

Treonica Auto User Guide

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Introduction

Treonica Auto is a system software product for Palm OS smartphones. It integrates with Palm OS to bring you very slick control of the Auto-off feature of your device via three methods:

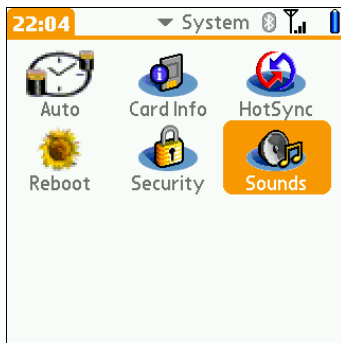
- a toggle hotkey accessible from any point in the Palm OS user experience
- automatic Auto-off disabling/enabling for chosen applications when they start/stop respectively
- manual Auto-off disabling/enabling from the program's simple user interface

All methods are available for use simultaneously yielding ultimate control.

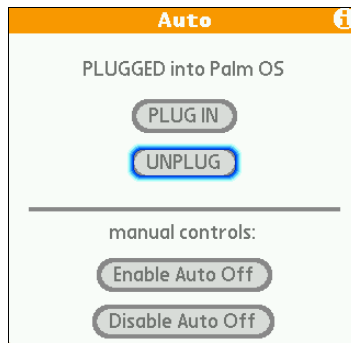
Audio/Visual indicators are provided to let you know what the software is doing.

Customizable features include:

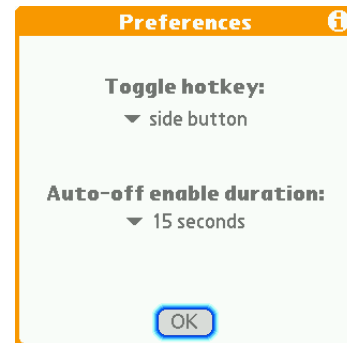
- 5 different hotkey keyboard/hardware button press combinations to invoke the toggle (left side button by default)
- a wide range of Auto-off enabling timeout durations (more than provided by the Palm OS Preferences panel)



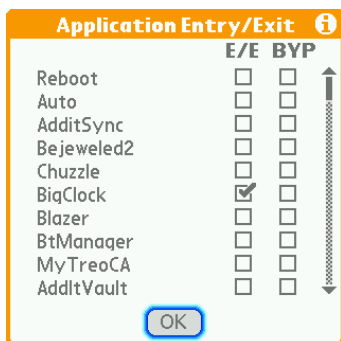
Treonica Auto and Treonica Reboot sitting in the System category on a Treo 680



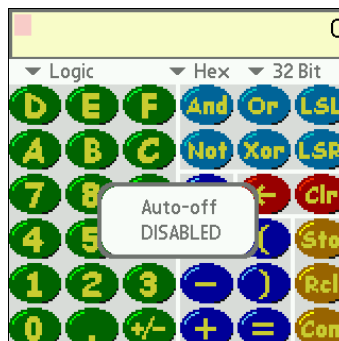
The main interface screen



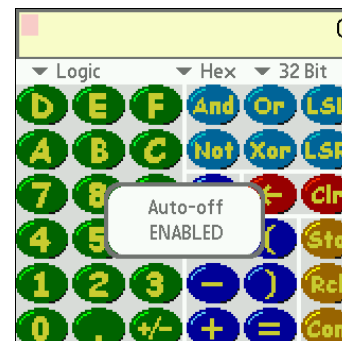
Obvious Preferences screen



Configuring an Application Entry/Exit – in this case for the BigClock application



Toggle hotkey splash screen, here being shown within the Parens engineering calculator



Toggle hotkey splash screen again, toggling to the opposite Auto-off state

Device Compatibility

This product was developed with a Palm Treo 680 running Palm OS 5.4. The product works on these three devices:

Palm Treo 680
Palm Treo 700p
Palm Treo 755p

It's reasonable to ask why the Palm Treo 650 isn't in this supported list, because it's very similar to the newer devices with a huge user base.

Unfortunately Access (formerly PalmSource) have made changes to the operating system's API that stop the same code working uniformly across all Treo models. A separate Treo 650 version of Treonica Auto V4.0 is being considered and an announcement will be made on our website accordingly.

A handheld (non Treo) version may be produced as well.

New Version 4.0 Features

The following new usability improvements have been incorporated into the v4.0 release (over the previous v3.02 release). There have been no bug fixes. In the first bullet point there is talk of resets and unintentional resets (i.e. crashes). It should be noted that nobody has ever observed Treonica Auto causing a crash for supported devices.

- If your device is reset, either intentionally or unintentionally (i.e. a crash) and Auto was 'PLUGGED into Palm OS' at the time, it will automatically plug itself back in when your device restarts. If it was 'UNPLUGGED from Palm OS' when the reset happened, it will remain in that state after your device restarts. With v3.02 if Auto was 'PLUGGED into Palm OS' at the time of a reset, after your device restarts it will not plug itself back in.
- After making any change to either Auto's own Auto-off enable duration, the toggle hotkey mapping or the application entry/exit table (when it's already 'PLUGGED into Palm OS'), that change will be effective immediately. With v3.02 you have to *UNPLUG* then *PLUG IN* again for the change to take effect.
- Application saved preferences will be used for all the user configurable parameters, such as those mentioned in the previous bullet point. This means all that data will be saved when you HotSync, so for example if you wanted to hard reset your device to clean it out properly or you simply wanted to remove Auto, your application entry/exit table and the other settings can be reloaded so you don't have to set them up again. With v3.02 application unsaved preferences are used for all user configurable parameters.

Installation If You Have A License Code

If you have a license code, install the file *auto.prc*. It will be placed in the *Unfiled* category, though you may wish to put it in *System* or another category of your choice.

When you first run Auto from your launcher the 'About' screen will appear prompting you to enter your license code. If you already copied your license code to the Palm clipboard, just tap 'Paste' and then 'Ok'. Alternatively tap 'Keyboard' if you want to enter the code manually. License codes can be quite long and entering them manually is error prone, so it's recommended that you first get the license code onto your device (by creating a Memopad entry for example), copy it to the Palm clipboard and then use the 'Paste' button.



Use the 'About' screen to enter your license code.

Treonica Reboot (*reboot.prc*) comes bundled in the zip archive you downloaded and is unlockable using the same license code. Users who like to be really thorough about things might want to install this. See the separate Treonica Reboot User Guide.

See the 'License' section on page 22 towards the end of this user guide.

Installation If You Don't Have A License Code

The Treonica Auto simulator (demo) is provided for users to see to see whether the product performs as claimed without having to purchase a license. Simply install the file *autod.prc*.

It will not actually control your Auto-off, but it will allow you to see the toggle hotkey splash screens, test application entry/exits and hear the system information beeps as described in the 'How To Use It' section. These audio/visual indicators guarantee that the real licensed version (*auto.prc*) will work properly with your particular device and installed base of software. The simulator allows you to verify if you really can control your device's Auto-off from any point in Palm OS - without being harassed to purchase a license.

The simulator is functionally identical to the real licensed version except that it does not include the new version 4.0 features.

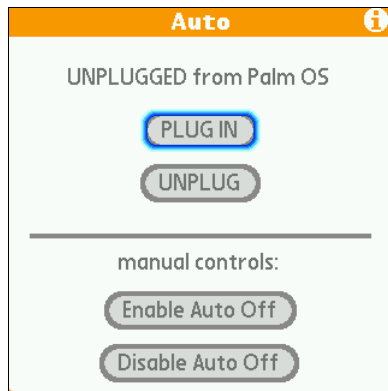
Note that there is no utility to be gained from keeping the simulator on your device other than for the above reason – it only simulates, it won't control your Auto-off

See the License section on page 22 towards the end of this user guide.

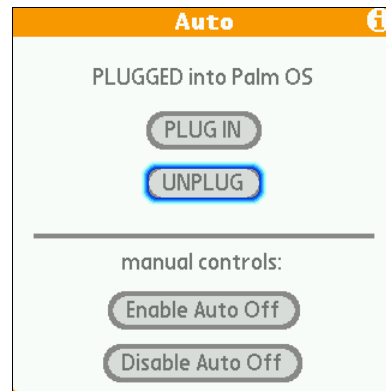
Reinstallation

NEVER install a copy of Treonica Auto on top of an already installed copy that's in the 'PLUGGED into Palm OS' state.

ALWAYS make sure that an already installed version is 'UNPLUGGED from Palm OS' before re-installing a new copy. If it's not, simply tap the *UNPLUG* button on the main interface screen.



CORRECT- you can reinstall when in this state



WRONG – you should not reinstall in this state, *UNPLUG* first

This instruction applies if you are installing the full version (*auto.prc*) on top of the simulation version (*autod.prc*), upgrading versions or if for some reason you are just installing the same version again.

You can install on top of an already installed version, but make sure its state is 'UNPLUGGED from Palm OS' beforehand.

You'll know what state the software is in because this is clearly shown as a text description at the top of the main interface screen.

Not following this advice will mean the new version you install is messed up from the moment it lands in your device's memory. This will manifest itself in the form of error messages when you tap buttons in the user interface and may be a reset as well. Your data or other applications are safe though, they will not be affected.

If you forget this advice by accident the best thing to do, is to delete *auto.prc* (or *autod.prc*) and all it's data via the launcher App->Delete menu, then re-install. If you want to be really thorough, you may want to reboot after deleting by using Treonica Reboot, before you re-install again. See the Treonica Reboot User Guide.

When reinstalling without deleting, Treonica Auto's own preferences (the toggle hotkey mapping, Auto-off enable duration and any application entry/exits) will be reused in the new installation. It's cleaner to delete the existing installation, though you lose any preferences you've set up, but that's not a big deal to set up again. See 'Reloading Your Settings'.

Uninstallation

For advanced users, there is nothing worse than installing an unknown, untrusted piece of software on your device, not knowing what it's done to your machine and then trying to get rid of it, not knowing what mess it's left behind.

You can be sure that if you try Treonica Auto and don't want it, you can remove it and be certain your device is in the same state it was before (or a better state if you use Treonica Reboot).

The completely clean orderly way to remove the product is:

- 1). *UNPLUG* it from Palm OS using the button on the main interface screen. You can omit this stage if it's already in the 'UNPLUGGED from Palm OS' state
- 2) Delete the application listed as 'Auto' (and all it's data) via the Palm OS launcher App->Delete menu. If you are using another launcher just delete *auto.prc* or *autod.prc* and all it's data.
- 3) Use Treonica Reboot to reboot (soft reset) your machine. You can also remove Treonica Reboot as well if you are paranoid. It's a good program to have handy though, because for some devices you can't reboot (soft reset) without taking off the battery cover (with the Treo 680 you actually have to take out the battery as well as the cover to do a soft reset)

Just doing steps 1) and 2) is generally ok though, but it's good practice to do step 3) too.

If you just do step 2) on it's own you will probably be ok, so the above is mentioned just to give a best practice guideline that guarantees a clean uninstallation.

Reloading Your Settings

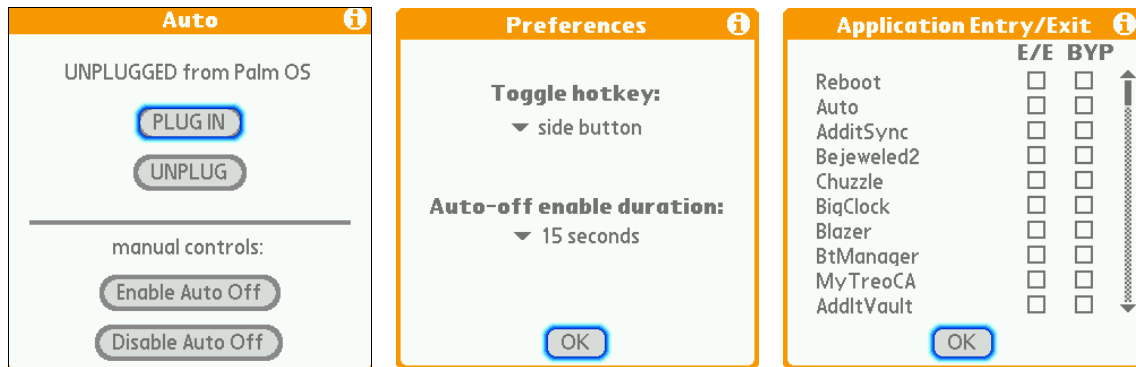
All your Treonica Auto settings are saved to a file called *Saved_Preferences.PRC* every time you HotSync - the Auto-off enabled duration, toggle hotkey mapping and application entry/exit table.

If Treonica Auto is deleted from your device this will also delete its settings. Should you install the software again, to avoid having to manually setup your previous settings, also install the file *Saved_Preferences.PRC*.

It's located in the *Backup* directory of your user profile directory for your Palm desktop installation. Note that *Saved_Preferences.PRC* is used to hold settings for other applications as well as Treonica Auto.

How To Use It

It's very simple. You can control your device's Auto-off in three different ways with this software and as it happens there are only three user interface screens as well:



The main user interface screen with manual controls

Select your toggle hotkey mapping and timeout duration

Set application entry/exits for any executables you want

The toggle hotkey and application entry/exit facilities are available any time the software is in the 'PLUGGED into Palm OS' state and obviously unavailable in the 'UNPLUGGED from Palm OS' state.

You can use the toggle hotkey from anywhere in Palm OS, which is really cool. As the name implies it switches your device from an Auto-off enabled state to an Auto-off disabled state or vice versa. By default the toggle hotkey is mapped to the left side button (i.e. left side button press & release, not HOLD which is another mapping), but you can also change that to any of the following:

side button HOLD (mapped to the voice recorder by default on the Treo 680)
 option key + DOWN
 shift key + DOWN
 center HOLD (mapped to the alert summary by default on the Treo 680)

If you map to 'side button HOLD' or 'center HOLD' on the Treo 680, you of course lose those default functions, so think whether they'll be important to you and what's the best mapping choice for the way you use your device.

You can also setup application entry/exits for certain applications where you think it would be beneficial to have the Auto-off disabled when they start. When those applications exit the Auto-off is automatically re-enabled to the duration specified in Treonica Auto's Auto-off enable duration setting in it's own Preferences screen.

You can also use the manual controls on the main interface screen as a pair of simple Auto-off enable/Auto-off disable buttons. These are available to you at all times. They don't require the software to be in the 'PLUGGED into Palm OS' state.

For all these three facilities, the software's own Auto-off enable duration setting is used, not the value displayed by the Palm OS Preferences panel.

You can leave Treonica Auto left 'PLUGGED into Palm OS' as long as you want. The code is efficient, there are no memory leaks and you won't notice it.

If you no longer wanted to use the toggle hotkey or the application entry/exit features you can simply hit UNPLUG and still the leave the product on your device, the manual controls are still available to you. Doing this would free up a small amount of memory from your device, typically much less than 1K.

There's a help summary on each screen (just hit the 'i' in the top right hand corner).

When Treonica Auto disables your device's Auto-off you hear two system information beeps. When it enables your Auto-off you hear one system information beep. If you are using the toggle hotkey you also see small splash screens on the display (two screens, one for each toggle state).

The only exceptions for these audio/visual indicators are if invoking the toggle hotkey:

- whilst on a call - the beeps are muted, but the splash screens still appear
- whilst using the camera, the splash screens don't appear, but you still get the beeps

NB: During a call if you were to use the hotkey to toggle to 'Auto-off Enabled' the device would not power off after the timeout interval has elapsed, because when you are on a call Palm OS considers you to be actively using the device. The timeout would only start counting when you ended the call and had no further interaction with the device.

Treonica Auto's default Auto-off enable duration is 15 seconds, so that when you first start using the software you now it's working without having to wait 1 minute or so, which is a more typical Auto-off duration. The idea is for the user to change this to something more suitable. Having said that a 15 second duration can be part of a good strategy for conserving power. See 'Auto-off Control Strategies'.

The User Interface – Minor Details

When you make changes to either the Preferences or the Application Entry/Exit screens, hit OK to save your changes. If you just hit a hardware button to change applications or go back to the launcher the product considers this to be a 'Cancel' so your changes will not be saved.

All the screens can be navigated with the 5-way rocker and menu key. For the Application Entry/Exit screen you have to tap a check box to select an application though.

On the main user interface screen because either the *PLUG IN* or *UNPLUG* button is inoperable, navigation of the buttons on that screen using the 5-way rocker will always skip one of those buttons.

On the main user interface screen you may think it makes more sense to have either the *PLUG IN* or the *UNPLUG* button greyed out as appropriate, but greying out user interface controls is not part of the Palm OS user interface guidelines. The way that pair of buttons work at the moment, one of them is left inoperable as appropriate, the active operable one is surrounded by a blue halo and the software's state is indicated in plain text at the top of the screen. This may be altered in a future release.

The screen shots for this user guide were taken on a Treo 680 with the *Zire* color theme.

Relationship between Treonica Auto and the Palm OS Preference Panel

When the software enables your Auto-off via any of its three methods, it will use the duration specified in its own Preferences screen (15 secs - 9 minutes), not the Palm OS Preferences panel specified duration (15 secs – 3 minutes).

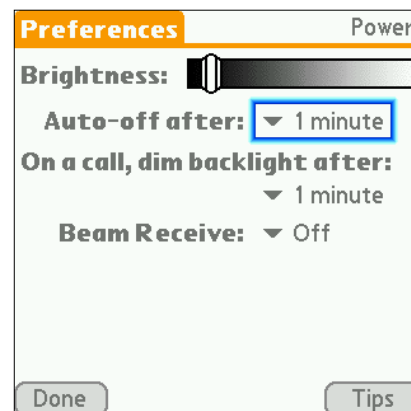
When Treonica Auto enables your Auto-off to a duration that's not possible to show in the Palm OS Preferences panel drop down control, for example 6 minutes (because it can only display 15 seconds – 3 minutes), whatever value the Palm OS Preferences panel drop down control shows is obviously not the value that the device is using.

If however Treonica Auto enables your Auto-off to a duration that the Palm OS Preference panel drop down control is capable of displaying, like 1 minute for example, then the Palm OS Preference panel will accurately reflect that duration.

If you used the Palm OS Preferences panel to set your Auto-off to any supported value and then go to the Treonica Auto Preference screen, that value will not necessarily be shown for the Auto-off enable duration (in Treonica Auto), because the software maintains its own preference value independent of the Palm OS Preferences panel value.

There is nothing to stop you using the Palm OS Preferences panel Auto-off control anytime you wish, whether Treonica Auto is in the 'Plugged into Palm OS' state or not, but remember that you must reactivate the Palm OS Preference panel drop down control for it to work.

Say for example you were using an Auto-off enable duration of 6 minutes within Treonica Auto, you enable the Auto-off (with the toggle hotkey for example), then you go to the Palm OS Preferences panel and see that the Auto-off duration shown there is 1 minute (remember that due to the reason mentioned above, that value is not accurate). If you hit *Done* at this point, the Auto-off duration will not be set back to 1 minute. You must reactivate (re-use) the drop down control and select 1 minute, even though it's already showing 1 minute and then hit *Done*. If you just hit *Done* without reusing the drop down control, the duration will be left unchanged at 6 minutes. This may sound confusing but actually it's kind of like a minor bug in the Palm OS Preferences panel; when you hit *Done* the value shown in the drop down is only saved and made effective if the drop down has been used, otherwise it does nothing.



Palm Preference panel Auto-off drop down control value does not take effect by hitting *Done* unless the control is reused.

Application Entry/Exit Support – General

This useful facility allows users to configure their Auto-off to be disabled when certain applications start and enabled when those applications finish. You can do this for third party applications you've installed yourself and the built in ROM based applications.

Simply find the application(s) in the Application Entry/Exit screen table, select the check box(s) in the E/E column, hit OK and then *PLUG IN* on the main screen if the software is not already in the 'PLUGGED into Palm OS' state.

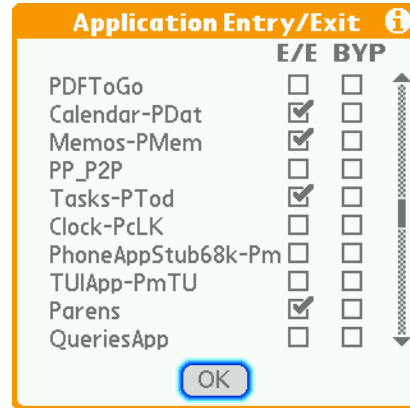
The rightmost column headed 'BYP' stands for 'BYPASS'; a cool facility that's only for use if instructed by Treonica Support - otherwise don't touch that dial!

Palm OS considers any database in it's memory with a type parameter of 'APPL' as an application. For completeness the Application Entry/Exit screen table shows all of them even though many are ROM based applications you would not have heard of.

Application Entry/Exit Support for ROM based Applications

Typically users will be more likely to configure entry/exits for third party applications they've installed themselves, but entry/exit support for ROM based applications is also provided.

When you configure an entry/exit for a ROM based application make sure what you've configured is what you think you've configured! For example, if you use the Memo Pad a lot and want an entry/exit for that, make sure you select 'Memos-Pmem' not 'Memo Pad', as that won't work. This is due to the software architecture of the ROM based applications. You think of them as separate executables but actually it's a bit more complex as shared libraries may be involved and what you think is the right application may not actually be what you want. It just requires a bit of experimentation to find the right executable.



3 examples of entry/exits for ROM based executables. (Parens is not ROM based)

Here are some more examples that may catch you out when setting entry/exits for ROM based applications:

You want an Entry/Exit for:

then configure:

Memo Pad
 Tasks/ To do List
 the calendar
 the basic calculator
 the main phone app

'Memos-Pmem'
 'Tasks-PTod'
 'Calendar-Pdat'
 'ScientificCalc'
 'PhoneAppHsPh'

NOT 'Memo Pad'
 NOT 'To Do List'

Application Entry/Exit Support for Documents To Go

This is also a ROM based executable, but note that with Documents to Go and it's component applications, it makes sense to set entry/exits for those specific applications rather than 'Documents To Go' itself, because that's just a shell that launches the component applications of the suite.

Consider: If you set the entry/exit for 'Documents To Go' itself, when that starts the Auto-off would be disabled, but when say Sheet To Go is invoked the Auto-off would be enabled again as Documents to Go has exited and an application switch has been made to a new application – which is unlikely to be the behaviour you want, most likely in that case you should have set the entry/exit on Sheet To Go (listed as 'SheetToGo' in Application Entry/Exit screen table).

So use entry/exits for Documents to Go and other ROM based applications with a little thought.

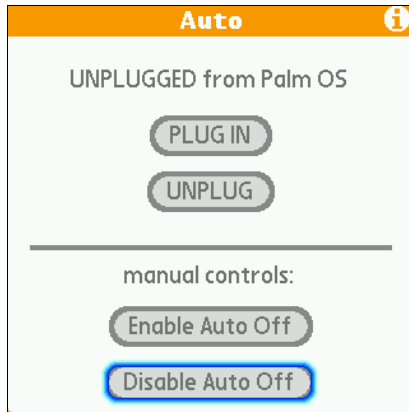
Combining Application Entry/Exits with the Toggle Hotkey

If you've set an entry/exit for an application and you are in that application and change your mind thinking that disabling the Auto-off for this particular application was not such a good idea, you can always invoke the toggle hotkey to enable it. When you exit the application the Auto-off will be enabled yet again because you set an entry/exit, but that won't matter.

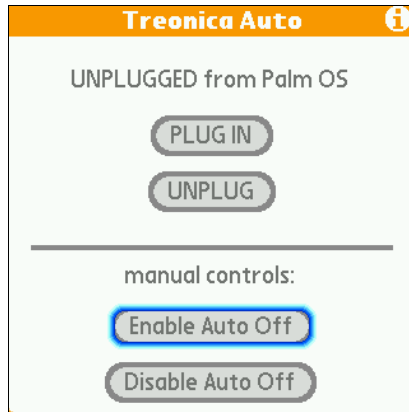
Using the toggle hotkey and application entry/exits together gives you great flexibility.

Using the Manual Controls

The main interface screen has a pair of manual controls to enable and disable your Auto-off. These can be used at any time regardless of how you're using the toggle hotkey and application entry/exits. The software does not have to be 'PLUGGED into Palm OS' for the manual controls to work.



The main screen with focus on the manual control disable button



The main screen with focus on the manual control enable button

Auto-off Control Strategies

Tightly controlling your Treo's Auto-off is one of best power management strategies to optimise your battery life and thereby standby time/talk time – which is blatantly uncompetitive with other smartphones on the market.

There is no ideal Auto-off duration even for a particular user, because the requirement will constantly vary depending on what you're doing with your device. That's why an easily accessible enable/disable Auto-off toggle is extremely valuable. Combined with the Application Entry/Exit facility and the manual controls you have an extremely thorough and flexible Auto-off control solution.

A good Auto-off strategy should find the right trade off between maximising battery life and maximising device availability (i.e. your device doesn't keep switching off¹ when you want it to stay on). That's what Treonica Auto is all about. – it gives you the facilities to do that . Here are some example strategies you may want to try:

- A very short Auto-off enable duration like 15 seconds with application entry exits for all or most of your commonly use applications.
- A very short Auto-off enable like 15 seconds with lots of use of the toggle. With the default mapping of the left side button, this feels very natural; just disable when you're going to use it for a while and enable when you want it to switch it off.
- Setting just a few application entry/exits for your most frequently used applications that need to have the device to stay on and using the toggle when you use less frequently used applications.
- Here's a simple one: Keep your Auto-off disabled by default (use the manual controls) then just use the power off/on button all the time!

You can probably think of a several more.

¹ What is commonly referred to as 'switching off' means putting your Treo into sleep mode where the screen goes blank and the device consumes minimal power – it's not actually 'off'.

Known Bugs, Limitations and Issues

There are some minor imperfections (bugs smaller than dust mites) with the applications table in the Application Entry/Exit screen – they have no effect on the software's functionality.

Contact and Support Information

For questions, feedback or anything else: support@treonica.com

If you're experiencing a problem, as well as your device type and OS version, list any third party software that you think might be significant; especially things that 'run in the background' or require any kind of activation step after installing.

License

Treonica Auto (*auto.prc*) requires a license code for the software to initialise itself and work. This code will also work for the bundled Treonica Reboot product (*reboot.prc*).

Licenses can be purchased from our website (www.treonica.com) or PalmGear (www.palmgear.com). Licenses purchased through our website are generated instantly upon checkout. For licenses purchased through PalmGear allow up to 24 hours for the code to be emailed to you.

If you are not happy with the software for any reason after purchasing, contact us for a full refund.

How the Software Works

Treonica Auto uses the Palm OS notification manager (see Code Design Decisions) to provide the bulk of its functionality – at least the cool part like the toggle hotkey and application entry/exits.

To use the correct terminology, the software must first 'register for notifications' from the operating system (and conversely 'unregister for notifications' when required). However, incorporating buttons on the main user interface labelled *Register/Unregister* would probably confuse users thinking it was something to do with paying for a registration, so instead we use the *PLUG IN / UNPLUG* analogy, a good way to look at it.

When you hit the *PLUG IN* button *auto.prc* registers for Palm OS notifications. That's when the software becomes active and 'live' if you like. In this state the product's code has to be flawless and super efficient or your device would die quickly – or worse die slowly with memory leaks.

In terms of extra resources needed when you tap *PLUG IN*, apart from the memory required by the executable image, Treonica Auto typically takes a few hundred bytes of extra memory from your device (less than 1K or more likely less than 512 bytes).

Treonica Auto uses Palm OS application saved preferences to persist user created settings i.e. the toggle hotkey mapping, Auto-off duration and application entry/exit table. For efficiency, Palm OS application unsaved preferences are used for other smaller more transient data items. Palm OS application saved preferences are sometimes used too lightly by developers, leading to longer HotSync times than necessary. See the Treonica Reboot User Guide for a brief explanation of Palm OS application unsaved vs. application saved preferences.

Code Design Decisions

To get the functionality, there were only 2 ways to do it:

- Palm OS notifications
- trap patch emulation (which would use notifications internally anyway)

The first option was chosen to eliminate any dependency on another host program like TealMaster to actually emulate the traps (HackMaster and X-Master don't work on Palm OS 5). This product uses notifications direct from the operating system.

The level of flexibility and power offered by Treonica Auto may seem a bit like overkill, but that's what it was meant to do – kill the Auto-off weakness in the Treo.

Document Conventions and Glossary

'the software' or 'the product' refers to Treonica Auto v4.0.

'Auto-off' refers the facility provide by Palm OS, which Treonica Auto can manipulate independently of the Preferences panel. Note the specific capitalization and hyphenation of the term, which is how Palm refer to it.

'Preferences panel' refers to the Palm OS Preferences panel in the System category containing (on the Treo 680) a screen called Power that has an Auto-off drop down control.

'control' is a term used in software development to indicate common user interface elements like buttons, check boxes, drop downs (as in the above definition), radio buttons etc.

'API' – stands for 'application programming interface', a term used in software development

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