PPS: PulseNet Production System

Touchscreen Installation Guide
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<th>Date</th>
<th>Revision No</th>
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<tr>
<td>9/18/2014</td>
<td>1</td>
<td>Initial version</td>
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Introduction

Congratulations on your purchase of a new PPS (Pulsenet Production System) Touchscreen. After just a few steps you will have your new touchscreen up and running on your PPS system. If you know the IP and MAC addresses you can jump to “Step 3. Network Settings” on page 9.

What’s in the Guide

This guide is for the basic installation and configuration of a replacement PPS touchscreen. The guide steps you through:

• Getting the IP and MAC address,
• Adjusting the network settings,
• Downloading and installing the PPS touchscreen software,
• Configuring the device, and
• Mount options.

What’s not in the Guide

This guide is for maintenance personnel installing a replacement PPS touchscreen monitoring station in an existing PPS system. This guide does not instruct you in:

• Installing counters and card readers,
• Setting up new work centers,
• Configuring the new device on the PPS Workstation computer,
• Safety concerns,
• Using basic tools, or
• Networking basics.
Follow these eight steps to install and setup your replacement PPS Touchscreen.

**Step 1. Install the Hardware**

Your replacement touchscreen monitor reattaches to the existing VESA 100 compliant mount. The most common reasons for touchscreen failure include: heat, impacts, and vibration. If any of these reasons caused the previous failure, you may need to reconsider the location of the PPS touchscreen. This may require a different mounting device. If you think you need an alternate method to attach the touchscreen, see Appendix A for other mounting solutions available from Softrol.

**Step 2. Get the IP & MAC Address**

The old PPS touchscreen network cable should have a label attached with the IP address. If the cable does not have the IP address label you can get it from the PPS workstation computer.

1. Find the workstation on the status screen (see Figure 1). Because the workstation is not connected, PPS displays it with a red or pink highlight.

2. Right-click on the row.

3. Select **Properties**.

4. Get the IP address from the **IP Address** field.

*Figure 1. PPS Monitor on the workstation PC. Right-click the entry for the work center, select properties, and get the IP Address.*
Get the SmartHub Box Number

If you don’t know for certain from which entry on the PPS Monitor Status screen to get the IP address, you can determine it using the SmartHub Box number and the card number. Each PPS touchscreen monitoring station, and, if it has them, its counter and card reader connect to a SmartHub. The SmartHub supplies the PPS monitoring station with power, and it houses the connection to the corporate Ethernet and the ArcNet network. Most systems have several SmartHubs, and you must locate the specific SmartHub for the PPS monitor station. To identify the SmartHub:

1. Trace the touchscreen CAT5e cable (typically gray) to the SmartHub.
2. Locate the SmartHub number on the side of the cabinet (see Figure 2).

Get the Card Number

Each touchscreen monitoring station is associated with a card in the SmartHub cabinet. If the monitoring station also includes a counter or separate card reader, you can trace the cable from the counter or card reader to the control box. Although the PPS touchscreen does not connect directly to the card, the counter and card reader do connect directly (see Figure 3).

Figure 2. The SmartHub cabinet.

Figure 3. Card rack detail. The blue cable (on the left) is for a counter coming from a monitor station, the gray cable (on the right) is coming from a card reader.
The counter and card reader cable connects to one of six cards on the rack (each card consists of two physical cards). Each card has a number assigned to it using DIP switches. The DIP switch determines the card number—not the card's rack location.*

1. Locate the DIP switch to the left side of the card (see Figure 4).

2. Compare the DIP switch settings on your card to those in Table 1 to identify your card number.

* The order in the rack does not determine the card number. Only the DIP switch setting. Also, although the card rack may have empty slots, they must come after the occupied slots. The system does not recognize any slots after the first empty slot.

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Table 1.
DIP Switch Card Number Chart

<table>
<thead>
<tr>
<th>Dip Switch</th>
<th>Card Number</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="DIP Switch" /></td>
<td>Card 1</td>
</tr>
<tr>
<td><img src="image" alt="DIP Switch" /></td>
<td>Card 2</td>
</tr>
<tr>
<td><img src="image" alt="DIP Switch" /></td>
<td>Card 3</td>
</tr>
<tr>
<td><img src="image" alt="DIP Switch" /></td>
<td>Card 4</td>
</tr>
<tr>
<td><img src="image" alt="DIP Switch" /></td>
<td>Card 5</td>
</tr>
<tr>
<td><img src="image" alt="DIP Switch" /></td>
<td>Card 6</td>
</tr>
</tbody>
</table>

*Figure 4. A single card. Notice the DIP Switch at the front left. The DIP switch in this graphic indicates that the card number is one. Graphic by Joe Vecchio 2013.*
**Determine the Addresses**

Using the SmartHub number and the card number you can determine your IP and the last two digits of the MAC address. Your IP address is “192.168.1.” plus the SmartHub number and the card number. Your address will look something like Figure 5. You will need the IP address in a later step. For future reference it is recommended that you create a label with the IP address and affix it to the end of the touchscreen cable.

You will use the two digits to replace the last two numbers on your MAC address in the next step.

192.168.1.12

SmartHub Number    Card Number

*Figure 5. IP address determination based on Hub number and card number.*

**Step 3. Network Settings**

You need to configure the network settings for the new touchscreen monitor. When you connect the monitor to the CAT5e cable the monitor immediately powers up. Once fully powered up:

**Set the MAC Address**

1. Tap the Applications icon located in the top right (see Figure 6).

2. Locate and tap the Ethernet MAC icon (see Figure 7).

*Figure 6. The Applications icon is located in the top right of the Home screen.*
3. Tap the text on the *Ethernet MAC Address* text field (see Figure 8).

4. Position the cursor to replace the last two digits of the MAC address.

5. Change the last two digits of the MAC address to match the last two digits of the IP address.

6. Click **Save**.

7. Click the Home icon 🏡.

8. Restart the touchscreen by disconnecting the CAT5e cable and reattaching it.

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*Figure 7.* The *Ethernet MAC* icon.

*Figure 8.* Change the last two digits of the *Ethernet MAC* address to match the SmartHub and card number.
Set the Ethernet Configuration and IP Address

Use the Settings application to set the networking and IP address.

1. Click the Applications icon.

2. Locate and tap the Settings icon (see Figure 9). You may need to swipe left or right to locate the icon.

![Figure 9. The Settings icon.](image)

3. Select Ethernet configuration on the Settings menu (see Figure 10).

4. Verify that the Ethernet option is checked.

5. Tap Ethernet configuration: Configure Ethernet devices to open the Configure Ethernet device dialog (see Figure 10).

![Figure 10. The Settings menu](image)
6. Select **Static IP**.

7. Tap to enter the IP address using the old IP address or the IP address from “Step 2. Get the IP & MAC Address” on page 6.

8. Tap in the lower left corner to hide the keyboard.

9. Tap the **Netmask** text field to enter the Netmask. Set it to 255.255.255.0

10. Tap in the lower left corner to hide the keyboard.

11. Tap the **DNS address** text field to enter the DNS address. Set it to 4.2.2.2

12. Tap in the lower left corner to hide the keyboard.

13. Tap **Save**.

14. Tap the **Home** icon.

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*Figure 11. The Configure Ethernet device dialog.*
**Step 4. Set Up the Superuser**

The superuser is a special user account. The superuser is similar to an administrator account in a Windows environment. The superuser has full access to modify the device. To set up the superuser:

1. Tap the **Applications** icon from the **Home** page.

2. Locate the **Superuser** icon and tap (see Figure 12). You may need to scroll left or right to find the icon.

![Figure 12. The Superuser icon.](image)

3. Tap the settings icon in the upper right corner of the **Superuser** application (see Figure 13).

![Figure 13. The Superuser application.](image)
4. Tap **Automatic response** under Security.

5. Select **Allow** in the **Automatic Response** selection dialog (see Figure 15).

![Figure 14. The Superuser settings menu.](image1)

![Figure 15. The Superuser Automatic response dialog.](image2)

6. Scroll down and uncheck **Notifications** to turn off notifications.

7. Tap the **Home** icon to exit the **Superuser** application.
Step 5. Download and Install PPS

You will need to download* and install the latest version of PPS to the device. To download the PPS application:

1. Tap the Applications icon  from the homepage.

2. Locate and tap the Browser icon (see Figure 16).

3. Tap the pps.apk link under “PPS Touchscreen Application” (see Figure 17).

4. Tap the “X” on the browser tab to exit the browser application.

* The PPS application is located on the network. You do not need an Internet connection to download and install the PPS application. If the download page doesn't automatically load navigate to http://192.168.100.253/ts

Figure 16. The Browser icon.

Figure 17. The PPS Download page.
5. Locate and tap the Downloads icon on the Applications screen (see Figure 18).

![Figure 18. The Download icon.](image)

6. Wait for the download to complete (see Figure 19).

7. Tap the robot icon to the left of the pps.apk file name to open the ES File Explorer.

![Figure 19. The Downloads dialog.](image)
8. Tap **Install** at the bottom of the *ES File Explorer* window (see Figure 20).

9. Wait for the "Application installed" message (see Figure 21).

10. Tap **Open**.

11. Click **OK** on the *Welcome* dialog to access the settings.


![Figure 20. The ES File Explorer dialog.](image)

![Figure 21. The ES File Explorer dialog showing a successful installation.](image)
**Step 6. PPS Configuration**

Now that you have installed and opened the application, it needs configured. The install process sets most of these configuration settings, so you only need to verify most of them. You may need to change the Daily Counts and Device Type settings. If you selected OK in number 11 of the "Step 5. Download and Install PPS" go to number 5 on page 19.

**Accessing the Settings Menu**

The **Settings** icon is located on the **Integrity Test** screen. To access the **Settings** menu:

1. Tap the **Exit** icon (see Figure 22).

2. Tap the text, “Enter Password” to bring up the keyboard (see Figure 23).

3. Type the password, “777777”

4. Tap the **Enter** button twice to launch the **Admin Panel** (the button will flash slightly on a successful click).

*Figure 22. PPS Home screen.*

*Figure 23. Password prompt.*
5. Tap **Launch Integrity Check** (see Figure 24).

6. Tap the **Settings** icon (see Figure 25).
**Set the Database IP Address**

The touchscreen needs to know where the database is located. To set the database IP address:

1. Tap **PPS Database IP**.
2. Enter the IP address: 192.168.100.254 (see Figure 26).
3. Tap **OK**.

![Figure 26. The PPS Database IP dialog.](image)

**Set the Database Name**

Now that the device knows where the database is located on the network, it needs to know which database to access. To set the Database Name:

1. Tap **Database Name**.
2. Tap the **Database Name** text field to bring up the keyboard.
3. Enter the Database Name, “PPS” (see Figure 27).
4. Tap **OK**.

![Figure 27. The PPS Database Name dialog.](image)
Set the PPS Version Link

The version link tells the box where to find version information. This is used to keep the software current. To set the version link:

1. Tap PPS Version Link.
2. Enter the URL: http://192.168.100.253/ts/update.txt (see Figure 28).
3. Tap OK.

Set the Device type

Each PPS touchscreen can function as either an RFID device or a Classic PPS box (this requires a separate card reader) depending on whether the plant uses RFID SmartCards or regular SmartCards. You can set the box up to use either type of card:

1. Tap Device.
2. Tap to select RFID or Classic PPS (see Figure 29).
**Set the Daily Count Display Options**

You have two choices for how the box gives the employee daily counts:

- **Read PPS Daily Counts**—This choice means that the device will only give employee productivity counts based on the employee’s productivity at this one device (current task) for the current session.

- **Read Database Daily Counts**—This choice displays the employee’s counts for all devices. The device will get the count data from the database. If the database is unavailable, the box defaults back to the PPS Daily Counts mode until the database becomes available.

To set the daily counts option:

1. Tap **Where to read Daily Counts**.
2. Tap to make your selection (see Figure 30).
3. 

**Exit Settings**

When finished verifying and updating the settings exit to the PPS home screen.

1. Tap **Close Settings** at the top of the **Settings** screen (see Figure 30).
2. Tap **Start Work** on the **System Integrity** screen (see Figure 31).
3. Unplug the device and restart.

*Figure 30. The Where to Read Daily counts dialog.*

*Figure 31. The System Integrity Check screen.*
Step 7. Update the Database

Now that you have completed the database configuration settings in Step 6, you need to update the database. Updating loads the device with current task and employee information. To update the database:

1. Tap the Update Database button in the (see Figure 32).
2. Wait for the status bar to indicate that the update is complete.
3. Restart the touchscreen by removing and reattaching the CAT5e cable.

Figure 32. The PPS Home screen.

Step 8. Set PPS to the Default

On restart, the touchscreen device will ask you to select the default (see Figure 33).

1. Tap to check the box for “Use by default for this action.”
2. Tap PulseNet Production System

Figure 33. Complete Action using dialog.
Support: Get Additional Help

If you find yourself in the need for help with the process, you have several support options:

**Web Support**

Visit the Softrol Support website (support.softrol.com) to get current documentation. With your support login, you will find:

- Product manuals,
- FAQ,
- Counter setup,
- Detailed Installation topics, and
- Update downloads.

**Telephone Support**

Call 1-888-763-8765 (888-SOFTROL) ext.110 for Softrol’s technical support. Site License Number may be necessary to receive support.

**Email**

support@softrol.com

**Hardware Repair**

A Return Merchandise Authorization (RMA) is required to return a part for repair or credit. To request an RMA call 1-888-763-8765 (888-SOFTROL) ext. 122 or email rma@softrol.com.

**Parts**

For replacement parts contact Softrol’s Parts Department between the hours of 8:30 a.m. and 5:30 PM EST at 1-888-763-8765 (888-SOFTROL) ext. 110 or email parts@softrol.com.

**Site License**

Site Licenses are available for all Softrol’s automation and information networks. Please contact Softrol Support support@softrol.com or call 1-888-765-8765 (888-SOFTROL) ext.128
Mount the Touchscreen

In most cases, during the course of their workday people interact frequently with the PPS touchscreens, so you need to position the unit where the user can reach it easily. You must also protect the touchscreen from heat, vibration, impacts, static shock, and product movement (sheets). You should consider installing an impact rail to help protect the device.

**Location**

Locate the device(s) so that the PPS devices do not interfere with:

- equipment repairs and service
- work flows,
- worker’s line of sight, and
- emergency stop buttons or bars.

For multi-lane ironers that also process single pieces, mount team boxes to the lane that receives the signal.

**Height**

Mount the bottom edge of the touchscreen between 48 and 54 inches from the floor. This height accommodates the average height user.

**Angle**

The included touchscreen mount allows for about 15 degrees of downward tilt and about 5 degrees of upward tilt. The basic mount accommodates the majority of basic mounting needs. Additionally, the PPS touchscreen mount is VESA100 compliant, so you can use other mounts to supplement or extend the touchscreen's position.

**Clearance**

If your workers need to access the touchscreen's card reader you need to keep a minimum of ten-inches clearance to the left of the screen. If the station uses a multi-user card reader box, place the box directly to the left of the touchscreen to block access to the built in card reader. Remember that SmartCards protrude about two inches from the box; you need to protect the protruding cards from impact.

**Optional Mounting Devices**

Each touchscreen installation requires well thought out placement. To help facilitate that placement you have many available options. Because the included mounting bracket is VESA100 compliant, you have many options available. Our installers find that the following four mounts solve most placement issues.
**Standard Mount**

Each PPS touchscreen device comes with the standard VESA 100 compliant mounting bracket. You can mount this bracket directly to a wall or other surface to accommodate many situations, or you can use the mount to connect to other VESA 100 compliant mounting brackets (see Figure 34 and 33). Softrol part number: MOUNT-VESA-TILT-01-BLK.

*Figure 34. PPS touchscreen with the standard mount.*

*Figure 35. PPS touchscreen with the standard mount attached.*
**Tabletop Mount**

The tabletop mount allows you to install the device on any flat surface: level, angled, or under mounted. This bracket enables tilt angles up to 110 degrees. Softrol part number: MOUNT-VESA-TABLE-01-BLK

![Figure 36. PPS touchscreen with tabletop mount.](image)

**Pole Mount**

The pole mount bracket is perfect for those narrow footprint mount locations such as on posts or poles. The bracket allows for tilts of 20 degrees up or down and swivels 90 degrees. Softrol Part Number MOUNT-VESA-POLE-01-BLK

![Figure 37. PPS touchscreen with pole mount.](image)
**Articulated Mount**

The articulated mount (commonly called simply "7562") uses a grommet or clamp (surfaces up to 3.5 inches thick) to attach to any horizontal surface. The mount allows for 15 degrees of tilt up or down, 360 degree rotation, adjustable height up to 11.8 inches, and it extends 22.8 inches. Softrol part number: COMPUTER-MOUNT-VESA-MONO-7562

*Figure 38. PPS touch screen with articulated mount.*
A
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Automatic response. 13

B
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