How do I configure a channel of my KPCMCIA-PIO24-C for output?

By default, all three ports of the KPCMCIA-PIO24-C will be digital inputs. Before any of the ports can be use for output, they must be configured to be an output channel. If you fail to do this, application code that tries to use a digital output channel will raise an 'invalid channel in channel/gain list' error message.

The DriverLINX implementation for the KPCMCIA-PIO24-C does not implement a means for channel configuration for input or output direction from your application code. When using DriverLINX for the KPCMCIA-PIO24-C, the DriverLINX Configuration Panel must be used to configure output channels.

The screen shot of AIOPanel below indicates the default condition wherein none of the channels have been configured for output (middle frame). Furthermore, none of the channels show up in the bottom frame as available for dynamic channel configuration.

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To make one or more of the channels available as an output channel, follow these easy steps:

1. Invoke the DriverLINX Configuration Panel and select your device for configuration. Below is a screen shot of the Device Tab for a KPCMCIA-PIO24-C

Configure DriverLINX Device	×
Device Digital Input Digital Ou	tput Counter/Timer
⊻endor: Keithley Instruments, Inc	<u>D</u> evice: 0
Model: KPCMCIA-PI024	Address: 0x300
☑ Detect ☑ Cajibrate	Dec O Hex O Special
ОК	Cancel Help

2. On the Digital Input tab, check the Initialize box with a value of zero in the Configuration Setup. Initialization with a value of zero will make the channel initialize as an output **the next time the driver is loaded.** If more than just channel A should be an output for your application, use the Channels drop down to select the other channels and check the Initialize box for these channels too.

Configure DriverLINX Device
Device Digital Input Digital Output Counter/Timer
Channels: 🗛 (bits 0-7) 💽 Interrupt:
Range: 0 to 255 🔽 DMA
Configuration
Setup: 0x0 Dec C Initialize
OK Cancel Help

3. For channels that have been Initialized as outputs (from Step 2 above), their initial logic high or low state can be controlled by settings on the Digital Output tab. By default they will be at logic 0, so normally this step is not required.

Configure Dri	verLINX	Device		×
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		ОК	Cancel	Help

4. Once these settings have been made, exit from the DriverLINX Configuration Panel and reboot to allow the driver to load with these new settings. Below is a new screen shot from the AIOPanel after a reboot showing that

channel 0, Port A, is now available in the middle frame, Digital Output Panel.

Application code that tries to make use of digital output channel 0 will now succeed.

(NOTE: channels configured for output can have their last written value read back, therefore output channels will also appear as available input channels)

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