

The Definitive Guide to Serial Hardware Troubleshooting

These instructions will help you troubleshoot your serial receipt printer and cash drawer when they stop working properly.

In most cases, if the cash drawer stops working it is because something is wrong with the receipt printer. Even if you do not know if the receipt printer is not printing, but your cash drawer does not open, go through the **Troubleshooting the Receipt Printer** section first.

Troubleshooting the Receipt Printer

If the receipt printer does not print, or if it gives an error message:

1. Verify that that receipt printer is turned on, and that there are no error lights on the printer. The only light that should be on is the green light for power.
2. If you moved the printer or computer recently, you may want to check the connections between the printer and the computer to make sure the connection is still solid.
3. If these problems just started happening recently and you have not restarted your computer, do so now.
4. Find the COM port that your printer is connected to. To find this port:
 - a. Right click on the **My Computer** icon, or the **Computer** icon in Windows Vista and Windows 7.
 - b. Click on **Properties**.
 - i. If you are running Windows XP click on the **Hardware** tab near the top of the **System Properties** window.
 - c. Click on **Device Manager**.
 - d. In the **Device Manager**, expand the line labeled **Ports (COM & LPT)**.
 - e. Look for any line ending in **(COMx)** where **x** is replaced by a number. Typically there will only be one COM port listed. If this is the case, this **x** is your COM port number. If there are multiple COM ports on your computer, take note of all of them for the next step, as your printer may be connected to any one of these ports. If there are no COM ports listed, or if there is not an entry for **Ports** in the **Device Manager**, jump to the **Where is my COM Port?** section before proceeding.



5. If not already open, open the DaySmart software on your computer and go to **Tools > Options**.

6. Go to the **Hardware Setup** tab and click on **Configure Receipt Printer**.¹
7. Select **Use serial printer (no Windows driver needed)** and click on **Settings**.²
8. Click on **Reset to Default Values**.
9. Change the COM Port # to the number you found in **Step 4**.
10. Clicking **Print Test Receipt** should print out a sample receipt correctly assuming the printer is plugged into the computer. If you found multiple COM ports in **Step 4**, try each port individually until the receipt printer gives you a receipt.
11. Click **OK** twice to get back to the **Options** screen.

If the receipt comes out fine, continue onto **Troubleshooting the Cash Drawer** if you have a cash drawer that is also not working. If the receipt message comes out garbled, blank, or has extra characters near the top or bottom of the message, follow the steps in the section **The Text from my Receipt Printer is Incorrect**.

The Text from my Receipt Printer is Incorrect

The troubleshooting tips found under this section can be used if the receipt prints out blank, has completely incoherent text, or if it adds extra characters to the receipt.

- **The Printout from my Receipt Printer is Blank**

The Epson TM-T88III, TM-T88IV, and TM-T88V receipt printer is a thermal printer. This means that it requires special thermal paper to print. If you replaced the paper recently and it feeds an appropriate length when you print but has no writing on it, it's possible that you put generic receipt paper into the printer, and not thermal receipt paper. You can contact DaySmart Software, Inc. to purchase receipt printer paper if you are unsure of the kind that you need.

- **The Printout from my Receipt Printer has Garbled Text**

This section is for when the printout does not appear to be written in any form of English or any other language. The text appears to be many random characters one after another, all question marks, or some other text that does not make sense. There are several different possible causes of this:

- **The Baud Rate or Other Miscellaneous Settings are Incorrect**

1. Turn off your receipt printer.
2. Hold the **Feed** button on the top of the printer. While holding the **Feed** button, turn the printer on.

1: In versions prior to version 7, go to the **Receipt Printing** tab from the **Options** window instead.

2: In versions prior to version 7, select **Use Epson serial or other non-Windows printer** and **My receipt printer uses the serial port**.

3. A diagnostic sheet will print out and the error light will turn on. Simply turn the printer off and turn it back on to clear the error light.
4. Open the DaySmart software on your computer and go to **Tools > Options**.
5. Click on the **Hardware Setup** tab and **Configure Receipt Printer**.
6. Make sure that **Use Serial Printer** is selected. Click on **Settings** to bring up the **Receipt Printer Settings** screen.
7. Verify that the values on the diagnostic sheet match the settings on this screen.
8. Go to the **Device Manager** on your computer and expand the **Ports** menu (see **Step 4** under **Troubleshooting the Receipt Printer**).
9. Right-click on the COM port you have been using and go to **Properties**.
10. On the **Port Settings** tab the same set of values will appear. Verify that these settings match those on your diagnostic sheet and adjust them accordingly.
 - **The PCI Card's Crystal Frequency may be Incorrect**

This is a common issue if your serial port is on a PCI card. If you know your printer plugs into a USB-Serial adapter or a motherboard port, this section will not apply to you.

1. Find your COM port in the **Device Manager** (see **Step 4** under **Troubleshooting the Receipt Printer**).
2. Right-click on the COM port and go to **Properties**.
3. Go to the **Data Rate** tab³.
4. Check the box for **Automatic Crystal Detection**. The **Crystal Frequency** should change to roughly 14.34MHz.
5. Click **OK**.
6. Receipts should print correctly now.

- **The Printout Contains Extra Characters**

Use these steps to fix if your printed receipts contain extra unspecified characters.

- **Settings Need to be Reset to Default Values**

1. If not already open, open the DaySmart software on your computer and go to **Tools > Options**.

3: If you do not have a **Data Rate** tab, your COM port does not reside on a PCI card and these instructions do not apply to you.

2. Go to the **Hardware Setup** tab and select **Configure Receipt Printer**.
3. Select **Use serial printer (no Windows driver needed)** and click on **Settings**.
4. Write down the current settings, and then click **Reset to Default Values**. If the COM number changed, change it back to what it was before.
5. Try printing a test receipt to see if it appears any better. If it looks worse or doesn't print at all, change the settings back to the settings you wrote down in **Step 4**.
 - **The Baud Rate or Other Miscellaneous Settings are Incorrect**

If you have not already done so, perform the steps in the subsection of the same title under **The Printout from my Receipt Printer has Garbled Text** from **Page 2**.

- **There is a Buffering Problem**

Sometimes the software sends the text to print faster than the printer can print it out. Follow these steps to correct this:

1. If not already open, open the DaySmart software on your computer and go to **Tools > Options**.
2. Go to the **Hardware Setup** tab and **Configure Receipt Printer**.
3. Select **Use serial printer (no Windows driver needed)** and click on **Settings**.
4. Change the **Delay Between Lines** value on this screen to a larger number, such as 30 or 50, to see if this makes any difference.

Troubleshooting the Cash Drawer

1. Find the COM port that your cash drawer is connected to. If you just set up your receipt printer successfully, the COM port number is the same as the COM port number you found in that section. If you do not have a receipt printer, and just use a standalone cash drawer, walk through **Step 4** under **Troubleshooting the Receipt Printer** to find the COM port number.
2. If not already open, open the DaySmart software on your computer and go to **Tools > Options**.
3. Go to the **Hardware Setup** tab and **Configure Cash Drawer**.⁸
4. Select the option **My cash drawer is connected to the serial port or is connected to a serial Epson receipt printer**.
5. Click on **Reset to Default Values**.
6. Change the COM Port number to whatever the COM Port was determined to be in **Step 1**.

⁸: In versions prior to version 7, go to the **Cash Drawer** tab from the **Options** window instead.

7. Clicking **Test Open Drawer** should open the cash drawer. If it does, press **OK** to get back to the **Options** screen.

If the cash drawer does not open, but the software says that it is, then there is likely to be some sort of hardware issue preventing the drawer from opening.

Where is my COM Port?

Your serial receipt printer must be plugged into the computer somehow. This is your COM port. Most new computers do not have motherboard serial ports, so you may have purchased a USB-Serial adapter or a PCI card to give your computer a serial port to plug the receipt printer into.



Note: StarTech.com USB to RS-232 Serial Adapter

However, these will still show in the Device Manager under Ports if their appropriate drivers are installed correctly. If you do not see a COM port listed under ports, and you have one of these devices, it is likely that the drivers somehow got uninstalled. Once the drivers get reinstalled, a COM port should become listed again under the **Device Manager** and you can proceed with the set up.

USB-Serial adapters typically come with a disc with the drivers on them. If you do not have the disc anymore, you can check the manufacturer's website for the appropriate driver. If you purchased the USB-Serial adapter from DaySmart Software, Inc., the driver can be downloaded from our website(s):

- **Salon Iris Software:** <http://www.saloniris.com/supportdownloads.aspx>
- **Orchid Medical Spa Software:** <http://www.medicalspasoftware.com/supportdownloads.aspx>
- **123Pet Software:** <http://www.123petsoftware.com/otherdownloads.htm>
- **InkBook Software:** <http://www.inkbooktattoosoftware.com/supportdownloads.aspx>

The driver is listed as **Prolific USB to Serial Adapter Driver**.