

How to connect IDEa controller inside Atari

I can not take response for damage caused by improper connection of IDEa system !!!

If your Atari computer doesn't have ECP connector or you want install it inside you have to connect all signals to **CON1** socket on IDEa's motherboard.



Good place to mount it inside computer is a space above TV modulator - IDE connector to the port SIO.

Before you will start take a look at chips pinouts, this will help you find requested signals on them:

Freddie - CO61922 or CO61991

14MHz Out	1	40	+5V
14MHz In	2	39	RESET
ExtSel	3	38	R/W
CasInh	4	37	OSC
o2	5	36	
	6	35	CAS
	7	34	WR
A0	8	33	RAS
A1	9	32	BA0
A2	10	31	BA1
A3	11	30	BA2
A4	12	29	BA3
A5	13	28	BA4
A6	14	27	BA5
A7	15	26	BA6
A8	16	25	BA7
A9	17	24	A15
A10	18	23	A14
A11	19	22	A13
GND	20	21	A12

6502C (CPU) - CO14806

GND	1	40	RST
RDY	2	39	o2
o1	3	38	S0
TRQ	4	37	o0
SYNCH	5	36	R/W
NMI	6	35	HALT
NC	7	34	NC
+5V	8	33	D0
A0	9	32	D1
A1	10	31	D2
A2	11	30	D3
A3	12	29	D4
A4	13	28	D5
A5	14	27	D6
A6	15	26	D7
A7	16	25	A15
A8	17	24	A14
A9	18	23	A13
A10	19	22	A12
A11	20	21	GND

Antic - CO21698

V _{SS}	1	40	D4
ANO	2	39	D5
AN1	3	38	D6
CP	4	37	D7
AN2	5	36	RST
RNMI	6	35	FO
NMI	7	34	Φ0
REF	8	33	D3
HALT	9	32	D2
A3	10	31	D1
A2	11	30	D0
A1	12	29	Φ2
A0	13	28	A4
R/W	14	27	A5
RDY	15	26	A6
A10	16	25	A7
A12	17	24	A8
A13	18	23	A9
A14	19	22	A11
A15	20	21	V _{CC}

MMU - CO61618

A11	+5V
A12	S4
A13	BE
A14	I/O
A15	MMU CI
MAP	OS
RD4	MPD
RD5	BASIC
REN	S5
GND	REF

All connection must be done using as shortest wire as possible:

- pin1 [con1] - GND GND can be connected only one time.
- pin2 - EXTSEL - pin no 3 of Freddie chip. In the case of XEGS or 65XE without EXP port you have to unsold this pin from motherboard and connect it to VCC through resistor 4.5-10k Ohm)
- pin3 - A0 - pin no 9 of CPU
- pin4 - A1 - pin no 10 of CPU
- pin5 - A2 - pin no 11 of CPU
- pin6 - A3 - pin no 12 of CPU
- pin7 - A4 - pin no 13 of CPU
- pin8 - A5 - pin no 14 of CPU
- pin9 - A6 - pin no 15 of CPU
- pin10 - GND
- pin11 - A7 - pin no 16 of CPU
- pin12 - A8 - pin no 17 of CPU
- pin13 - A9 - pin no 18 of CPU
- pin14 - A10 - pin no 19 of CPU
- pin15 - A11 - pin no 20 of CPU
- pin16 - A12 - pin no 22 of CPU
- pin17 - A13 - pin no 23 of CPU
- pin18 - A14 - pin no 24 of CPU
- pin19 - GND
- pin20 - A15 - pin no 25 of CPU
- pin21 - D0 - pin no 33 of CPU
- pin22 - D1 - pin no 32 of CPU

- pin23 - D2 - pin no 31 of CPU
- pin24 - D3 - pin no 30 of CPU
- pin25 - D4 - pin no 29 of CPU
- pin26 - D5 - pin no 28 of CPU
- pin27 - D6 - pin no 27 of CPU
- pin28 - D7 - pin no 26 of CPU
- pin29 - GND
- pin30 - GND
- pin31 - Ø2 - pin no 29 of ANTIC
- pin32 - GND
- pin33 - N/C (not connected)
- pin34 - RST - pin no 36 of ANTIC
- pin35 to pin41 - N/C
- pin42 - GND
- pin43 - MPD - pin no 14 of MMU (in the case of Atari XEGS look below)*
- pin44 - N/C
- pin45 - GND
- pin46 - R/W: Read/write direction - pin no 14 of ANTIC
- pin47 - VCC (power supply - e.g. pin no 8 of CPU)
- pin48 - VCC
- pin49 - N/C
- pin50 - GND

* If you have Atari XEGS you have to replace original MMU chip with programmed GAL 16V8.

Some tips.

1. If you used too long wire to made your connection you can experience some distortion in KMKDIAG application
2. Signals A0-A15 and D0 can be find on ANTIC, GTIA and POKEY as well, not only on CPU.