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(54) **System for public display of imaging devices, such as still cameras and video cameras**

(57) A system for public display of imaging devices, such as still cameras and video cameras, comprising: a control unit (2), adapted to control the operation of at least one device on display (6); power supply means (3), adapted to supply the devices on display with a specific power supply voltage for each individual device; sup-

porting means (5), each adapted to support a corresponding device on display (6) by being connected to the device on display by way of a single cable (7) suitable to carry the power supply voltage for the device, analog and digital video and data signals, and to provide anti-theft protection for the device.

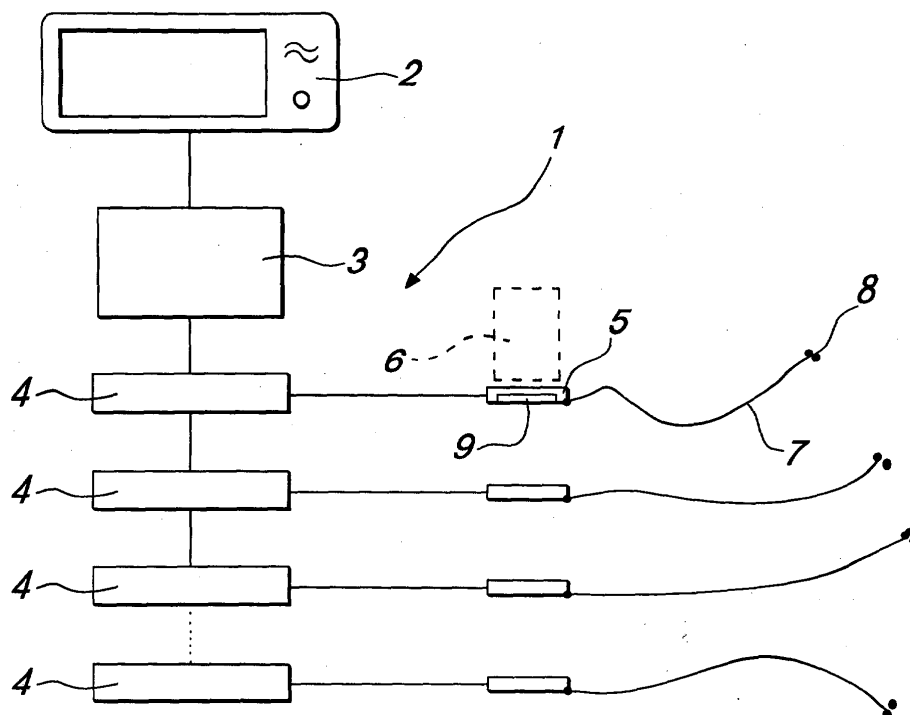


Fig. 1

Description

[0001] The present invention relates to a system for public display of imaging devices, such as still cameras and video cameras. More particularly, the invention relates to a system for public display of imaging devices such as still cameras and video cameras that are on display on shelves and sales counters of shops and department stores.

[0002] As is known, imaging devices such as still cameras and video cameras are placed on display on shelves and sales counters of shops and department stores so that the customer can hold the item he intends to purchase while the item is firmly attached to the sales counter or display but without being able to switch on the device so as to assess its imaging characteristics.

[0003] Substantially, the customer can only try holding for example a digital still camera or a video camera without however being able to switch it on and operate it.

[0004] This drawback is due to the fact that in order to allow the devices placed on display for sale to operate, it would be necessary to use the transformer of each device to supply power and the cables for the transfer of data and video signal, and all this would therefore entail a considerable presence of cables on the display surface, with a consequent degradation of the quality of the display of the items to be sold, as well as connection difficulties.

[0005] The transformers supplied with the device are necessary, one for each device, since each individual device has a specific and different power supply voltage and/or absorption.

[0006] Accordingly, known kinds of display systems for imaging devices such as still cameras and video cameras currently have a single cable that connects the device to the display counter and is used only as an anti-theft system for the device.

[0007] The aim of the present invention is to provide a system for public display of imaging devices, such as still cameras and video cameras, that allows the customer to test the actual operation of the device while keeping it firmly connected to the display counter.

[0008] Within this aim, an object of the present invention is to provide a system for public display of imaging devices, such as still cameras and video cameras, that allows to drastically reduce the number of cables that would instead be necessary if one wished to actually operate imaging devices connected to known types of display counter.

[0009] Another object of the present invention is to provide a system for public display of imaging devices, such as still cameras and video cameras, that allows to protect against theft of the devices if they are disconnected from the connecting cable that connects them to the display counter.

[0010] Another object of the present invention is to provide a system for public display of imaging devices, such as still cameras and video cameras, that allows to

provide useful statistical data regarding the number of times that these devices are picked up and/or handled by customers.

[0011] Another object of the present invention is to provide a system for public display of imaging devices, such as still cameras and video cameras, that is highly reliable, relatively simple to provide and at competitive costs.

[0012] This aim and these and other objects that will become better apparent hereinafter are achieved by a system for public display of imaging devices, such as still cameras and video cameras, characterized in that it comprises: a control unit, adapted to control the operation of at least one device on display; power supply means, adapted to supply the devices on display with a specific power supply voltage for each individual device; supporting means, each adapted to support a corresponding device on display by being connected to said device on display by way of a single cable adapted to carry the power supply voltage for the device, analog and digital video and data signals, and to provide anti-theft protection for said device.

[0013] Further characteristics and advantages of the invention will become better apparent from the description of a preferred but not exclusive embodiment of the system according to the present invention, illustrated by way of nonlimiting example in the accompanying drawings, wherein:

Figure 1 is a schematic view of the system according to the present invention; and

Figure 2 is a schematic view of the control unit of the system according to the present invention.

[0014] With reference to the figures cited above, the system according to the present invention, generally designated by the reference numeral 1, comprises a control unit 2 that is suitable to manage a plurality of imaging devices connected thereto. In particular, the control unit 2 is connected to power supply means 3 that are suitable to supply power to the individual imaging devices according to the technical characteristics of each one of said imaging devices.

[0015] The power supply means 3 are suitable to vary the power supply voltage to be sent to the connected devices on the basis of information entered by an operator in the control unit 2, so as to be able to comply with the specifications dictated by the manufacturer of the product in order to avoid causing damage of any kind.

[0016] At least one peripheral 4, preferably a plurality of peripherals 4, is connected to the power supply means 3; the number of peripherals matches the number of devices to be put on display.

[0017] Each one of these peripherals 4 constitutes the interface for connection between the control unit 2, the power supply means 3 and the devices on display.

[0018] In turn, each peripheral 4 is connected to supporting means 5, which are suitable to support an imag-

ing device 6, for example by connecting the support 5 to the coupling usually intended for mounting the device 6 on the stand.

[0019] The supporting means 5 accommodate an electronic card that is provided with electronic components that ensure the protection of the displayed device, by way of the presence of a microswitch, and the activation of the system when the individual device 6 is lifted, by way of a specific motion sensor.

[0020] A cable 7 is connected to the supporting means 5 and is suitable to send the video and data signals as well as the power supply and the anti-theft protection to the device 6.

[0021] One end of the cable 7 is provided with a single connector that is connected on the internal card of the supporting means 5, while the opposite end of the cable 7 has connectors 8 that are specific for each different device.

[0022] In this manner it is very simple to change the type of device on display, since it is sufficient to deactivate the protection system, disconnect the supporting means 5 from the device 6 previously on display, optionally change the cable 7 depending on the device, and repeat the operation in reverse.

[0023] In Figure 1, the electronic card inserted in the supporting means 5 is designated by the reference numeral 9.

[0024] Figure 2 instead is a view of the control unit 2, which is provided with a display screen 10, with at least one knob 11 suitable to manage the functions and the menu displayed on the display screen 10, and at least one alarm buzzer 12.

[0025] Operation of the system according to the present invention is as follows.

[0026] First of all, the devices to be put on display, for example still or video cameras 6, are fixed to the cable 7 by way of the supporting means 5, and one or more monitors, arranged appropriately, show the images taken by the devices.

[0027] When the customer lifts a device 6, the motion sensor that is present in the supporting means 5 sends a signal to the control unit 2, which automatically recognizes the number of the device 6 handled by the customer and then pairs it with suitable parameters entered in its database; on the basis of this information, the control unit 2 supplies the device 6 with the correct voltage and absorption. Accordingly, when the customer presses the power-on button of the device 6 being held, the picture being taken is displayed on the monitor.

[0028] When multiple devices 6 are connected to the same monitor and multiple devices are handled simultaneously by customers, the control unit 2 records the order of arrival of the customers, storing the times when the individual devices 6 were picked up, and compiles a sort of waiting list. Conveniently, it is possible to spread the connected devices over a maximum number for example four monitors, to spare customers the long waiting times that would occur if multiple evaluations were

being conducted with a single monitor available.

[0029] At this point, the first device 6 held begins a sort of countdown, at the end of which the first device of the waiting list is activated, and so forth.

[0030] The countdown time is programmable.

[0031] When a customer lifts a device 6 connected to the supporting means 5, the graphics displayed on the display screen 10 of the control unit 2 varies, giving the operator information regarding which and how many devices 6 are being handled at that time. The waiting list, if any, is also displayed on the screen 10 by varying the graphics of the symbols on the screen.

[0032] Every time the device 6 is deposited on the shelf and the supporting means 5 therefore detect no motion for a certain period of time, the device 6 is deactivated automatically.

[0033] From the statistical point of view, each movement affecting each individual device is recorded and stored: the authorized operator can then enter the menu of the control unit 2 and check the ranking of the most handled devices so as to determine the preferences of the public.

[0034] As regards instead the anti-theft protection aspect, the products are protected physically by way of the constraint offered by the cable fixed to the supporting means 5 and electronically against any attempts at separation, cutting or sabotage of said cable.

[0035] In case of alarm, the control unit 2 emits an acoustic signal, and on the display screen 10 the graphics allow to easily identify the number of the device 6 involved. The operator can thus enter the management menu, deactivating the visual/acoustic alarm, remove the cause of the alarm and reactivate the entire system.

[0036] In practice it has been found that the system according to the invention fully achieves the intended aim and objects, since it allows to control the operation of each device on display, allowing the customer to check the technical quality of the device.

[0037] Furthermore, the system according to the invention allows, by using a single cable both for the supply of power and for the transmission of video and data signals, to improve considerably the aesthetic appearance of the display counter, further simplifying connections.

[0038] The system thus conceived is susceptible of numerous modifications and variations, all of which are within the scope of the appended claims; all the details may further be replaced with other technically equivalent elements.

[0039] In practice, the materials used, as well as the contingent shapes and dimensions, may be any according to requirements and to the state of the art.

[0040] The disclosures in Italian Patent Application no. MI2002A002378, from which this application claims priority, are incorporated herein by reference.

[0041] Where technical features mentioned in any claim are followed by reference signs, those reference signs have been included for the sole purpose of in-

creasing the intelligibility of the claims and accordingly such reference signs do not have any limiting effect on the interpretation of each element identified by way of example by such reference signs.

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Claims

1. A system for public display of imaging devices, such as still cameras and video cameras, **characterized in that** it comprises: 10

a control unit, adapted to control the operation of at least one device on display; power supply means, adapted to supply the devices on display with 15
a specific power supply voltage for each individual device; supporting means, each adapted to support a corresponding device on display by being connected to said device on display 20
by way of a single cable adapted to carry the power supply voltage for the device, analog and digital video and
data signals, and to provide anti-theft protection for said device. 25

2. The system according to claim 1, **characterized in that** said power supply means are connected to said supporting means by way of interface means, the number of said interface means being equal to 30
the number of said supporting means and of said corresponding devices on display.

3. The system according to claim 1, **characterized in that** said supporting means accommodate at least one microswitch for anti-theft protection of the device connected to said supporting means, and at least one motion sensor that is adapted to determine when said device is moved. 35

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4. The system according to one or more of the preceding claims, **characterized in that** said control unit is adapted to recognize the number of the device handled by a customer and to pair said number with parameters entered in a database, in order to supply said device, by way of said power supply means, with the correct voltage and absorption. 45

5. The system according to one or more of the preceding claims, **characterized in that** each one of said devices is disconnected from the power supply when it is not moved for a certain period of time. 50

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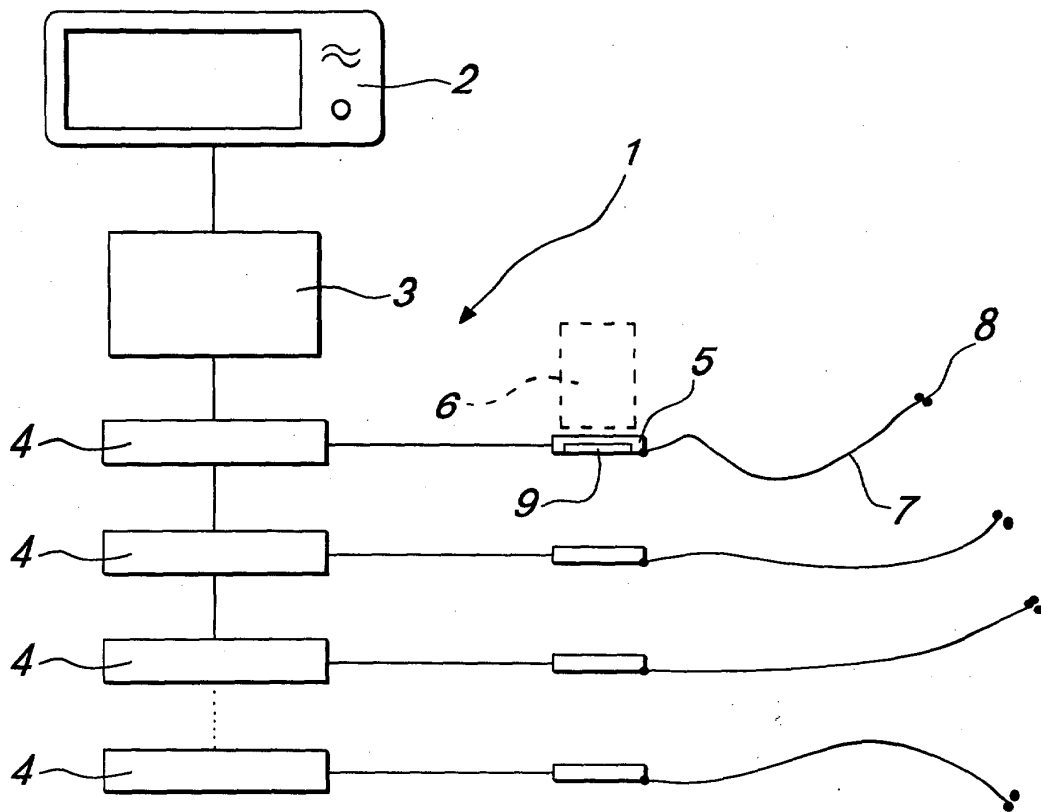


Fig. 1

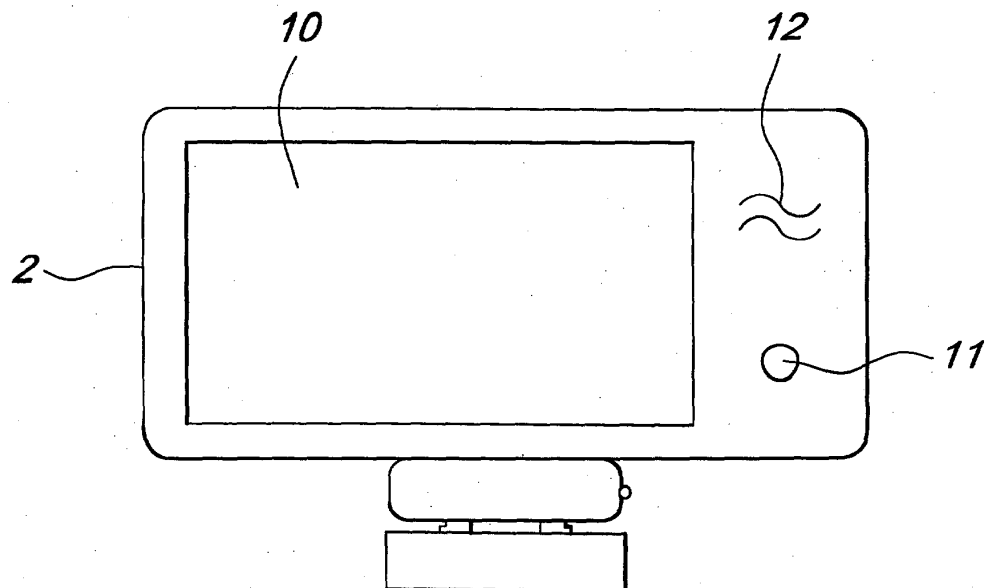


Fig. 2



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 03 02 5426

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
A	US 2002/148792 A1 (MARIHUGH DANIEL W) 17 October 2002 (2002-10-17) * the whole document *	1-3	A47F7/024 A47F10/00 G08B13/14
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A	US 6 236 435 B1 (GERTZ JONATHAN) 22 May 2001 (2001-05-22) * the whole document *	1-3	
A	US 3 933 399 A (KOLBENSVIK JOEL ROBERT ET AL) 20 January 1976 (1976-01-20) * abstract *	1	
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			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			A47F G08B
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
THE HAGUE		11 February 2004	Pineau, A
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EPO FORM 1503 03/82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 03 02 5426

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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