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(54) **Motion-controlled musical tone control apparatus.**

(57) An apparatus for the generation of musical sounds based on monitoring motions of the body, especially the natural motion of swinging the arms and legs. The monitoring of body motion depends on the use of an acceleration sensor in a hand-held element, or on the use of an acceleration sensor contained in a detachable housing which is held by a "Velcro" (Trademark) type means to a part of the body. The signal from the acceleration sensor is transmitted via a cable or a wireless means to a musical tone signal generating circuit which is contained, along with batteries, in a belt-shaped casing which may be worn by the user. The musical tone generating circuit receives signals from the acceleration sensor, and, using the musical tone colour in-

formation stored in its memory, produces the appropriate output signal. Therefore, musical tones can be generated simply by moving a monitored part of the body, without the actions usually required to play an electronic musical instrument.

EP 0 322 863 A3



EP 88 12 1727

| DOCUMENTS CONSIDERED TO BE RELEVANT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                        |                                                |                                                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|------------------------------------------------|
| Category                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Citation of document with indication, where appropriate, of relevant passages                                                                                                          | Relevant to claim                              | CLASSIFICATION OF THE APPLICATION (Int. Cl. 4) |
| X                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | GB-A-2 071 389 (CASIO COMPUTERS)<br>* Page 3, claims 1-4; figure 2 *<br>---                                                                                                            | 1,6                                            | G 10 H 1/00                                    |
| P,X                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | EP-A-0 264 782 (YAMAHA)<br>* Column 13, lines 25-31; column 14, lines 25-55; column 29, line 42 - column 31, line 43; column 38, line 53 - column 39, line 11; figures 3,4,29 *<br>--- | 4,5                                            |                                                |
| A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | US-A-3 935 669 (POTRZUSKI et al.)<br>* Column 3, lines 21-66; figures 1,2 *<br>---                                                                                                     | 1-8                                            |                                                |
| A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | US-A-4 662 260 (RUMSEY)<br>* Column 2, line 31 - column 4, line 47; column 7, lines 20-49; figures 1,2,7 *<br>---                                                                      | 1,4,5,7,8                                      |                                                |
| A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | GB-A-2 153 579 (LANGFORD)<br>* Page 2, lines 66-103, claims 1,2; figure 2 *<br>-----                                                                                                   | 7,8                                            |                                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                        |                                                | TECHNICAL FIELDS SEARCHED (Int. Cl.4)          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                        |                                                | G 10 H                                         |
| The present search report has been drawn up for all claims                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                        |                                                |                                                |
| Place of search<br>THE HAGUE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                        | Date of completion of the search<br>31-10-1989 | Examiner<br>PULLUARD R.J.P.A.                  |
| <b>CATEGORY OF CITED DOCUMENTS</b><br>X : particularly relevant if taken alone<br>Y : particularly relevant if combined with another document of the same category<br>A : technological background<br>O : non-written disclosure<br>P : intermediate document<br>T : theory or principle underlying the invention<br>E : earlier patent document, but published on, or after the filing date<br>D : document cited in the application<br>L : document cited for other reasons<br>.....<br>& : member of the same patent family, corresponding document |                                                                                                                                                                                        |                                                |                                                |