ASPKey+

for Windows 95, 98 and NT

ASPKey+ is an all-Australian product by:

ASP Microcomputers
456 North Road,
Ormond, Victoria, 3204
Australia
Telephone: (03) 9578-7600
FAX: (03) 9578-7727
email: solutions@asp.com.au
World Wide Web: http://www.asp.com.au

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Welcome To ASPKey+

ASP's original ***ASPKey for Windows*** program read data from a serial port on your PC, from RS-232 Barcode Scanners or other devices, and sent that data directly to applications such as Access or Excel, or ***any*** other Windows program, just as if it had been entered at the keyboard.

ASP's new ***ASPKey+*** does all that, as well as providing the ability to read DataTags, and will send either the data loaded into the DataTag, or the DataTag ID, directly to application programs.

ASPKey+ is designed to shrink down into the system tray (in the bottom right corner of your screen, next to the clock) and runs in the background, continually monitoring for data. Received data is converted to "keyboard codes" and sent directly to the active Windows application. ***ASPKey+*** can also store the received data to a disk file for later (or concurrent) processing by other programs.

ASPKey+ is a full 32-bit program, designed to run under Windows 95, Windows 98 and Windows NT. It does not run under Windows 3.x.

ASPKey+ has two further enhancements over the original ASPKey for Windows – it is able to send data to DOS programs running under Windows, whether they are running full screen or in a window, and it consumes fewer system resources when running under Windows NT.

Installing ASPKey+

To install ***ASPKey+***, just follow these simple instructions:

1. Insert the installation disk into a 3.5" floppy disk drive.
2. Click the **Start** button, and select **Run**.
3. In the **Open:** box, type **a:\setup** and click the **OK** button. If your 3.5" floppy disk isn't your A: drive, substitute the appropriate drive letter (for example, **b:\setup**).
4. Follow the on-screen instructions.

Unless you have a particular reason not to, you should accept the default location and folder name.

When the installation is finished, an ***ASPKey+*** window will be left open on your screen. If you want to put a shortcut to the program on your desktop, now is the best time to do it. Press and hold down your Control key, then click on the ***ASPKey+*** program icon and drag it onto your desktop. Let go of the mouse button, then the control key. Move the shortcut icon to an appropriate area of your desktop.

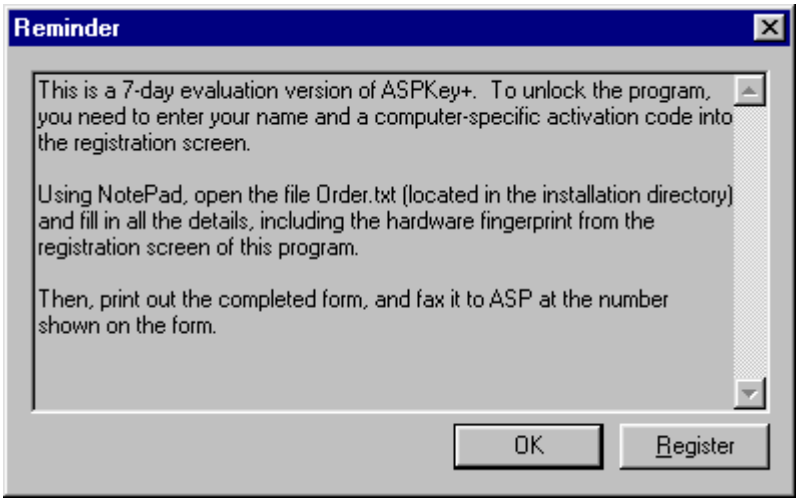
Running ASPKey+ at Startup

Depending on your application, you may wish to have the ***ASPKey+*** program run automatically each time your computer is started. To do so, you need to put the program into your **StartUp** group. Here's how to do it:

1. Click the **Start** button, and then point to **Settings**.
2. Click **Taskbar**, and then click the **Start Menu Programs** tab.
3. Click **Add**, and then click **Browse**.
4. Locate the program you want to create a shortcut to, and then double-click it. The program is called ***ASPKey+*.exe**, and if you accepted the default installation folder, it will be located in the **c:\Program Files\Asp*ASPKey+*** folder.
5. Click **Next**, and then double-click the **StartUp** folder.
6. Type the name that you want to see on the StartUp menu (***ASPKey+*** might be a good choice!), and then click **Finish**. If Windows prompts you to choose an icon, click one, and then click **Finish**.

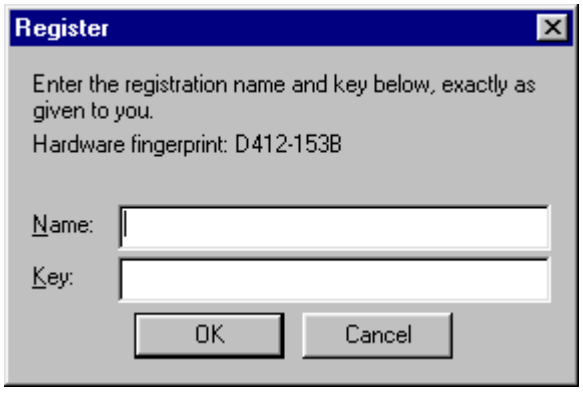
Unlocking ASPKey+

To allow you to evaluate ASP's ***ASPKey+*** program to ensure that it meets your needs before purchase, the program is supplied in a form that allows it to run for 7 days from the date of installation before it must be registered. Except for the time limit, the evaluation version is fully functional.



Until it is registered, this reminder screen will be displayed each time the program is run. To register the program and permanently remove the reminder screen, simply follow the on-screen instructions. You can fax or email the form to us, or simply telephone us while you're in front of the computer that you've installed the program on.

To run the program in Evaluation mode, just press the **OK** button. When you're ready to register it, press the **Register** button, which will display the screen shown below.



This screen contains a computer-specific **Hardware Fingerprint**, which is two sets of four characters separated by a dash. From this Hardware Fingerprint and your name (or the name you want to register the program under), we can generate the matching **Activation Key** to permanently unlock the program. The Activation Key is four sets of four characters separated with dashes.

You must be sure that the **Registration Name** you enter here is **exactly** the same as the one you gave to ASP when you registered - upper or lower case is not significant, but everything else such as spaces and punctuation marks is.

Note that the only characters used in Hardware Fingerprints and Activation Keys are the digits **zero** through **nine**, and the letters **A** through **F**.

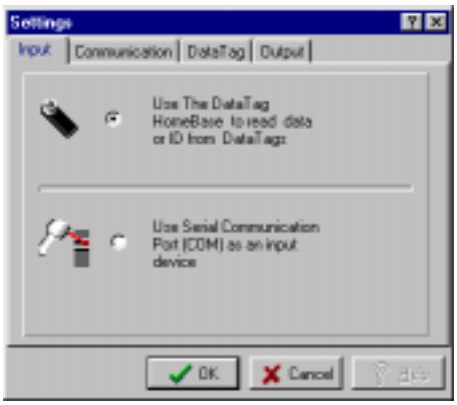
Configuring ASPKey+

Before you can use ***ASPKey+*** the first time, you'll have to set it up to suit your requirements.

Double-click on the icon to start the program. The first time the program is run, it may issue an error message about not being able to find its configuration file, or that the selected COM port is not available – that's quite normal for the program before it's been set up, so just click on the OK button.

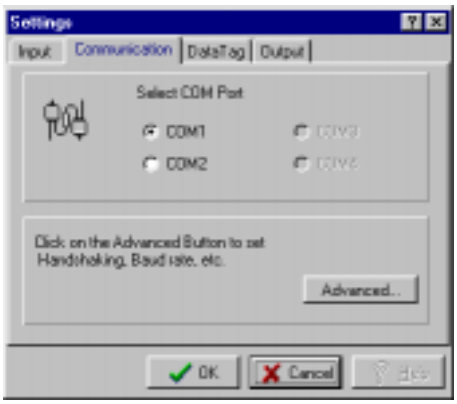
To set up ***ASPKey+***, click on the **Configure** button on the main screen, or select **Settings…** from the **File** menu, which will bring up the first page of a multi-page configuration screen, as shown below.

Serial Input or DataTags?



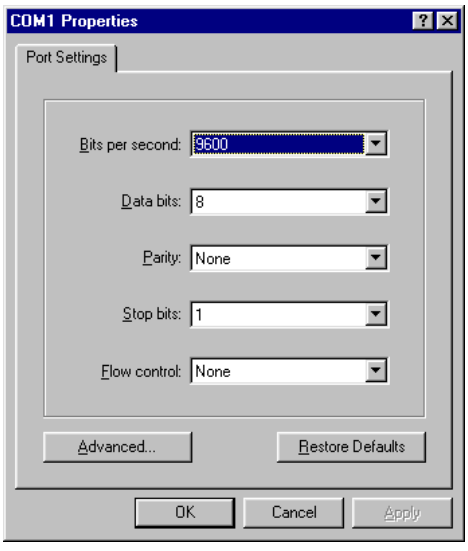
The **Input** tab, as shown on the right, is where you select whether you want to read data from DataTags or from an RS-232 device attached to a serial port. Select the **Use the DataTag HomeBase to read data or ID from DataTags**, or **Use Serial Communication Port (COM) as an input device** as appropriate.

Next, you'll need to set up the **Communication** tab, as shown below.



Select a port number from those listed in the **Select Com Port** section – only those ports actually installed in your computer and available for use are listed. If, for instance, you have a mouse installed on COM1:, that port will not be able to be selected.

To set the other serial port parameters, click on the Advanced button, which will bring up the screen shown on the right below.

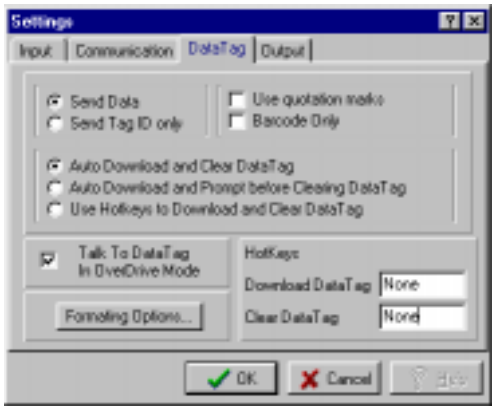


The default settings of **9600 baud**, **8 data bits**, **no parity**, **1 stop bit** and **no flow control** are often fine, but your particular application may have specific requirements. For use with ASP's DataTag HomeBase to read DataTags, use the default settings.

If you're sending large amounts of data to the active window through ***ASPKey+***, you'll probably need to use **Flow Control**. This allows ***ASPKey+*** to ask the device sending data to temporarily hold off sending any more data while ***ASPKey+*** deals with the data it has already received. Once it's finished, ***ASPKey+*** then allows the device to send more data. ***ASPKey+*** supports both **Hardware** handshaking using the RS-232 RTS and CTS signals, and **Xon/Xoff** handshaking. Select whichever method the sending device uses, or **None** to disable handshaking.

Once you've set the serial port up properly, click the **OK** button.

DataTag Options



If you're reading DataTags with ***ASPKey+***, click on the **DataTag** tab to bring up the screen shown on the right.

The main decision is whether you want to output the data that's stored in the DataTag (**Send Data**), or to output only the DataTag ID number (**Send Tag ID only**). If you're using the Send Data option, you can elect whether to **Use Quotation Marks** around the data or not, and whether to drop the time and date (**Barcode Only**) if it was saved along with the data.

There are three options that control what happens when you insert a DataTag into the DataTag HomeBase. The first is to automatically download the data and then clear the data from the DataTag. Or, you can automatically download the data, but then prompt to clear the data from the DataTag. Finally, there's an option that doesn't download or clear the DataTag until user-defined hotkeys are pressed.

The serial ports on many computers can be set to run in **OverDrive Mode** here, which allows DataTag data to be downloaded many times faster than normal. Unfortunately, it's not possible to tell in advance whether any particular PC can operate correctly in overdrive mode, so you'll have to try it out. If you get errors when reading DataTags, simply turn overdrive mode back off.

For some applications, automatically sending data read from a DataTag to the currently active window might not be the most useful way to deal with the data. ***ASPKey+*** can be set to hold the data in memory, then to "release" the data when a user-specified "hotkey" is pressed. A different hotkey can be set to clear the DataTag.

To set a hotkey, click the **Use Hotkeys** box, then click in the input field to the right of **Download DataTag** or **Clear DataTag** and press the key combination you want to use. For example, to use **F11** as the download

hotkey, just press F11. To use ctrl-F11, press the control key, and then while holding it down, press the F11 key. **Shift** and **Alt** work the same way – hold down the shift or alt key (or both, if that's what you want to use), then press the required key.

You should take care not to use hotkey that already does something in your application – depending on exactly how your application has been written, its use of the hotkey may override ***ASPKey+***, or ***ASPKey+***'s use may override your application.

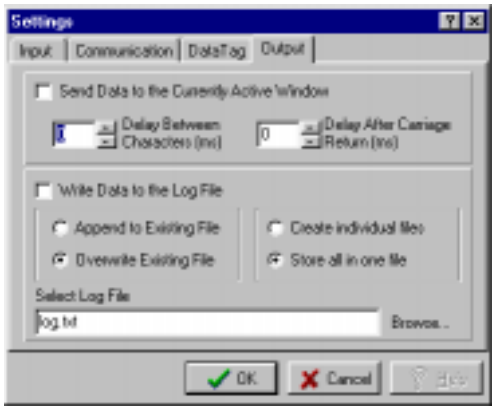
Finally, to clear a hotkey, just press the space bar.

Pressing the **Formatting Options** button brings up a list of options that are saved into the DataTag every time it's formatted. The options to **Append Date**, **Append Time** and **Include Seconds** are almost self-explanatory – you set these options to add date and/or time, with or without seconds, to every item stored in the DataTag.

The **Beeper Time** option sets the length of the beep that the scanner emits when a barcode or iButton is read, and the **Sleep Time** sets the amount of time that the scanner waits before turning off after a scan.

Output Options

The final thing you need to do is to decide what ***ASPKey+*** does with the data it receives – the options are to send the data to the active window, to save the data into a disk file, or both. This is done via the **Output** tab of the configuration screen, which is shown on the right.



The **Send Data to the Currently Active Window** option means that every character received by ***ASPKey+*** is passed on to the program that is currently active, just as if it was a key pressed on the keyboard. One important thing to be aware of if you use this facility – ***ASPKey+*** doesn't know which program to send the keypresses to, it just sends them to whichever program is active at the time the characters arrive on the serial port. It's up to you to ensure that the active program is always the program you want to send the data to.

To avoid sending data to a program faster than the program can accept it, you can set a **Delay Between Characters**, and/or a **Delay After Carriage Return** (ie ENTER). These delays are specified in milliseconds (thousandths of a second), and can be set to **0** to **99ms**. For many applications, you can leave these delays set to their defaults

of 0. If you notice that some characters seem to be getting lost during a download, increase these delays.

The other way of operating the ***ASPKey+*** program is to **Write Data To The Log File**, which saves the data to a disk file. If you're reading data from the serial port, the only option that applies is the name and location of the disk file, which is set at the **Select Log File** input field. Newly arrived data is always appended to any existing data that might be in the disk file in this mode.

If you're reading data from DataTags, however, there are a number of other options. You can store all downloads into a single file (**Store All In One File**), in which case you set the name and location of the disk file as described in the previous paragraph, or you can store the data from different DataTags into different files (**Create Individual Files**), in which case the filename used is the last eight characters of the DataTag number with **.tag** added to the end. You can also elect to append new data to the end of an existing file, or overwrite any previous data.

ASPKey+ observes file locking protocols, so if another program opens the disk file, ASPKey+ will buffer any further data that arrives, then append it to the file when the other program has finished with the file.

ASPKey+ in the System Tray

When you press the Minimize button on the ***ASPKey+*** window (the first button in the set of three in the top right corner of the ***ASPKey+*** window, as shown on the right), ASPKey+ is removed from the screen and appears in the system tray (next to the clock at the bottom right corner of the screen) as an icon. If ASPKey+ is configured to accept data from a serial port, this icon says **aspkey**, otherwise it says **datatag**.

If you right-click on the system tray icon, the menu on the right pops up. Selecting **Open** just re-opens the main ***ASPKey+*** screen, while **Settings** opens the Configuration screen, and **Exit**, as you would expect, terminates ***ASPKey+***.

To make working with DataTags easier, there are menu items here to Clear and Format DataTags, and to load programs into DataTags.

Finally, if you've set up ASPKey+ to use hotkeys, the **Save Data** and **Save Data As** menu items provide an alternative way to store data.

Using Serial Devices with ASPKey+

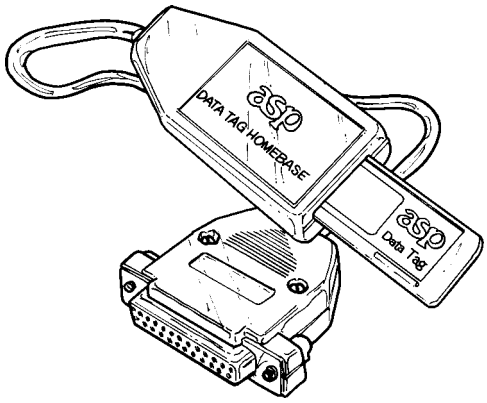
To read data from a device attached to an RS-232 port, go to the **Input** tab of the Configuration screen and select **Use Serial Communication Port (COM) as an input device**.

On the **Communication** tab, select the serial port that you will be using with the serial device, then press the **Advanced** button and ensure that the settings are appropriate for the input device.

Finally, on the **Output** tab, choose what you want to do with the data that ***ASPKey+*** receives, and set the delays if needed, and that's all there is to it - any data that arrives on the configured serial port will be sent to the currently active window, and/or a disk file.

Reading DataTags with ASPKey+

To read DataTags, as used with ASP's Palm Portable, DataGlove and ZapStore products, you'll need a **DataTag HomeBase**, as used pictured on the right. The DataTag HomeBase simply plugs into one of your PC's serial ports.



Next, you need to set up ***ASPKey+***.

On the **Input** tab, select **Use the DataTag HomeBase to read data or ID from DataTags**.

On the **Communication** tab, select the serial port that you plugged the ASP DataTag HomeBase into. Press the **Advanced** button, and ensure that the settings are as follows:

Bits per second	9600
Data bits	8
Parity	None

Stop Bits	1
Flow Control	None

On the **DataTag** tab, select **Send Data** or **Send Tag ID Only**, as appropriate for your application. Set your desired download and clear options. If your PC serial port supports it, you can set **Overdrive Mode** to speed up DataTag access. Then, set up the hotkeys if you'll be using them.

Finally, on the **Output** tab, choose what you want to do with the data that ***ASPKey+*** receives, and set the delays if needed.

Then close the configuration screen, minimize ***ASPKey+***, and you're ready to go! ***ASPKey+*** will shrink down into the system tray (next to the clock at the bottom right on your screen).

Using Hotkeys with DataTags

Unless the **Use HotKeys to Download and Clear DataTags** checkbox is set (on the **DataTag** tab of the Configuration screen), data from a DataTag will be sent to the currently active window as soon as the DataTag is inserted into the HomeBase. This may not be the most useful way for you to send the data to a program, so ***ASPKey+*** can be set up to hold the data until a user-specified key is pressed, by setting HotKeys.

As an example, check the **Use Hotkeys…** option, then set the **Download DataTag** hotkey to **Ctrl-F11** and the **Clear DataTag** hotkey to **Ctrl-F12**. Then, insert a DataTag containing data into the HomeBase. A blue **D** will flash over the system tray icon, indicating that the data has been downloaded from the DataTag and held by ***ASPKey+***. Then start up the program that you want to send the DataTag data to and press **Ctrl-F11** and the data will be sent to the application.

The blue **D** on the system tray icon will now stop flashing, to indicate that the data has been output, but that the DataTag still contains data that needs to be cleared. You can then press **Ctrl-F12** to clear the tag, and a blue **E** will appear over the system tray icon to indicate that an empty DataTag is in the HomeBase.

If you want to download the DataTag again instead of clearing it, just remove it, wait a second or so, and insert it into the HomeBase again.

DataTag Status

When it's configured to read DataTags, ***ASPKey+*** changes the icon displayed in the system tray to indicate the status of the program. Here's what the various tray icons mean:

ASPKey+ is idle, waiting for a DataTag to be inserted.

A DataTag has been inserted, and ***ASPKey+*** is downloading the data from it.

The DataTag in the HomeBase is empty.

There has been an error reading the DataTag, or an incorrect type of DataTag has been inserted.

ASPKey+ could not find a DataTag HomeBase on the selected port.

ASPKey+ also emits a beep when data has been downloaded from a DataTag, and when an empty DataTag is detected.

Using ZapStore with ASPKey+

To set up ***ASPKey+*** for use with ZapStore, click on the **Configure** button on ASPKey+'s main screen, or select **Settings…** from the **File** menu. Then, on the **Input** tab of the **Configuration** screen, select **Use the DataTag HomeBase to read data or ID from DataTags**.

On the **Communication** tab, select the COM port that the DataTag HomeBase is plugged into, then press the **Advanced** button and ensure that **Bits per second** is set to **9600**, **Data bits** is set to **8**, **Stop bits** is set to **1** and **Flow** control is set to **None**, then press the **OK** button to return to the **Communication** tab.

On the **DataTag** tab, select **Send Data**. Most likely, the **Use quotation marks** box should be unchecked, and the **Barcode Only** box should be checked, but this will depend on what your application software requires, and should be verified with your software supplier. Similarly, **Auto Download and Prompt before Clearing DataTag** is likely to be the most appropriate download method, but this should also be verified with your software supplier. You can try checking the **Talk to DataTag in OverDrive Mode** if you wish – see the **DataTag Options** section on page 5 for more details.

Still on the **DataTag** tab, press the **Formatting Options** button, then select the options relevant to your application. Most likely, you won't need to append the time or date, so make sure those boxes are not checked. The **Imperfect Barcodes** should be turned off, and the **Beeper Time** and **Sleep Time** should be left at their defaults of 1 and 10 respectively. Press the **OK** button to return to the **DataTag** tab. **Note:** The options set here are written to a DataTag *only* when the DataTag is formatted.

On the **Output** tab, select **Send Data to the Currently Active Window**, and set the **Delay Between Characters** and **Delay After Carriage Return** both to **0**. Ensure that the **Write Data to Log File** box is not checked.

Press the **OK** button to save the settings, then minimise ***ASPKey+*** and you're ready to go! In the next section, we describe how to download into your application.

Downloading from ZapStore using ASPKey+

To download data from the ZapStore to your application program, you first need to make sure that ASPKey+ is properly configured (see the previous section of this manual), and is running (in the system tray, next to the clock at the bottom right corner of the screen on your PC, you'll see a little icon that says **datatag**).

Next, go into the download section of the program you want to download the data into. Remove the DataTag from the ZapStore and insert it into your DataTag HomeBase, and the data stored in the DataTag will be automatically downloaded to your program. When the download is finished, a screen will pop up asking you whether you want to clear the data from the DataTag.

If the download was successful, you can clear the DataTag. Otherwise, remove the DataTag, go back to the download section of your application program, and re-insert the DataTag to download the data again.

Don't forget to clear the DataTag before putting it back into the ZapStore.

If you want to update or change the DataTag options, or set the time and date in the ZapStore, you can now format the DataTag by right-clicking on the ASPKey+ icon in the system tray – see the ***ASPKey+ in the System Tray*** section on page 7, and your ZapStore manual, for more details.

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Year 2000 Compliance Statement

When ***ASPKey+*** is used to read DataTag ID's, it does not use or process any date information, and it can therefore be considered compliant.

When ***ASPKey+*** is used to read data from a device attached to the serial port on your PC, it passes the data on to the PC without modification. It is your responsibility to ensure that compliant date information is output by the device sending data to the PC via ***ASPKey+***.

When ***ASPKey+*** is used to read data from DataTags, and the data stored in the DataTag contains date information written to the DataTag by an ASP product, the year will have been stored as two digits. ***ASPKey+*** converts such a two-digit year into a four-digit year using the "pivot" principle, with a pivot year of 1990. Years before the pivot year (ie 00 to 89) are assumed to be dates in the 21st century, and are converted to 2000 to 2089. Years from the pivot year onwards (ie 90 to 99) are assumed to be dates in the 20th century, and are converted to 1990 to 1999. This allows the combination of DataTag and ***ASPKey+*** to correctly handle dates between 1990 and 2089, including proper handling of all leap years within that range.

Note that it is your responsibility to ensure that your PC and application software can correctly handle dates from the year 2000 onwards – ***ASPKey+*** cannot compensate for any problems relating to your PC.