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D E C I S I O N
of 25 November 1999

Case Number: T 0772/97 - 3.5.2

Application Number: 87308671.4

Publication Number: 0262954

IPC: G11B 19/02

Language of the proceedings: EN

Title of invention:
Remote control transmission apparatus

Patentee:
Pioneer Electronic Corporation

Opponent:
Interessengemeinschaft für Rundfunkschutzrechte E.V.

Headword:
-

Relevant legal provisions:
EPC Art. 56

Keyword:
"Inventive step - after amendment, yes"

Decisions cited:
-

Catchword:
-

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Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 0772/97 - 3.5.2

D E C I S I O N
of the Technical Board of Appeal 3.5.2
of 25 November 1999

Appellant: (Opponent)
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Representative:
-

Respondent: (Proprietor of the patent)
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Decision under appeal:
Interlocutory decision of the Opposition Division of the European Patent Office posted 5 May 1997 concerning maintenance of European patent No. 0 262 954 in amended form.

Composition of the Board:

Chairman: W. J. L. Wheeler
Members: F. Edlinger
J. H. P. Willems

Summary of Facts and Submissions

I. The opponent filed an appeal against the decision of the opposition division concerning maintenance of the European patent No. 262 954 in amended form.

II. The following documents cited by the appellant in the course of the appeal proceedings are relevant for this decision:

D6': English translation, pages 1 to 31, and Figures 1 to 8 of JP-A-61-23499

D11: English translation of JP-A-60-206299, pages 1 to 5 and Figures 1 to 5

D12: NCR Personal Computer, "GW™-BASIC", first edition, September 1984, DE; pages v to xi, 2-6, 4-118 to 4-123 and Appendix F, pages F-1 and F-2.

JP-A-61-23499 was taken into account in the contested decision (referred to there as D6) by reference to the corresponding United States patent US-A-4626 848 (D4), which was published after the priority date of the contested patent. D11 and D12 are newly cited documents.

III. Oral proceedings were held on 25 November 1999, during which the respondent filed an amended claim 1, and amended columns 1 and 2 and insert page 2a of the description.

IV. Claim 1 now reads as follows:

"A remote control transmission apparatus provided with a plurality of key-actuable switches (10), operable by actuation of said switches for generating and transmitting command code signals representing respective command codes to a reproduction apparatus for reproducing data recorded on a recording medium, said reproduction apparatus being responsive to the respective command code signals for executing corresponding predetermined operations, said remote control transmission apparatus further comprising memory means (18) for storing said command codes produced in response to actuation of said switches (10), display means (20) for displaying said command codes and a control circuit (9) and a drive circuit (30) responsive to predetermined actuations of said switches for selectively reading out said command codes stored in said memory and driving said display means to display said command codes, and the control circuit (9) is further adapted to enable transmission of corresponding command code signals, wherein said switches (10) comprise a first group respectively responsive to keys (b, d) for normal mode operation where said command codes are temporarily stored in the memory means (18) in response to at least one of said first group of switches, and said switches comprise a second group respectively responsive to memory keys (a) for program mode operation characterised in that sequences of said command codes are previously stored by the operator in the memory means (18) and a sequence is selected by a respective one of the second group of switches for program mode operation."

Claims 2 to 9 are dependent on claim 1.

V. The appellant argued essentially as follows:

(i) D6' disclosed the features of the preamble of claim 1. The person skilled in the art was familiar with function or shortcut keys for short sequences of program steps of general purpose computers (eg as evidenced by D12). Programming sequences of command codes, if needed, and selecting a sequence by a respective one of the second group of switches was obvious in these circumstances, because the idea of the user programming switches of the second group by assigning them single command codes was already disclosed in D6'. It would further be obvious to select one of the sequences of command codes stored for each of several remote controlled apparatuses (TV, VCR, CABLE, AUX) by a respective one of a plurality of dedicated switches instead of selecting one of the successively displayed apparatuses by a source key. The subject-matter of claim 1 therefore lacked an inventive step in view of the prior art disclosed in D6' and the general knowledge of the person skilled in the art.

(ii) D11 disclosed a remote control apparatus consisting of a computer and an adaptor which could be inserted in a ROM cartridge slot section of the computer. The user could enter a schedule of command codes via the computer's keyboard and thus store sequences of command codes in the adaptor which were transmitted to the controlled apparatus under the control of a timer circuit in the adaptor. Since function or shortcut keys belonged to the basic knowledge of the skilled

person, it would have been obvious to provide switches for program mode operation to select and transmit previously stored sequences of command codes. The subject-matter of claim 1 was therefore also obvious with regard to the prior art disclosed in D11 or by the combination of D6' and D11 (supplemented, if need be, by the knowledge about function keys as evidenced by D12).

VI. The respondent argued essentially as follows:

(i) D6' did not disclose previously stored sequences of command codes as specified in claim 1 of the contested patent. D6' (table on pages 11 to 12) listed simple labels given to single command codes, not to a sequence of them. They were programmed by transmitting signals from another remote controller and thus not produced and stored in response to actuation of switches as specified in claim 1. They constituted bundles of preprogrammed command codes from which individual ones were selected in a use mode (cf D6', page 13, paragraph 2: "block of data").

According to claim 1 of the contested patent, sequences were created by the user actuating switches which produced (pre-existing) command codes and these sequences were stored against respective keys.

(ii) D11 disclosed a combination of a personal computer and a remote controller where sequences of command codes were typed in on a keyboard. These sequences were not transmitted on actuation of respective

keys, but triggered by a timer. There was no suggestion of splitting the commands on page 4 of D11 into a plurality of sequences and allocating each sequence a different key. Also D12 did not suggest selecting sequences of user-actuated command codes, but preprogrammed function keys for particular tasks.

VII. The appellant requested that the decision under appeal be set aside and that the patent be revoked.

VIII. The respondent requested that the patent be maintained in amended form in the following version:

Claims: 1 as filed in the oral proceedings on 25 November 1999;
2 to 6 as filed on 13 March 1997 during the oral proceedings before the opposition division;
7 to 9 of the patent specification;

Description: columns 1 and 2 and insert page 2a filed in the oral proceedings on 25 November 1999, and
columns 3 to 22 of the patent specification;

Drawings: Figures 1 to 15 of the patent specification.

Reasons for the Decision

1. The appeal is admissible.

2. *Amendments*

2.1 Apart from repositioning of the phrase "characterised in that", claim 1 as granted was amended in the opposition proceedings by adding, in its new characterising part, that "sequences of command codes" are previously stored and "a sequence" is selected by "a respective" one of the second group of switches. These features are disclosed in the application as filed in the context of program loops where sequences of command codes are stored (Figure 6(b): steps 96 to 100 and Figure 6(c): steps 121 to 130), and where one of the stored sequences is selected by a memory key (A to J), read out, displayed and transmitted (Figure 7: steps 135 to 145). The phrase "where the command codes are program codes" (claim 1 as granted, column 22, lines 37 to 39) was deleted. Claim 2 and the description, columns 1 and 2, as well as insert page 2a were adapted to the amended claim 1. Neither the appellant nor the opposition division objected to these amendments.

2.2 Claim 1 was further amended in the appeal proceedings by inserting the word "wherein" before "said switches (10) comprise a first group ..." and specifying in the characterising part that sequences of "said" command codes are previously stored. The description has been adapted to the new wording of claim 1.

2.3 The first of these further amendments ("wherein") is purely grammatical. The second amendment ("said") specifies that the sequences which are previously

stored consist of the command codes as defined in the preamble (and as disclosed in the application as filed, cf point 2.1 above). Storing and selecting sequences of command codes in the way specified in claim 1 effectively means that "the command codes are program codes" as will be seen from the paragraph which follows. The deletion of this phrase therefore does not extend the protection conferred by claim 1. Consequently, none of these amendments infringes Article 123(2) and (3) EPC.

2.4 The link provided by the second amendment clarifies that the command codes in the sequences which are previously stored (as specified in the characterising part of claim 1) are produced in response to actuation of switches for generating and transmitting signals representing respective command codes. The preamble of claim 1 recites memory means for storing said command codes: on the one hand, the command codes are "temporarily stored" in normal mode operation; on the other hand, they are "previously stored by the operator" and (later) selected by "switches for program mode operation". In both cases the wording of claim 1 refers to actuation of switches which already have command codes assigned to them. Thus, claim 1, read as a whole, makes it clear that the control circuit, switches and memory means of the apparatus are arranged such that an operator may create and store sequences of program codes by sequentially actuating switches selecting individual predefined command codes. A particular one of a plurality of the thus created sequences may then be selected by a respective one of the second group of switches.

3. *Inventive step*

3.1 The parties agree that D6' discloses the features of the preamble of claim 1 in combination. According to D6' (page 10, last line - page 12, penultimate line), a plurality of command codes may be stored for each controllable apparatus (eg TV or VCR) in that, in a learning process, the operator selects one of the soft key functions corresponding to command codes by means of a function key (70) and then selects the corresponding key of the remote controller to be emulated. The then transmitted command code signals are decoded and stored in compressed form (D6', claim 1; page 4, last paragraph). In a use mode, the operator may select an apparatus (using a source key 12) and a desired function (using a function key 70) among the possible choices which are successively displayed by the thus configured device (D6', claim 1, second paragraph of the characterising part; page 11, lines 7 to 11, and "Annexed Table II"). The command code signal corresponding to the selected function will then be generated from the code stored in a permanent memory (38) and temporarily stored in a second memory (40) before it is transmitted via an infrared transmitter (16) to the apparatus to be controlled (D6', pages 7 and 13, paragraphs 2; Figure 4).

3.2 The apparatus disclosed in D6' does not store sequences of command codes as specified in claim 1 of the contested patent (cf point 2.4 above) because, in the learning process, actuation of the switches does not produce and temporarily store command codes, but only instructs the remote transmitter to receive and learn the selected command code. In the use mode, previously

learned command codes are individually produced and temporarily stored in response to actuation of said switches. Although actuation of the source and function keys successively displays a plurality of command codes, they are neither displayed in the order of a sequence stored by an operator, nor is a group of these command codes "selected by a respective one of the second group of switches for program mode operation". D6' therefore does not disclose the features of the characterising part of present claim 1, whose subject-matter is thus considered to be new.

3.3 In view of the prior art disclosed in D6', the subject-matter of claim 1 solves the problem of providing a remote control transmission apparatus with easier selection and better control of a plurality of command codes transmitted to a reproduction apparatus (cf column 1, lines 12 to 28 and column 21, lines 19 to 54, of the patent specification).

3.4 As is readily apparent from point 3.2 above, a simple modification of the remote controller disclosed in D6', such as providing respective dedicated switches for each of the controlled apparatuses, would not lead the person skilled in the art to make the controller suitable for storing and selecting sequences of command codes in the manner as specified in present claim 1. Nor does D6', which is only concerned with selecting individual command codes, give any other hint of programming such sequences.

3.5 D11 (page 1, lines 1 to 5; page 3, line 4 to page 5, line 19; Figures 1 to 5) discloses a general purpose computer in combination with an adaptor. It does not

have switches comprising keys for normal mode operation where command codes are produced in response to actuation of the switches. The gist of the teaching of D11 may be seen as providing a supplement to conventional remote controllers which allows the user to program sequences of command codes with the aid of a computer and transmits them under the control of a clock circuit (3d) of the adaptor (3) to the apparatuses being controlled. The role of the computer is essentially limited to the programming of the sequences and that of the adaptor to transmitting the programmed sequences at the desired times. Therefore, the state of the art disclosed in D11 is far away from the subject-matter of the contested patent and cannot be used as a realistic starting point.

3.6 The person skilled in the art starting from the disclosure of D6' would not find an obvious solution to his problem in D11 either, only that an additional computer programmed adaptor could be provided for carrying out time controlled tasks. No hint can be found in D11 that key-actuable switches for transmitting command codes as in the remote controller of D6' could be used to program a time-controlled adaptor. Nor is there anything in the combined teachings of D6' and D11 that would lead the skilled person to consider programming and storing sequences of command codes, as disclosed in D11, in the remote control transmitter of D6' and selecting such stored sequences by respective switches for program mode operation.

3.7 D12 discloses "function keys" (F1 to F10) and "key traps" (eg Ctrl-Shift-X on page 4-120) as used in GW™-

BASIC for personal computers. Although the board can agree with the appellant that the person skilled in the art, at the date of priority of the contested patent, may be assumed to have been aware of these program facilities for personal computers, the appellant has not convinced the board that there was any obvious reason for using similar keys in a remote control transmission apparatus as disclosed in D6'. First, the appellant has not shown that any hand-held remote control transmitter similar to that in D6' makes provision for storing sequences of command codes as specified in the present claim 1, so that the need to select such a sequence does not even arise therein. Second, the combination of a computer and an adaptor disclosed in D11 lacks an essential feature characterising remote control transmission apparatuses as claimed, namely keys for remote control transmission of command code signals. Assuming the computer in D11 has the usual function keys, they are not mentioned there and thus D11 cannot suggest using any of them to select part, or the whole, of the programmed sequences. Therefore, it does not follow from the fact that individual command codes were assigned to switches in a learning process in D6' that the person skilled in the art, without foreknowledge of the present invention, **would** have considered including switches for program mode operation, which select sequences of command codes, in the manner specified in the present claim 1.

3.8 For these reasons, the subject-matter of present claim 1, having regard to the cited prior art, is not obvious to a person skilled in the art and shall thus be considered as involving an inventive step (Article 56 EPC).

4. No other objections having been raised, the board considers that the amended patent and the invention to which it relates meet the requirements of the Convention.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the first instance with the order to maintain the patent as amended in the following version:

Claims: 1 as filed in the oral proceedings on 25 November 1999;
2 to 6 as filed on 13 March 1997 during the oral proceedings before the opposition division;
7 to 9 of the patent specification;

Description: columns 1 and 2 and insert page 2a filed in the oral proceedings on 25 November 1999, and
columns 3 to 22 of the patent specification;

Drawings: Figures 1 to 15 of the patent specification.

The Registrar: The Chairman:

M. Kiehl W. J. L. Wheeler