

K-MOUSE 2011

K-MOUSE 2011 is mouse and multijoystick interface for ZX Spectrum and compatible computers. Can work only as Kempston mouse or Kempston joystick or Fuller joystick or Sinclair joystick or QWERT joystick in one time.

- Push mouse button for active Kempston mouse mode + disable joy
- Push joy fire for active joystick mode + disable mouse

Interface use CANON9 connector for connect standard Atari joy or real Amiga mouse. If real Amiga mouse is connect to CANON9 then mouse FIRE deactivate PS/2 mouse and Amiga mouse work as Kempston mouse and in same time as A-MOUSE.

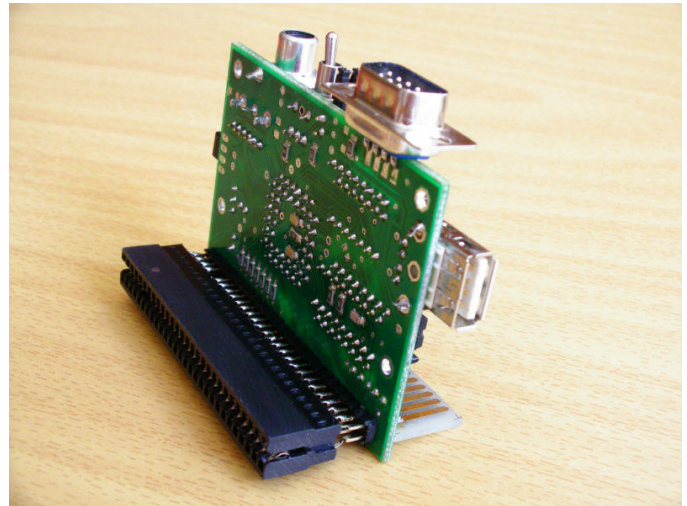
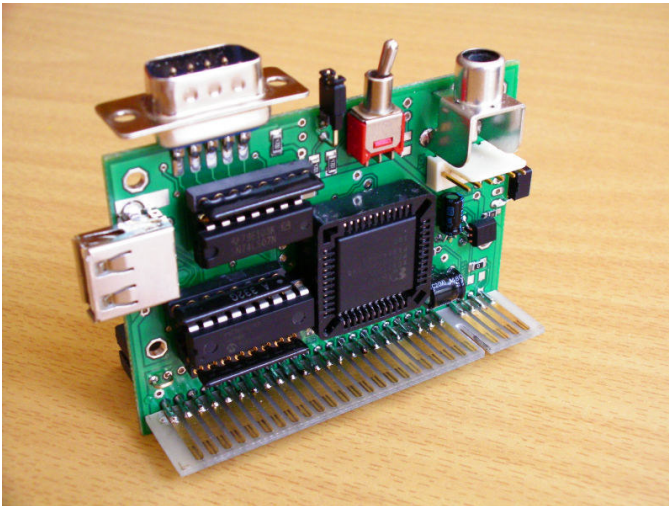
IM2 fixed vector table address (correct floating bus value):

K-MOUSE return to data bus correct 8bit low adress (#FF) of vector table. Will work software with incomplete vector table.

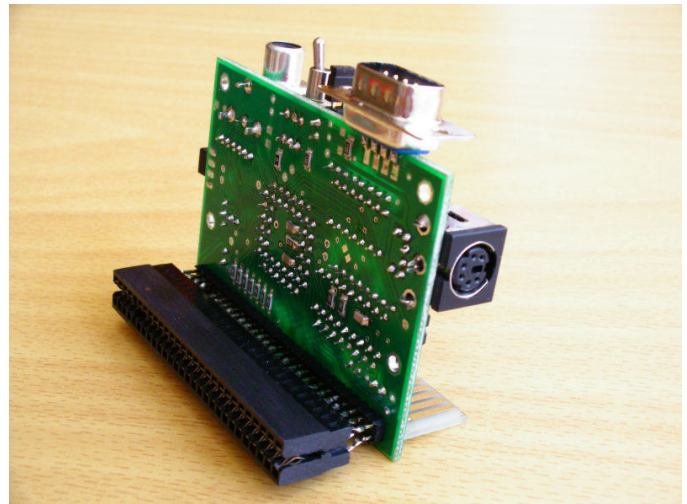
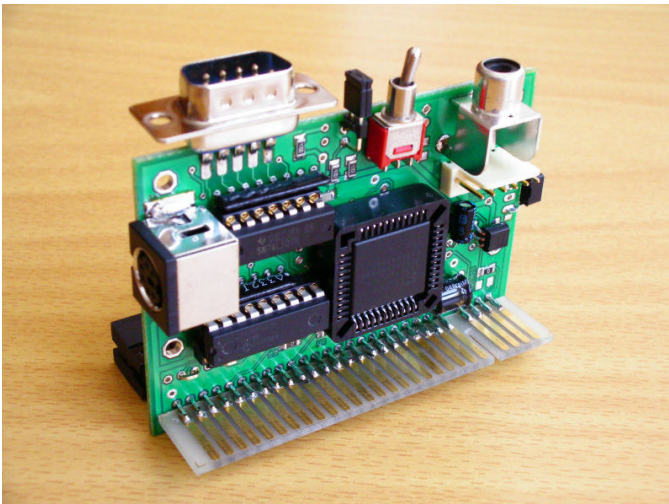
PS/2 or USB:

You can use PS/2 or USB connector for PC mouse. Interface support PS/2 protocol and is possible connect USBmouse with PS/2 protocol too(USB/PS2 mouse).

Version with USB connector:



Version with PS/2 connector:



- support KEMPSTON/SINCLAIR joystick in master mode and FULLER/QWERT in slave mode
- jumper on board is used for MASTER(connect) / SLAVE(disconnect) switching
- new MASTER/SLAVE support (K-MOUSE PORTS - MASTER:A12=1 / SLAVE:A12=0)
- return to data bus correct 8bit low address (#FF) of vector table

Inhibit feature: OUT xxDF,128 = inhibit master/slave k-mouse ports and all joysticks
 OUT xxDF,0 = connect all ports

EXTRA MODE:

Press L+R+M mouse buttons = enter to EXTRA MODE. Yet interface wait for next buttons:
 - press L+R+M mouse buttons in EXTRA MODE = reset K-MOUSE features + exit EXTRA MODE
 - press L+R mouse buttons in EXTRA MODE = exit EXTRA MODE without change features (CANCEL)
 - press L mouse button = reset or enable kempston port #1F (reset port = IN 31 return 0)
 - press R mouse button = exchange left and right mouse buttons
 - press M mouse button = switch between fast and slow(4x slower) mouse mode
 - move mouse WHEEL more than 4 step - disable / enable read mouse wheel on button port.
 If wheel is off then D4-D7 on button port return 1111.

JOYSTICK PORTS:

port 31 (#1F) - KEMPSTON JOY is enabled in master mode and if SWITCH is set to left
 port 61438 (#EFFE) - SINCLAIR JOY is enabled in master mode and if SWITCH is set to right
 port 127 (#7F) - FULLER JOY is enabled in slave mode and if SWITCH is set to left
 port 64510 (#FBFE) - QWERT JOY is enabled in slave mode and is SWITCH is set to right

Ports adressation:

master K-MOUSE ports

buttons = 64223(#FADF) xxx1x0x0 11011111 (D4-D7=4bit wheel counter)
 X-AXIS = 64479(#FBDF) xxx1x0x1 11011111
 Y-AXIS = 65503(#FFDF) xxx1x1x1 11011111
 detect = 65247(#FEDF) xxx1x1x0 11011111 (return stable value 128(#80))

A-MOUSE/KEMPSTON JOY = 31 (#1F) 00011111
 SINCLAIR = 61438(#EFFE) xxx0xxxx xxxxxxx0 (keys 6,7,8,9,0 for SINCLAIR JOY mode)
 + 65278(#FEFE) xxxxxxx0 xxxxxxx0 (keys Z,X for fire2 and fire 3)

slave K-MOUSE ports

buttons = 2783 (#0ADF) xxx0x0x0 11011111 (D4-D7=4bit wheel counter)
 X-AXIS = 3039 (#0BDF) xxx0x0x1 11011111
 Y-AXIS = 4063 (#0FDF) xxx0x1x1 11011111
 detect = 3807 (#0EDF) xxx0x1x0 11011111 (return stable value 128(#80))

FULLER JOY = 127(#7F) 01111111
 QWERT JOY= 64510(#FBFE) xxxxx0xx xxxxxxx0 (Q,W,E,R,T keys mode)
 + 65278(#FEFE) xxxxxxx0 xxxxxxx0 (keys C,V for fire2 and fire 3)

Port info:

K-MOUSE: 3 buttons + wheel support

mouse buttons port:

D0- right button
D1- left button
D2- middle button
D3- always log.1
D4- \
D5- \ 4bit mouse
D6- / wheel counter
D7- /
(press button = log.0)

A-MOUSE / KEMPSTON JOYSTICK: port 31(#1F)

D0- XB / joy RIGHT
D1- YB / joy LEFT
D2- XA / joy DOWN
D3- YA / joy UP
D4- left button / joy FIRE 1
D5- right button / joy FIRE 2
D6- middle button / joy FIRE 3
D7- always log.0
(all signals on port #1F is active in log.1)

SINCLAIR JOYSTICK: port 61438(#EFFF)

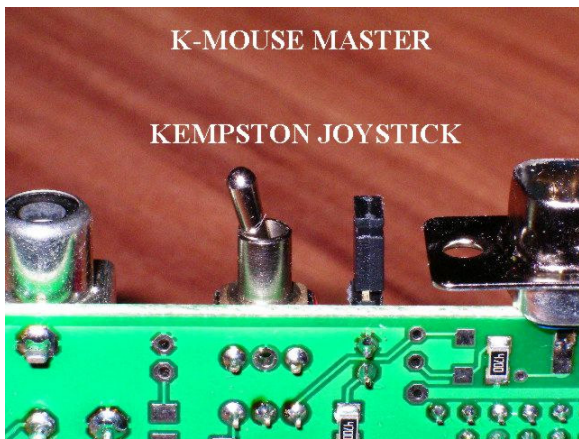
D0- FIRE 1 - key "0"
D1- UP - key "9"
D2- DOWN - key "8"
D3- RIGHT - key "7"
D4- LEFT - key "6"
Next buttons for SINCLAIR mode: port 65278(#FEFE)
D1- FIRE 2 - key "Z"
D2- FIRE 3 - key "X"
(all signals is active in log.0)

FULLER JOYSTICK: port 127(#7F)

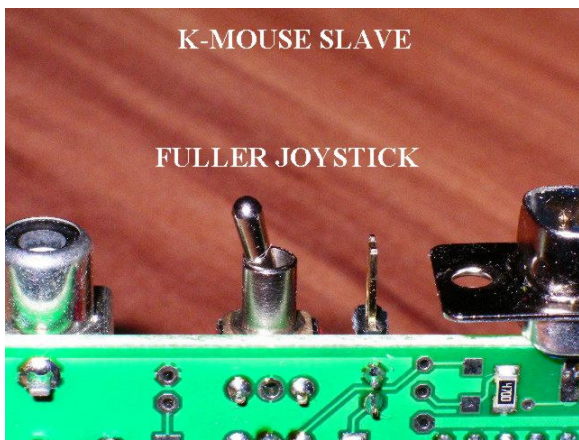
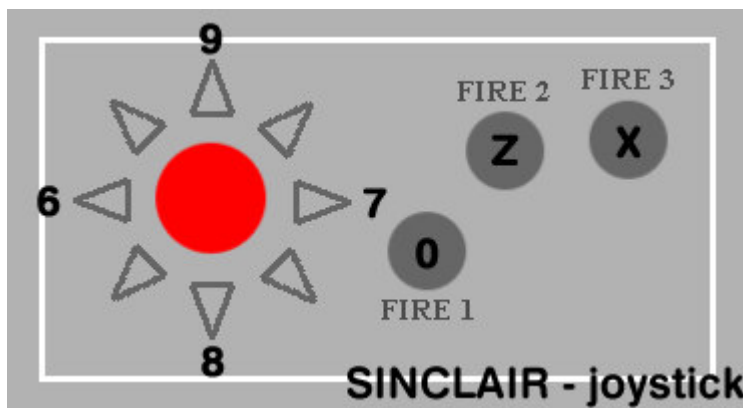
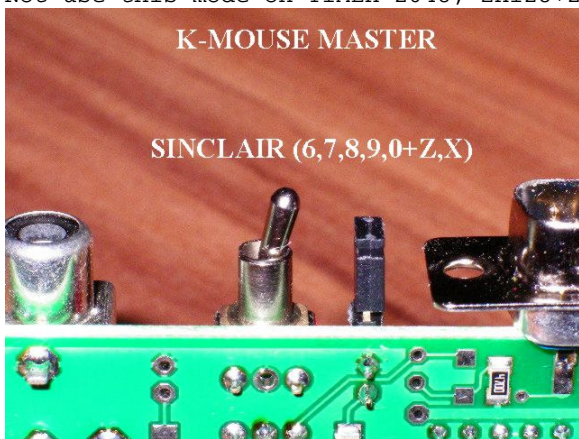
D0- YA / joy RIGHT
D1- XA / joy LEFT
D2- YB / joy DOWN
D3- XB / joy UP
D4- always log.1
D5- middle button / joy FIRE 3
D5- right button / joy FIRE 2
D7- left button / joy FIRE 1
(all signals on port #7F is active in log.0)

QWERT JOYSTICK: port 64510(#FBFE)

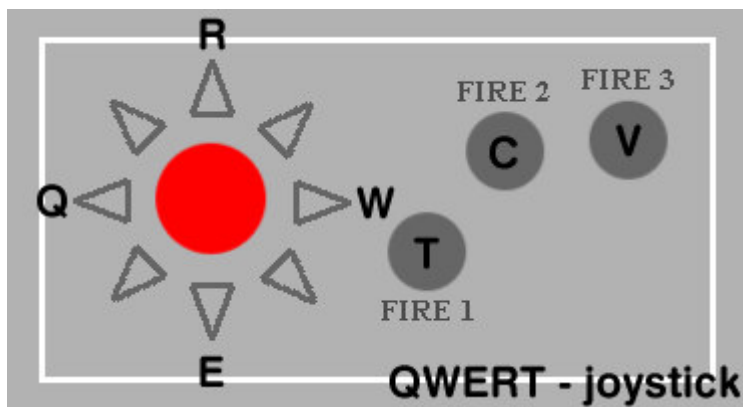
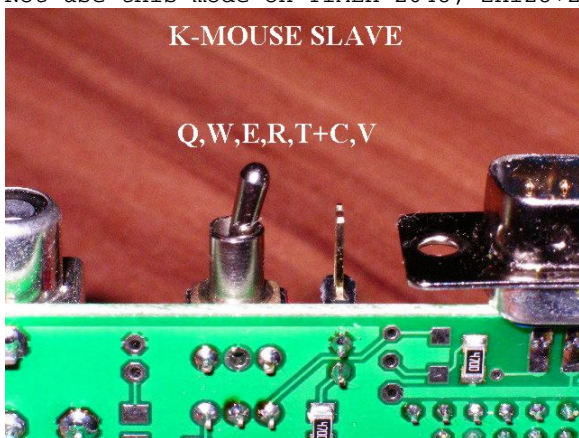
D0- LEFT - key "Q"
D1- RIGHT - key "W"
D2- DOWN - key "E"
D3- UP - key "R"
D4- FIRE - key "T"
Next buttons for QWERT mode: port 65278(#FEFE)
D3- FIRE 2 - key "C"
D4- FIRE 3 - key "V"
(all signals is active in log.0)



Not use this mode on TIMEX 2048, ZX128+2A, ZX128+3



Not use this mode on TIMEX 2048, ZX128+2A, ZX128+3



Software with mouse support:

<http://velesoft.speccy.cz/kmsoft.htm>

Mouse drivers + source code:

http://velesoft.speccy.cz/k-mouse_driver.htm

Software for Amiga mouse support:

<http://velesoft.speccy.cz/othermouse-cz.htm>