Welcome to AquaScape

Thank you for choosing AquaScape.   You've chosen a leading edge product to add to your screensaver collection.   AquaScape is a fully featured Windows 95 compliant 32-bit screensaver package that brings the joys and enchantments of an aquarium right to your desktop.   It is very easy to setup and you can start enjoying it immediately.   If you're interested, you'll find there's much more to AquaScape than meets the eye.   You can customize nearly everything if you wish to do so.

AquaScape features:

  * Several program models to take advantage of   maximum performance on anything from a slow 486 to a fast Pentium
  * Runs well in both low-res and hi-res modes and supports both 256 and true color graphics
  * Vast customization - Almost every aspect of the program can be easily customized and most options can be changed dynamically while the aquarium is running
  * Both standard rectangular aquarium and circular undersea views, from partial to full-screen
  * *ZoomView* technology brings you panning and zoom-in views
  * Realistic air tubes and bubbles, complete with sound effects
  * Extensive plant life and landscaping abilities
  * 23 real tropical/saltwater fish and 10 other animated creatures to choose from
  * 4 colors of water to choose from
  * 5 colors of gravel to choose from plus multi-colored gravel
  * 3 colors of tank decor to choose from
  * Bonus Image gallery containing 15 beautiful hi-res aquatic images
  * Support for password protection
  * Also included is a beginner's guide to starting your own real aquarium

This version of AquaScape is shareware.   Most features are enabled for this demo release, but you must register to receive the commercial version with all the features.   See the Registration section for more information.

For easy instructions on installing AquaScape, see the Getting Started section.

Once you've installed AquaScape, you can easily configure just about every aspect of the program. Most settings can be changed dynamically while the aquarium is running using different keyboard keys. Press F1 while the program is running for a list of keys you can use to change settings.   You can also make permanent changes using the configuration program.   The rest of this guide focuses on all of the features and options available to you.

Don't forget to visit us on the World Wide Web at http://www.multipro.com/runpro

Getting Started

Installing AquaScape

Run Setup.

Configuring AquaScape

Almost every aspect concerning AquaScape's performance and features may be configured.   The configuration program can be run by running Configure, available from the AquaScape menu on your start menu or through explorer in your AquaScape folder.   You may also configure AquaScape by bringing up the Win95 screen saver settings (by right-clicking your desktop, choosing properties, and selecting the screen saver tab), choosing AquaScape, and clicking Configure.   Any changes you make in the configuration will be saved automatically when you exit.

You can also make changes to AquaScape while it's running, using the keyboard keys.   For a list of settings you can change, press F1 while the aquarium is running.   For example, if you wanted to make the gravel green, you could simply press 1 while the aquarium is running.   Note, any changes you make while the aquarium is running will be temporary.   To make permanent changes, run Configure as outlined above.

Running AquaScape

If you chose to have AquaScape setup as your default screen saver when you installed it, AquaScape will automatically run when your system is idle for a while.   Otherwise, you can set AquaScape as your default screen saver by right-clicking your desktop, choosing properties, selecting the screen saver tab, and choosing AquaScape in the screen saver list.

You can also run AquaScape anytime you want by choosing it in your start menu or running it from explorer.

Exiting AquaScape

If AquaScape is invoked as a screensaver, simply moving the mouse will cause it to exit.   You can also press the Esc key to exit.   If AquaScape is run from the start menu or from explorer, AquaScape will only exit when you hit the Esc key.

Program Models

AquaScape has several built in program models that automatically set all other options according to a certain theme.   For more information about the options mentioned below, right-click any configuration item in AquaScape.

Important Note: The biggest impact factor on performance (using 8-bit 256 color mode) can not be set by the program models, as some graphics cards do not support changing color modes.   If your screen normally runs in 8-bit mode, you'll enjoy maximum performance, usually twice that of a higher color mode. If your screen runs in 16-bit or 24-bit color, AquaScape can attempt to force 8-bit color while running. Check 'Use 8-bit 256 color mode if possible' to enable this setting.

AquaScape comes with the following preset program models:

Ultra-Lite: Equips AquaScape with the fewest features and options, requiring the least memory and CPU power.   Only a few small fish are loaded; water, bubbles, and plants are turned off; and the screen mode is set at the lowest resolution.   With these settings, you'll get the maximum frame rate (animations per second), the fastest loading time, and the lowest memory usage, but you'll get the fewest features AquaScape has to offer.

Lite: Equips AquaScape with typical features.   A few more fish, plants, and a couple animated creatures are used in the medium-resolution screen mode.   Best used when faster loading and low memory usage outweigh bells and whistles.

Normal: Equips AquaScape with standard options.   These settings should allow AquaScape to run well on a fast 486 or low-end Pentium.   Most features are enabled including water, plants, and bubbles, but not always at their highest settings.   The main difference between this mode and the Full mode is that not all fish and animated creatures are loaded.

Full: Equips AquaScape will all features.   All fish and creatures are loaded.   It uses about 10-12 MB of memory in 8-bit color mode.   On slower computers, this may not be the ideal setting when AquaScape is primarily used as a screensaver, as it takes longer to load and requires more memory.

The above program models are preset and cannot be changed.   They are a good place to start if you're trying to maximize both performance and features according to your system.   After you've chosen a model, as soon as you change any of the options, the program model is set to custom.

Gravel

You can equip AquaScape with various colors of gravel, or none at all.   Five colors are available: green, red, tan, blue, and purple.   Additionally, random multi-colored gravel can be selected.   Multi-colored gravel adds greater depth to the bottom of the tank.   You can change the gravel settings at any time while the aquarium is running.   Keys 1-5 choose the gravel color while pressing 6 generates random multi-colored gravel.   The ` key turns gravel off.

Tank Decor

Several types of tank decor are available.   Two colors of wood and 1 shade of marble add a border around the tank.   You can change the decor settings at any time while the aquarium is running.   Keys 7-9 select the decor color while 0 turns it off.   Note that using the decor in the round aquarium view requires more processing power and might result in slower animation performance on slower computers.

Tank Size

The tank size is variable and has 4 possible settings from small to full screen.   On slower computers, a smaller tank yields a higher animation rate.   You can change the tank size at any time while the aquarium is running.   Key F5 toggles through the various sizes.

Tank Layout

You have the choice of either a rectangle or round aquarium.   The rectangle view creates the look of a standard aquarium landscape while the round view gives you the sense of looking through an undersea window.   The round view requires more processing power yielding a slower animation rate on slower computers.   Key F6 toggles the view style while the aquarium is running.

Water Color

You can change the water to full blue, dark blue, or black (none).   Turning the water off yields a slightly higher animation rate on slower computers.   You can change the water color while the aquarium is running by pressing key F3.   To turn the water off, press F4.

Bubbles

Bubbles are a familiar part of most aquariums, as air needs to be pumped through the water to maintain a high concentration of oxygen.   AquaScape includes various bubble settings to give you added flexibility.

Airtube Bubbles: Checking this item will cause the air tubes and bubbles to be displayed.   The F8 key toggles this setting while the aquarium is running.

Tank Bubbles: Checking this item will cause bubbles to randomly float up throughout the tank. The F9 key toggles this setting while the aquarium is running.

Bubbles SFX: Now you too can enjoy the sound of an aquarium right from your desktop.   The F10 key toggles the bubble sound effects while the aquarium is running.

Amount of Bubbles: The amount of bubbles can be configured.   'A few' yields a slight trickle of bubbles while 'An absurd amount' yields an absurd amount of bubbles.   Key F7 cycles through these settings while the aquarium is running.   Bubbles require more processing power than many of the other features. The first two settings don't affect the animation rate too much while an absurd amount of bubbles could significantly reduce the animation rate even on fast computers.

Try turning off the water and turning on the bubbles sometime.   Cool effect.

Screen Mode

Of all the settings, the screen mode has more impact on the animation performance and memory requirements than any other.   AquaScape was designed and optimized for the 800*600 screen mode in 8-bit 256 colors.   Running AquaScape in any higher resolution or higher color depth will not yield any better results than this mode.

Several screen modes are available to accommodate the speeds of various computer systems and uses of AquaScape.   320*240 and 400*300 are low-res modes that require the least memory and should yield good animation performance even on slower computers.   640*480 and 800*600 are beautiful hi-res modes you can enjoy if you have a more powerful PC or don't mind a slower animation rate.   Even a slow 486 should be able to yield good performance in the low-res modes while a Pentium 133 may be necessary for the highest animation rate in 800*600 mode with all the features turned on.

The animation rate is really the frame rate (number of animations per second).   If you are more interested in a high frame rate, with 20 frames/sec being the best frame rate, you may have to skimp on some of the features like screen resolution, plants, and bubbles.   If you are more interested in the graphics and features, you may have to sacrifice the frame rate on slower computers.

You can nearly double the animation performance and cut the memory use in half by running in 8-bit color.   If your Windows system is already running in this mode, you'll enjoy maximum performance with AquaScape.   Otherwise, AquaScape can attempt to run in this mode and then restore the previous mode afterwards.   This may not be possible on some graphic cards, so you'll have to try it to see if it works with your graphics card.   AquaScape gives you the option of testing this capability when you install it.

If you wish to disable any kind of screen changes, check 'Don't change scrn mode'.

Drive Space Tip: If you are trying to conserve drive space and you are positive you will always run AquaScape in the hi-res modes (640*480 and higher), you can opt to delete the lo-res graphics files which will save you about 1.5 MB of drive space.   Similarly, if you always run in the lo-res mode, you can delete the hi-res graphics files, saving 6.2 MB.   The graphics files are titled lores*.* and hires*.*.   Finally, registered users may opt to delete the Image Gallery pictures, which are all the files in the Gallery subfolder, saving 3 MB.

Performance Tip: The graphics have been optimized for the 800*600 and 400*300 screen modes.   The 320*240 or 640*480 modes use only slightly less memory and might actually take a little longer to load. These latter modes are provided mainly to increase the animation performance on slower computers. Also note that any kind of screen mode change regarding color depth or screen resolution will cause AquaScape to take a little longer to load as screen changes tend to give even Win95 the fits.

** To see what frame rate AquaScape is running at, press F while the aquarium is running.

Other Settings

Activate Zoom Camera: This effect will change the viewpoint from that of the entire aquarium to that of a camera panning randomly throughout the tank while zooming in and out.   Pressing key Z will toggle this feature while the aquarium is running.   When in zoom mode, you can use the arrow keys to influence the camera direction and the + and - keys to zoom in and out.   Pressing Enter while in zoom mode will freeze the camera movement.   While the camera is still, you can still move the camera around and zoom in and out using the previously mentioned keys.

Random Changes: This setting will cause AquaScape to change a random setting once every 5 minutes. This is a good idea if you want increased variety and it will also help protect your monitor from screen burn-in. Pressing key C will toggle this feature while the aquarium is running.   Warning: On some systems, enabling this setting might cause problems including system lock-ups.   If this happens, please discontinue use of this feature.

Aquarium Always On Top: Enable this setting to hide the mouse, Win95 start bar, and any other applications that try to stay on top of the desktop such as application launchers and toolbars.   Pressing key O will toggle this feature while the aquarium is running.

Real Fish Options

The Real Fish page allows you to configurable various options for the fish.   You can use these settings to reduce the number of fish, enabling AquaScape to load faster and use less memory.   You can also use these settings to create a particular theme of fish.   Now you'll even have the freedom of mixing freshwater fish and saltwater fish, as well as aggressive and non-aggressive fish.

As you move the mouse over a fish, the cat may attack it (just kidding), an image of the fish in proper scale will come up in the center window with a description of the fish.   In the unregistered version, unavailable fish will appear in black and white on the main page, but will show up in color in the center window.

Random: Causes AquaScape to load different fish every time it loads.   If this box is checked, all the individual fish settings will be ignored.

All: Click to easily select or deselect all fish.

Fish Checkboxes and Max Fields: To enable an individual fish, check its checkbox.   To specify a maximum amount of an individual fish, enter a number in its 'Max' field.

Total Max Fish: To set a limit on the total amount of fish that can be on-screen at once, enter a number in this field.   A high number of fish on-screen might reduce the animation rate even on fast computers.   14 is a good solid number.   Try 30-40 small fish such as the cardinal tetra sometime for a neat effect.

Themes: Several preset themes are available so you can easily change all the fish settings at once according to a certain theme, and you can your own themes if you wish.   Click the + button to add or save a theme, and - button to delete the currently selected theme.   You cannot delete preset themes. Note, once a theme is saved, if you make any changes to it, you must click the + button again or your changes will not be saved in the theme.

Other Creatures

Besides the 23 real fish, 10 additional special 'creatures' are included with AquaScape.   These 10 creatures are fully animated.   To enable a creature to be loaded with AquaScape, click its checkbox. You can then enter a maximum amount you'd like the creature to appear on screen at once.   Most of these creatures are larger than the fish so setting the maximum to more than 5 for any given creature may be over doing it.

The Sign: Well, the sign isn't exactly a creature, but it does give you the ability to say whatever you want in your tank.   You can also choose from several preset sign messages which are often popular in real aquariums.   In addition, you can choose to place the sign in the back or front of the tank.   Try to position it so that some plants are around it for a neat effect.

The Treasure Chest: This treasure chest has a mind of its own.   Periodically, it will open to expose its treasure and release some air bubbles.   You can place it in the front or back.   Surrounding it with plants yields a nice view.

Performance Tip: If you're concerned about performance such as loading time and memory usage, choose these creatures sparingly.   Because they are fully animated, they use about 3-5 times the memory of a single fish and thus will take longer to load.

Plant Life

Plants are an essential part of a real aquarium, whether real or fake, as they add variety, shelter, and food for the fish.   Four types of plants with two views each are available to decorate your aquatic landscape. You can completely customize the size, location, and depth of up to 20 plants.

To Add a Plant: Click on a small plant thumbnail below the tank.   Your new plant will appear somewhere in the tank above.   You can then move the plant by clicking and dragging it in the tank.

To Move a Plant: All plants appearing in the aquarium preview can be repositioned.   Just click the plant you want to move.   The chosen plant will change colors.   Simply drag the plant to its new location. Note: If a plant is in the back, it may be difficult to reach it.   You will need to temporarily move foreground plants away or set them to the background to reach some background plants.

To Delete a Plant: Click on the desired plant in the tank.   You may have to temporarily move other plants to the background to reach the plant you want.   Once you've chosen a plant, the plant will appear either lighter or a different color.   Once chosen, click the scissors button to delete the plant.

To Delete All Plants: Click the X button.

To Copy a Plant: Once you've customized a plant, you can duplicate it by clicking the copy button to the left of the scissors button.

To Resize a Plant: Click on the desired plant and then use the + and - magnifying glass buttons to enlarge or reduce the size of the plant.

To Change the Depth of a Plant: The depth of a plant refers to the distance of the plant in the tank. Plants may be configured to lie in the front, middle, or back of the tank.   Plants in the back of the tank will not require additional processing to draw as they are drawn only once on the backdrop and are not redrawn every frame.   If you have a lot of plants, try placing some in the back to improve animation performance.

To Generate a Random Landscape: You can either generate a permanent random landscape that will be used when AquaScape is run, or you can have AquaScape generate a different landscape every time it's run.   To do the latter, click 'Random each time'.   For the former, click the Random button below the + and - buttons.   Once a plant landscape is generated, you can perform all the above mentioned customizations on any of the plants.   In addition, you can generate a random plant landscape while the aquarium is running by pressing key R.   To toggle the plants on and off, press P.

Themes: The plant Themes work similar to the fish themes on the fish page.   Several preset themes are available.   To add or save a custom theme, click the + button.   To delete the currently select theme, click the - button.   Preset themes cannot be deleted.

Image Gallery

The image gallery contains fifteen high-resolution 24-bit true color aquatic-related images.   Each image can be enlarged by left-clicking it.   To set the image as your desktop wallpaper, right-click it.   In addition, you can choose to have it zoom out when viewing the enlarged image.

Well, ok, the cat picture might not seem wildly aquatic, but the cat **is** on a waterbed.   The cat's name is Dagwood and he is my (somewhat) faithful pet.

You currently must be running in 15-bit or higher color mode to view the images best.

<u>NOTE</u>: The images in the image gallery are for personal use only, and are **not** royalty-free.   Duplication in any form for any reason other than for personal use is strictly prohibited.   Usage in publications may be granted if authorization is obtained first.   Low fee extended licenses for commercial use are available for individual images from Run Productions.

Aquarium Guide

The Aquarium Guide provides information on helping you get started in setting up a real aquarium if you wish to do so.   To display a topic, just click its title.

Order Information

The demo version of AquaScape has been released as shareware.   This gives you the chance to evaluate it before purchasing.   Most, but not all of the features are included in the demo version.   The registered, commercial version of AquaScape includes these additional bonus surprise awards:

  * 10 additional real fish, for a total of 23 for you to choose from!
  * 5 additional fully animated creatures, for a total of 10 exciting 'special' creatures, each with lots of personality!
  * 15 beautiful 24-bit color hi-res (1024*768) aquatic images, great for use as wallpaper!
  * A customizable underwater sign!
  * Nearly a dozen undocumented secrets.
  * A bonus guide to helping you get started in setting up your own real aquarium!

AquaScape is available for only $19.95 plus $3.60 S/H*.

* Special Internet Discount Available:

The Internet allows us to save on shipping, handling, and materials cost. To pass these savings on to you, those who elect to receive the registered version via the Internet can avoid paying the $3.60 S/H cost. To be eligible for this discount, you may order using any of the following methods, but you must be reachable by email and agree to download the registered version from our web site (you'll be emailed with instructions).   This also results in greater efficiency and delivery speed.

Orders outside the U.S. and Canada must add $5 ($28.55 total) if you want to receive the registered version via mail.

Several ordering methods are available:

TO PAY BY CREDIT CARD,

Run Productions has contracted with NorthStar Solutions to handle credit card orders, resulting in faster processing and greater efficiency. Please contact NorthStar solutions for credit card orders.   Note however, that technical support is not available from NorthStar Solutions.

NorthStar Solutions may be reached via:

Phone: Call 1-800-699-6395 (US) or 1-803-699-6395 (International) from 10 am - 8 pm EST, Mon-Sat.
EMail: 71561.2751@compuserve.com
Secure Internet Form: http://ourworld.compuserve.com/homepages/starmail/664.htm
Fax: Dial 1-803-699-5465 (International) 24 hours a day.

Please have your address, credit card #, expiration date, and email address (if applicable) handy.

TO PAY BY CHECK OR MONEY ORDER,

Please use the Order Form to mail a check or money order in $U.S. to Run Productions.

Order Form

This form is provided as a convenience to ordering AquaScape using a check or money order.   For information on ordering using a credit card, via telephone, email, or online, please see the Order Information section.

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          -------A Q U A S C A P E   O R D E R   F O R M-------

Name:_____

Address: _____

City:_____  State/Province:_____

ZIP/Postal Code:_____  Country:_____

Phone #: (    ) _____  Email:_____

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| Quantity | Product Description           |  Price Each |  Total  |
+----------+-------------------------------+-------------+---------+
|          | AquaScape                     |     $19.95  |         |
+----------+-------------------------------+-------------+---------+

                                    Sub Total   $_____

                    Shipping & handling ($3.60 each)   $_____

International Shipping outside U.S. or Canada ($5.00 each)   $_____

                                    Grand Total   $_____
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Print this form and send a check/money order in $U.S. to:

Run Productions
P.O. Box 338
Cookeville, TN 38501 USA

Thanks!

Contact Information

Run Productions may be contacted via:

Email Steve Barber at: runpro@multipro.com

or

Internet: http://www.multipro.com/runpro

or

Snail mail:
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Cookeville, TN 38501

We appreciate any comments, suggestions, or any other feedback you have to offer!

Further Development

AquaScape 0.9 (beta) is the first public release of AquaScape.   For the version 1.0 release, it is hoped to eliminate any bugs that crawl into 0.9.   In addition, a few more features are currently on the drawing board for implementation into version 1.0 or later.   These include:

* Better viewing of the Image Gallery on systems running 256 colors
* Faster loading and less memory and hard drive usage
* DirectX and MMX support, which could significantly improve animation performance
* Display of a preview image in the Win95 screen saver settings dialog box
* More extensive fish animation including moving fins
* I suppose an un-install utility may be needed in some extreme circumstances
* More stable memory manager
* If I have time, I'd also like to write some fishy music to accompany the screensaver

Please contact Run Productions if you notice any unsightly bugs in this version or you have any ideas for upcoming releases.

Attention Developers, Photographers, Musicians, Aquarium Enthusiasts, and other Creative Geniuses: Earn $$$!

If AquaScape does well, an extension or plus package will probably be developed.   This package is hoped to consist of a melting pot of various aquarium-related arts including additional fish, animated creatures, aquatic plants, elaborate sets, fishy music, and maybe a couple additional guide sections for AquaScape, as well as 40 or more additional high quality 24-bit aquatic images for use in the Image Gallery or as wallpaper.   If you're interested in helping me develop some of these materials and are very creative, please contact me for further information.   **Royalties** will be paid to all authors whose works are used in this package.   The work must be YOURS.   If it is based on clipart or any other existing type of art, you must have the proper license and rights to distribute it, including electronically.

Troubleshooting

When starting AquaScape, if it reports fatal error messages or locks up your system, it is most likely due to forcing a 256-color video mode when your system is running in 16-bit or 24-bit color. This can be easily corrected by running the configuration program and disabling the "Attempt to run in 256 colors" checkbox.

If AquaScape locks up or reports fatal error messages after running for a while, it is most likely due to the 'Random Changes' feature.   On some systems, use of the random changes feature has reported in sporadic lockups.   This feature is still being developed and is hoped to be more stable in the next release.

If AquaScape locks up or reports fatal error messages after numerous dynamic changes (such as changing the size or shape of the aquarium, toggling the zoom camera, changing the water color, etc.), it is most likely due to a memory leak in the memory manager.   We are working on a workaround for this problem.   Meanwhile, try and limit the number of dynamic changes to a few per session.   On some systems, you can make an infinite amount of changes without any problems, while on others, just a few changes can cause bedlam.

For information on fine tuning AquaScape for maximum performance, see the Performance Tips section.

If you experience any other problems, please contact Run Productions.

Performance Tips

In order for you to get the most enjoyment out of AquaScape, we've compiled a list of tips that will help you fine-tune both your computer and AquaScape for maximum graphics performance.

AquaScape's performance will vary greatly from computer to computer.   While most computer systems in the same class perform similarly, graphics cards' performance vary tremendously.
AquaScape uses extensive graphics animation and image manipulation, thus its performance is directly dependent on your graphics card.   When it comes to graphics and animation, a Pentium 90 with a fast graphics card may well outperform even a Pentium 166 with a slow graphics card.   Fast graphics cards usually rely on fast graphics memory and onboard acceleration techniques to take a load off the main processor .   The fact of the matter is, every graphics card varies tremendously in speed, acceleration techniques, and the type of graphics memory used.   You'll need to experiment with all of the following suggestions to maximize performance with your particular computer and graphics card.

To determine exactly how well AquaScape is performing, press **F** while the aquarium is running to view the animation frame rate, which is the number of animation frames/second.   12 or more frame/second is a good frame rate with 20 (maximum) being ideal.

1. First, ensure that graphics acceleration is set to **full** in Windows 95/NT.   This can be verified by opening the control panel, choosing system and then the performance tab, clicking graphics, and making sure that hardware acceleration is set to full.   This will enable the use of the graphics card's services for work that the main processor would normally have to handle.   Each graphics card varies in the acceleration services it offers.

2. Probably the most significant factor affecting animation performance is the video mode color depth. **Color depth** refers to the amount of colors your screen can display at once and is usually measured in bits/pixel.   8-bit color depth results in the simultaneous display of 256 colors, requiring the least memory and usually the smoothest animation.   Many systems today run in 16-bit or 24-bit color which allows for more colors, but at the sacrifice of speed and memory usage.   AquaScape has been optimized for use in the **8-bit 256 color** mode.   Running in any higher color depth will not yield better graphics and will probably result in slower performance and more memory usage.   You can determine and alter your color depth by right-clicking the desktop background, choosing properties, and clicking the settings tab.   16-bit color is ideal for normal system usage, but 8-bit color is best for animation and games.   If your system normally runs in 16-bit color, AquaScape can attempt to temporarily change to a 8-bit 256 color mode while running and then restore your normal mode upon exit.   To enable this, run the AquaScape Configuration, and check the '**Try 8-bit 256 color mode**.' **Note** however, that some graphics cards do not support dynamic mode changes, so enabling this setting may cause your computer to lock up.   If this happens, run the AquaScape Configuration again and disable this setting.   If AquaScape can run in 256 colors, the animation performance could be double that of a 16-bit or 24-bit mode.   A few graphics cards actually perform better in a higher color depth, so you might want to experiment with different color depth modes, but higher color modes will always require more memory.

3. Another very significant factor affecting animation performance is the screen resolution.   While AquaScape can run in any screen resolution, it offers 4 preset resolutions which offer varying degrees of resolution and clarity.   320*240 is the lowest quality and is fairly blocky, but usually offers the fastest animation rate.   400*300 is a little better quality.   640*480 is significantly better than the previous two, but requires more memory and processing power.   800*600 is the optimum resolution and the resolution for which AquaScape has been designed around.   Experiment with the different resolutions. If you want better graphics, choose a higher resolution, but you may have to skimp on animation performance, depending on how fast your computer and graphics card are.   Usually, running in 400*300 can result in up to twice the animation performance of 800*600.

4. Once you've determined which color depth and screen resolution you want AquaScape to run in, you

can further fine-tune performance by toggling water, plants, and bubbles on/off.   Plants tend to affect the performance more than the other factors.

5. The rectangular tank generally requires less processing power than the circular tank.   Similarly, reducing the size of the tank may increase the frame rate slightly.   On a few systems, animation performance is actually best with the largest, full-screen tank with no border.   It depends on your graphics card and its acceleration techniques.

6. For a good start on maximizing animation performance, choose the Ultra-Lite program model from the AquaScape Configuration.   Beyond that, experiment to determine which features affect the animation performance the most with your graphics card and computer.