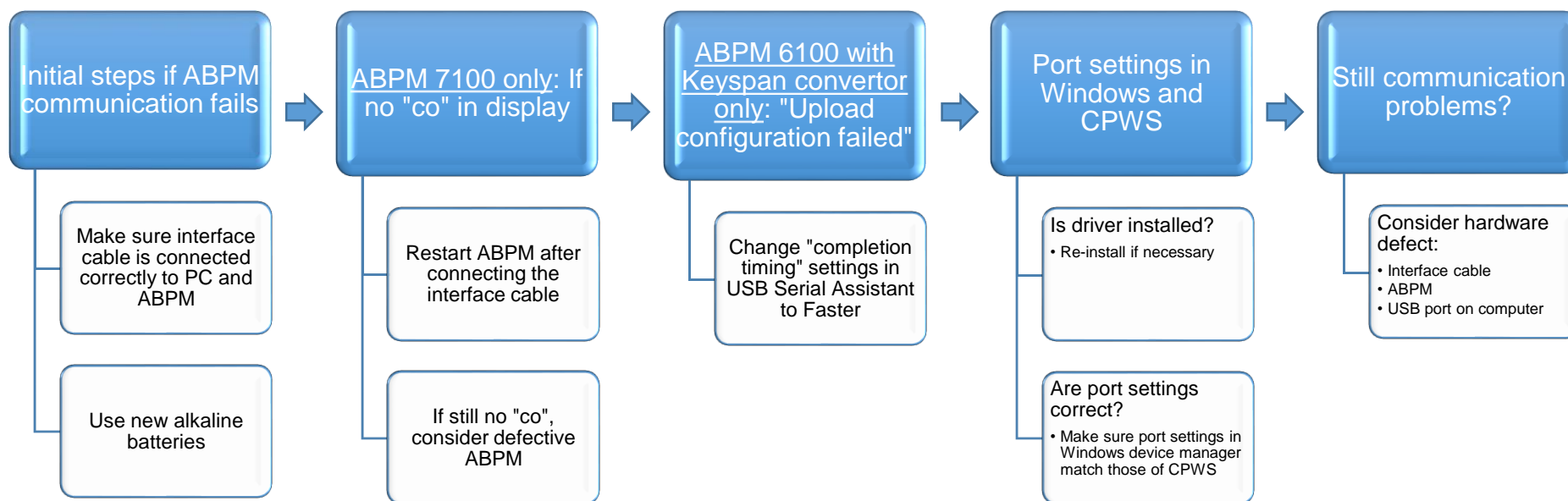


## ABPM 6100 & 7100 to CardioPerfect Workstation (CPWS)

### Communication troubleshooting guide

*Click on any of the white buttons for more information and solutions*



## Cable connections:

Make sure the interface cable is inserted properly into both the USB port on the computer and the port on the bottom of the ABPM.

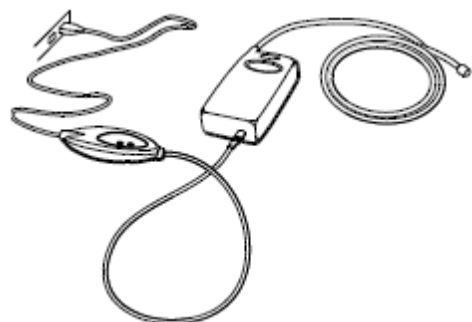


Figure 1 ABPM 6100 connections

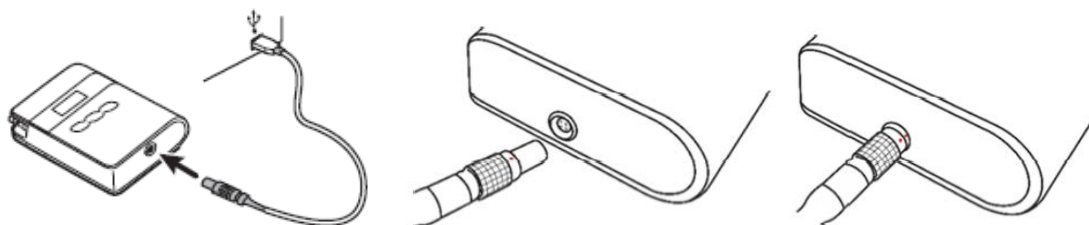


Figure 2 ABPM 7100 connections

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## Batteries:

It is important to use new fully charged batteries, Welch Allyn recommends using non-rechargeable alkaline batteries.

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## Restart ABPM

“co” on the display indicates the ABPM 7100 is in communication mode, this can only be accomplished by powering up the device while the interface cable is connected to the ABPM.

The device will automatically enter communication mode if you start it up with the interface cable connected. So plugging in the cable after the device has been switched on will not work, first plug in the cable, then switch on the device, after start up, the display should say “co”.

### Still no “co”

If after restarting the ABPM with the cable connected there’s still no “co” on the display, you will need to have the device (and the cable) checked by Welch Allyn.



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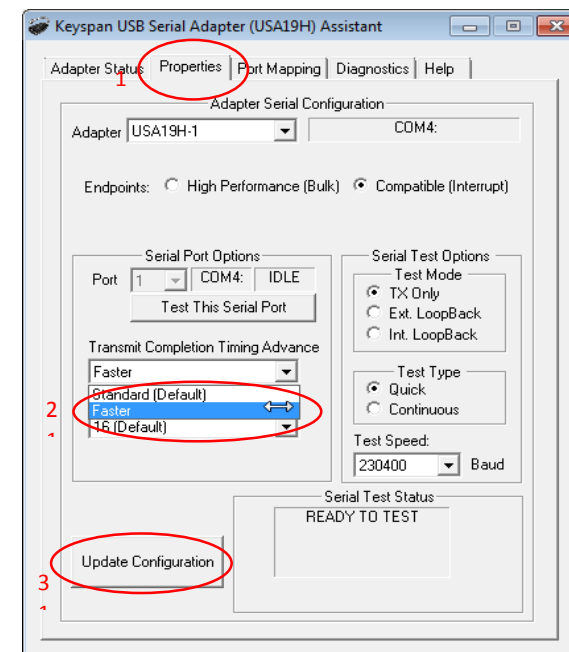
## Upload configuration failed

This can only occur if you are using the ABPM 6100 in combination with a serial interface cable and a Keyspan USB-to-Serial converter (not if you have the later release black USB cable that directly connects the ABPM 6100 to your computer).

This issue can easily be resolved with a quick settings change within the Keyspan Serial Assistant software. From the Windows Start menu, go to All Programs > Keyspan USB Serial Adapter > Keyspan Serial Assistant.

When the Serial Assistant window opens:

- Click on the Properties tab (1),
- Select the dropdown under “Transmit Completion Timing Advance” and change the setting from “Standard (Default)” to “Faster” (2),
- Click on “Update Configuration” (3),
- Click ‘Yes’ to update the driver configuration,
- Click ‘OK’ to acknowledge the update.



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## ABPM Driver

During the installation of CPWS, normally the driver for the ABPM would also have been installed.

See instructions in the section [Port Settings](#) to identify if the driver is installed.

To re-install the driver follow these instructions (Windows Administrator permissions required):

- *These instructions apply to CPWS 1.6.6 (instructions may be different with earlier versions) with the ABPM 6100 with USB cable or the 7100 with USB cable (ABPM 7100 is only supported with CPWS 1.6.6)*
- *In case of the ABPM 6100 serial cable in combination with Keyspan convertor, you will need to install the Keyspan driver that is included on a separate CD or can be downloaded from the internet*
  
- Insert the CPWS DVD in your computer's DVD drive and wait for the menu to appear, from the menu select "CardioPerfect Device Drivers", then select "Install ABPM drivers" and follow the instructions on screen
- After the installation is finished, re-insert the ABPM interface cable into the computer. If it was indeed a question of a missing driver, Windows should now install the appropriate driver and create the virtual COM port. After this is finished, the port should now be visible in the Device manager as one of the three as mentioned under the section [Port Settings](#)
- After installing the driver, follow the instructions in the section [Port Settings](#) to identify and configure the port number

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## Port settings:

Every time you plug in the cable that connects the ABPM into the computer, Windows creates a so-called virtual COM port and gives this port a number. CPWS has been programmed with this number during the installation.

If the cable is removed from the computer and plugged in again, perhaps into a different USB port, Windows may hand out a different number to the virtual COM port. However, the settings in CPWS will not automatically change accordingly.

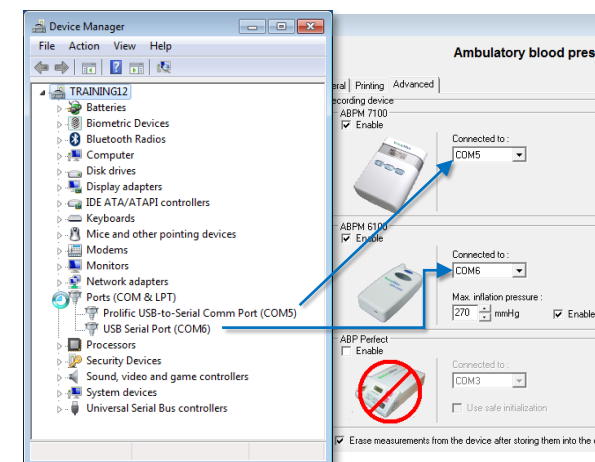
Take the following steps to find out if this is causing the issue and how to correct it

1. First we need to find out if the port is available in Windows and what the assigned port number is:
  - In Windows, click the start button and type “Device manager” and hit enter or click on “device manager” in the list that appears
  - The Device manager window will open
  - In the list of devices that appears, look for an entry named “Ports (COM & LPT)” and click on the little arrow left of it to expand this entry (double clicking on the item itself also works)
  - You should now see at least one entry that has one of the following names (depending on your ABPM version and interface cable type):
    - “Prolific USB-to-Serial Comm Port (COMx)”
    - “USB Serial Port (COMx)”
    - “Keyspan USB Serial Port (COMx)”

*The x represents the port number that Windows has assigned to the virtual port.*

If none of these entries are shown under Ports, you may find an “Unknown device” under the section “Universal Serial Bus Controllers”. In that case there may be a problem with the driver that is needed for this interface cable, see section [ABPM Driver](#) for instructions to (re)install the driver.

2. The port number (the number that is shown after “COM”) must now be entered into the CPWS settings (windows Administrator privileges required):
  - Open CPWS and go to: <File><Settings><Ambulatory Bloodpressure><Advanced>
  - You can now verify or correct the selection under “Connected to:” for the appropriate device
  - Then click OK to close the settings window and retry communication



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## If the above fails, you may be dealing with a hardware problem

- Interface cable defective
  - Specifically for the ABPM 6100, if the ABPM seems to respond after starting communication (the device is being activated and beeps), but there is still the message that there is no communication, it is most likely due to a defective cable
- ABPM defective
  - A defective interface cable or ABPM can only be confirmed by trying out a replacement. If you do not have that option, contact your Welch Allyn representative for assistance
- USB port on computer defective or inactive
  - In case of a computer with a few USB ports on the front and more on the back, and the ABPM is connected to the front, plugging it into one of the USB ports on the back can make a difference
  - It is not very likely, but there can be a problem with the USB port on your computer. The easiest way to rule that out is to connect another USB device to that port and confirm that it communicates with your computer

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