

SolSys 1.1 - July 14th, 1994

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SolSys is a shareware MicroSoft Windows 3.x program that displays the current position of the nine planets in our Solar System in an icon. You can specify the icon's title to display the current time and/or date in **many** different formats, or specify it to show the orbital degree position of any planet(s) you wish. You can show from 1 to all 9 planets at once, and select how many of them to show. This is an interesting icon-program for all amateur astronomers or for anyone who is curious about the universe around them.

Simply use the Program Manager to create a New Program Icon in the group of your choice and set the *Working Directory* to the subdirectory where you installed the program files. You may place the files in the subdirectory of your choice, but the software **must** be able to find it's SOLSYS.INI file there.

If it cannot find the .INI file, then the **About** box will be displayed *each and every time* you start **SolSys**. See the section [Troubleshooting](#) for more information.

I also recommend placing the Program Icon in the **Startup** group so it loads every time you start Windows.

If you don't already have the file **BWCC.DLL**, make sure you copy it to your Windows SYSTEM subdirectory and erase any other older copies of it. See the file BWCC.TXT for more information.

Before you use **Solsys**, you might want to tell it what background color you want to use. Black is, of course, the default. You might also want to use the "always on top" feature to keep the icon visible at all times, and use the "preserve icon's screen position" feature to keep the icon in the same screen location each time you start Windows.

The Planet Size and Sun size options let you change the size of the planets and the Sun in the icon.

The Orbit Selection box lets you choose how many planets to display in the icon at once.

Once you have finished setting the above options, you will probably want to have a look at how you can change the icon's title.

You can change the **size** of each **planet** from one pixel to two pixels (the default). Please note, however, that the scale of the Solar System is exaggerated when the larger pixel sizes are used, but the icon is easier to view from a distance this way.

You can change the **size** of the **Sun** just like you can change the size of each planet. The size of the Sun can be changed to either "None", 1 pixel, 2 pixels or 4 pixels (the default). Please note, however, that the scale of the Solar System is exaggerated when the larger pixel sizes are used, but the icon is easier to view from a distance this way.

If the Sun size is set to "None", no Sun is drawn. This makes it **much** easier to view the planets when they're positioned very close to each other.

You can select which **planets** to display using the *Orbit Selection* box. The default is *Show the Inner Planets*, showing the positions of Mercury, Venus, Earth and Mars. You can also select *Show the Outer Planets* to show Jupiter, Saturn, Uranus, Neptune and the Pluto/Charon double-planet system.

If you wish, you can choose to display only one planet, all the planets at once, or any combination in between. Just select the first planet and the last planet you wish to see, and **SolSys** will display them.

You can change the **title** beneath the icon to whatever you like. More importantly, you can have the time and/or date, and other information, displayed here as well.

The **About** box has the default icon title set to "**M.~g1 V.~g2 E.~g3 M.~g4**", which is a special "code" to display the current orbital positions of Mercury, Venus, Earth and Mars. Note how you can add spaces between the various options to cause them to "wrap" down to the next icon title line, if desired.

If you prefer, you can change the title to be just a simple word or two, like "Our Solar System". This may be necessary to work with some screen savers.

All the available options are listed below:

Clock options:

- ~1 =12-hour format
- ~2 =24-hour format
- ~a ="am" or "pm"
- ~A = "AM" or "PM"
- ~p = "a" or "p"
- ~P = "A" or "P"
- ~w = Weekday name as "Mon", "Tue", etc.
- ~W = Weekday name as "Monday", "Tuesday", etc.
- ~m = Month name as "Jan", "Feb", etc.
- ~M = Month name as "January", "February", etc.
- ~h = Month number (1-12)
- ~d = Day of the month number (1-31)
- ~y =Year as "94", etc. (Year without the century)
- ~Y = Year as "1994", etc. (Year with the century)
- ~o =Ordinal suffix of "Day of the month" as "st", "nd", "rd", "th", etc. (as in 1st, 2nd, 3rd, 4th, etc.)

Other options:

- ~g1 = Show Mercury's orbital degree position (Use ~G1 to the nearest 1/10th)
Use the numbers 1-9 to specify other planets (i.e. Earth is 3)
Zero degrees is to the right, 90 degrees is at the top, etc.
- ~r1 = Show Mercury's Right Ascension in hh,mm format. (~R is the same as ~r)
Use the numbers 1-9 to specify other planets (i.e. Mars is 4)
Note: Of course, Earth (3) has no meaning.
- ~E1 = Show Mercury's Declination in degs,mins,secs
Use the numbers 1-9 to specify other planets (i.e. Mars is 4)
Note: Of course, Earth (3) has no meaning.

Example icon titles:

Title:	Displays as:
"M.~g1 V.~g2 E.~g3 M.~g4"	M.79° V.332° E.138° M.307°

"~1~a ~w ~m ~d~o"	9:05pm Thu Jul 14th
"~2 ~W ~m ~d~o"	21:05 Thursday Jul 14th
"~1~A"	9:05PM
"~W ~M ~d ~Y"	Thursday July 14 1994
"~y.~h.~d"	94.07.14
"Our Solar System"	Our Solar System

Feel free to experiment with different combinations to suit your taste.

You can select one of many different **background colors**. The default is black, but you can select white or a shade of gray if you prefer. The "transparent" color allows you to display the icon with no background, appearing on top of whatever is beneath it.

You can click the *Icon is always on top of windows* button **on** to have the **SolSys** icon stay visible when other windows are covering it. When on, the icon will always appear "on top of" the other windows instead of being "hidden" beneath them.

You can click the *Preserve icon's screen position* button **on** to have the **SolSys** icon remain in the same position on the screen the next time you start Windows. Usually, icons appear beside each other on the bottom of the screen in the order that they are listed in the Startup group. This option, however, lets you move the icon to any place on the screen and it will appear there instead of with the other icons.

You can set the **colors** of the planets by changing the Red, Green and Blue values to the ones you want. Each color value is from 0 (no color) to 255 (full color). By mixing and matching the values, you can create any color you wish.

When you select the **Current Date/Time** window, the current date, time and icon are displayed in a small window and updated once a second.

Press the Minimize button in the upper right corner to shrink the window back to an icon.

Planet	Mass (e24 kg)	Equatorial Radius (km)	Average Mean Density (g/cm ³)	Distance From Sun (AU=1.496e8km)
Mercury	0.33022	2439	5.43	0.38
Venus	4.8690	6052	5.24	0.72
Earth	5.9742	6378.140	5.515	1.00
Mars	0.64191	3393.4	3.94	1.52
Jupiter	1898.8	71398	1.33	5.20
Saturn	568.50	60000	0.70	9.5
Uranus	86.625	25400	1.30	19.2
Neptune	102.78	24300	1.76	30.0
Pluto	0.015	1500	1.1	39.5

Satellite/s (°)	Radius (km)	Orbital Period (days)	Inclination to planet equator
(none)			
(none)			
Moon	1738	27.321661	18.28 - 28.58
(I) Phobos	13.5 x 10.8 x 9.4	0.31891023	1.0
(II) Deimos	7.5 x 6.1 x 5.5	1.2624407	0.9 - 2.7
(I) Io	1815	1.769137786	0.04
(II) Europa	1569	3.551181041	0.47
(III) Ganymede	2631	7.15455296	0.21
(IV) Callisto	2400	16.6890184	0.51
(V) Amalthea	135 x 83 x 75	0.49817905	0.40
(I) Mimas	196	0.942421813	1.53
(II) Enceladus	250	1.370217855	0.00
(III) Tethys	530	1.887802160	1.86
(IV) Dione	560	2.736914742	0.02
(V) Rhea	765	4.517500436	0.35
(VI) Titan	2575	15.94542068	0.33
(VII) Hyperion	205 x 130 x 110	21.2766088	0.43
(VIII) Iapetus	730	79.3301825	14.72
Phoebe		550.48 (Retro)	177
(I) Ariel	665	2.52037935	0.3

(II)	Umbriel	555	4.1441772	0.36
(III)	Titania	800	8.7058717	0.14
(IV)	Oberon	815	13.4632389	0.10
(V)	Miranda	160	1.41347925	4.2
(I)	Triton	1900	5.8768433 (R)	159.00
(II)	Nereid	150	360.2	27.6
(I)	Charon	1000 (?)	6.3871	94

Data from the 74th Edition [1993-1994] of the CRC Handbook of Chemistry and Physics

In the default configuration, **SolSys** displays a clock beneath the icon. Since this will automatically update the icon's title once per minute, this may cause some **screen savers**, which can sense such activity, to never activate. A simple solution is to change the *Icon Title* field in the **About** box to some simple word or words, such as "Our Solar System". You will not be able to use **SolSys**'s clock feature (although you could still display the date), but your screen savers should work again.

Look for EARTHSxx.ZIP, a Windows icon that shows the current sunlit side of Earth, GREDSpxx.ZIP, a Windows icon that shows the current position of Jupiter's Great Red Spot and the four Galilean Satellites, and MARSICxx.ZIP, a Windows icon that shows the current view of the planet Mars. All are available at the Internet FTP site **oak.oakland.edu** and it's mirrors, **ftp.cica.indiana.edu** and it's mirrors, and at the Software Creations BBS **(508) 365-2359 (2400,N,8,1)**, all in the USA. All users receive the shareware versions of these programs when they register.

The current versions are **EARTHS41.ZIP**, **GREDSpxx.ZIP** and **MARSIC27.ZIP**.

Print out the file ORDER.FRM to get a quick order form for registering **SolSys**. This shareware version is not cripple-ware, nag-ware or free-ware, although it will remind you every 5 times to register until the evaluation period expires. When you do register, you will receive the latest executable version that allows **UNLIMITED** use of the program with no reminder box and no expiration.

All future versions/upgrades of this program are **FREE** to registered users. When a new shareware version becomes available, just download it and copy the new files to the registered version's subdirectory. It's that simple!

The cost of the diskette and the mailing charges are all included in the **US \$10** registration fee. Personal checks, money orders and American Express traveler's checks are all accepted (sorry, I do not yet accept credit card orders). You also receive the full Borland C++ 3.1 source code and Windows resource files used to make this program as well. The source code for each future version will be available **free** for registered users.

If you find **SolSys** useful, please upload it to other bulletin boards and/or Internet FTP sites so other people can enjoy it, too!

SolSys 1.1 - Order Form

Return this form along with US \$10 to:

W. Scott Thoman
41 Lee Road
Dryden, NY 13053 -USA-

Registered users are entitled to ALL upgrades AT NO EXTRA COST!
When a new shareware version becomes available, download it and
copy the new files to your registered version's subdirectory.
It's that simple!

You will receive the latest executable version PLUS the Borland
C++ 3.1 source code and Windows resource files on the disk size
you specify below. Personal checks, money orders and American
Express traveler's checks are all accepted. (Sorry, I do not
yet accept credit card orders). You will also receive the
shareware version of three other related icon-programs, one for
the planet Earth (EarthSun; EARTHS41.ZIP), one for Jupiter
(GRedSpot; GREDSPP37.ZIP) and one for the planet Mars (MarsIcon;
MARSIC27.ZIP)

Name _____

Address _____

Internet/CompuServe Address: _____

Can I e-mail it to you? ___ .ZIP file ___ UUENCODEd ___ No

Where did you hear about SolSys? _____

Disk size: ___ 5.25" ___ 3.5"

Comments: _____

THANK YOU!

If you get the **About** box each and every time you start the program, make **sure** you have the program icon's *Working Directory* set to the directory where you have the SOLSYS.EXE file. This allows the program to properly find it's .INI file. Make sure your SOLSYS.INI file is in the same subdirectory as the SOLSYS.EXE file; if it isn't, move it to that subdirectory. This is the recommended way to keep all of **SolSys**'s files together.

If you prefer, you may also set the *Working Directory* to your Windows subdirectory explicitly, or just leave it blank to have it default to your Windows subdirectory. Again, just make **sure** that SOLSYS.INI is, indeed, located there.

Finally, make sure the .INI file is marked as read/write (this is the default); do **NOT** mark this file as read-only.

Many thanks go to **Mike Andersson** (anderss@u.washington.edu) for beta-testing the initial release. Thanks also to **Eric Rickin** (erickin@umich.edu) for pointing me in the right direction, namely to **Don LeClair** (71534.3255@compuserve.com) for help on doing transparent backgrounds and having icons stay "always on top". Thanks to **Mike Andersson** (anderss@u.washington.edu) for the planetary and satellite data.

Hi Mom and Dad, Grandma and Grandpa, Brian, Joe, and my wife, Robin.

SolSys - Revision History

07/14/94 Version 1.1 - Added preserve icon's screen position feature.

02/18/94 Version 1.0 - Initial Release.

Any suggestions, bugs, ideas, complaints? Let me know what you think of this program so I can improve it! Please include the version number you are using in all correspondence; this is version 1.1.

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Thank you for using SolSys!

If you're familiar with the idea behind Shareware, then you know that Shareware is the ultimate in **money-back guarantees**.

Most money-back guarantees work like this: You pay for the product and then have some period of time to try it out and see whether or not you like it. If you don't like it or find that it doesn't do what you need, you return it (undamaged) and at some point - which might take months - you get your money back. Some software companies won't even let you try their product! In order to qualify for a refund, the diskette envelope must have an unbroken seal. With these "licensing" agreements, you only qualify for your money back if you haven't tried the product. How absurd!

Shareware is very different. With Shareware, you get to **try it** for a limited time, **without spending a penny**. If you decide not to continue using it, you throw it away and forget all about it. No paperwork, phone calls, or correspondence to waste your valuable time.

Software authors who use the Shareware method of distribution feel that Shareware is the **best** way to try a product. You are able to try it on your own system(s), in your own special work environment, with no sales people looking over your shoulder. Have you ever purchased a car and realized that if you could have test driven it for 30 days your purchase decision might have been different? With Shareware, these problems can be avoided - you **do** have a 30 day test-drive!

After trying a Shareware product and deciding to continue to use it, then - and only then - do you pay for it. Not only that, but Shareware is traditionally **much less expensive** simply because you are paying for the software, not the advertising and marketing that comprises the majority of the cost of most software (a one-page ad in PC Magazine, one time, can cost upwards of \$20,000). If the try-before-you-buy concept sounds like an ideal way to make your purchase decisions, you're right!

Some companies burden their products with annoying copy protection schemes because they don't trust their users. Shareware developers not only don't use copy protection, they **freely distribute** their products because they trust their users.

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Shareware is a distribution method, **not** a type of software.

Shareware is produced by accomplished programmers, just like retail software. There is good and bad Shareware, just as there is good and bad retail software. The primary difference between Shareware and retail software is that with Shareware you know if it's good or bad **before** you pay for it. Registration of Shareware products, in addition to being required, is also an incentive for programmers to continue to produce quality software for the Shareware market.

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Thank you for your support!

