure 1 is a front view of a device of the invention;

Figure 2 is a side view of the device of Figure 1;

Figure 3 is a front view of an alternative device shown clamped to a table top;

Figure 4 is a front view of the device of Figure 3 in a partially collapsed condition;

Figure 5 is a front view of another alternative device;

Figure 6 is a side view of the device of Figure 5 in a partially collapsed condition;

Figure 7 is a side view of the device of Figure 6 in a collapsed condition;

Figure 8 is a side view of the device of Figure 4 in a fully collapsed condition;

Figures 9 to 11 are side views illustrating the device of Figure 8 moving to a stored position.

The signal device 1 shown in Figures 1 and 2 includes an elongate housing 3 with a plurality of lights 4 provided in a light compartment 5 arranged at a top end 6 of the housing 3. An associated switch 7, for activating each respective light 4, is provided at a lower end 8 of the housing 3. The lower end 8 of the housing is provided with a base component 9, which serves to accommodate batteries 10 in a battery compartment 11, for powering the lights 4.

The light compartment 5 includes a transparent cover 12 formed of, for example, plastics material which may additionally be constructed to have a magnifying effect so that the lights within the compartment 5 can be clearly seen when switched on. The compartment 5 also includes a cap 13 which may be removed to provide access for replacement of any damaged or malfunctioning lights.

The lights 4 may be all of the same colour or of varying colours, as required. For example a system of different coloured lights may be employed where activation of a green light is intended to indicate that drinks service is required, a white light could indicate that the customer required rice, a red light could be used for requesting sauce and a blue light used for requesting water. Different combinations of lights could be used to designate further or more particular service requirements.

As can be appreciated, transmission of messages by the device allows waiting staff to remotely register particular orders and provide a requested menu item or service without firstly attending the table. This reduces time spent in taking orders and substantially increases a restaurant's efficiency. Further, the lights are preferably arranged in a

manner which is visible from many positions around the restaurant so that a restaurant manager or the like will be in a position to gauge whether customer requests are being attended to within a suitable time frame and to determine whether staffing levels are adequate. The lights may be adapted to strobe in order to be more readily observed.

An alternative device 20 is shown in Figures 3 and 4. The construction of the device 20 is generally similar to that of device 1 and like reference numerals are used to denote like parts. The housing 3 of device 20 is formed of two elongate parts 21, 22 which are concentrically arranged for telescopic movement from an extended condition shown in Figure 3 through a partially collapsed condition shown in Figure 4 to a fully collapsed condition represented in Figure 8. Such a construction provides an advantage in that the device may be collapsed to an unobtrusive height of for example about 0.5 metres when not in use but may readily be extended when some form of service is required, to a height of about 1.0 metres, which will allow the signal lights to be readily observed by waiting staff. To prevent obstruction and enhance clear visibility for the staff, the housing parts 21, 22 of the device can also be arranged at many different angles (for example, as shown in Figure 6), to ensure the lights can be seen by the staff wherever they are.

The base component 23 of the device 20 differs from that of device 1 in that it includes two members 24, 25 which are positioned on the top and bottom side 26, 27 respectively of a table top 28 and clamped in position by screw fastener 29. Another difference is that the switches 7 are provided on the base component 23, instead of the housing 3, as shown in Figures 1 and 2.

As an alternative to being constructed for telescopic movement, the two parts of the housing may instead be hingedly connected, as represented by the housing parts 31, 32 of device 30 shown in Figures 5 to 7. The parts 31 and 32 are connected by hinge 33 to allow the housing part 31 to be pivoted relative to the lower housing part 32 from the extended condition shown in Figure 5, through the partially collapsed condition of Figure 6 into the fully collapsed condition of Figure 7.

The housing parts 21, 22 or 31, 32 may further be folded into a stored position beneath the table top 28 so as to be completely unobtrusive when not in use. For this purpose, the housing 3 is coupled to the base component via a pivot 33 which is provided at a spaced location with respect to the edge 34 of the table top 28 and below the level of the table surface, so that the housing 3 of the device 20 can readily pivot from the collapsed condition shown in, for example, Figure 8 through the positions shown in Figures 9 to 11 and into the fully stored position of Figure 12. A catch 35 may be rotatably connected to the bottom of the lower member 25 to swing from an open position shown in Figure 11 to a locked position shown in Figure 12 to fasten the housing 3 beneath the table top 28 when the device is in its stored position.

Although the above pivotal motion is described with references to the device 20, it is equally applicable to the device 30 of Figures 5 to 7.

As can be appreciated from the above, the present invention offers an easy to operate and install device which can be used to transmit a plurality of different messages. The device is also suitable for moving between a position where the lights for transmitting messages can be readily observed, to an unobtrusive stored position when not in use. The device may also be used in environments other than restaurants where messages need to be remotely communicated such as (1) seminar rooms, where the lecturers and the speakers can communicate with the audiences, (2) construction sites, where the foremen can give instructions to the workers for designating jobs or to signal them in relation to dangers, or (3) airports, where the traffic officers can use it to direct the traffic of the air planes, especially when they are trying to reverse for embarkation or when they are to park near to the disembarkation bays. The latter is very useful because an airport is usually very noisy and using a walkie-talkie or other talking device will not be as clear and precise as seeing the different lights from the above described device. The device also has application to (4) military exercises, when the commodores can use it to give clear signals to soldiers instead of using a wireless talking device. It will be appreciated that there are many more other areas of applications. The number of light bulbs may be varied to provide as many message combinations as required.

Further, at least one of the lights may be arranged to strobe or blink. This has the advantage of attracting attention such as in a busy restaurant where urgent attention is required, where a non-blinking light may otherwise be overlooked. For this purpose, the device may include a functional component such as a printed circuit board (not shown) electrically coupled to the lights, and operable to effect the blinking if desired.

Finally, it is to be understood that the inventive concept in any of its aspects can be incorporated in many different constructions so that the generality of the preceding description is not to be superseded by the particularity of the attached drawings. Various alterations, modifications and/or additions may be incorporated into the various constructions and arrangements of parts without departing from the spirit or ambit of the invention.



THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. A signal device including:
a housing adapted fit a plurality of lights therein; and
a plurality of associated light switches, wherein the lights are adapted to be selectively operated by the switches to transmit a plurality of different messages.
2. A signal device as claimed in claim 1, wherein the device includes a base component adapted to be mounted on a table.
3. A signal device as claimed in claim 2, wherein the housing is collapsible relative to the base component so that the device is adapted to move between an extended condition and a collapsed condition.
4. A signal device as claimed in claim 3, wherein the housing is formed of at least two elongate parts arranged concentrically for telescopic movement.
5. A signal device as claimed in claim 3, wherein the housing is formed of at least two elongate parts hingedly connected intermediate the free end of the housing and the base component.
6. A signal device as claimed in any one of claims 2 to 5, wherein the base component is secured at or adjacent an edge of an object, such as a table top, and the housing is pivotably coupled to the base component so as to pivot between a first position, where the housing is located above the table top, or any one of a number of intermediate positions where the housing is angled so as to enhance visibility of the light, and a second position, where the housing is removably stored substantially below the table top.
7. A signal device as claimed in any one of the preceding claims, wherein the switches are provided on the base component and the base component is provided with a clamp for attachment of the device to an object, such as a table.



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8. A signal device as claimed in any one of the preceding claims, wherein the device includes a battery compartment arranged to receive a battery pack for powering the lights.
9. A signal device as claimed in any one of the claims 1 to 7, wherein the device is powered by an AC power source.
10. A signal device as claimed in any one of the preceding claims wherein the housing includes a plurality of lights of differing colours.
11. A signal device as claimed in any one of the preceding claims, wherein at least one of the lights is adapted to strobe or blink.
12. A signal device as claimed in claim 11, wherein the device includes a printed circuit board for electrical coupling with said at least one of the lights, the circuit board having a component to effect blinking of the at least one light.