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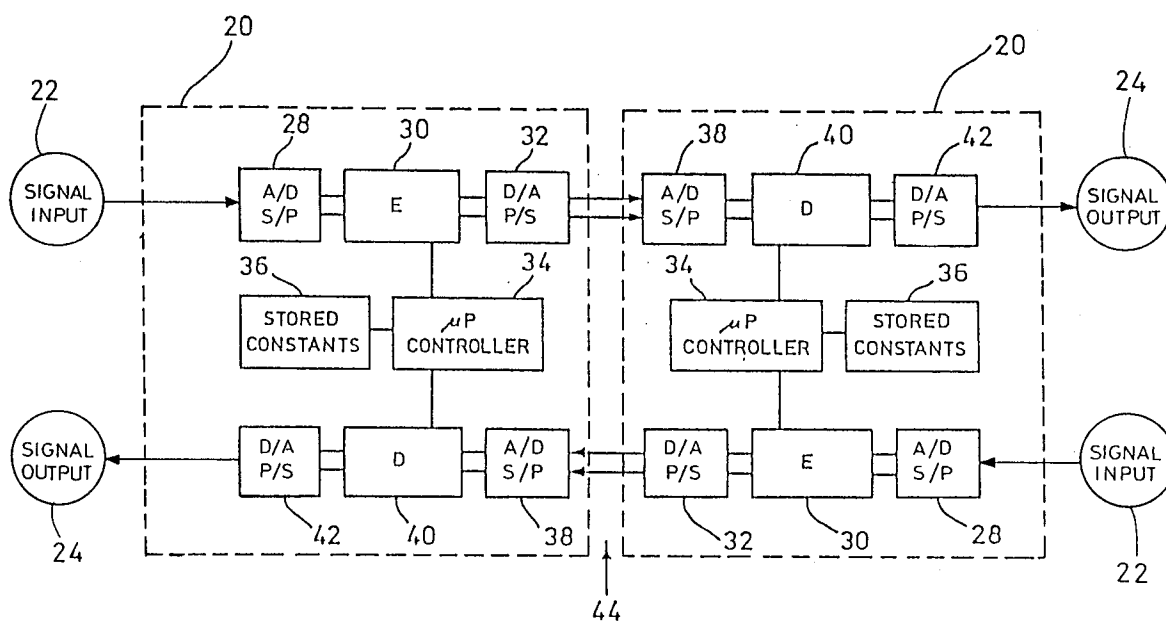
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(12)

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**27.05.92 Bulletin 92/22**(71) Applicant: **Webb, Joseph Alfred**  
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**D. Young & Co. 10 Staple Inn**  
**London WC1V 7RD(GB)**(54) **Signal encryption.**

(57) Methods and apparatus for encrypting and subsequently decrypting an analog or digital signal are disclosed. During encryption the signal waveform is transformed by a substantially continuous non-linear complex function of frequency. The transformation is characterised in that the time duration of a trans-

formed impulse signal is substantially increased. Decryption requires transformation of the encrypted signal by substantially the complex inverse of the encryption function. The transformations may vary in time during encryption/decryption of a signal.

**FIG.12****EP 0 378 446 A3**



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## EUROPEAN SEARCH REPORT

Application Number

EP 90 30 0407

| 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.5) |
| Y  | EP-A-0 277 392 (PHILIPS)<br>* column 4, line 34 - line 55 *<br>* column 5, line 6 - line 31 *<br>---                    | 1,3   | H04K1/00                                      |
| Y  | PATENT ABSTRACTS OF JAPAN<br>vol. 7, no. 222 (E-201)(1367) 4 October 1983<br>& JP-A-58 114 641 ( TATEISHI ) 8 July 1983 | 1,3   |   |
| A  | * abstract *<br>---   | 2,4   |   |
| A  | GB-A-2 094 593 (MARCONI)<br>* page 1, line 31 - line 110 *<br>* page 4, line 1 - line 39 *<br>-----                     | 1-4   |   |
|  |   |   | TECHNICAL FIELDS<br>SEARCHED (Int. Cl.5)      |
|  |   |   | H04K<br>H04B                                  |
| The present search report has been drawn up for all claims   |   |   |   |
| Place of search<br>THE HAGUE   |   | Date of completion of the search<br>27 MARCH 1992 | Examiner<br>HOLPER G. E. E.                   |
| <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 |   |   |   |