Test Drive Report for palmOne Zire 31

As the evolution of the Zire 21, the Zire 31 inherits its predecessor's exterior design, but installs new features such as the faster processor, a color screen, and MP3 playback support.

Front	Rear
1. Power button	1. Stylus
2. Application key	2. Mounting slot for protective flip lid
3. 5-way Navigator	3. Reset
	4. Speaker

Top:
1. Stylus
2. Infrared port
3. SD slot
4. 3.5mm headphone jack

Bottom

Left:
1. Power supply port
2. HotSync USB port

Right

Exterior Design

With the exception of the changed button design, and rearranged locations of the HotSync USB port and power supply port, the Zire 31 looks completely familiar. Front panel color looks

exceedingly similar to that of the Zire 71, and is called 'Zindigo Blue' by palmOne. The entire rear shell is made of white plastic, with the surface specially processed for "that special feeling", with the rounded edges providing an extra measure of comfort. In addition, the rear shell is not painted, so there are no worries about the paint flaking in the heat and moist of summer.

To avoid scratching during transport, the Zire 31 comes with a translucent rubber flip lid ala Zire and Zire 21. This well-designed flip lid covers the front of the handheld seamlessly.

Different from the four buttoned design found in the Zire and Zire 21, the Zire 31 was designed with a 5-way navigator and two programmable application keys that launch the Calendar and Contacts programs by default, though users may reassign them according to their own set of preferences. The two buttons and 5-way navigator are not rigid and feel proper.

Like its predecessors, the Zire 31's power button is located on the bottom left of the front facing panel. You'll never be able to poke the reset button hidden far within the rear panel with the thick stylus, so a smaller pin is needed.

As mentioned above, the designers of the Zire 31 have made certain layout changes to the input ports. Both the HotSync USB port and power supply port are now at the upper left side, instead of the top as seen in previous Zire models. This should in practice be a little more convenient than before.

Looking at the top of the Zire 31, we see a black translucent plastic cover that houses an IR port, 3.5mm headphone jack, SD slot, and stylus silo.
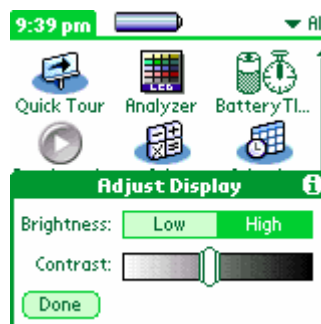
The Zire 31 may be the same as the Zire 21 in size, both measuring 4.4 x 2.9 x 0.6 inch, but it is a bit heavier at the weight of 4.1 oz, light enough to forget that it was ever in your shirt pocket!

Screen

Instead of the 4bit grayscale screen seen in the Zire and Zire 21, the Zire 31 uses a color display, for a bit of history in low-end Zire series handhelds.
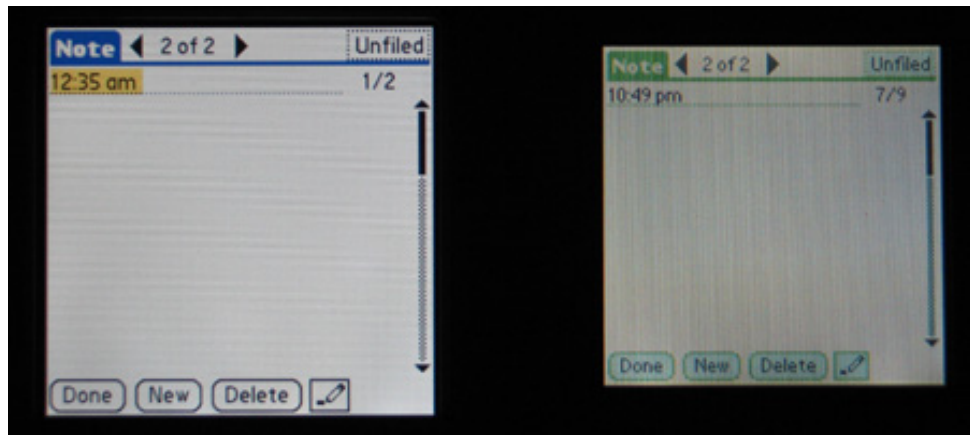
As a entry-level model, the STN LCD display of the Zire 31 still only supports the resolution of 160*160. PalmOne claims that this display 'supports thousands of colors', and it should be 4096 (12bit). Brightness adjustments come courtesy of two simple options: High and Low. Though the Zire 31 allows users to adjust the display contrast, according to our tests, the optimum is achieved using the default settings, i.e. at the middle of the scale (see picture below).

Left: Zire 72   Right: Zire 31

Left: Zire 72   Right: Zire 31

No matter how you put it, there is still a gap between the 160*160 STN LCD and a 320*320 TFT LCD. It is, however, still a great leap forward for the Zire 31, since it has walked out from the black and white realm of the Zire and Zire 21, and into a world of color even though it is a low-end handheld.

Hardware Configuration

The Zire 31 uses a 200MHz Intel ARM-based processor that works at nearly twice the speed of the 126 MHz TI OMAP 311 ARM-based processor in the Zire 21. This is partnered to the built-in memory that is updated from previous 8MB in the Zire 21 to current 16MB, 14MB of which is offered to the user, so you don't have to worry about memory shortages in the short run.

Also built-into the Zire 31 is an SD slot for storage expansion when the built-in memory runs short. This is a much needed improvement as memory shortages in the Zire and Zire 21 often caused users to delete valuable data they were reluctant to let go of. Good thing, too, that the built-in SD slot is versatile, supporting SD and MMC cards, as well as SDIO devices. Therefore, SDIO equipped devices - such as SD Bluetooth, SD Wi-Fi, and SD Cam products - can all work with the Zire 31.
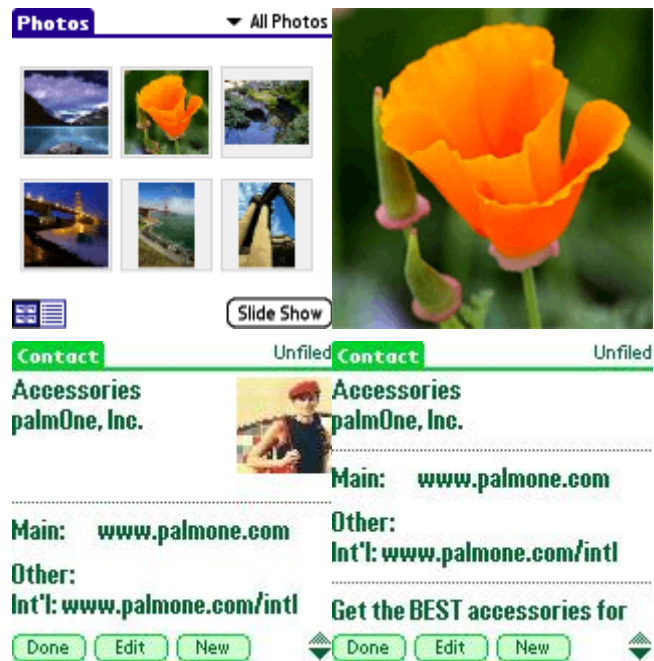
Software Applications

Palm OS 5.2.8

The OS used in the Zire 31 is the Palm OS 5.2.8, the same found in the Tungsten T3, Tungsten E, and Zire 72. As for the accompanying software, besides the preinstalled programs such as Contacts, Calendar, World Clock, Memos, Tasks, Calculator, Expense, Prefs, and Note Pad, the Zire 31 also provides more on the bundled CD, such as RealOne Mobile Player, palmOne Photos, Audible Player, Handmark Splash Money, Handmark Mobile DB, powerOne Calculator, Palm Reader, AddIt, and Solitaire. For syncing action with PC, the bundled CD also includes the Palm Desktop for Windows and Mac.

palmOne Photos

To better utilize the color display, palmOne includes the program 'palmOne Photos' with the CD. The program acts as a photo album for your collection in the Zire 31's memory; and will allow for the addition of images from memory/storage card into the contact list as contact portraits. The program will automatically convert the picture into a 30*30 sized image and saves it directly to the Contacts database. Though the resolution is low, it still helps users to quickly recognize an unfamiliar contact.

HotSync

Taking into consideration the fact that more and more users are turning to Microsoft Office nowadays, palmOne is providing a purpose built synchronization program. We were prompted during the initial installation process, about whether or not to synchronize with Palm Desktop or Microsoft Office Outlook. The program is flexible, so if made the wrong selection, or want to change things for the heck of it, all you have to do is place the CD into the optical drive, and select "Change your synchronization method" option when prompted, and follow the instructions.

World Clock

It wouldn't be called a World Clock if it couldn't display world time. What is good about this program is that it can display time even when the Zire 31 is powered off with a simple press of the center key on the 5-way navigator. The time will be displayed for 3 seconds, after which the system will automatically shut things off. Because there is no other content except for the time information so a quick glance is all that's needed.
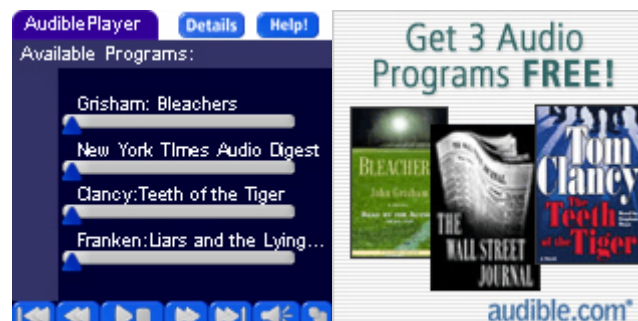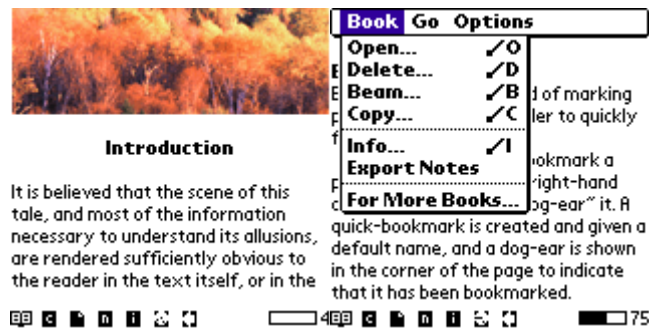

The Expense is a simple financing program, helping users record daily expenses.
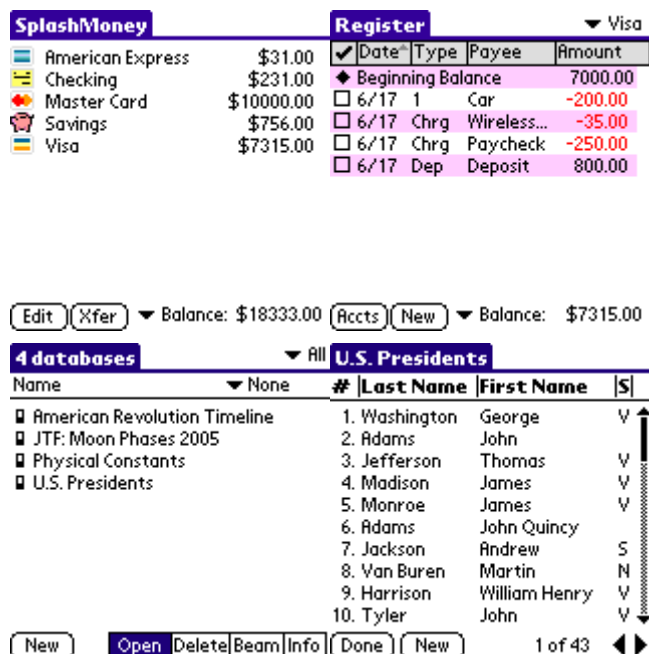

Audible Player

The Audible Player can be regarded as an electronic book reader. Users can download custom ebooks from the Internet and transfer them to the Zire 31. The Audible Player will then read the content to you at the time of your choosing. Though the books included with the program are free, most downloaded from the Internet will cost extra.
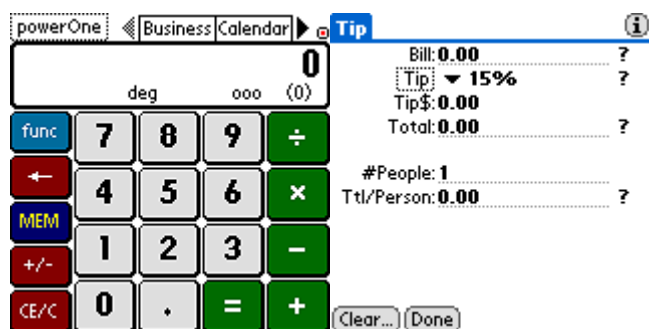
Handmark Splash Money

The Handmark Splash Money is a strong financing program, while the Handmark Mobile DB is a database program for handhelds, similar to Microsoft Access for desktop PCs.

powerOne Calculator

The powerOne Calculator can be regarded as an enhanced version of the original calculator within the OS. Besides the expected addition, subtraction, multiplication, and division, it also supports complex business and scientific calculations.

AddIt

The AddIt is more a Palm OS program catalog than a program. By downloading the latest catalog, you can browse and search for the latest software information locally on your Palm OS-based handheld. If your handheld has access to the Internet, you can directly download trial version programs or purchase others listed in the catalog.

Multimedia

The Zire 31 is perhaps the most affordable handheld to support both video and audio playback. With the included RealOne Mobile Player, the Zire 31 will play music in MP3 and Real Audio format. It also automatically searches for music files in storage, allows for the generation of play lists, and will play music in the background.

Besides, this powerful player also sports a good power management system that automatically turns the screen off after a preset amount of time.

The Zire 31 also supports multimedia API, which in turned allowed for the proper usage of the very handy and popular MMPlayer in the device. Unfortunately, due to the 160*160 resolution screen, videos with higher resolutions may not appear properly within the boundaries of the video area, often extending and covering parts of the window, but the flaw goes away in full screen mode. In our tests, normal video clips play fine in MMPlayer, but image reproduction is only of an acceptable quality due to the low resolution. At any rate, it is good for a low-end handheld.

Battery Life

The Zire 31 uses a built-in 900mAH rechargeable Li-ion battery that is not accessible without some unscrewing, but rates well for an entry-level handheld. Running PIM programs for 30 minutes per day will keep the Zire 31 alive for 4 to 5 days. Video games and videos will definitely shorten that time. Continuous MP3 playback will do you good for about 4 hours.

Benchmark Testing

pBench 1.0: A benchmark program used to benchmark computing capabilities of Palm OS-based handhelds from many aspects. This program gives results in percentages, which are compared to the results of the Palm m505 (all results of the Palm m505 are set to 100%).

pBench 1.0	
Arithmetics	311%
Heap Management	234%
Data Access	1126%
Graphics	939%

Palm OS Benchmark 1.0: A benchmark program used to test the overall computing speed of Palm OS-based handhelds by calculating the required time that the tested handhelds take to finish the same computing tasks.   Zire 31 ends up with 11 (the less the better).

Speedy 3.4: Also a benchmark program used to test the overall computing speed of Palm OS-based handhelds, including computing test, memory test, and graphics test. Based on the time that the tested handhelds need to finish the same computing tasks, it gives scores accordingly to indicate their computing speeds.   The Zire 31 scored 1181.

Benchmark 2.0: Again, a benchmark program used to test the overall computing speed of Palm OS-based handhelds. Like pBench 1.0, it also gives scores in percentages, but the scores are compared to those of the Palm IIIe/IIIxe.   Zire 31 achieved a 271%.