

# Welch Allyn® CardioPerfect™ Workstation Installation Guide

## INSTALLING CARDIOPERFECT WORKSTATION SOFTWARE & ACCESSORIES ON A SINGLE PC

For software version 1.6.7 or later

**For network installation, please refer to the Network Installation Manual or contact Welch Allyn technical support.**

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This guide shows how to install the software and accessories for the Welch Allyn CardioPerfect Workstation on a single laptop or desktop PC. This guide does not cover installation for networked CardioPerfect configurations, for EMR-connected computers, or thin-client settings.

For a detailed installation procedure, see *WACP Installation*, located on the disc under “Browse the manuals” folder.

### System Requirements

You need the following minimum recommended configuration to work with the CardioPerfect resting ECG, ambulatory blood pressure, or spirometry software modules:

Computer	Tower or desktop PC preferred; laptop or tablet.
Operating System	Windows 7 Home Premium, Professional, or Ultimate; Windows 10
CPU	P4 (or equivalent) or higher
Hard disk	20 GB with 5 GB free space
RAM	512 MB; 1 GB or higher recommended
Ports	2 USB ports
Monitor size	15" or larger
Monitor resolution	1024 x 768 true color; 1280 x 1024 resolution recommended
Other	DVD-ROM drive

## INSTALLING CARDIOPERFECT WORKSTATION SOFTWARE

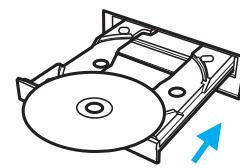
### 1 Install the CardioPerfect software.



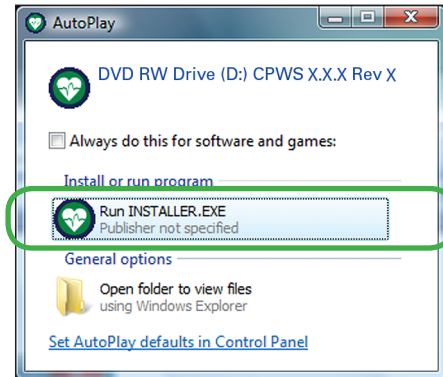
**Caution** Do not plug in any USB devices during this installation process.



- Make sure that you have administrator rights.
- Close all running programs.



CardioPerfect disc.



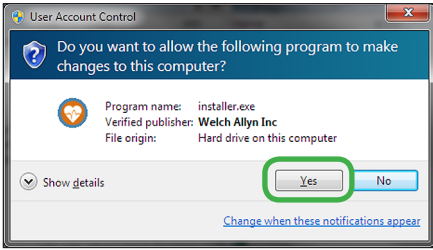
This screen might appear.



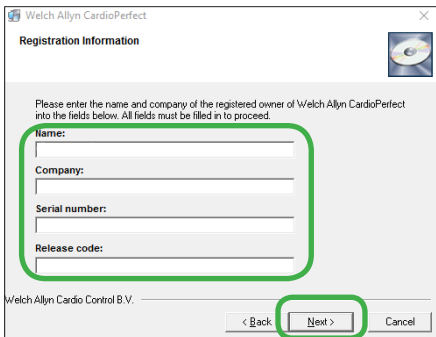
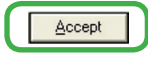
If this screen does not appear, explore the disc, and double-click **installer** (📁).



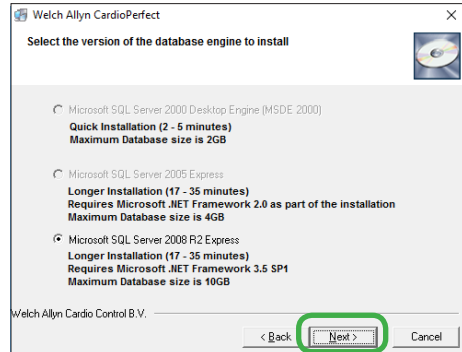
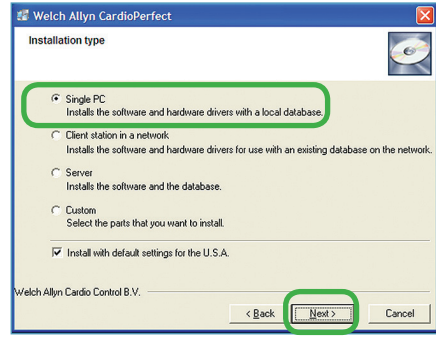
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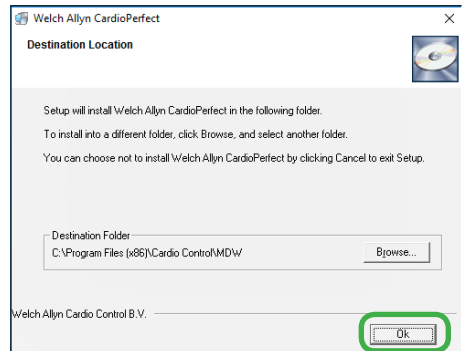
The above screen, or one like it, might appear.



The serial number and release code are located on the inside cover of the disc case.



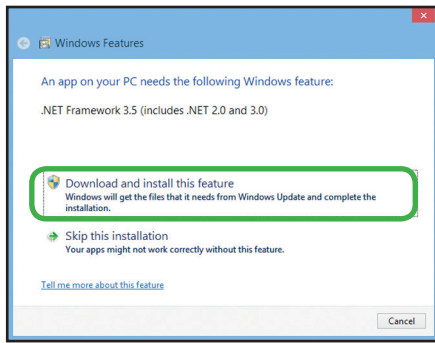
Accept the default option.



Select OK.



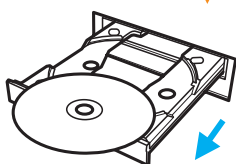
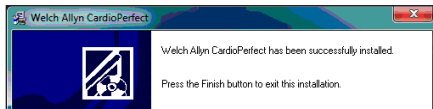
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This screen might appear. Select **Download and install this feature**.



Wait while the CardioPerfect client software installs. It takes a few minutes.

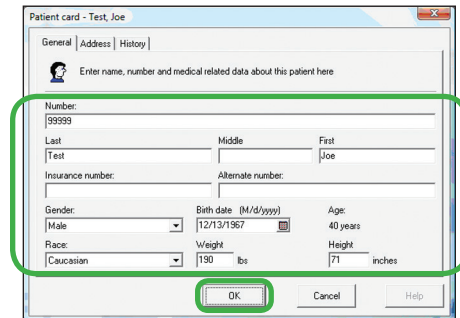
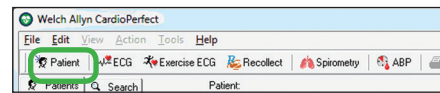
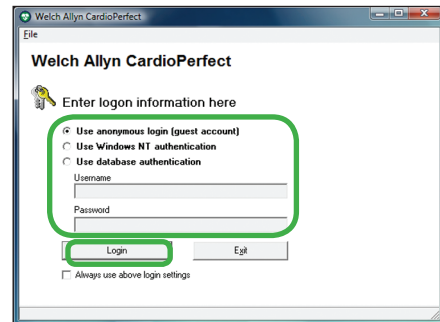


CardioPerfect disc.

## 2 Create a test patient card.



This icon will have been automatically created on your desktop. Double-click to start the CardioPerfect application.



Fill in the fields with any data you like. This test patient will be used in later steps.

This test patient will remain in your system. Patient cards can be edited but not deleted except by a system administrator.

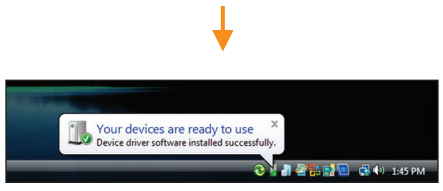
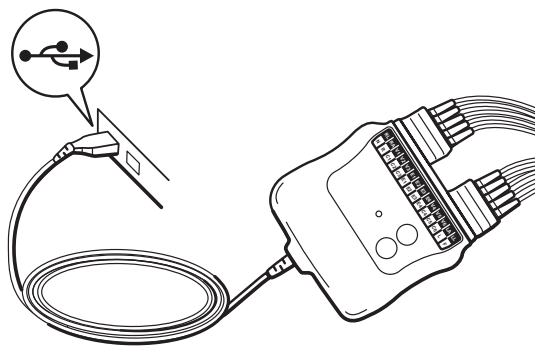
Close CardioPerfect.

**NEXT STEP:** Install and verify all devices that you have purchased: ECG recorder, spirometer, and/or ABPM 7100 device. When finished, please see the user information provided with your product.

# INSTALLING THE AM12 ECG RECORDER ON A CARDIOPERFECT WORKSTATION

Before you start, install the CardioPerfect Workstation software.

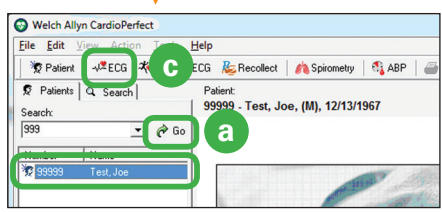
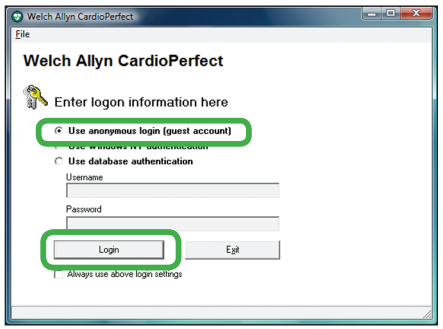
## 1 Assemble the AM12 and plug it into any USB port.



## 3 Verify the installation of the ECG recorder.



Welch Allyn CardioPerfect

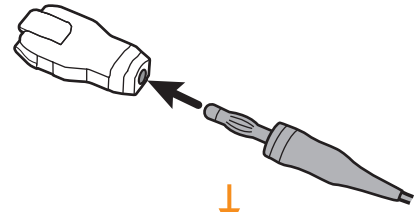


- (a) Click **ECG**.
- (b) Select your test patient.
- (c) Click **Go**.



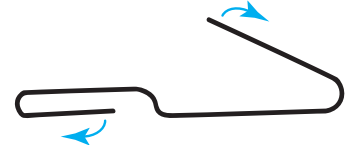
You will see square waves along with this message: "Bad signal on Right Arm."

Attach clips to the ends of the lead wires.



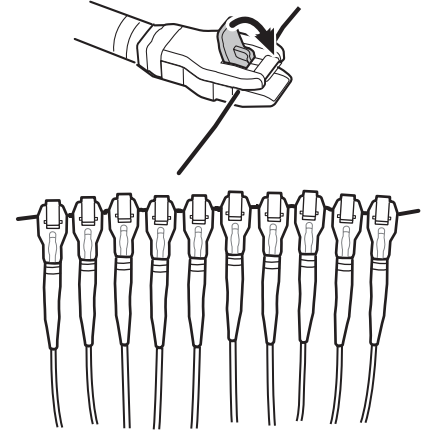
Straighten a large metal paper clip.

**Note** Do not using a plastic-coated or painted paper clip.

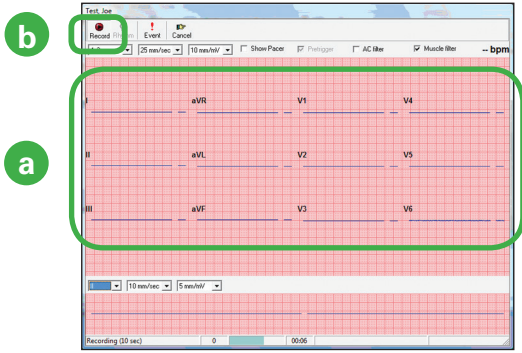


Attach all lead wires to the paper clip.

If one paperclip is not long enough to hold all the lead wires, clip the lead wires to a second paperclip. Overlap the first and second paperclips as necessary to ensure that the inside of each lead is completely touching the metal paperclip.



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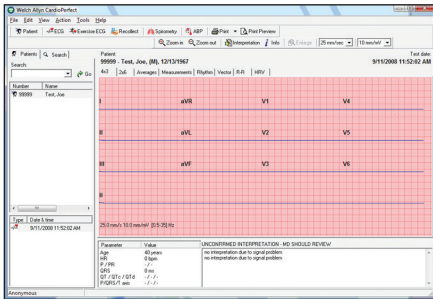


- (a) Wait at least 20 seconds for the square waves to level off. When the lines become straight, verify that there are no lead-off messages.

Example lead-off message: **Bad signal on V3, V5**

If you receive a lead-off message, reconnect the indicated leads, and wait 20 seconds again. Repeat until there are no lead-off messages.

- (b) Click **Record**.

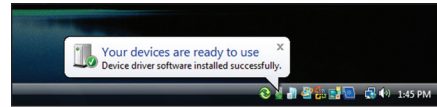
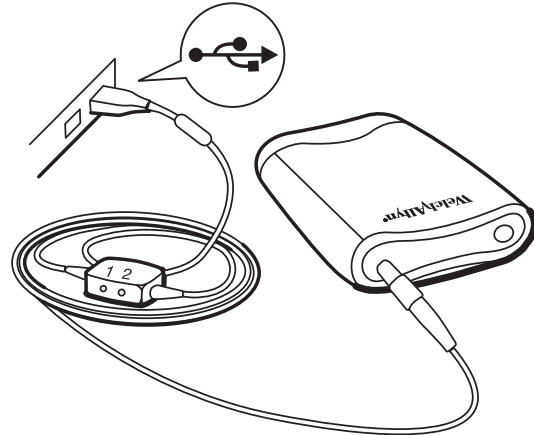


The system takes a 10-second recording and returns to the main screen with your recording displayed. You have now verified that your ECG recorder is properly installed.

## INSTALLING THE PRO ECG RECORDER ON A CARDIOPERFECT WORKSTATION

Before you start, install the CardioPerfect Workstation software.

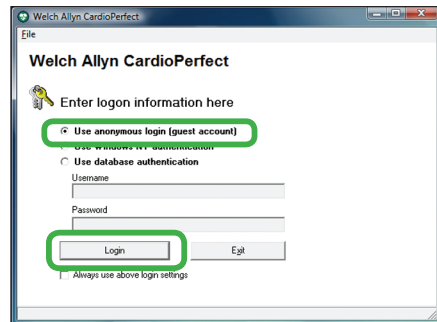
- 1 Assemble the ECG recorder, and then plug it into any USB port.



- 2 Verify the installation of the ECG recorder.

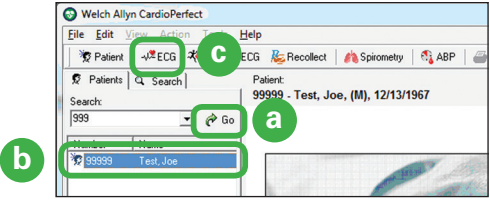


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CardioPerfect

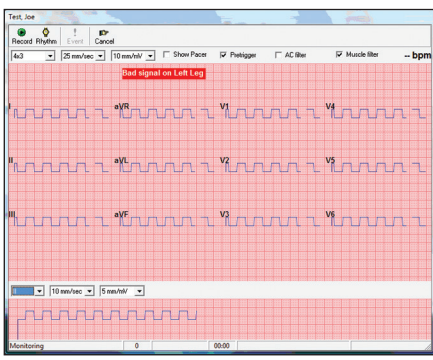


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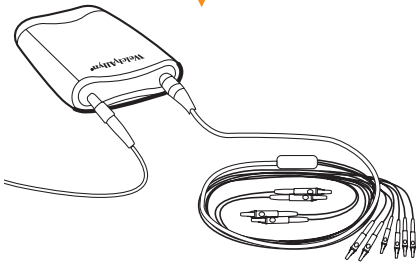




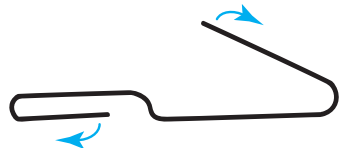
- (a) Click **Go**.
- (b) Select your test patient.
- (c) Click **ECG**.



You will see square waves along with this message: "Bad signal on Left Leg."

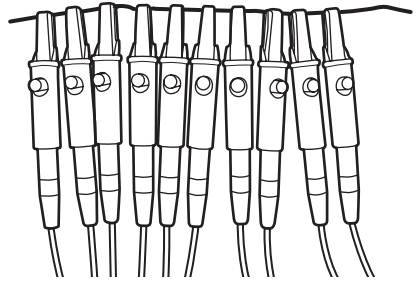


Attach the patient cable to the recorder. Attach clips to the ends of the lead wires.

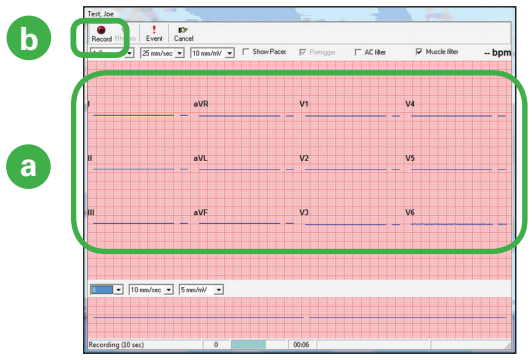


Straighten a large metal paper clip.

**Note** Do not use a plastic-coated or painted paper clip.



Attach all ten lead wires to the paper clip.

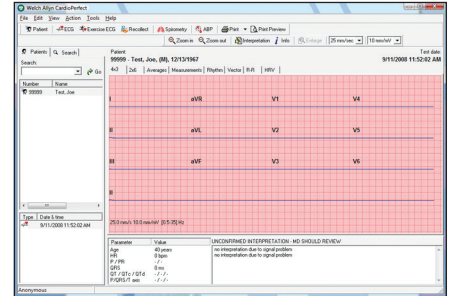


- (a) Wait at least 20 seconds for the square waves to level off. When the lines become straight, verify that there are no lead-off messages.

Example lead-off message: **Bad signal on V3, V5**

If you receive a lead-off message, reconnect the indicated leads, and wait 20 seconds again. Repeat until there are no lead-off messages.

- (b) Click **Record**.

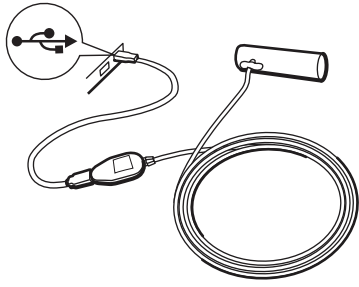


The system takes a 10-second recording and returns to the main screen with your recording displayed. You have now verified that your ECG recorder is properly installed.

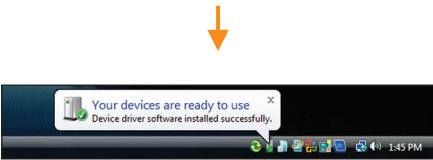
# INSTALLING THE SPIROMETER ON A CARDIOPERFECT WORKSTATION

Before you start, install the CardioPerfect Workstation software.

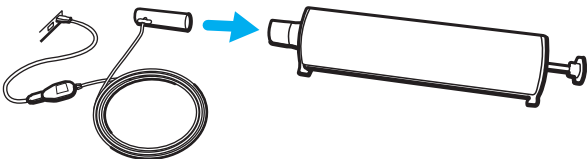
## 1 Assemble the spirometer, and plug it into any USB port.



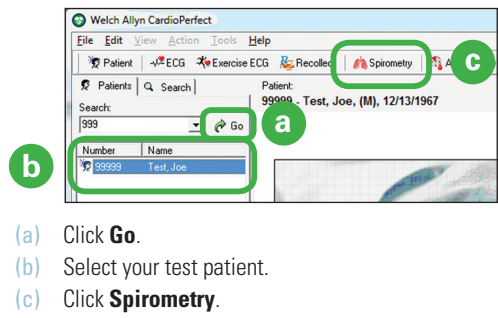
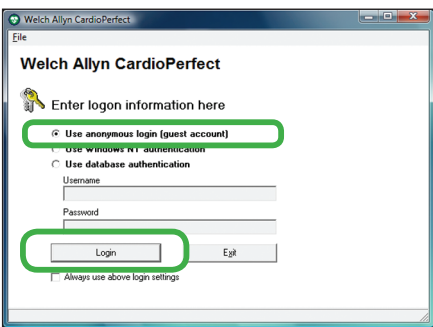
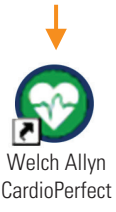
**Caution** With the spirometer, always use the USB extension cable, as shown. This cable helps to prevent damage to the spirometer.



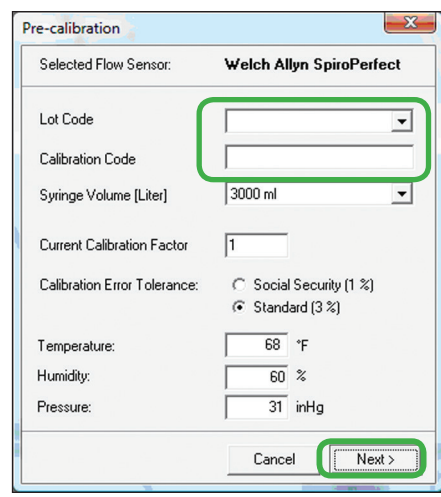
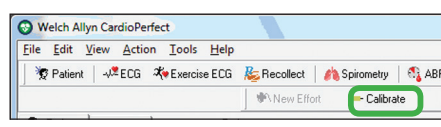
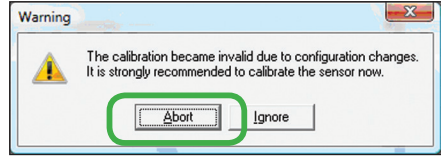
## 2 Verify the installation of the spirometer.



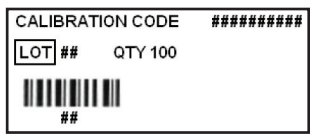
Attach the flow tube. Attach the calibration syringe as illustrated.



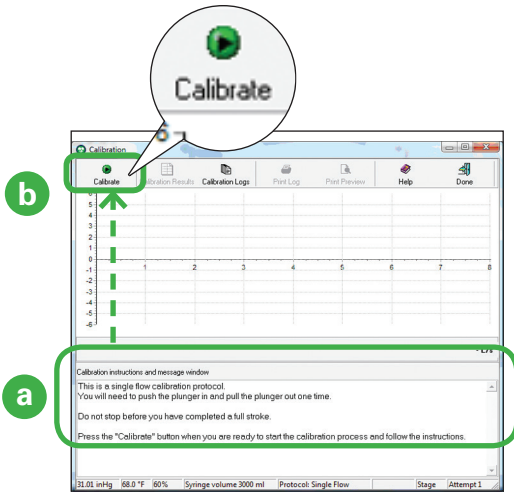
- (a) Click **Go**.
- (b) Select your test patient.
- (c) Click **Spirometry**.



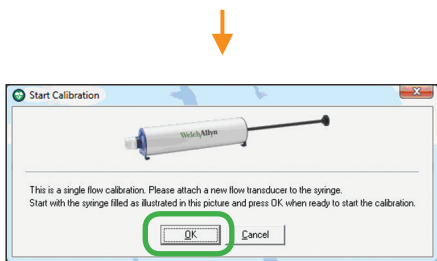
The lot code and calibration code appear on the flow transducer box:



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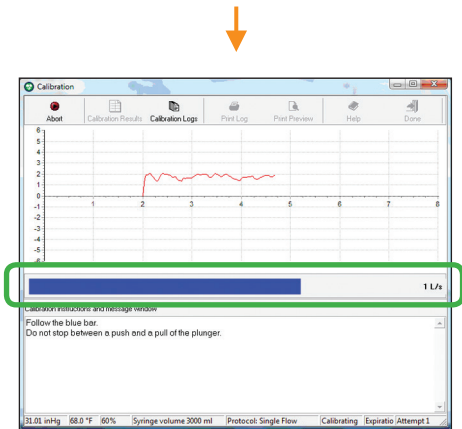


- (a) Read the instructions on this screen.
- (b) Click **Calibrate**.

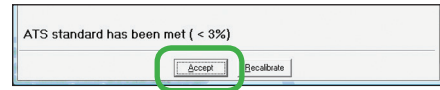
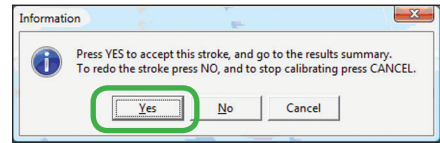


Follow the instructions on this screen.

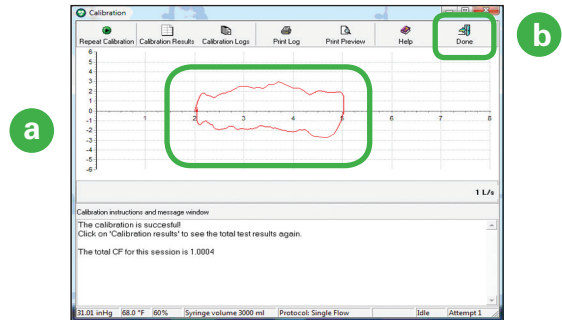
..3.. ..2.. ..1..



Push and then pull the plunger in sync with the side-to-side motion of the blue bar. Move steadily, all the way in and then all the way out, without hesitating during the stroke.



Don't worry if your screen says ATS standard has NOT been met. You don't need to meet the standard for this verification.



- (a) Verify that you see a flow loop. Each flow loop looks slightly different.
- (b) Click **Done**. You have verified that your spirometer is communicating with the Workstation.

Before performing spirometry tests, be sure to perform a successful calibration.

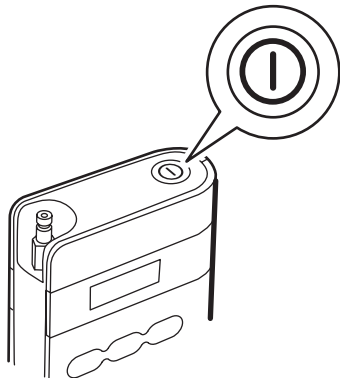


# INSTALLING THE ABPM 7100 ON A CARDIOPERFECT WORKSTATION

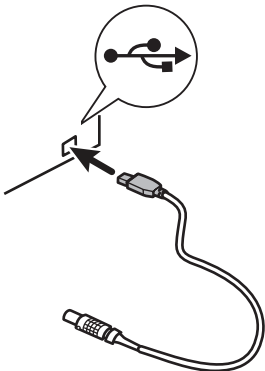
Before you start, install the CardioPerfect Workstation software.

## 1 Install two fresh AA batteries in the device.

If the device is on, turn it off. (**Press and hold** the On/Off button for two seconds.)



## 2 Plug the PC Interface Cable into a USB port on your PC.



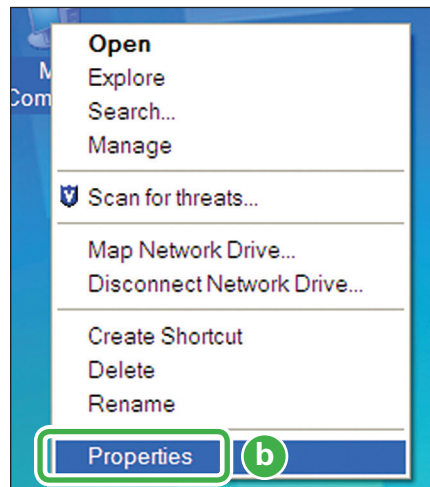
If prompted, allow Windows to install the driver.



### (a) Right-click on **(My) Computer** or **This PC**.

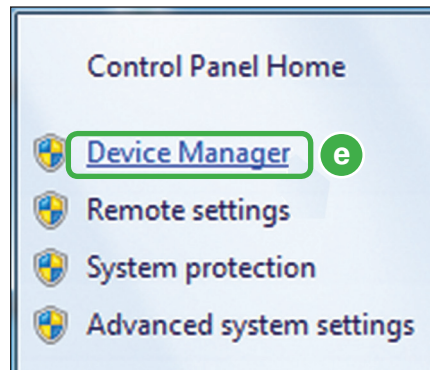


The actual screens you see may appear slightly different than what is pictured below.



(b) Select **Properties**.

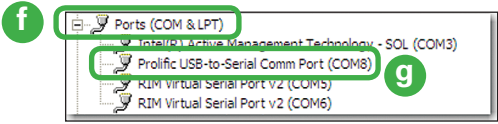
OR



(e) Click the **Device Manager**.

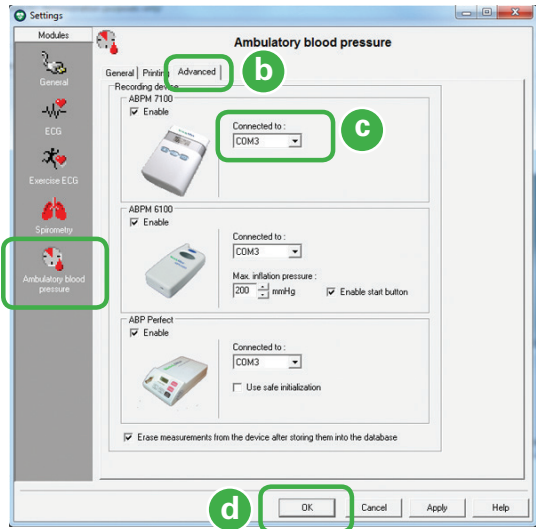
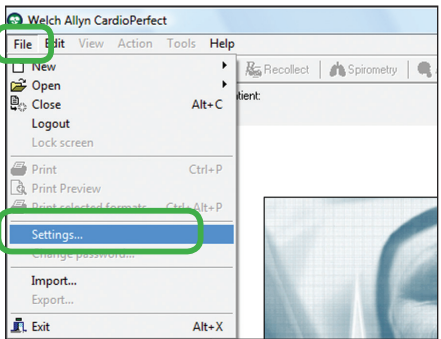
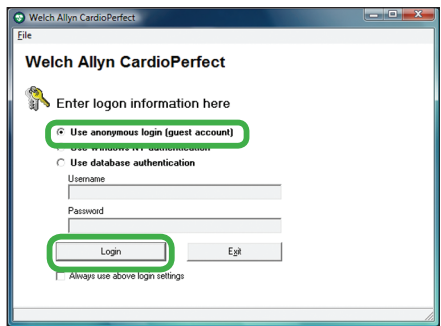
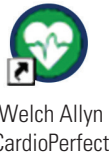


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- (f) Double-click **Ports (COM & LPT)**.
  - (g) Make a note of the number associated with the selected COM port. You will need this number in the next steps.
- Close the Device Manager window.

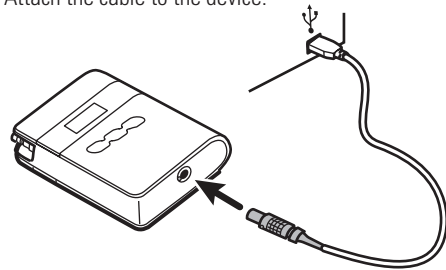
### 3 Select the proper CardioPerfect settings.



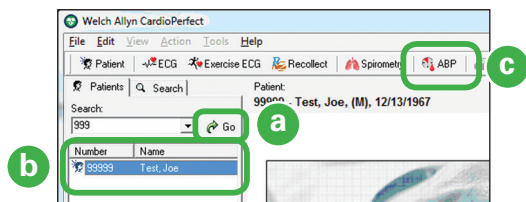
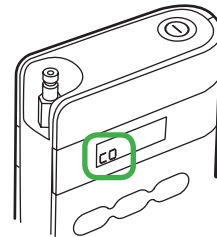
- (a) Click this icon.
- (b) Click this tab.
- (c) Select the COM number appropriate for your device. Use the number you previously made a note of in *Step 2, (g)*.
- (d) Click **OK**. You can leave the main screen open.

### 4 Verify the installation of the ABPM 7100 device.

Align the red indicator of the cable connector to the indicator on the device. Attach the cable to the device.



Press the On/Off button to turn on the device. "CO" appears on the device screen indicating the device is connected.

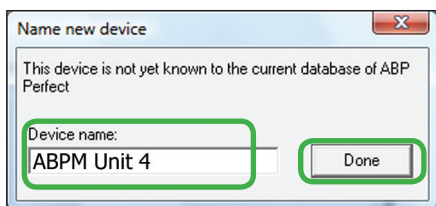
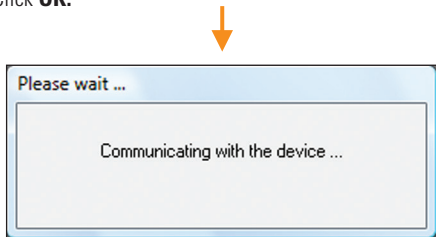


- (a) Click **Go**.
- (b) Select your test patient.
- (c) Click **ABP**.

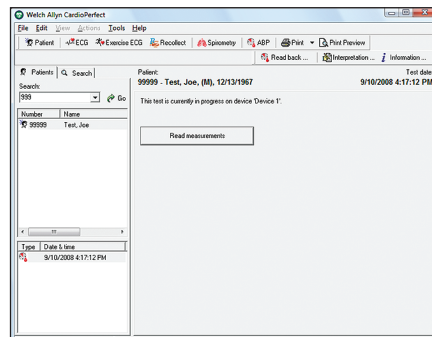
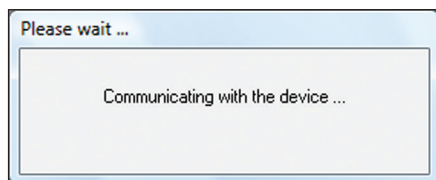
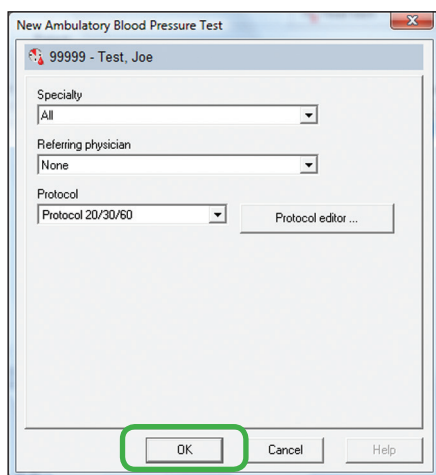
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- (a) Select device.  
(b) Click **OK**.



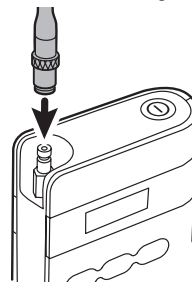
You can give the device any name that you find helpful.



Disconnect the cable from the device. The device is ready to take a BP measurement.

Place the cuff on your upper arm.

Align the cuff tubing connector to the device. Click the tubing connector onto the device fitting to secure.



Press the Start button to take a BP measurement.

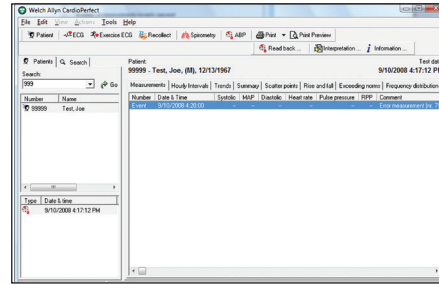
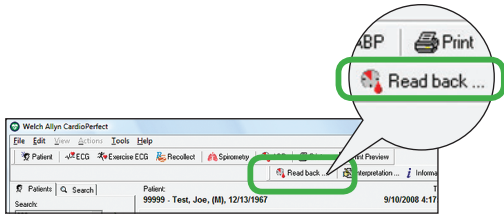


When the time reappears on the screen, **Press and hold** the On/Off button for two seconds to turn the device off. Remove the cuff from your arm.

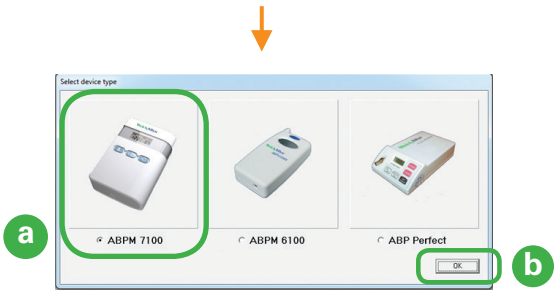
Attach the cable to the device.

Press On/Off to turn the device on. "CO" appears on the device screen indicating the device is connected.

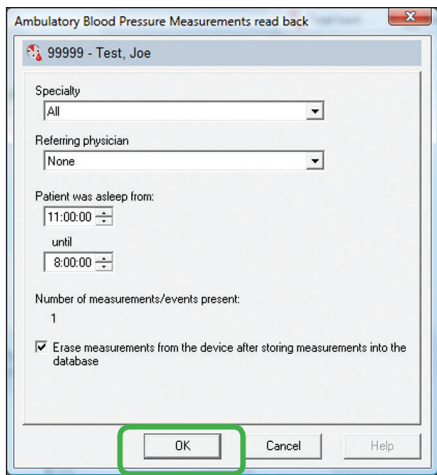
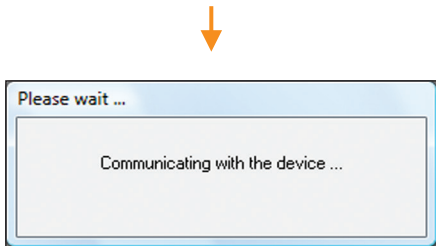
(next page)



Verify that your BP measurement appears in the test patient's record. Your device is properly installed.



- (a) Select device.
- (b) Click **OK**.



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