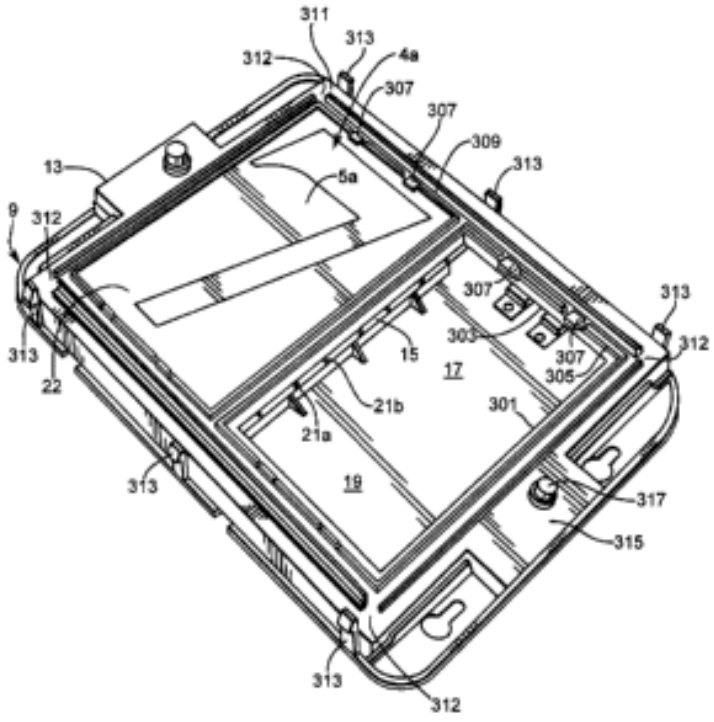
Canadian Patents Database

Patent Summary

(12) Patent:	(11) **CA 2424935**
(54) English Title:	ADDRESS AND/OR ALARM INDICATOR SIGN
(54) French Title:	PANNEAU INDICATEUR D'ADRESSE ET/OU D'ALARME

Representative Drawing



Abstracts

Third-party disclaimer

English Abstract

Sign 1 has frame 13 attaching to base 9 and supporting character plates 4. Casing 11 attaches to
frame 13 and holds character plates 4 against frame 13. Light assembly 15 and base 9 backlight
character plates 4. Backlight is diffusion chamber 17 sidelit by light assembly 15. Causing 11
hides access to the mount and is not easily removable. Light assembly 15 is externally powered
and is activated by external messages and by low ambient light, An Emergency Alarm message
causes flashing in one colour and intermittent activation of sound. For non-emergency, alternate
light mode is used with constant sound. Transmitter 1501 transmits messages for the sign 1.
The transmitter 1501 learns emergency telephone numbers for dial detection on a telephone line,
in addition to standard emergency telephone number. Emergency button 1507 can
begin
transmission of emergency alarm message. Transmitter 1501 may have other alarm
inputs.

Patent Details

(51) International Patent Classification (IPC):	***G09F 13/06*** (2006.01) ***G08B 5/36*** (2006.01) ***G09F 13/08*** (2006.01)
(72) Inventors (Country):	**CUNNINGHAM, JAMES VERNON** (Canada) **GOMES, MICHAEL** (Canada)
(73) Owners (Country):	**CUBE INVESTMENTS LIMITED** (Canada)

(71) Applicants (Country):	**CUBE INVESTMENTS LIMITED** (Canada)
(74) Agent:	**RIDOUT & MAYBEE LLP**
(45) Issued:	**2007-05-01**
(22) Filed Date:	**2003-04-09**
(41) Open to Public Inspection:	**2004-10-09**
Examination requested:	**2003-04-09**
(30) Availability of licence:	**N/A**
(30) Language of filing:	**English**

Patent Cooperation Treaty (PCT):	**No**

(30) Application Priority Data:	**None**

View or Download Images

Click on a link under View Patent Image to view a section of the image or click on a link under Download Patent Image in PDF format to download a section of the image in PDF format.

If you have any difficulty accessing content, you can call the Client Service Centre at 1-866-997-1936 or send them an e-mail at CIPO Client Service Centre.

Third-party disclaimer

View Patent Image	Download Patent Image in PDF Format	Size of Image (KB)	Number of Pages
Cover Page	Cover Page	58	1
Abstract	Abstract	34	1

View Patent Image	Download Patent Image in PDF Format	Size of Image (KB)	Number of Pages
Claims	Claims	218	6
Description	Description	2,112	24
Drawings	Drawings	492	31
Representative Drawing	Representative Drawing	25	1

PDF Readers.

Last Updated: 2012-10-23

1. A sign comprising:

a) an opaque housing,

b) a radio frequency receiver for receiving messages,

c) a character plate,

d) a backlight, and

e) a sign control circuit,

wherein the character plate has an opaque background surrounding one or more translucent characters, the housing has an aperture for the character plate, the housing enclosing the backlight and the control circuit, the backlight for back-lighting the one or more characters, and the control circuit for activating the backlight in response to messages received by the receiver.

2. The sign of claim 1, wherein: the sign is an address sign and the characters are characters of an address.

3. The sign of claim 1, wherein: the sign is an alarm indicator sign and the characters form an alarm message.

4. The sign of claim 1, wherein: the backlight comprises a light diffusion chamber and a light assembly with one or more light sources for side-lighting the diffusion chamber.

5. The sign of claim 4, wherein: the housing comprises a base and a frame that form the light diffusion chamber, the base having a reflective face opposite the housing aperture with the light assembly between the base and the plate, the frame surrounding and having the same colour as the plate background, and the frame attached to the base so as not to block light from the light assembly entering the diffusion chamber.

6. The sign of claim 1, wherein: the control circuit recognizes a radio frequency alarm message and activates the backlight in response to the alarm message.

7. The sign of claim 1, wherein: the control circuit recognizes a radio frequency emergency alarm message and activates the backlight in an emergency mode in response to an emergency alarm message.

8. The sign of claim 7, wherein: the control circuit also recognizes a radio frequency non-emergency alarm message and activates the backlight in a non-emergency mode different from the emergency mode in response to a non-emergency alarm message.

9. The sign of claim 1, wherein: the control circuit recognizes radio frequency messages that are addressed to it.

10. The sign of claim 9, wherein: the control circuit recognizes broadcast address messages for learning a specific address for the sign from the broadcast address message.

11. The sign of claim 4, wherein the light sources are LEDs.

12. The sign of claim 4, wherein the sources are alternating LEDs of two different colours, one colour for use in indicating an emergency alarm condition, the other colour used to illuminate the characters in low light conditions.

13. The sign of claim 12, wherein the emergency colour is red and the other colour is yellow.

14. The sign of claim 11, wherein the light assembly comprises the LEDs mounted on one or more light circuit printed circuits boards.

15. The sign of claim 14, wherein the light circuit printed circuit boards are retained in slots in the base.

16. The sign of claim 15, wherein the light assembly further comprises a power circuit on a power circuit printed circuit board that is mounted in slot in the base perpendicular to the light circuit printed circuit boards, and the light circuit printed circuit boards plug into the power circuit printed circuit board for power.

17. The sign of claim 16, wherein the sign control circuit is on a printed circuit board and

the control circuit printed circuit board also plugs into the power circuit printed circuit board for controlling power to the power circuit for controlling activation of the light sources.

18. The sign of claim 17 wherein the control circuit has a light sensor and the control circuit printed circuit board is located in a pocket of the housing optically separated from the light sources.

19. The sign of claim 5, further comprising a casing that encloses the base and frame and retains the character plate against the frame, while providing an aperture through which the characters are visible.

20. The sign of claim 5, wherein the frame further comprises a shelf extending partially in front of the diffusion chamber to support the character plate is in front of the diffusion chamber.

21. The sign of claim 20, wherein the frame further comprises a shelf rim extending outwardly about the shelf to hold the character plate in front of the shelf.

22. The sign of claim 21, further comprises a flange extending from the frame rim in front of the shelf for retaining the character plate between the shelf and the flange within the frame rim.

23. The sign of claim 22, further comprising a casing that encloses the base and frame and retains the character plate against the frame, while providing an aperture through which the characters are visible.

24. The sign of claim 23, wherein the frame further comprises a supra-rim about the frame rim to provide a rim slot, and wherein the casing has a tongue extending rearward that fits into the rim slot.

25. The sign of claim 1, wherein the sign has a relatively small depth when compared to its width and height to create a low profile.

26. The sign of claim 1, wherein the sign has a depth of approximately one inch.

27. A sign comprising:

a) an opaque housing,

b) a character plate,

c) a backlight, and

d) a sign control circuit, and

e) a receiver for receiving messages,

wherein the character plate has an opaque background surrounding one or more translucent characters, the housing having an aperture for the character plate, the housing enclosing the backlight and the control circuit, and the control circuit for activating the backlight, and wherein the control circuit activates the backlight in response to messages received by the receiver.

28. The sign of claim 27 wherein the receiver is a wireless receiver.

29. The sign of claim 28 wherein the receiver is a radio frequency wireless receiver.

30. The sign of claim 27 wherein the receiver is a wired input.

31. A sign and transmitter combination comprising a sign according to claim 1 and a transmitter unit comprising:

a) an alarm detector,

b) a radio frequency transmitter circuit,

c) a transmitter control circuit, and

d) a transmitter housing for housing the transmitter circuit and transmitter control circuit, wherein the transmitter control is for recognizing alarms detected by the alarm detector and sending messages to the transmitter circuit in response to a detected alarm, and the transmitter circuit is for transmitting those messages over

radio frequencies.

32. A sign and transmitter combination comprising a sign according to claim 28 and a transmitter unit comprising:

a) an alarm detector,

b) a transmitter control circuit, and

c) a transmitter housing for housing the transmitter circuit and transmitter control circuit,

wherein the transmitter control is for recognizing alarms detected by the alarm detector, and the transmitter is for transmitting those messages to the sign.

33. A kit comprising:

a) an opaque housing,

b) a radio frequency receiver for receiving messages,

c) a character plate,

d) a backlight,

e) a sign control circuit, and

f) a casing that encloses the base and frame and retains the character plate against the frame, while providing an aperture through which the characters are visible,

wherein the character plate has an opaque background surrounding one or more translucent characters, the housing has an aperture for the character plate, the housing enclosing the backlight and the control circuit, the backlight for back-lighting the one or more characters, and the control circuit for activating the backlight in response to messages received by the receiver;

wherein the backlight comprises a light diffusion chamber and a light assembly with one

or more light sources for side-lighting the diffusion chamber;

wherein the housing comprises a base and a frame that form the light diffusion chamber, the base having a reflective face opposite the housing aperture with the light assembly between the base and the plate, the frame surrounding and having the same colour as the plate background, and the frame attached to the base so as not to block light from the light assembly entering the diffusion chamber; and

wherein the casing and character plates are provided detached from other components of the kit for later assembly.

34. The kit of claim 33, further comprising a transmitter unit comprising:

a) an alarm detector,

b) a radio frequency transmitter circuit,

c) a transmitter control circuit, and

d) a transmitter housing for housing the transmitter circuit and transmitter control circuit, wherein the transmitter control is for recognizing alarms detected by the alarm detector and sending messages to the transmitter circuit in response to a detected alarm, and the transmitter circuit is for transmitting those messages over radio frequencies.