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PTI Apex 5000 Tools for Palm™



Setting up a bill acceptor has never been so easy. Pyramid Technologies set out to make the Apex 5000 the most user-friendly bill acceptor ever. It is no coincidence that the Palm computing platform was chosen as a complete setup and diagnostic tool.

The Apex 5000 Tools program is a free download, and fully functional. If you do not have an Apex acceptor, you can still download the Tools program for evaluation purposes. Most of the functions and menus will work, but you will receive some error messages if the Palm is not connected to an Apex 5000 acceptor. See the *Download* section of our web site.

If you are new to Palm computing, it may help to know that learning how to use a Palm is very easy and takes little time. In addition to being the ultimate setup tool for the Apex 5000, you can use a Palm for countless other tasks. Schedule your daily appointments, use it as a travel alarm clock, play games, use the built-in calculator, quickly write down important notes in the Note Pad, and hundreds of other things. Visit <http://www.palm.com> to find out more.

Compatible Palm Models:

The Apex 5000 Tools software will run on the following Palm handhelds: **m100, m105, m125, m130, m500, m505, m515, Zire 71, Tungsten series T, T2, T3, C, & W.** This software will **not** work with the Zire 21 or Tungsten E, which do not have the "Universal Connector" required for the Serial Hotsync cable.

What can the Apex 5000 Tools Palm program do?

Flash Firmware Updates

If you have worked with bill acceptors before, you probably know that firmware updates can be quite common (firmware is the software code that operates the bill acceptor, stored on a memory chip inside the acceptor). Firmware updates are typically used to update the acceptor when a new bill design is released, or to provide enhanced functions or security measures. In the past, acceptor updates were often a time-consuming or difficult process. With the Apex 5000 Tools, you can have new firmware releases running on your Apex literally in minutes after they become available on the PTI web site. Simply download the new file to your PC, Hotsync it to your Palm, and Flash Program the new code into your Apex 5000 using the PTI serial cable (purchase from PTI, Part Number: **05AA0011**).

Diagnostics (Status Report)

Troubleshooting is done with a single click of the stylus. The Apex5000 runs a self-diagnostic and sends a report back to the Palm, letting you know of any problems or required actions. This also tells you what firmware version the Apex is currently running.

Acceptor Configuration

Configuring the acceptor is also very easy. Select the interface type (pulse, serial, MDB, etc.) and various other options listed on the screen, and send the configuration to the Apex 5000 when you see the configuration summary showing your selections.

Palm Basics

Your Palm should come with an installation CD and a Hotsync cradle or cable. When you install the "Palm Desktop" software to your computer, and connect the Palm to the PC's serial port, you should be able to perform a Hotsync to transfer data to and from your Palm. You can use the "Install" button from the Desktop software on your PC to select Palm files to be sent to the Palm during the next Hotsync. Once you have mastered the basics of getting files from your computer to your Palm, you are ready to get started with the PTI Apex tools. Please refer to the documentation supplied with your Palm for complete details on getting set up.

There are two types of Palm files; PRC program files, and PDB database files. A PRC file is simply a program that runs on your palm, such as the **Apex5000.PRC** Tools program. When you download a new Flash firmware update from <http://www.pyramidacceptors.com>, this file will have a **.PDB** extension, such as **Apex54USA100.PDB**. The Apex Tools program reads this file and uses it to reprogram the Apex 5000 acceptor.

Using the Apex 5000 Tools program



We have covered the basics, so it's time to look at the program in more detail. The Apex 5000 Tools were designed to be self-explanatory, so if you prefer to experiment, you probably don't need to read much further.

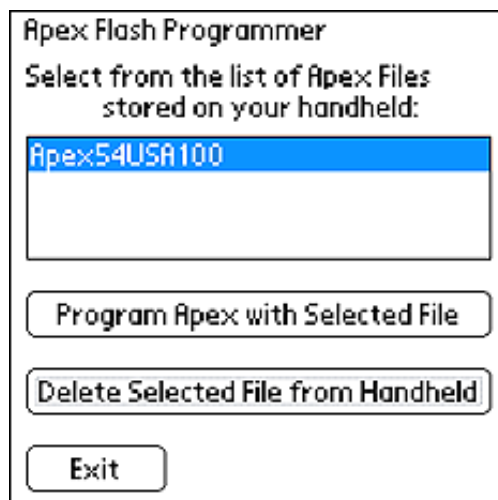
When you start the program, you will see the Main Menu as shown. From here you can choose one of the three main functions of the Tools software.

Program Apex (Flash Download)

Before you can use this function, you must have a Flash firmware file stored on your Palm handheld unit. To do this, download a Flash firmware file from the PTI web site, <http://www.pyramidacceptors.com>, and then "Hotsync" it to the Palm.

The Flash filename may look something like **Apex54USA100.PDB**. In this example, the "54" indicates that this file will work only with Apex 5400 models (check model number on back of acceptor). Therefore, you cannot use a "54" file to program a 5200 or 5600 series acceptor, etc. Be sure the filename matches the acceptor type you wish to program. The next three characters ("USA" in this example) represent the ISO standard country code. The last three digits represent the version number. In this case, the "100" represents version 1.00. *If you are not sure what version of firmware is currently running on your Apex acceptor, exit back to the Main Menu and select the "Get Status Report from Apex" function, and the Apex will report the version number to the Palm (more on this later).*

When you select the "Program Apex" function from the Main Menu, you will see a screen similar to this one:



If you have loaded any Apex flash files to your Palm, you will see them listed in the file window. In the pictured example, there is only one file loaded; "Apex54USA100". The number of Apex flash files you can store on your Palm is limited only by the available memory on your handheld.

Using the stylus, select one of the files in the list box to highlight it. If you press "Program Apex with Selected File", the highlighted file will be used to reprogram the acceptor you are connected to. Be sure your Palm is connected to an Apex acceptor, or you will see a "communication error" message.

If you press the **“Delete Selected File from Handheld”** button, the highlighted file will be deleted (you will be given the chance to cancel this operation in case you selected this option by mistake).

If you selected the **“Program Apex”** option, the Tools program will begin communicating with the Apex acceptor, and you will see a series of messages telling you what is happening. If the file type matches the acceptor model, the Flash programming process begins automatically. The Flash programming takes 2 minutes, and you will see a status display telling you what percentage of the program has been transferred to the Palm. When the new program is transferred, the Apex will verify the data integrity and you will see a **“Successfully Programmed”** message. You can then disconnect the Palm and program another acceptor or quit.

Flash Programing Troubleshooting:

Your Palm will automatically shut itself off after not receiving any user input for a while. To avoid having this shut-off function interfere with Flash programming, we suggest you run the **“Prefs”** program on your Palm and set this time to 3 minutes.

If you experience error messages during Flash programming, check the connection between your Palm and the Apex 5000 and try again. If you still have problems, contact PTI with the following information:

1. Apex acceptor Model Number
2. Apex acceptor Serial Number
3. The name of the Flash file you are attempting to send to the acceptor.
4. Any error messages you see during the process.

Get Status Report from Apex



When you select this option, you will see a button at the bottom of the screen that says, **“Get Status”**.

Make sure your Palm is connected to the Apex 5000, and then press this button. You should see the firmware version listed in the top box. The lower box should say, **“No errors to report.”** If there are any errors detected, they will be listed. For instance, if you see **“Stacker Full”**, you will know that the cashbox must be emptied (stackered versions).

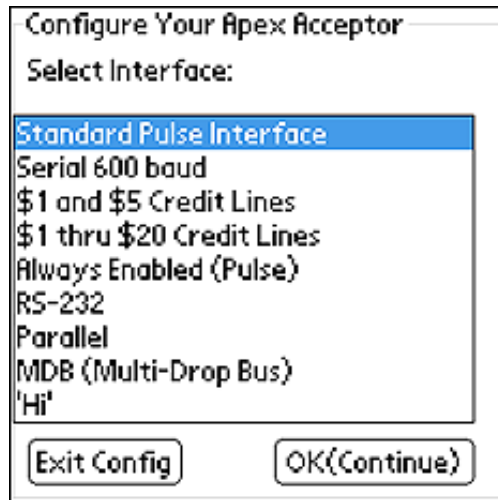
If you see a message saying, **“Status Not Received Properly”**, check the connection and try again.

Configure Apex Bill Acceptor

When you enter the Configuration part of the program, you will be given two options:

View Existing Configuration This function allows you to see what configuration parameters your Apex acceptor is currently using. The Palm will request the current configuration from the acceptor and then display it. This is especially helpful if you do not remember your previous configuration settings.

Enter New Configuration This option lets you reconfigure your Apex:



You will see a series of screens, such as the one pictured here. For each of these screens, highlight your selection and then press the “OK(Continue)” button. Each selection will be recorded, and when you reach the final screen, your selections will be summarized so you can double-check them before sending the new configuration to the acceptor. For more details on the various options, and what they do, refer to the *Apex 5000 Installation and Operation Manual*.

The Configuration screens will appear in order as follows:

Select Interface This screen is pictured above.

Select Bezel Lighting (flashing or always on when acceptor enabled).

Select Security Mode (low or high security).

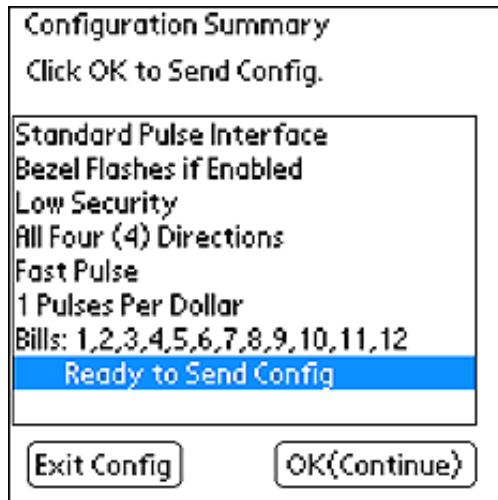
4-Way or 1-Way Acceptance? (accept bills in all 4 directions, or just one direction).

Select Pulse Speed This screen only appears if you selected a pulse-based interface in the first screen. This allows you to choose fast or slow pulses.

Pulses Per Dollar This screen only appears if you selected a pulse-based interface in the first screen. Use the keypad display to enter the number of pulses per base unit of currency.

Check Boxes to Enable Bills This allows you to disable certain bill denominations so that they are not accepted. For example, an Apex 5600 with USA software which accepts \$1, \$5, \$10, \$20, \$50, and \$100 bills, you would un-check “bill 3” to disable the \$10 bill, which is the third bill. Bills 7 through 12 (in this case) would not be used, and it doesn’t matter if you check them or not.

Configuration Summary



This final screen lists a summary of your configuration. Press OK to send the listed selections to the Apex. You will see a “Configuration Complete” message to indicate the operation was successful. If you see an Error message, check your connection and press the “Retry” button.

You should now be able to program, diagnose, and configure your Apex 5000 acceptors with a Palm. Visit <http://www.pyramidacceptors.com> to check for new program files, help documentation, and information updates as they are released.

