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(56) Documents cited
GB 2060228 A GB 1588147 A GB 1539448 A
EP 0101772 A WO 88/01408 A WO 87/01835 A
WO 85/03785 A WO 83/02343 A

(58) Field of search
UK CL (Edition J) G4A AAP
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(54) Power control security system for a computer

(57) A power control security system for a computer uses a code controller to control a power switch such as a relay or S.C.R. so that data stored in the computer are not disclosed without keying in the correct code of the code controller. The code controller includes a set of switches for setting a main code, a keyboard and a remote control input for receiving input of a code, a remote control output for sending out a code, a power control output for controlling the power switch and a keyboard control output for controlling lock-in of the keyboard.

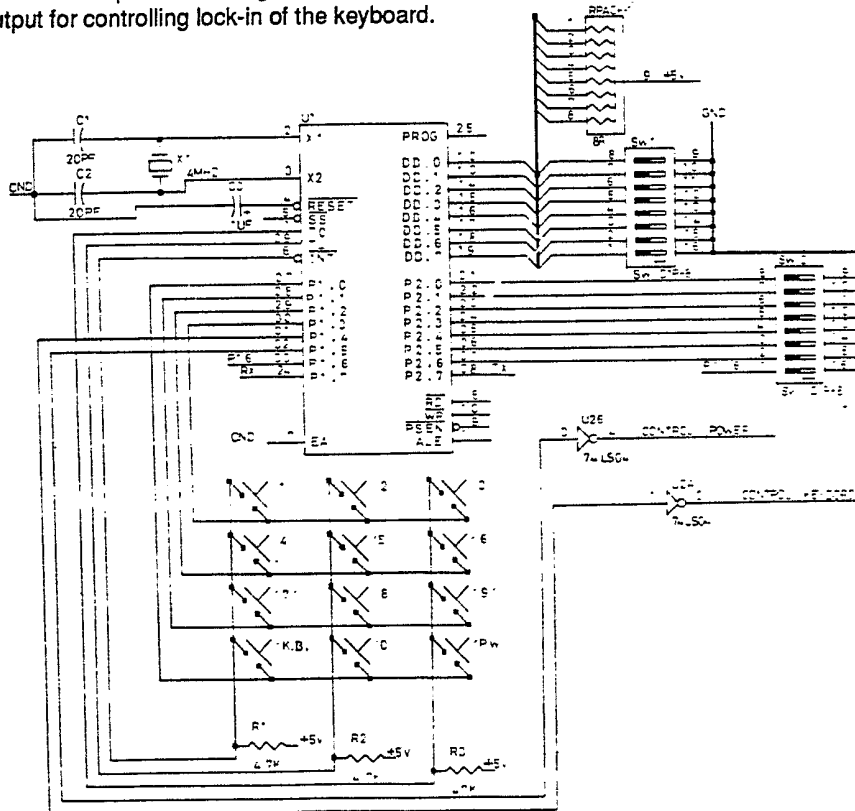


FIG. 1

At least one drawing originally filed was informal and the print reproduced here is taken from a later filed formal copy.

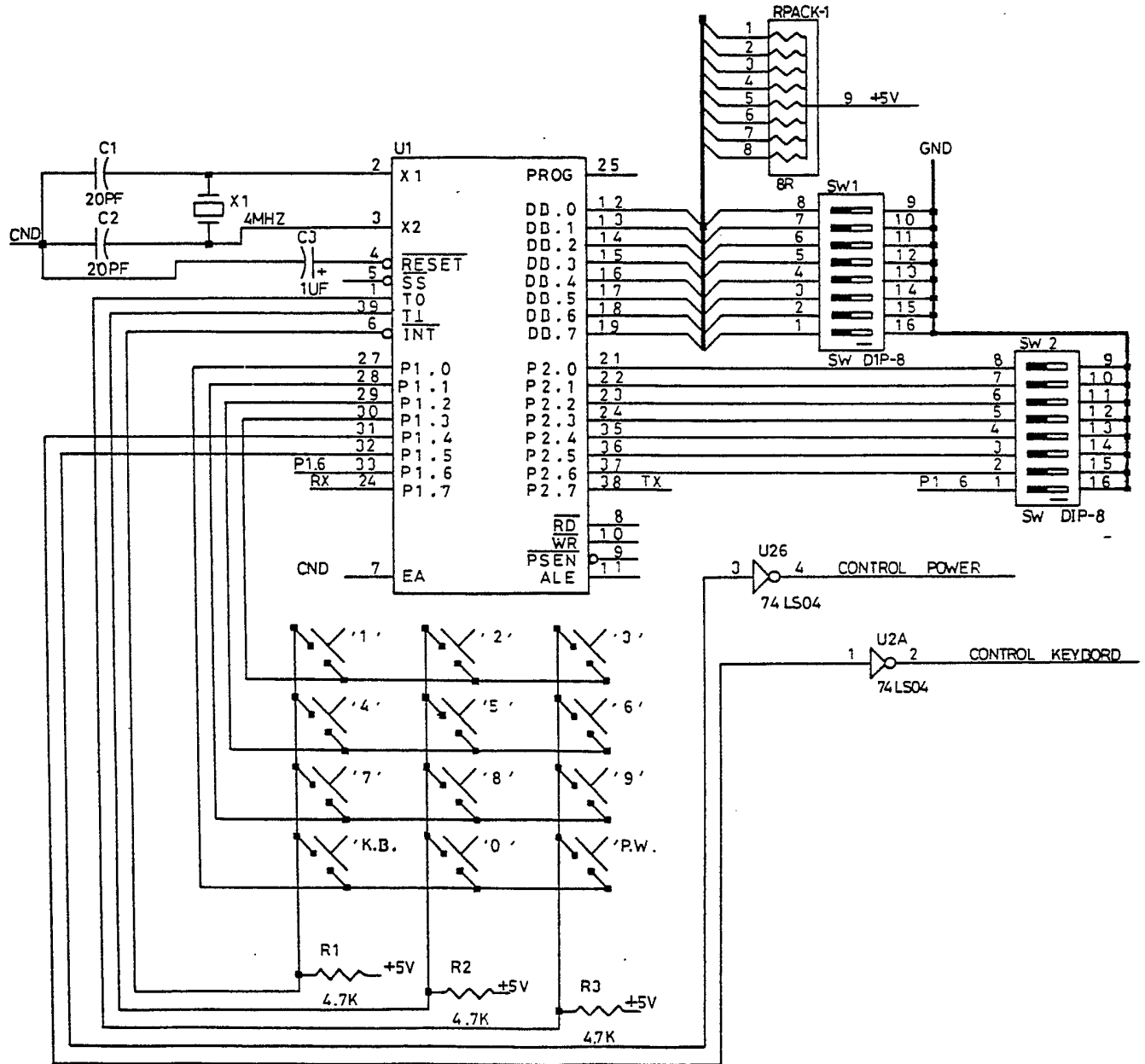


FIG. 1

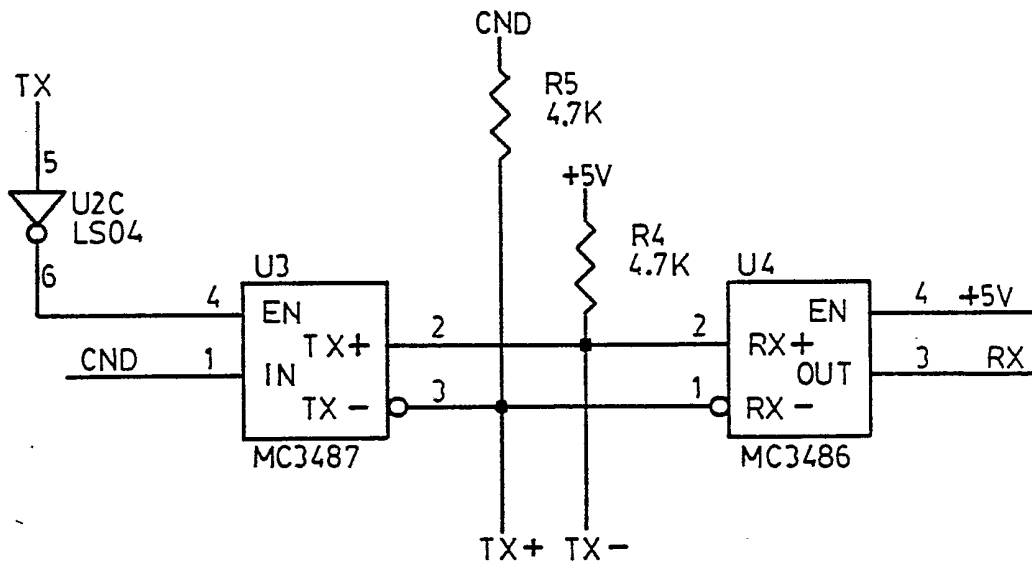


FIG. 2

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TITLE: POWER CONTROL SECURITY SYSTEM FOR COMPUTER

This invention relates to a power control security system for a computer.

5 It has been found that the security of the data stored in a computer is achieved by either hardware or software. The former utilizes a mechanical lock or a code lock to turn on a computer or the input of a keyboard, while the latter applies the principles of code comparison, file name concealment or the like. Nevertheless, the mechanical lock and the code lock are easily damaged and so the data stored in the computer can be easily copied or modified. In addition, such security system must be opened on the spot by the responsible person thereby causing much inconvenience. 10 As to the latter, the data can be printed out and so they can still be read out through some complex procedures. Hence, such security means are insufficient to ensure the data stored in a computer not to be stolen and do not meet the need of the market.

20 It is, therefore, an object of the present invention to provide a computer security system which may obviate and mitigate the above-mentioned drawbacks.

This invention relates to a power control security system for a computer.

5 It is the primary object of the present invention to provide a computer security system which utilizes a code controller to control a power switch such as a relay S.C.R. or TRAC so as to keep data stored in the computer from being disclosed without keying in the correct code of the code controller.

10 It is another object of the present invention to provide a computer security system which can be controlled on the spot, via a computer network or by means of radio signals.

15 It is another object of the present invention to provide a computer security system which can ensure the data stored in a computer not to be copied or modified without permit.

It is still another object of the present invention to provide a computer security system which is easy to produce.

20 It is still another object of the present invention

to provide a computer security system which is very
low in cost.

It is a further object of the present invention
to provide a computer security system which is facile
5 to operate.

The novel features which are characteristics of
the invention, together with further objects and advantages
thereof will be better understood from the following
description considered in connection with the accompanied
10 drawings and in which a preferred embodiment of the
invention is illustrated by way of example. It is to
be expressly understood, however, that the drawings
are for the purpose of illustration and description
only and are not intended as a definition of the limits
15 of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG.1 shows an electrical circuit of a code controller of the present invention; and

FIG.2 shows the communication circuit of the present invention.

5

For purposes of promoting an understanding of the principles of the invention, reference will now be made to the embodiment illustrated in the drawings. Specific language will be used to describe same. It will, nevertheless, be understood that no limitation of the scope of the invention is thereby intended, such alternations and further modifications in the illustrated device, and such further modifications in the illustrated device, and such further applications as would normally occur to one skilled in the art to which the invention relates.

With reference now to FIG.1, the code controller according to the present invention mainly comprises a single chip microprocessor UI, a set of switches SW, a keyboard, a remote control input RX, a remote control output TX, a power control output 32, a keyboard control output 31 and some resistors, capacitors and transistors. The switches SW are used to set a four-digit code. To set the code, first press the P.W. key of the keyboard, then a code such as 4321 preset in the factory and another code such as 9876. The above-mentioned procedure may

change the code as desired. Meanwhile, the power control output 32 has not yet been actuated. When desired to turn on the power, it is necessary to press the P.W. button of the keyboard first and then
5 the code such as 9876 thereby turning on the computer or the power switch of the hard disc driver. If the code is keyed in once more, it will be turned off. The keyboard control output 31 is used to control the lock-in signal of the keyboard, which function and
10 controlling way are just the same as the above-mentioned. The remote control output TX and the remote control input RX utilize a computer network or remote control communication to achieve the function thereof. FIG.2 shows the communication circuit of present invention.
15 As illustrated, the code may be transmitted to the communication circuit (TX +, TX -) via transformation of an electrical interface U3 from the remote control output TX. Reversely, it may be via the signal of the communication circuit (TX +, TX -) which is picked
20 up by another interface U4 and then transmitted into the single chip microprocessor U1 of the code controller

from the remote control input RX for discrimination.
If the code is correct, it will control the computer
or the mechanism according to the aforementioned
principle.

5 It conclusion, the present invention is mainly
characterized by the following:

1. The present invention can be applied to
microcomputers, personal computers as well as power
supplies such as exchange power supply of a working
10 station, with only the exposure of the code output
and input portions such as the keyboard. Hence, if
no correct code is keyed in and the power supply has
no switch to turn on, then the inside relay switch
cannot be turned on and no power will be supplied to
15 the computer. Further, since the input of an exchange
power supply is alternating current while the output
thereof is direct current, it is impossible to use
the alternating current to supply power to the computer
without the control of the present invention thereby
20 keeping confidential the data stored in the computer.

2. Similarly, the present invention can also applied

to important mechanics such as hard disc driver. Since
it is integrally combined with the present invention,
the hard disc driver will have no power if no correct
code is keyed in thus preventing the data stored in
the hard disc from printing out.

5
3. The present invention of the integrated circuit
simply by unitarily formed with the microprocessor or
the control integrated circuit so as to control the power
supply thereof. In consequence, if no correct code is
keyed in, no power will be supplied thereto and the data
10 stored in the computer can be kept confidential.

Although the present invention has been described
with a certain degree of particularity, it is understood
the present disclosure is made by of example only and
15 that numerous changes in the detailed construction
and the combination and arrangement of parts may be
resorted to without departing from the spirit and scope
of the invention as hereinafter claimed.

CLAIMS:

1. A power control security system for a computer
utilizing a code controller to control a power switch
such as a relay so as to keep data stored in the computer
5 from being disclosed without keying in correct code of
the code controller, said code controller comprising:

a set of switches for setting a main code;

a keyboard and a remote control input for
receiving input of a code;

10 a remote control output for sending out a code;

a power control output for controlling a power
switch such as a relay, S.C.R. or TRAC and

a keyboard control output for controlling
lock-in of the keyboard.

15 2. The power control security system as claimed in
Claim 1, wherein the input and output of the code are
by means of transformation of an interface via a communication
circuit.

20 3. The power control security system as claimed in
Claim 1, wherein said code controller may be combined
with a controlled power supply or unitarily formed with
a controlled integrated circuit.