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(71) Applicant:

Telefunken Fernseh und Rundfunk GmbH, 3000
Hannover, DE

(72) Inventor:

Schiering, Rolf; Platte, Hans-Joachim, (Ph.D. Eng.),
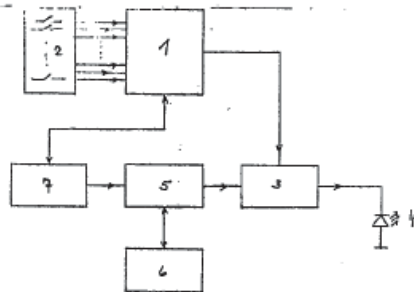3005 Hemmingen, DE

(56) Search results pursuant to § 43 Subsection 1 Patent
Act (PatG):
  DE-OS   32 02 949
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DE-Z: Funkschau, 1978, H.20, pp.963-966;
DE-Z: Funkschau, 1978, H.21, pp.1025-1028;

(54) Remote control unit for the wireless control of different devices

A remote control unit for the wireless control of
different devices of one device class contains a
control code generator (3) that is capable of
generating, upon actuation of a control element (2),
different control signals for triggering different
functions on the device.

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CLAIMS

1.   A remote control unit for the preferably uniform and wireless control
       of different known devices of one and the same device class, preferably
       in the market segment of consumer electronics such as, for example,
       various television sets, video recorders or various High Fidelity
       systems, <u>characterized in that</u>

       a)   the remote control unit contains suitable control elements (2)
              for controlling a device of the respective device class;

       b)   the remote control unit contains a control code generator (3)
              that is capable of generating various control signals, when the
              control element (2) is actuated, such that the function, which
              is allocated to the actuated control element (2) of the remote
              control unit, is triggered in each device of a pre-determined
              group of known devices of the same device class.

2.   The remote control unit according to Claim 1, <u>characterized in that</u>
       the control code generator (3) is connected to a code selection circuit
       (5), which selects, upon availability of unique information as to
       which special device of the pre-determined device group is presently
       to be controlled, the respectively valid control code on the remote
       control unit by means of the actuation of the control element (2) on
       the remote control unit and causes said control signal to be generated
       that triggers the function that is allocated on the actuated control
       element (2) of the remote control unit for the device that is presently
       to be controlled.

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3.   The remote control unit according to Claim 2, <u>characterized in that</u>
      the code selection circuit (5) is connected to a code detection
      circuit (7) that functionally engages, respectively upon start-up
      of operation of the remote control unit, with a special device that
      is to be controlled and then detects, by means of a user-controlled
      try-out process or in a targeted fashion by means of a plurality of
      these try-out processes with different control code words from among
      the control codes of the pre-determined device group, in a unique
      way that complete control code which triggers the desired function
      on the device that is to be controlled.

4.   The remote control unit according to Claim 3, <u>characterized in that</u>
      during the start-up phase of operation, when a control element (2)
      is actuated on the remote control unit, the code detection circuit
      (7) sends out different possible control code words to the device that
      is to be controlled until the user indicates, preferably by releasing
      the control element (2) or by actuation of a confirmation control
      element (2), that the desired function was triggered by the most
      recently sent control code word, and in that the code detection
      circuit (7) then continues the corresponding process, with actuation
      of other control elements (2), until the such detected valid control
      code words identify the complete control code of the respective
      device that is to be controlled in a logically unique manner from
      among the quantity of all codes that are stored in the remote control
      unit.

5.   The remote control unit according to Claim 3, <u>characterized in that</u>
      during the start-up phase of operation, upon actuation of the same
      control element (2) on the remote control unit, the code detection
      circuit (7) sends out other control code words, respectively, to the
      device that is to be controlled and concludes based on the end of
      the repetition of actuation that the desired function was triggered
      by the most recently sent control code word, and in that the code
      detection circuit (7) continues the corresponding process

with actuation of other control elements (2) until such a time that
the valid control code words thus detected identify in a logically
unique manner the complete control code of the respective device that
is to be controlled from the quantity of all codes that are stored
in the remote control device.

6.   The remote control unit according to any one or multiple of Claims
      3 to 5, characterized in that the start-up phase of operation with
      the special function of the code detection circuit (7) is restarted
      automatically, respectively, when a control element (2) that is
      normally only actuated for a short period of time is actuated for a
      significantly longer period of time.

7.   The remote control unit according to any one or multiple of Claims
      3 to 5, characterized in that the start-up phase of operation with
      the special function of the code detection circuit (7) is restarted
      automatically, respectively, when a control element (2) that is normally
      only to be actuated once is repeatedly actuated in a consecutive sequence
      that is not interrupted by actuation of another control element.

8.   The remote control unit according to any one or multiple of Claims
      3 to 5, characterized in that the start-up phase of operation with
      the special function of the code detection circuit (7) is restarted
      when a special control element (2), which is preferably protected
      against any inadvertent actuation, is actuated.

9.   The remote control unit according to any one or multiple of Claims
      1 to 8, characterized in that the code selection circuit (5) and the
      code detection circuit (7) are completely or partially embodied by
      means of a program in a corresponding programmable circuit part of
      the remote control device.

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                    T E L E F U N K E N
                    Fernseh und Rundfunk G m b H Göttinger
                    Chaussee 76
                    3000 Hannover 91

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     Remote control unit for the wireless control of different devices

The invention relates to a remote control unit, in particular for
controlling electronic devices in the market segment consumer
electronics, which is able to control each device of a pre-determined
group of known devices without any need for complicated adjusting or
resetting operations of the remote control unit to be compliant with the
device that is to be controlled. The remote control unit can, therefore,
be configured easily as a compatible remote control unit that is
independent of the device model and the manufacturer of the device.

Known remote control units are, due to the pre-determined remote control
code by circuit-type, for the most part uniquely matched to a certain
device manufacturer. For the user, this means, with any purchase of a new
device, said user must also purchase a new special remote control unit
and keep the same handy, ready to use in the vicinity of the device, which
is, in the case of consumer electronics, typically the immediate living
space of the user. Each newly acquired remote control unit, furthermore
requires a familiarization phase, even if

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