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AE-ISP-U1

DIP28/BH-10 universal adapter for in system programming.

Click the programmer model below to get an appropriate list of the devices supported by the adapter:

- ChipProg+
- ChipProg-40
- ChipProg-48, ChipProg-G4

Adapter Wiring Diagram:

DIP-28	BH-10	74AHC126	74AHC126	C1, 0.1uF
1,23	1	3		
2	3	6		
3	5	8		
4	7			
5,14	9	7	1,2,7	1
6		2		
7		1		
8		5		
9		14	14	2
10		9		
11		10		
12		12		
13		13		
15		4		

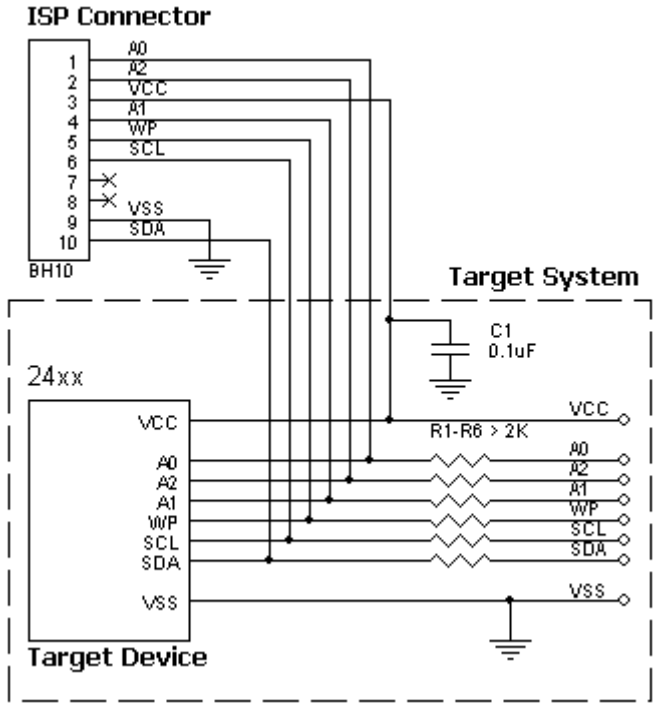
16			5	
17			4	
18			9	
19			10	
20			12	
21			13	
22				
24	10		6	
25	8			
26	6		8	
27	4		11	
28	2	11		

AE-ISP-U1 connection for the 24xx devices

Click the programmer model below to get an appropriate list of the devices supported by the adapter:

- ChipProg+
- ChipProg-40
- ChipProg-48, ChipProg-G4

Recommended connection:



Powering the target device:
There are two alternative options for powering the targets:
1. The target gets power from the programmer (Vdd). This is possible only if the target does not consume too much energy. A capacity of the target power circuitry should not exceed 50 uF.
2. The target gets power from a built-in or external power supply. In this case the power output from the programmer should not be connected with the target. The target system should be tolerant to applying logical signals with the voltage levels exceeding the voltages on the target.
NOTE! It is strictly prohibited to power the target from both the programmer and built-in or external power supply simultaneously.

Isolating resistors:
Purpose of the R1..R6 resistors is to isolate the programmed chip from rest of target system. Recommended value of resistors R1..R6 is 2k or more. You can also use jumpers instead of the resistors.

ISP characteristics:
1. Programmer's output capability:
  1.1 Vcc - 80 mA;
  1.2 Vpp - 50 mA;
  1.3 logical pins - 5 mA.

2. The cable length should be less then one foot.

Table of connections of the adapter output socket to the device pins:

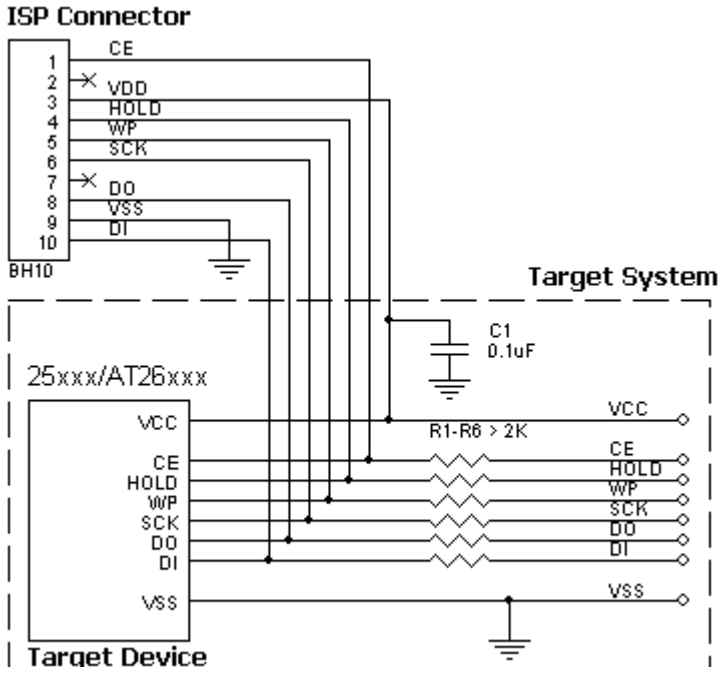
Adapter Output connector, BH-10	Target Device 24xx
1	1
3	8
5	7
7	-
9	4
10	5
8	-
6	6
4	2
2	3

AE-ISP-U1 connection for the 25xxx devices

Click the programmer model below to get an appropriate list of the devices supported by the adapter:

- ChipProg+
- ChipProg-40
- ChipProg-48, ChipProg-G4

Recommended connection:



Powering the target device:
There are two alternative options for powering the targets:
1. The target gets power from the programmer (Vdd). This is possible only if the target does not consume too much energy. A capacity of the target power circuitry should not exceed 50 uF.
2. The target gets power from a built-in or external power supply. In this case the power output from the programmer should not be connected with the target. The target system should be tolerant to applying logical signals with the voltage levels exceeding the voltages on the target.
NOTE! It is strictly prohibited to power the target from both the programmer and built-

in or external power supply simultaneously.

Isolating resistors:
Purpose of the R1..R6 resistors is to isolate the programmed chip from rest of target system. Recommended value of resistors R1..R6 is 2k or more. You can also use jumpers instead of the resistors.

ISP characteristics:
1. Programmer's output capability:
   1.1 Vcc - 80 mA;
   1.2 Vpp - 50 mA;
   1.3 logical pins - 5 mA.
2. The cable length should be less then one foot.

Table of connections of the adapter output socket to the device pins:

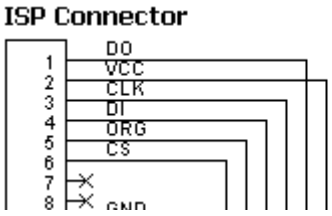
Adapter Output connector, BH-10	Target Device AT26xxx	Target Device 25xxx 8 pins package	Target Device 25xxx 16 pins package
1	1	1	7
3	8	8	2
5	3	3	9
7	-	-	-
9	4	4	10
10	5	5	15
8	2	2	8
6	6	6	16
4	7	7	1
2	-	-	-

AE-ISP-U1 connection for the 93xx devices

Click the programmer model below to get an appropriate list of the devices supported by the adapter:

- ChipProg+
- ChipProg-40
- ChipProg-48, ChipProg-G4

Recommended connection:



Powering the target device:
There are two alternative options for powering the targets:
1. The target gets power from the programmer

(Vdd). This is possible only if the target does not consume too much energy. A capacity of the target power circuitry should not exceed 50 uF.
2. The target gets power from a built-in or external power supply. In this case the power output from the programmer should not be connected with the target. The target system should be tolerant to applying logical signals with the voltage levels exceeding the voltages on the target.
NOTE! It is strictly prohibited to power the target from both the programmer and built-in or external power supply simultaneously.

Isolating resistors:
Purpose of the R1..R6 resistors is to isolate the programmed chip from rest of target system. Recommended value of resistors R1..R6 is 2k or more. You can also use jumpers instead of the resistors.

ISP characteristics:
1. Programmer's output capability:
   1.1 Vcc - 80 mA;
   1.2 Vpp - 50 mA;
   1.3 logical pins - 5 mA.
2. The cable length should be less then one foot.

Table of connections of the adapter output socket to the device pins:

Adapter Output connector, BH-10	Target Device 93xx
1	DO
3	CLK
5	ORG*
7	-
9	GND
10	PE*
8	-
6	CS
4	DI
2	Vcc

* Must be connected if there is no connection in a system.

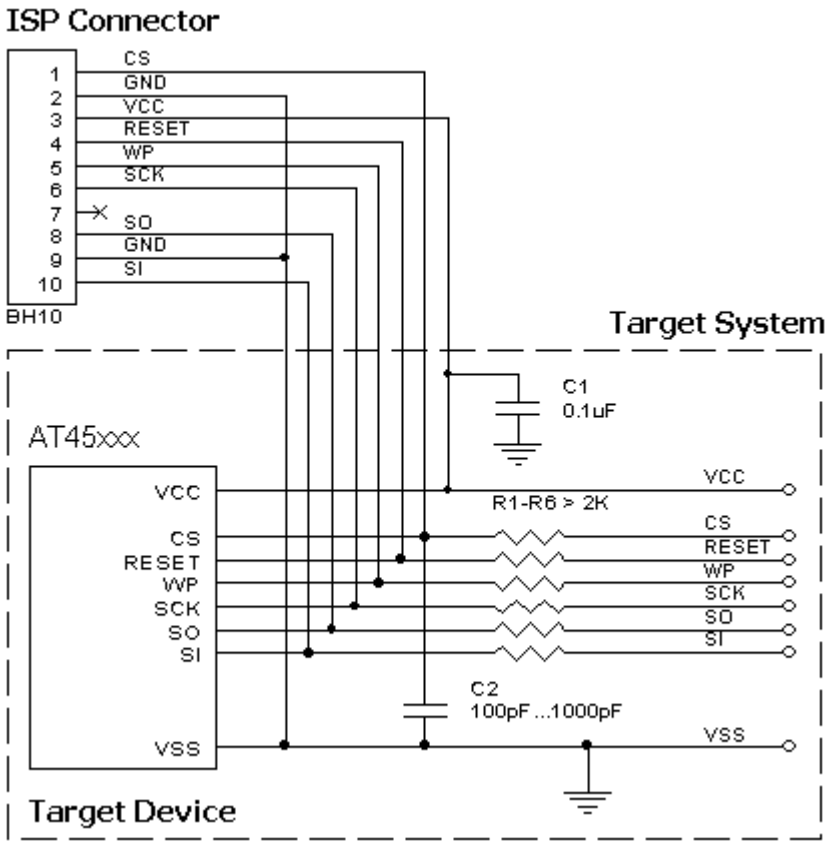
AE-ISP-U1 connection for the Atmel AT45xxx devices

Click the programmer model below to get an appropriate list of the devices supported by the adapter:

- ChipProg-40

- ChipProg-48, ChipProg-G4

Recommended connection:



Powering the target device:
There are two alternative options for powering the targets:
1. The target gets power from the programmer (Vdd). This is possible only if the target does not consume too much energy. A capacity of the target power circuitry should not exceed 50 uF.
2. The target gets power from a built-in or external power supply. In this case the power output from the programmer should not be connected with the target. The target system should be tolerant to applying logical signals with the voltage levels exceeding the voltages on the target.
NOTE! It is strictly prohibited to power the target from both the programmer and built-in or external power supply simultaneously.

Isolating resistors:
Purpose of the R1..R6 resistors is to isolate the programmed chip from rest of target system. Recommended value of resistors R1..R6 is 2k or more. You can also use jumpers instead of the resistors.

ISP characteristics:
1. Programmer's output capability:
   1.1 Vcc - 80 mA;
   1.2 Vpp - 50 mA;
   1.3 logical pins - 5 mA.
2. The cable length should be less then one foot.

Table of connections of the adapter output socket to the device pins:

Adapter Output connector, BH-10	Target Device AT45xxx
1	CS
3	VCC
5	WP
7	

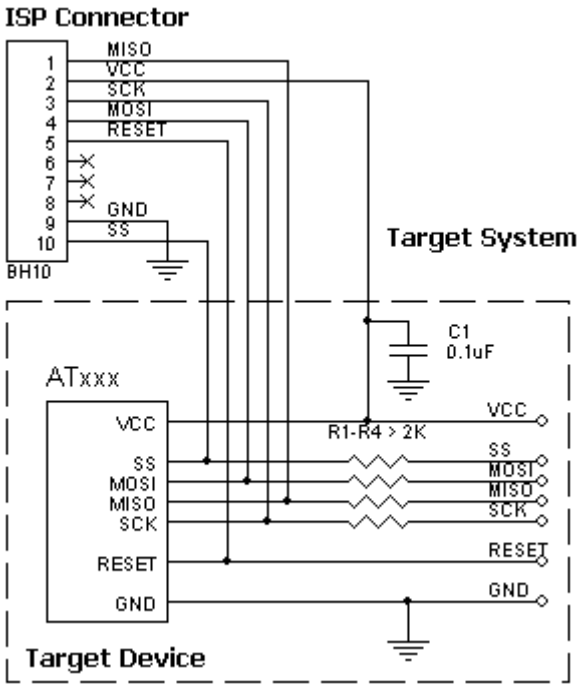
9	GND
10	SI
8	SO
6	SCK
4	RESET
2	GND

AE-ISP-U1 connection for the Atmel AT89LP21x devices

Click the programmer model below to get an appropriate list of the devices supported by the adapter:

- ChipProg+
- ChipProg-40
- ChipProg-48, ChipProg-G4

Recommended connection:



Powering the target device:
There are two alternative options for powering the targets:
1. The target gets power from the programmer (Vdd). This is possible only if the target does not consume too much energy. A capacity of the target power circuitry should not exceed 50 uF.
2. The target gets power from a built-in or external power supply. In this case the power output from the programmer should not be connected with the target. The target system should be tolerant to applying logical signals with the voltage levels exceeding the voltages on the target.
NOTE! It is strictly prohibited to power the target from both the programmer and built-in or external power supply simultaneously.

Isolating resistors:
Purpose of the R1..R4 resistors is to isolate the programmed chip from rest of target system. Recommended value of resistors R1..R4 is 2k or more. You can also use jumpers instead of the resistors.

ISP characteristics:
1. Programmer's output capability:
   1.1 Vcc - 80 mA;
   1.2 Vpp - 50 mA;
   1.3 logical pins - 5 mA.
2. The cable length should be less then one foot.

Table of connections of the adapter output socket to the device pins:

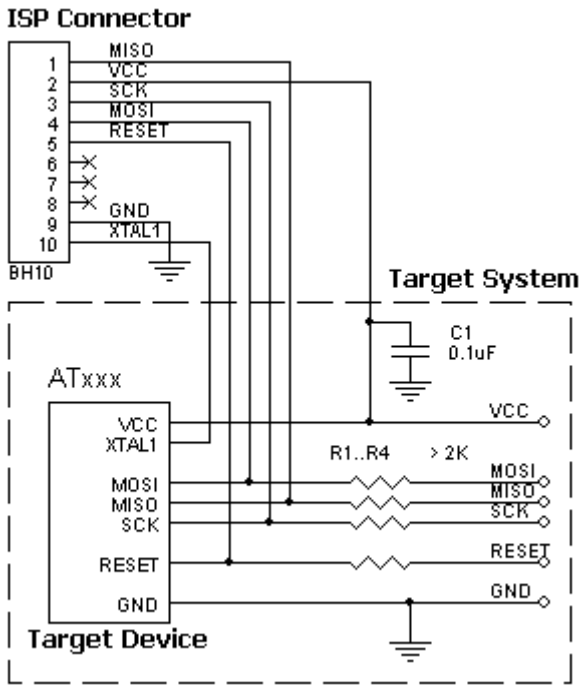
Adapter Output connector, BH-10	Target Device AT89LP21x
1	MISO
3	SCK
5	RESET
7	-
9	GND
10	SS
8	-
6	-
4	MOSI
2	Vcc

AE-ISP-U1 connection for the Atmel AT90/ATS89S/ATtiny/ATmega devices

Click the programmer model below to get an appropriate list of the devices supported by the adapter:

- ChipProg+
- ChipProg-40
- ChipProg-48, ChipProg-G4

Recommended connection:



Powering the target device:
There are two alternative options for powering the targets:
1. The target gets power from the programmer (Vdd). This is possible only if the target does not consume too much energy. A capacity of the target power circuitry should not exceed 50 uF.
2. The target gets power from a built-in or external power supply. In this case the power output from the programmer should not be connected with the target. The target system should be tolerant to applying logical signals with the voltage levels exceeding the voltages on the target.
NOTE! It is strictly prohibited to power the target from both the programmer and built-in or external power supply simultaneously.

Isolating resistors:
Purpose of the R1..R4 resistors is to isolate the programmed chip from rest of target system. Recommended value of resistors R1..R4 is 2k or more. You can also use jumpers instead of the resistors.

ISP characteristics:
1. Programmer's output capability:
   1.1 Vcc - 80 mA;
   1.2 Vpp - 50 mA;
   1.3 logical pins - 5 mA.
2. The cable length should be less then one foot.

Table of connections of the adapter output socket to the device pins:

Adapter Output connector, BH-10	Target Device AT90/AT89S (except AT90CAN128), ATtinyXX, ATmegaXXXX (except ATmega103, ATmega128, AT90CAN128, ATMega1281, ATMega2561, ATMega64)
1	MISO
3	SCK
5	RESET
7	-
9	GND
10	XTAL1*
8	-
6	-
4	MOSI
2	Vcc

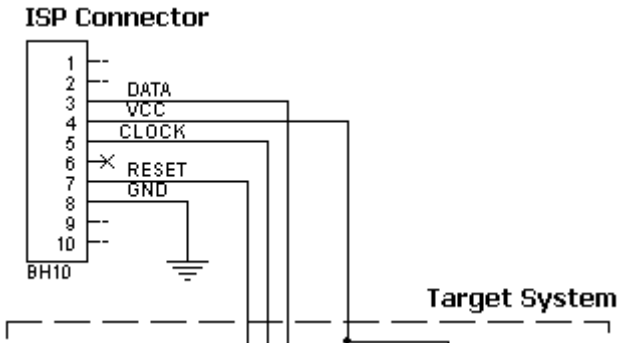
* Must be connected if there is no external oscillator in system.

AE-ISP-U1 connection for the Atmel ATTINY10 devices in TPI Mode

Click the programmer model below to get an appropriate list of the devices supported by the adapter:

- ChipProg-40
- ChipProg-48, ChipProg-G4

Recommended connection:



Powering the target device:
There are two alternative options for powering the targets:
1. The target gets power from the programmer (Vdd). This is possible only if the target does not consume too much energy. A capacity of the target power circuitry should not exceed 50 uF.
2. The target gets power from a built-in or external

power supply. In this case the power output from the programmer should not be connected with the target. The target system should be tolerant to applying logical signals with the voltage levels exceeding the voltages on the target.
NOTE! It is strictly prohibited to power the target from both the programmer and built-in or external power supply simultaneously.

Isolating resistors:
Purpose of the R1..R3 resistors is to isolate the programmed chip from rest of target system. Recommended value of resistors R1..R3 is 2k or more. You can also use jumpers instead of the resistors.

ISP characteristics:
1. Programmer's output capability:
   1.1 Vcc - 80 mA;
   1.2 Vpp - 50 mA;
   1.3 logical pins - 5 mA.
2. The cable length should be less then one foot.

Table of connections of the adapter output socket to the device pins:

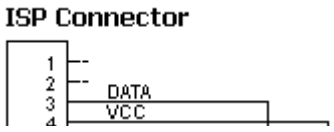
Adapter Output connector, BH-10	ATTINY10
1	-
2	-
3	DATA
4	VCC
5	CLOCK
6	-
7	RESET
8	GND
9	-
10	-

AE-ISP-U1 connection for the Atmel ATXMega devices in PDI Mode for ChipProg-40

Click the programmer model below to get an appropriate list of the devices supported by the adapter:

- ChipProg-40

Recommended connection:



Powering the target device:
There are two alternative options for powering

the targets:
1. The target gets power from the programmer (Vdd). This is possible only if the target does not consume too much energy. A capacity of the target power circuitry should not exceed 50 uF.
2. The target gets power from a built-in or external power supply. In this case the power output from the programmer should not be connected with the target. The target system should be tolerant to applying logical signals with the voltage levels exceeding the voltages on the target.
NOTE! It is strictly prohibited to power the target from both the programmer and built-in or external power supply simultaneously.

Isolating resistors:
Purpose of the R1..R2 resistors is to isolate the programmed chip from rest of target system. Recommended value of resistors R1..R2 is 2k or more. You can also use jumpers instead of the resistors.

ISP characteristics:
1. Programmer's output capability:
   1.1 Vcc - 80 mA;
   1.2 Vpp - 50 mA;
   1.3 logical pins - 5 mA.
2. The cable length should be less then one foot.

Table of connections of the adapter output socket to the device pins:

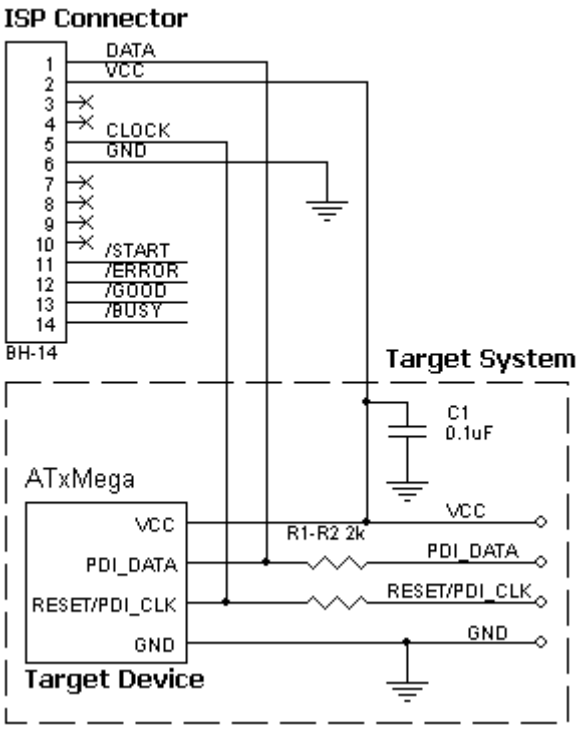
Adapter Output connector, BH-10	ATxMega
1	
2	
3	Data
4	Vcc
5	
6	
7	Clock
8	Gnd
9	-
10	-

AE-ISP-U1 connection for the Atmel ATXMega devices in PDI Mode for ChipProg-48

Click the programmer model below to get an appropriate list of the devices supported by the adapter:

- ChipProg-48, ChipProg-G4

Recommended connection:



Powering the target device:
There are two alternative options for powering the targets:
1. The target gets power from the programmer (Vdd). This is possible only if the target does not consume too much energy. A capacity of the target power circuitry should not exceed 50 uF.
2. The target gets power from a built-in or external power supply. In this case the power output from the programmer should not be connected with the target. The target system should be tolerant to applying logical signals with the voltage levels exceeding the voltages on the target.
NOTE! It is strictly prohibited to power the target from both the programmer and built-in or external power supply simultaneously.

Isolating resistors:
Purpose of the R1..R2 resistors is to isolate the programmed chip from rest of target system. Recommended value of resistors R1..R2 is 2k or more. You can also use jumpers instead of the resistors.

ISP characteristics:
1. Programmer's output capability:
   1.1 Vcc - 80 mA;
   1.2 Vpp - 50 mA;
   1.3 logical pins - 5 mA.
2. The cable length should be less then one foot.

Table of connections of the adapter output socket to the device pins:

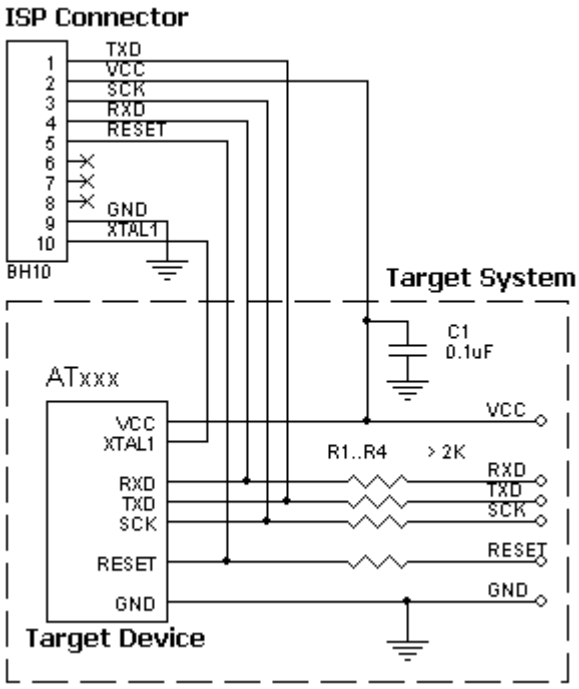
Adapter Output connector, BH-10	ATxMega
1	DATA
2	Vcc
3	-
4	-
5	CLOCK
6	GND
7	-
8	-
9	-
10	-

AE-ISP-U1 connection for the Atmel ATmega103/128/1281/2561/64 AT90CAN128 devices

Click the programmer model below to get an appropriate list of the devices supported by the adapter:

- ChipProg+
- ChipProg-40
- ChipProg-48, ChipProg-G4

Recommended connection:



Powering the target device:
There are two alternative options for powering the targets:
1. The target gets power from the programmer (Vdd). This is possible only if the target does not consume too much energy. A capacity of the target power circuitry should not exceed 50 uF.
2. The target gets power from a built-in or external power supply. In this case the power output from the programmer should not be connected with the target. The target system should be tolerant to applying logical signals with the voltage levels exceeding the voltages on the target.
NOTE! It is strictly prohibited to power the target from both the programmer and built-in or external power supply simultaneously.

Isolating resistors:
Purpose of the R1..R4 resistors is to isolate the programmed chip from rest of target system. Recommended value of resistors R1..R4 is 2k or more. You can also use jumpers instead of the resistors.

ISP characteristics:
1. Programmer's output capability:
   1.1 Vcc - 80 mA;
   1.2 Vpp - 50 mA;
   1.3 logical pins - 5 mA.
2. The cable length should be less then one foot.

Table of connections of the adapter output socket to the device pins:

Adapter Output connector, BH-10	Target Device ATmega103, ATmega128, AT90CAN128, ATMega1281, ATMega2561, ATMega64
1	TXD
3	SCK

5	RESET
7	-
9	GND
10	XTAL1*
8	-
6	-
4	RXD
2	Vcc

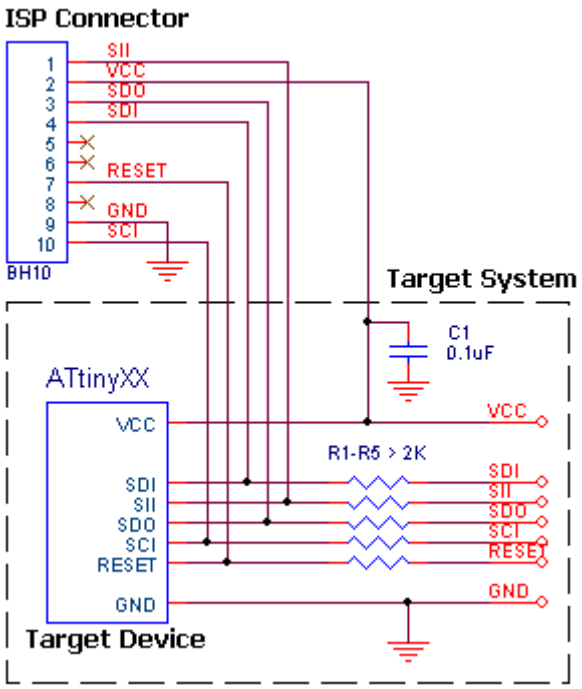
* Must be connected if there is no external oscillator in system.

AE-ISP-U1 connection for the Atmel ATtiny devices in the High-Voltage Mode

Click the programmer model below to get an appropriate list of the devices supported by the adapter:

- ChipProg+
- ChipProg-40
- ChipProg-48, ChipProg-G4

Recommended connection:



Powering the target device:
There are two alternative options for powering the targets:
1. The target gets power from the programmer (Vdd). This is possible only if the target does not consume too much energy. A capacity of the target power circuitry should not exceed 50 uF.
2. The target gets power from a built-in or external power supply. In this case the power output from the programmer should not be connected with the target. The target system should be tolerant to applying logical signals with the voltage levels exceeding the voltages on the target.
NOTE! It is strictly prohibited to power the target from both the programmer and built-in or external power supply simultaneously.

Isolating resistors:
Purpose of the R1..R5 resistors is to isolate the programmed chip from rest of target system. Recommended value of resistors R1..R5 is 2k or more. You can also use jumpers instead of the resistors.

ISP characteristics:

1. Programmer's output capability:
   1.1 Vcc - 80 mA;
   1.2 Vpp - 50 mA;
   1.3 logical pins - 5 mA.
2. The cable length should be less then one foot.

Table of connections of the adapter output socket to the device pins:

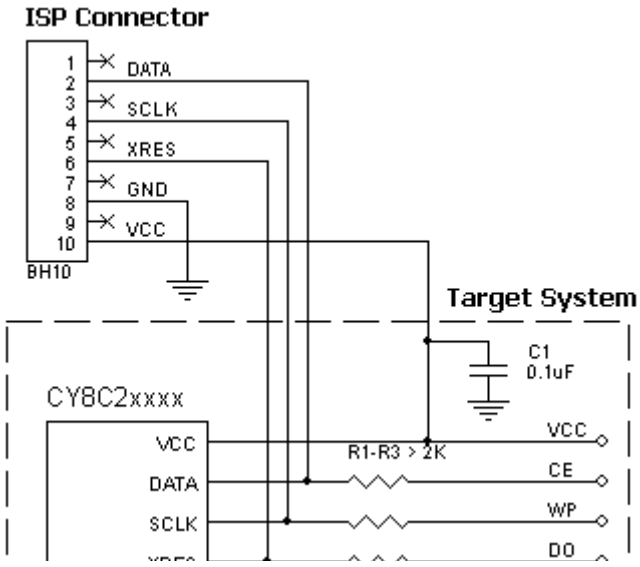
Adapter Output connector, BH-10	Target Device ATtinyXX in High-Voltage Mode
1	PB1
3	PB2
5	-
7	PB5
9	GND
10	PB3
8	-
6	-
4	PB0
2	Vcc

AE-ISP-U1 connection for the Cypress CY8C2xxxx devices

Click the programmer model below to get an appropriate list of the devices supported by the adapter:

- ChipProg+
- ChipProg-48, ChipProg-G4

Recommended connection:



Powering the target device:
There are two alternative options for powering the targets:
1. The target gets power from the programmer (Vdd). This is possible only if the target does not consume too much energy. A capacity of the target power circuitry should not exceed 50 uF.
2. The target gets power from a built-in or external power supply. In this case the power output from the programmer should not be connected with the target. The target system should be tolerant to applying logical signals with the voltage levels exceeding the voltages on the target.

NOTE! It is strictly prohibited to power the target from both the programmer and built-in or external power supply simultaneously.

Isolating resistors:
Purpose of the R1..R3 resistors is to isolate the programmed chip from rest of target system. Recommended value of resistors R1..R3 is 2k or more. You can also use jumpers instead of the resistors.

ISP characteristics:
1. Programmer's output capability:
   1.1 Vcc - 80 mA;
   1.2 Vpp - 50 mA;
   1.3 logical pins - 5 mA.
2. The cable length should be less then one foot.

Table of connections of the adapter output socket to the device pins:

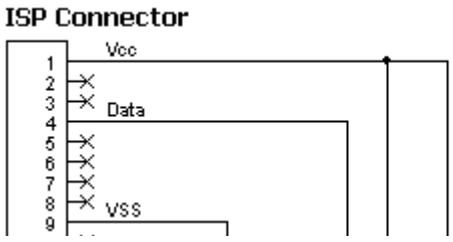
Adapter Output connector, BH-10	Target Device CY8C2xxxx
1	
2	DATA
3	
4	SCLK
5	
6	Xres
7	
8	GND
9	
10	Vcc

AE-ISP-U1 connection for the Dallas iButton

Click the programmer model below to get an appropriate list of the devices supported by the adapter:

- ChipProg-40
- ChipProg-48, ChipProg-G4

Recommended connection:



Powering the target device:
There are two alternative options for powering the targets:
1. The target gets power from the programmer (Vdd). This is possible only

if the target does not consume too much energy. A capacity of the target power circuitry should not exceed 50 uF.
2. The target gets power from a built-in or external power supply. In this case the power output from the programmer should not be connected with the target. The target system should be tolerant to applying logical signals with the voltage levels exceeding the voltages on the target.
NOTE! It is strictly prohibited to power the target from both the programmer and built-in or external power supply simultaneously.

Isolating resistors:
Purpose of the R1 resistor is to isolate the programmed chip from rest of target system. Recommended value of resistor R1 is 2k or more. You can also use jumpers instead of the resistors.

ISP characteristics:
1. Programmer's output capability:
   1.1 Vcc - 80 mA;
   1.2 Vpp - 50 mA;
   1.3 logical pins - 5 mA.
2. The cable length should be less then one foot.

Table of connections of the adapter output socket to the device pins:

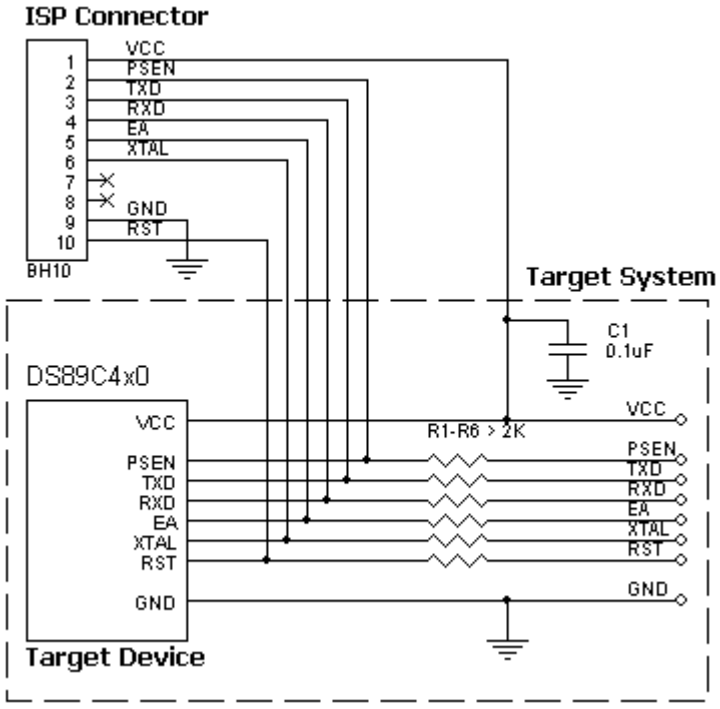
Adapter Output connector, BH-10	Target Device iButton	Tagret Device OneWire
1		Vcc
3		
5		
7		
9	Gnd	Gnd
10		
8		
6		
4	IO	DQ
2		

AE-ISP-U1 connection for the Dallas/Maxim DS89C420/430/440/450 devices

Click the programmer model below to get an appropriate list of the devices supported by the adapter:

- ChipProg-40
- ChipProg-48, ChipProg-G4

Recommended connection:



Powering the target device:
There are two alternative options for powering the targets:
1. The target gets power from the programmer (Vdd). This is possible only if the target does not consume too much energy. A capacity of the target power circuitry should not exceed 50 uF.
2. The target gets power from a built-in or external power supply. In this case the power output from the programmer should not be connected with the target. The target system should be tolerant to applying logical signals with the voltage levels exceeding the voltages on the target.
NOTE! It is strictly prohibited to power the target from both the programmer and built-in or external power supply simultaneously.

Isolating resistors:
Purpose of the R1..R6 resistors is to isolate the programmed chip from rest of target system. Recommended value of resistors R1..R6 is 2k or more. You can also use jumpers instead of the resistors.

ISP characteristics:
1. Programmer's output capability:
   1.1 Vcc - 80 mA;
   1.2 Vpp - 50 mA;
   1.3 logical pins - 5 mA.
2. The cable length should be less then one foot.

Table of connections of the adapter output socket to the device pins:

Adapter Output connector, BH-10	Target Device DS89C4x0
1	40
3	11
5	31
7	-
9	20
10	9
8	-
6	19
4	10

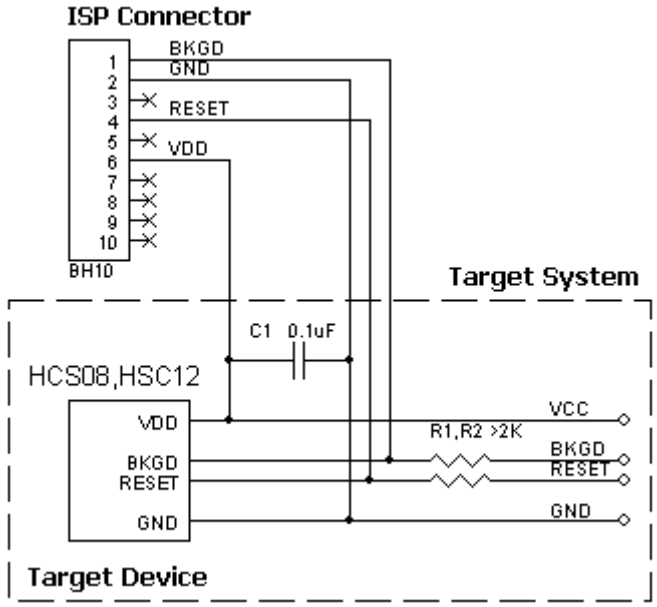
2	29

AE-ISP-U1 connection for the Freescale HCS08, HCS12 devices

Click the programmer model below to get an appropriate list of the devices supported by the adapter:

- ChipProg-40
- ChipProg-48, ChipProg-G4

Recommended connection:



Powering the target device:
There are two alternative options for powering the targets:
1. The target gets power from the programmer (Vdd). This is possible only if the target does not consume too much energy. A capacity of the target power circuitry should not exceed 50 uF.
2. The target gets power from a built-in or external power supply. In this case the power output from the programmer should not be connected with the target. The target system should be tolerant to applying logical signals with the voltage levels exceeding the voltages on the target.
NOTE! It is strictly prohibited to power the target from both the programmer and built-in or external power supply simultaneously.

Isolating resistors:
Purpose of the R1..R2 resistors is to isolate the programmed chip from rest of target system. Recommended value of resistors R1..R2 is 2k or more. You can also use jumpers instead of the resistors.

ISP characteristics:
1. Programmer's output capability:
   1.1 Vcc - 80 mA;
   1.2 Vpp - 50 mA;
   1.3 logical pins - 5 mA.
2. The cable length should be less then one foot.

Table of connections of the adapter output socket to the device pins:

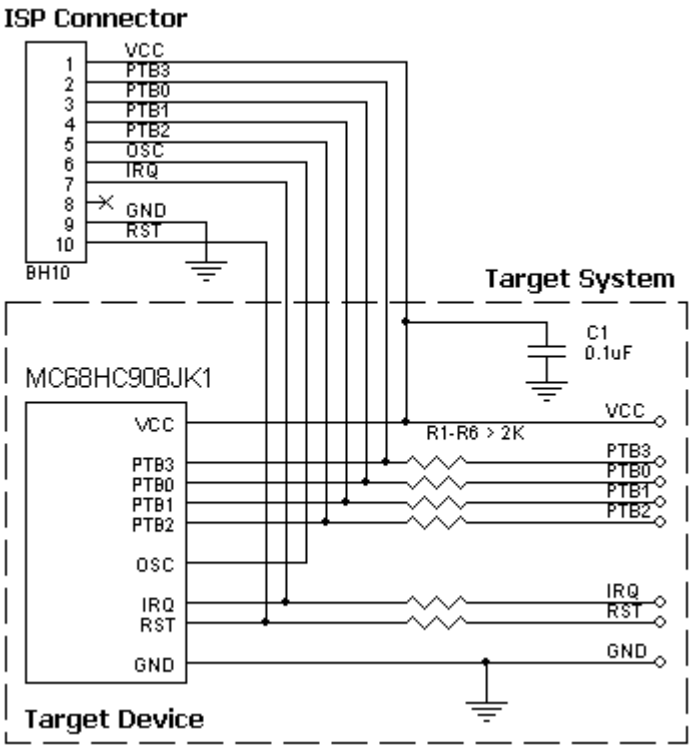
Adapter Output connector, BH-10	Target Device HCS08, HCS12
1	BKGD
2	GND

3	-
4	RESET
5	-
6	VDD
7	-
8	-
9	-
10	

AE-ISP-U1 connection for the Freescale MC68HC908JK1 devices

Click the programmer model below to get an appropriate list of the devices supported by the adapter:

Recommended connection:



Powering the target device:
There are two alternative options for powering the targets:
1. The target gets power from the programmer (Vdd). This is possible only if the target does not consume too much energy. A capacity of the target power circuitry should not exceed 50 uF.
2. The target gets power from a built-in or external power supply. In this case the power output from the programmer should not be connected with the target. The target system should be tolerant to applying logical signals with the voltage levels exceeding the voltages on the target.
NOTE! It is strictly prohibited to power the target from both the programmer and built-in or external power supply simultaneously.

Isolating resistors:
Purpose of the R1..R6 resistors is to isolate the programmed chip from rest of target system. Recommended value of resistors R1..R6 is 2k or more. You can also use jumpers instead of the resistors.

ISP characteristics:
1. Programmer's output capability:
   1.1 Vcc - 80 mA;
   1.2 Vpp - 50 mA;
   1.3 logical pins - 5 mA.
2. The cable length should be less then one foot.

Table of connections of the adapter output socket to the device pins:

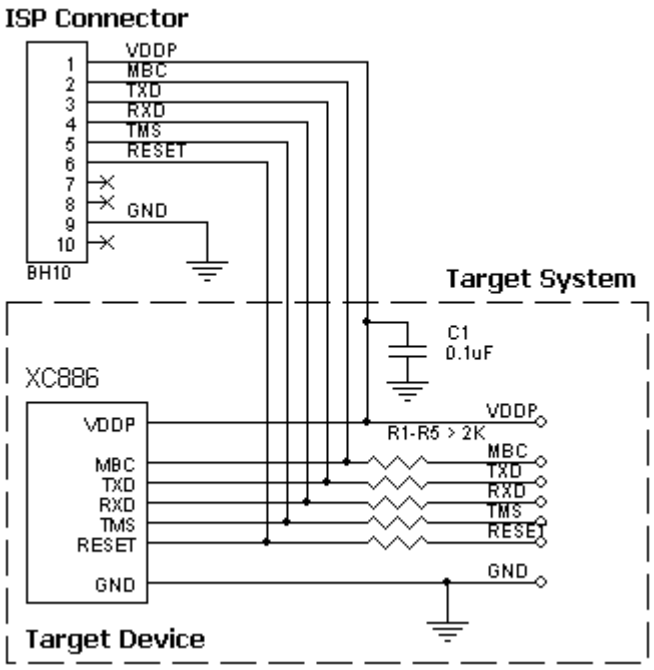
Adapter Output connector, BH-10	Target Device MC68HC908JK1
1	5
2	12
3	15
4	14
5	13
6	3
7	1
8	-
9	2
10	20

AE-ISP-U1 connection for the Infineon XC886/888CLM, XE164/167 devices

Click the programmer model below to get an appropriate list of the devices supported by the adapter:

- ChipProg-40
- ChipProg-48, ChipProg-G4

Recommended connection:



Powering the target device:
There are two alternative options for powering the targets:
1. The target gets power from the programmer (Vdd). This is possible only if the target does not consume too much energy. A capacity of the target power circuitry should not exceed 50 uF.
2. The target gets power from a built-in or external power supply. In this case the power output from the programmer should not be connected with the target. The target system should be tolerant to applying logical signals with the voltage levels exceeding the voltages on the target.
NOTE! It is strictly prohibited to power the target from both the programmer and built-in or external power supply simultaneously.

Isolating resistors:

Purpose of the R1..R5 resistors is to isolate the programmed chip from rest of target system. Recommended value of resistors R1..R5 is 2k or more. You can also use jumpers instead of the resistors.

ISP characteristics:
1. Programmer's output capability:
   1.1 Vcc - 80 mA;
   1.2 Vpp - 50 mA;
   1.3 logical pins - 5 mA.
2. The cable length should be less then one foot.

Table of connections of the adapter output socket to the device pins:

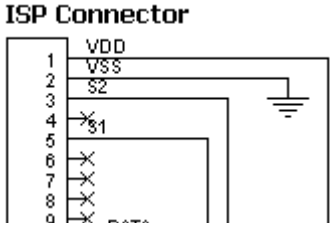
Adapter Output connector, BH-10	Target Device XC886/888CLM	Target Device XE164/167 in 100/144 pins package	Target Device XE164/167 in 64 pins package
1	VDDP	VDDP	VDDP
3	TXD	P7.3 (TxD)	P2.3 (TxD)
5	TMS	P10.1	P10.1
7	-		
9	GND	GND	GND
10	-	P10.2	P10.2
8	-		
6	RESET	PORST	PORST
4	RXD	P7.4 (RxD)	P2.4 (RxD)
2	MBC	P10.0	P10.0

AE-ISP-U1 connection for the Microchip HCS101/HCS201/HCS360/HCS361/HCS362 devices

Click the programmer model below to get an appropriate list of the devices supported by the adapter:

- ChipProg+
- ChipProg-40
- ChipProg-48, ChipProg-G4

Recommended connection:



Powering the target device:
There are two alternative options for powering the targets:
1. The target gets power from the programmer (Vdd). This is possible only if the target does not

consume too much energy. A capacity of the target power circuitry should not exceed 50 uF.
2. The target gets power from a built-in or external power supply. In this case the power output from the programmer should not be connected with the target. The target system should be tolerant to applying logical signals with the voltage levels exceeding the voltages on the target.
NOTE! It is strictly prohibited to power the target from both the programmer and built-in or external power supply simultaneously.

Isolating resistors:
Purpose of the R1..R3 resistors is to isolate the programmed chip from rest of target system. Recommended value of resistors R1..R3 is 2k or more. You can also use jumpers instead of the resistors.

ISP characteristics:
1. Programmer's output capability:
   1.1 Vcc - 80 mA;
   1.2 Vpp - 50 mA;
   1.3 logical pins - 5 mA.
2. The cable length should be less then one foot.

Table of connections of the adapter output socket to the device pins:

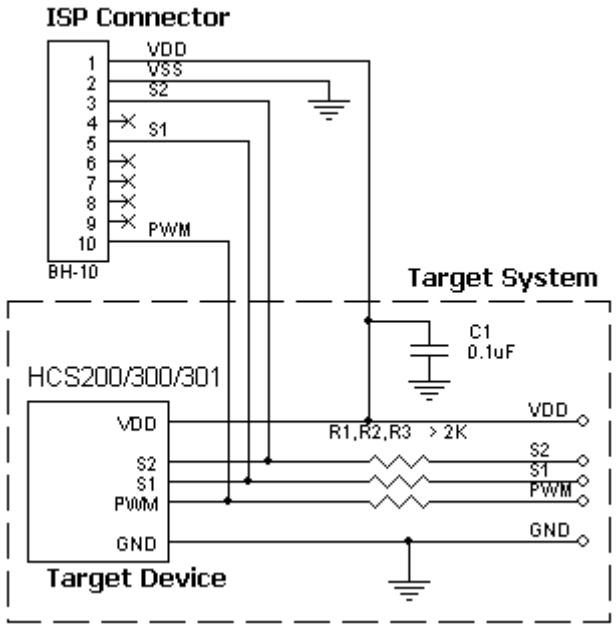
Adapter Output connector, BH-10	Target Device HCS101	Target Device HCS201	Target Device HCS360	Target Device HCS361	Target Device HCS362
1	Vdd	Vdd	Vdd	Vdd	Vdd
2	Vss	Vss	Vss	Vss	Vss
3	S2	S2	S2	S2	S2
4					
5	S1	S1	S1	S1	S1
6					
7					
8					
9					
10	Data	Data	Data	Data	Data

AE-ISP-U1 connection for the Microchip HCS200/HCS300/HCS301/HCS320 devices

Click the programmer model below to get an appropriate list of the devices supported by the adapter:

- ChipProg+
- ChipProg-40
- ChipProg-48, ChipProg-G4

Recommended connection:



Powering the target device:
There are two alternative options for powering the targets:
1. The target gets power from the programmer (Vdd). This is possible only if the target does not consume too much energy. A capacity of the target power circuitry should not exceed 50 uF.
2. The target gets power from a built-in or external power supply. In this case the power output from the programmer should not be connected with the target. The target system should be tolerant to applying logical signals with the voltage levels exceeding the voltages on the target.
NOTE! It is strictly prohibited to power the target from both the programmer and built-in or external power supply simultaneously.

Isolating resistors:
Purpose of the R1..R3 resistors is to isolate the programmed chip from rest of target system. Recommended value of resistors R1..R3 is 2k or more. You can also use jumpers instead of the resistors.

ISP characteristics:
1. Programmer's output capability:
   1.1 Vcc - 80 mA;
   1.2 Vpp - 50 mA;
   1.3 logical pins - 5 mA.
2. The cable length should be less then one foot.

Table of connections of the adapter output socket to the device pins:

Adapter Output connector, BH-10	Target Device HCS200	Target Device HCS300	Target Device HCS301	Target Device HCS320
1	Vdd	Vdd	Vdd	Vdd
2	Vss	Vss	Vss	Vss
3	S2	S2	S2	S2
4				
5	S1	S1	S1	S1
6				
7				
8				
9				
10	PWM	PWM	PWM	PWM