

DMX-CFG-USB Cables (A2/ACE/K117/K23)

Stepper Driver Configurator with USB 2.0 Communication



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Revision History:

1.0 – First revision

1.01 – Updated title page, updated introduction, updated ACE configuration connection section, added power warning for ACE, updated windows GUI section

Software Compatibility:

DMX-CFG-USB-K117/K23 – V1.3

DMX-CFG-USB-ACE/A2 – V2.1

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1. Introduction

The DMX-CFG-USB Cables are used to configure any Arcus stepper driver. The following cables can configure the corresponding stepper drivers.

- DMX-CFG-USB-K117 → DMX-K-DRV-11/17
- DMX-CFG-USB-K23 → DMX-K-DRV-23
- DMX-CFG-USB-A2 → DMX-A2-DRV-17/23
- DMX-CFG-USB-ACE → ACE-SDX

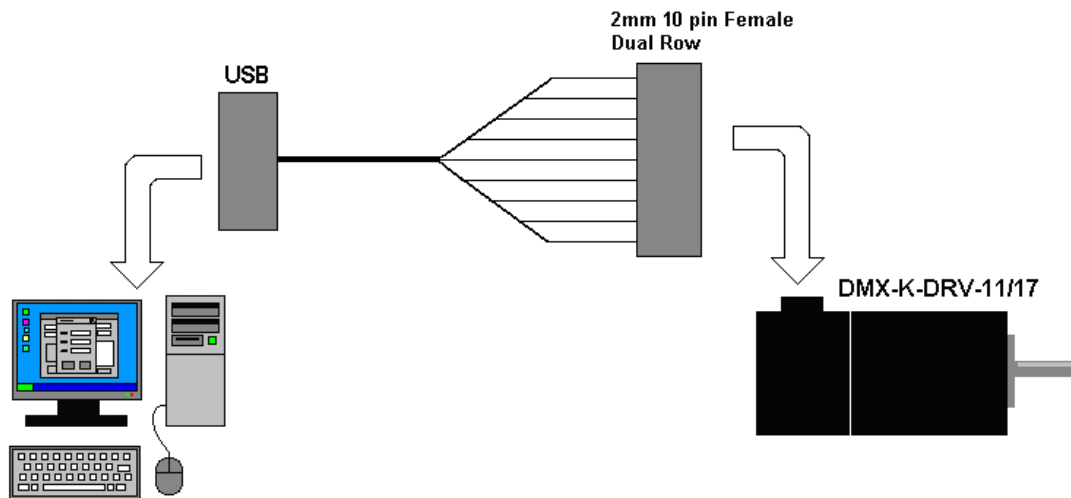
The DMX-CFG-USB Cables have the following features:

- USB 2.0 Communication
- PC based configuration

2. Connecting to the Arcus driver

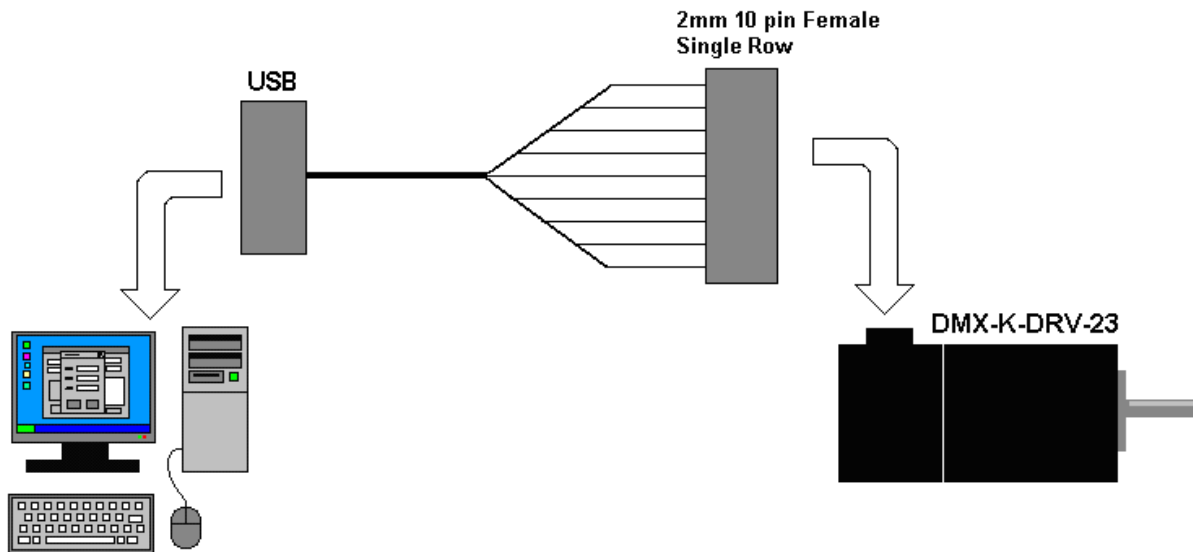
Once a connection between the stepper driver to the PC has been achieved, our configuration software can be used to configure the DMX-K-DRV, DMX-A2-DRV, or ACE-SDX.

Connecting DMX-CFG-USB-K117 to DMX-K-DRV-11/17



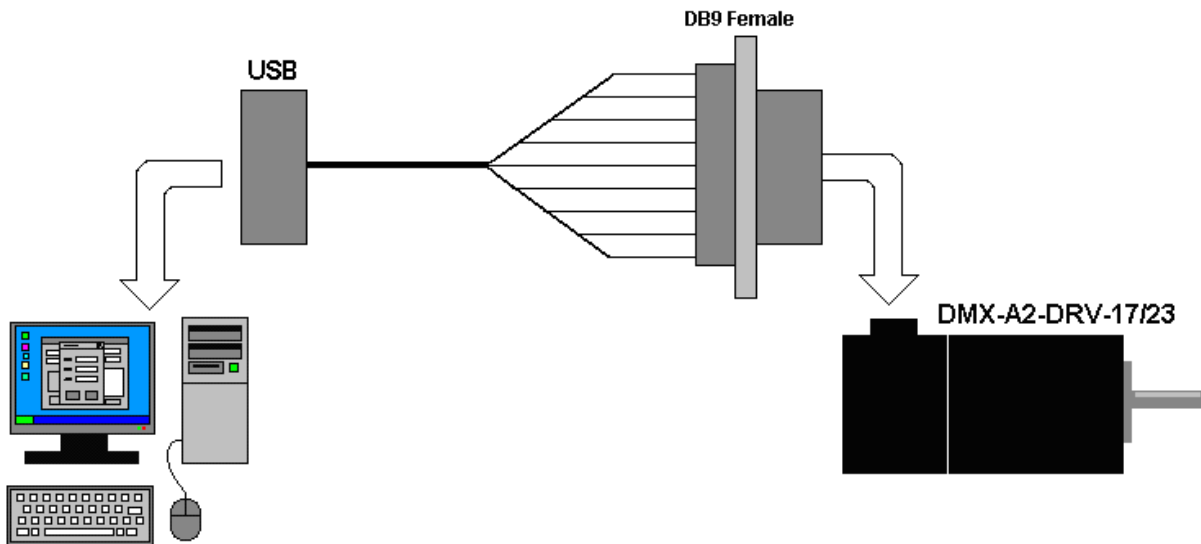
Note: No extra connectors are needed to configure the DMX-K-DRV-11/17 when using the DMX-CFG-USB-K117.

Connecting DMX-CFG-USB-K23 to DMX-K-DRV-23



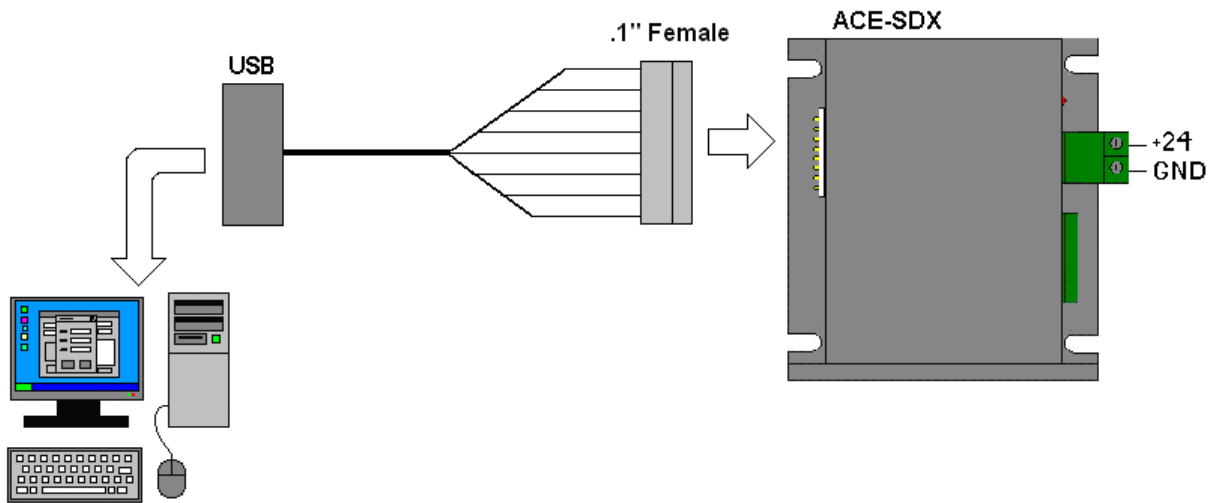
Note: No extra connectors are needed to configure the DMX-K-DRV-23 when using the DMX-CFG-USB-K23.

Connecting DMX-CFG-USB-A2 to DMX-A2-DRV-17/23



Note: No extra connectors are needed to configure the DMX-A2-DRV-17/23 when using the DMX-CFG-USB-A2.

Connecting DMX-CFG-USB-ACE to ACE-SDX



Note: When configuring the ACE-SDX with the DMX-CFG-USB-ACE, an external 12-24 VDC must be supplied to the ACE unit (see above).

Important Note:

Do not disconnect the motor wires or motor connector while the power is on. Make sure to turn off the power when disconnecting the motor from the driver. If the motor is plugged in or unplugged while the power is on, driver may become damaged.

3. Windows GUI Program

The DMX-CFG-USB cables come with two Windows GUI programs to read and configure Arcus driver settings.

One program is used by the DMX-CFG-USB-K117 and DMX-CFG-USB-K23 to configure the DMX-K-DRV-11/17/23.

The second program is used by the DMX-CFG-USB-A2 and DMX-CFG-USB-ACE to configure the DMX-A2-DRV-17/23 and ACE-SDX.

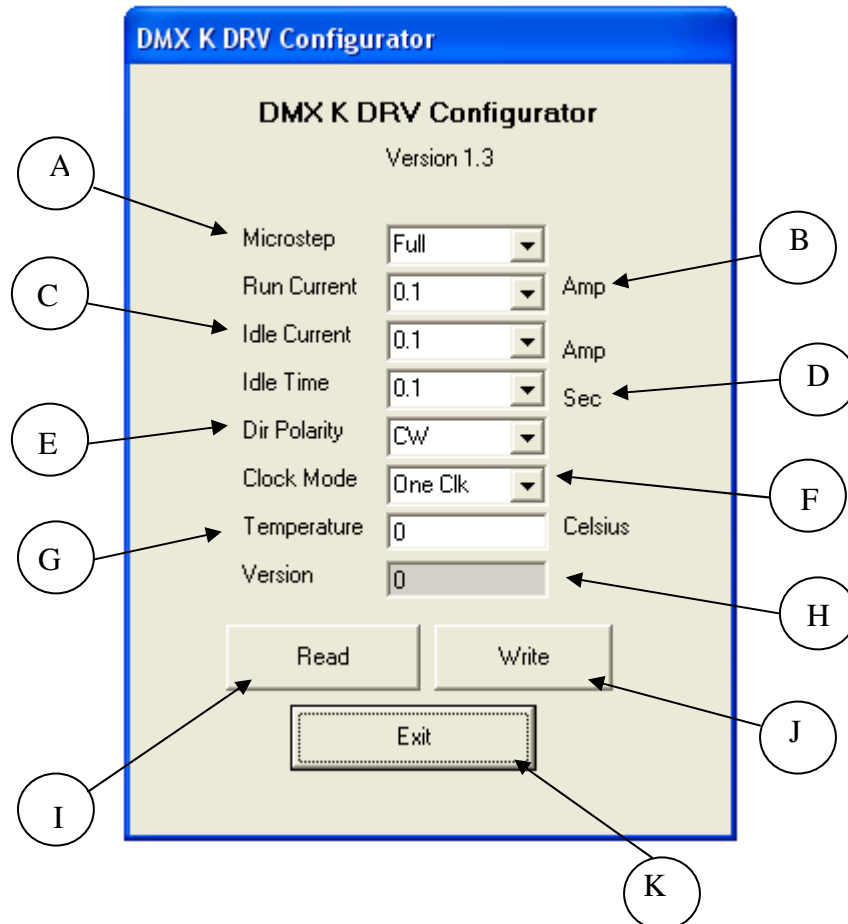
USB Driver Installation

In order to communicate with the DMX-CFG-USB cable via USB, the proper driver must be installed first. Before connecting the DMX-CFG-USB device or running any program, please go to the Arcus web site, download the USB driver installation instruction and run the USB Driver Installation Program.

Make sure that the USB driver is installed properly before running the controller.

DMX-K-DRV Configurator

Startup the DMX-K-DRV Configurator GUI program and you will see following screen.



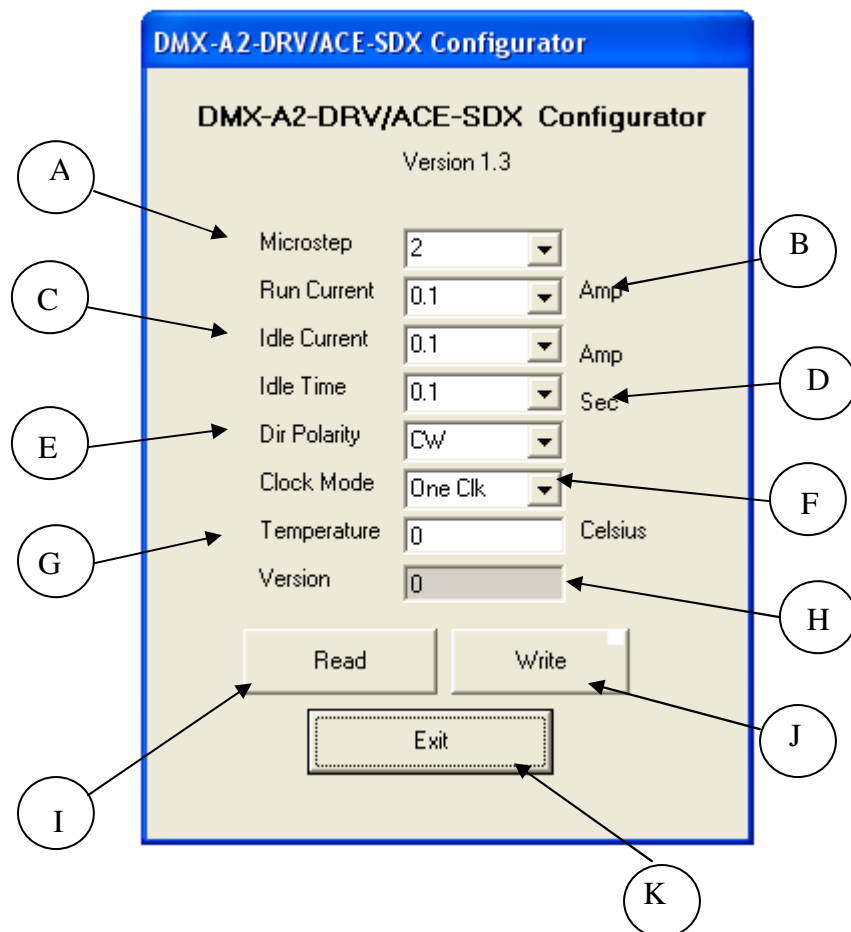
- A. Microstep** – Microstep range include the values full, 1/2, 1/4, and 1/16 step.
- B. Run Current** – Run current is the current used when the pulse is detected and the motor is moving. Range is from 100mA to 2.5A.
- C. Idle Current** – Idle current is the current used when the pulse is not detected for the duration of the idle time at which time the current is dropped to the idle current. Idle current is used to reduce the heat generated by the stepper motor.
- D. Idle Time** – Idle time is used as the duration time required for dropping the current from the run current to the idle current.
- E. Dir Polarity** – Direction polarity is used to set the rotational direction of the stepper motor.
- F. Clock Mode** – Driver supports both one clock (Pulse/Dir) or two clock (CW/CCW) outputs from the controller.
- G. Temperature** – Current driver temperature of the driver is read.
- H. Version** – Current driver firmware version of the driver is read.
- I. Read** – Driver parameters are uploaded from the connected driver.
- J. Write** – Driver parameters are downloaded to the connected driver.
- K. Exit** – Exit the program.

NOTE:

* Once the parameters are downloaded to the driver, the parameters are stored on the Flash of the driver.

DMX-A2-DRV/ACE-SDX Configurator

Startup the DMX-CFG-USB-A2/ACE Configurator GUI program and you will see following screen.



- A. Microstep** – Microstep range is any value from 2 to 500 microstep.
- B. Run Current** – Run current is the current used when the pulse is detected and the motor is moving. Range is from 100mA to 3.0A.
- C. Idle Current** – Idle current is the current used when the pulse is not detected for the duration of the idle time at which time the current is dropped to the idle current. Idle current is used to reduce the heat generated by the stepper motor.
- D. Idle Time** – Idle time is used as the duration time required for dropping the current from the run current to the idle current.
- E. Dir Polarity** – Direction polarity is used to set the rotational direction of the stepper motor.

- F. Clock Mode** – Driver supports both one clock (Pulse/Dir) or two clock (CW/CCW) outputs from the controller.
- G. Temperature** – Current driver temperature of the driver is read.
- H. Version** – Current driver firmware version of the driver is read.
- I. Read** – Driver parameters are uploaded from the connected driver.
- J. Write** – Driver parameters are downloaded to the connected driver.
- K. Exit** – Exit the program.

NOTE:

** Once the parameters are downloaded to the driver, the parameters are stored on the Flash of the driver.*

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