The Lights Go Down
User's Manual

Contents:

Notes for non-English users

This is the English version of a program which was originally written in German.
For the time being (October 1994), these programs are available in German and English Versions.

I will assist you if you would like to translate these programs into other languages. You will need a word-processor capable of reading and writing RTF Files (like MS Word or Word for Windows). A program like Borland's Resource Workshop would be a great help.
If you translate the programs, you will receive a percentage of each registration fee for programs sold in that language.

Hinweise für deutschsprachige Anwender

Dies ist die englische Übersetzung eines deutschen Programms.

Sie können sowohl die Shareware- als auch die Vollversion sowohl auf deutsch als auch auf englisch erhalten.

Falls Sie diese Programme in eine weitere Sprache übersetzen möchten, bin ich Ihnen gerne behilflich.
Sie benötigen eine Textverarbeitung, die RTF-Dateien lesen und schreiben kann (z.B. Microsoft Word oder Word for Windows). Ein Resource-Editor wie der Resource Workshop von Borland wäre hilfreich.

Sie erhalten dann einen bestimmten Prozentsatz der Registrierungsgebühr für jede Registrierung der von Ihnen übersetzten Programmversion.

Quick Start

A little preface first
This is the English version of a German program.
This manual is the result of a collaboration between Thomas Hövel, the programmer, and David Stewart, who assisted in preparation of the English language version.

And now some useful hints
The Randomizer runs other screen-savers for a specific period of time, which gives a variety of effects. To activate the Randomizer, just press 'R', when the LGD window is activated, until the word "Randomizer" is highlighted in the list box on the left of the window. Alternatively, you can use the Saver Menu (Alt,S) or the mouse.

Using Windows <TM> 3.1
Using Windows 3.1, you should then quit LGD (Alt-F4). Run the Control Panel, open the Desktop and select "LGD Loader" as your screen-saver. Choose the length of time that should elapse before LGD should be started.

Using Windows <TM> 3.0
Windows 3.0 doesn't feature an integrated screen-saver. Therefore, LGD has to be loaded. Start LGD, set up your favourite screen-saver (e.g. Randomizer), set up the delay (Alt-E), and minimise LGD.
If you want LGD to be loaded each time you start Windows, you have to specify LGD in your WIN.INI file. See Loading LGD

Using the Mouse
The List box on the left side of LGD's main window lets you select a screen-saver (single click), lets you open the Options Window of a screen-saver (double click), and lets you run the selected screen-saver (single click with the right button anywhere in the list box).

There are further hints on each and every screen-saver. When options are offered, you may change the effects of the screen-savers.

How do I register?

Registered Users should ignore this section!

Notes on Registration and Information about Shareware can be accessed via the Read Me! Icon in the UL-TOMat Group.

There you'll find the prices and an order form which you can print out.

How do I use LGD?

Using the Mouse: In the list box (on the left of LGD's main window), a single click will select a screen-saver. The three buttons - Options, Info, and Demo - give easy access to the most important functions. Additionally, double-clicking in the list box will open the Options dialogue (if one is available) of the selected screen-saver.
Clicking the right mouse button anywhere in the list box will run the high-lighted screen-saver (it doesn't matter which screen-saver you click - the selection won't change; the high-lighted screen-saver will run).

Using the Keyboard: There are hot keys for all major functions.

F1:	Help
Alt-D:	Demo (Run Saver) (or **F2**)
Alt-P:	Options (or **F3**)
Alt-I:	Info about Saver (or **F4**)
Alt-E:	Delay

Choose screen-savers using the cursor keys or by pressing the first letter of the name. If this letter is not unique, type it several times, until the wanted saver is high-lighted.

More information about available options

If you are using Windows <TM> 3.1, continue reading for hints on Windows 3.1

If you want LGD to be activated each time you start Windows, edit the file WIN.INI. Locate the line beginning with 'LOAD=' and add LGD to it. You may have to include the path for LGD.
This will work with Windows 3.1, too, but better solutions are available.

Example:
    LOAD=clock.exe c:\win\ultomat\lgd.exe

LGD and Windows 3.1

Method 1:
If you do not require the Quickstart Mouse Corner, you can (and should) use LGD with Window's integrated screen-saver. To do this, simply run CONTROL. Select DESKTOP and chose **LGD Loader** as your screen-saver.
Select the "Settings..." button to change the LGD settings.
Use Alt+F4 to exit LGD and return to CONTROL.

If you use Window's integrated screen-saver, LGD need not (and should not) be run, so do not include it in your Start-up Group or the LOAD Section of your WIN.INI File.

Method 2:
Use the StartUp Group to run LGD.EXE as a symbol. Select **Desktop** in the **Control Panel** and highlight **(None)** in the Screen-saver group.
Use **Options / Delay** (Alt+E) in LGD to define the Delay for the screen-saver.

Mouse Corners

You may specify two **Mouse Corners**, called **Quick Start** and **Saver Off**.
The **Quick Start** corner lets you run LGD immediately - just by moving the mouse cursor into that corner. If you activate the **Clear Screen** option, LGD will blank the screen. This is very useful if somebody enters the room without knocking on the door. To hide confidential information, just move the mouse cursor into the **Quick Start** corner.
The **Saver Off** corner stops LGD from running, even if the PC has been idle for the period specified. This is useful if you, for any reason, don't want the screen-saver to be active. This might be a real time task (communications via modem) or any lengthy task (sorting a database or printing long texts).

To use the **Quick Start** mouse corner, you have to load LGD as a program (e.g. with Windows' Startup Group). You should run LGD as a symbol.
If you load LGD this way, then you must not select any screen-saver in the **Control** / **Desktop** dialogue. Select **<none>** as the screen-saver!
The **Saver Off** corner works as well if you do not run LGD. Just select **LGD Loader** as your screen-saver in **Control** / **Desktop**. LGD will only run when it has to blank the screen, so there is neither a LGD window nor a LGD icon which might disturb you!

Index

Usage Hints for the Screen-saver Modules

The characteristics of many modules can be changed.
To do this, select any screen-saver and press the Options Button (Alt+P). Using a mouse, you may also double-click the module in the list box.
From each of these Options Dialogues, you can access a description via the Help Button of the dialogue.

       Saving the Screen as a Bitmap

The Saver Modules:
       LGD
       Turbo Arty
       Abstract
       Apple (Fractal Generator)
       Bitmap Show
       Bitmap Demo (creates Demos, Presentations, Shows, ...)
       Boxes
       Bubbles
       Cast
       Cookies (cuts Cookies out of the Screen)
       3 "D" Saver
       Drifter
       Drop out
       Earth is Flat
       Flags (shows different Flags)
       Flood Fill (fills screen areas with new colours)
       Flower Power
       3D Graphics
       Game of Life
       GeoMagic
       Gummyworms
       Haystacks
       Kaleidoscope
       Lissajous
       Loops
       Melting Ice
       Moon Base
       Mover
       NATURE
       Pik A Program (introduces our main distributor - shareware only)
       Plasma
       Puckman (a strange creature eats up the screen)
       Quotations
       Radiation
       Scramble
       Shrink
       Spores and Pollen
       Stars
       Stretching
       Tilt
       Digital clock
       Blackness
       Randomizer (randomly selects other screen-savers)

Only a selection of these screen-savers is included in the Shareware Version.

Saving the Screen as a Bitmap

If the Screen-saver created an interesting image which you would like to save as a bitmap, you may proceed like this:

Press the Print Screen key while the Screen-saver is running. The whole screen will be copied to the clipboard. If you press Print Screen several times, only the last image will remain in the clipboard.

Run Paintbrush.

Create a new image with the size of your screen. You can change the bitmap attributes using the Options Menu. The Default or Standard Button in the Attributes Dialogue will assign the screen size to the bitmap.
With Windows 3.0, you will have to select "File/New" to activate the new settings.
Then select "Zoom out".
Now, select "Edit/Paste".
Select "Edit/Paste" again.
After selecting "Zoom in" you can save your bitmap using "File/Save as...".

For 256 Colour Bitmaps you have to use other utilities. I use Borland's Resource Workshop, but other programs might work as well.

Usage Hints for the Screen-saver Modules

LGD's Options

Delay: LGD will activate the screen-saver if the computer has been idle for a certain time. This time (in seconds) can be specified with this option.
The default setting is 60 seconds. If you find this time too short,   you can change it to 180 seconds (3 minutes) or 300 seconds (5 minutes).
LGD will not activate the screen-saver if
        LGD is the active program or if
        a DOS Session is the active program.
The Delay Setting has no effect if you use Windows' integrated screen-saver (Windows 3.1).
You can use the Blank Now icon in the WEEP Group to activate the screen-saver at any time you like.

Warnings: If you activate LGD via the Settings button from Windows' Control/Desktop, you have to exit LGD with Alt+F4 to have changed settings become effective. If warnings are on (checked), a reminder will be displayed. This reminder will not appear if warnings are unchecked.

Usage Hints for the Screen-saver Modules

Frequency

Frequency is measured in 1/s (Cycles per second or Hertz Hz).
You specify the speed of the Screen Savers in Milliseconds (ms) which is the reciprocal value of the actual Frequency.
A second has 1000 Milliseconds.
A value of 250 limits the speed to 1000 (ms) / 250 (ms) = 4 Cycles per second.
A value of 10 limits the speed to 1000 (ms) / 10 (ms) = 100 Cycles per second.
A value of 25 limits the speed to 1000 (ms) / 25 (ms) = 40 Cycles per second.

Cycles, in this context, means number of drawing actions.
Frequency can only limit the maximum speed of the screen savers - it cannot speed up a slow computer, of course!

Turbo Arty

Turbo Arty shows many dancing lines on the screen.

Two options affect Turbo Arty's appearance:

> **Clear Screen:** Turbo Arty overwrites the old screen if you don't request the screen to be cleared first.

> **LapTop Mode:** the screen background colour will be white instead of black. This might save some power on some LapTop Computers.

> **Frequency:** limits the speed of Turbo Arty.

Usage Hints for the Screen-saver Modules

Abstract

Abstract creates animated abstract drawings.

Points: defines the complexity of the drawing

Radius: defines the distance the points of the drawing may wander

Steps: defines the speed of movement

LapTop Mode: the screen background colour will be white instead of black. This might save some power on some LapTop Computers.

Usage Hints for the Screen-saver Modules

Apple / Apple 32

Apple is not just a screen-saver; it's a complete Fractal Generator.

In the Options Dialogue you specify the co-ordinates within the plane of complex numbers. The whole of the Mandelbrot set will be drawn using -2,2,-2,2,48,4. All other images are part of this area.

The **Calculate Button** will start the calculation of the image with the co-ordinates you just entered.

The **Save Button** allows you to save interesting co-ordinates which you have found. Specify a filename (up to 8 letters); the extension will default to .KOR. These saved co-ordinates will be used when Apple is called as a screen-saver.

The **Load Button** allows you to load co-ordinates. Several pre-defined co-ordinates come with the screen-saver and you may add others.

The **Close Button** closes the Options Dialogue.

The **Colour Button** shows a dialogue where you select the Colour Scheme to use. The Colour Schemes are only available if your display supports 256 or more colours. Click on the **Animation** check box to activate Palette Animation (only available with 256 colour modes).
Freq. (ms) limits the speed of Palette Animation.

The caption of the dialogue indicates if Apple uses the fast 386 Mode (which should be the case for all 386, 486, 586 etc.).
CPUs ranging from 8088/8086 to 80286 will have to use the 8086 Mode.
Apple makes use of the 32-bit registers of 386 chips and higher; therefore, it is pretty fast!

If Apple is started as a screen-saver it randomly picks one of the saved co-ordinates and calculates this image.

Time Out: is only effective if Apple is called from the Randomizer. Click on Time Out if Apple should terminate after the specified time. Otherwise, Apple will finish the image it is just calculating.

Delay: After finishing one image Apple will wait this period of time before calculating another randomly chosen image. (Only invoked if Apple is called as a screen-saver)

Note: This screen-saver checks keyboard and mouse only after a line on the screen has been drawn. Therefore with a 80286 it might take 10 seconds or even more before the saver stops when you press a key. On 80386 systems this time normally isn't longer than 2 seconds - usually it's only part of a second. However, Apple consumes a lot of CPU time and thus should not be used while other time-consuming processes are running.
If either Password Protection or Palette Animation are used, Apple will check keyboard and mouse after each pixel - thus giving ample time to other tasks, but running slowly.

What's special about Apple 32?
In a German computer magazine I read that "32-bit Operating Systems are theoretically twice as fast as 16-bit Operating systems". The guy who wrote this probably owns a car with an 8-cylinder-engine ("theoretically twice as fast as a 4-cylinder-engine") with four-wheel-drive ("theoretically twice as fast as two-wheel-drive") ...

Apple 32 was found to be between 7 and 20 per cent faster than Apple.
Curious?
In a 16-bit code segment, machine statements use 16-bit registers by default. A special prefix byte is used to access 32-bit registers. These prefix bytes make programs bigger and slower.

When using a 32-bit code segment, Apple 32 doesn't need the prefixes: therefore it is faster. On the other hand, you do need prefix bytes to access 16-bit registers in a 32-bit code segment. Therefore 32-bit code may even be slower than 16-bit code. However, Apple is a special case where the 32-bit-code yields a big gain in execution speed. The results achieved with Apple cannot be transferred to other applications or operating systems.

Results for a 386DX33 (Standard VGA Mode):

	Apple	Apple 32	Gain
'Quicky'	1'01"	0'57"	+ 7 %
'Teatime'	10'06"	8'25"	+ 20 %

'Teatime' gains more speed because it requires many more calculations.

Results for a 486DX2-66 VLB (calculating 'Teatime' co-ordinates):

	Apple	Apple 32	Gain
VGA 16 Colours	3'27"	3'00"	+ 15 %
256 Colours & Palette-Animation	4'16"	3'50"	+ 11 %
16 Colours (System-Palette) using 256 colour display driver	3'21"	2'54"	+ 14 %

According to information from Microsoft there may be problems using this 32-bit-code with ROM-based Windows. I do not have access to a computer with ROM-based Windows and thus could not test this.

Usage Hints for the Screen-saver Modules

Bitmap Show

You can specify the pause between two images and the size of the elements a picture consists of (this size affects the time it takes to draw a picture).

To slow drawing down you might enter a range between 8 and 10. To speed it up, you may enter 16 to 20 or even higher.

Image Size specifies how large bitmaps are drawn. The bitmaps that come with the Nature screen saver have a size of 320 x 240 pixels. With the standard VGA resolution, you get 2 by 2 images on the display. With 800 by 600 you get 2 1/2 images in each direction. If you set Image Size to 640 x 480, you'll get a 2 by 2 display with a black border around it.
Enter 0 to use physical resolution.

Bitmaps with more than 16 colours
16 (2) colours Windows mode: Windows will convert all bitmaps to 16 (2) colours - possibly changing their appearance quite a bit!
256 colours Windows mode: All screen-saver modules have to use an identical colour palette. Bitmaps with 256 colours are displayed with LGD's colour palette - this is an improvement compared to the 16 standard colours, but the picture might appear different from what you expected. The utility BMPCNVRT.EXE will convert bitmaps to LGD's colour palette - usually improving the results with Bitmap Show. Bitmaps with more than 256 colours shouldn't be used because loading would take too long (loading them with Paintbrush takes a long time, too).
More than 256 colours Windows modes: Using Hi Colour or True Colour, the colour palette is not restricted by LGD - all pictures should look the same as with any other picture viewer.

Utility BMPCNVRT.EXE
This utility has been written especially for the 256 colours mode. It lets you convert bitmaps with 256 or 16 million colours to the 256 colours palette used by LGD. It uses Floyd-Steinberg-Dithering for best results.
Usage:
        BMPCNVRT <old_name> <new_name>

Utility WHERE.COM
The file SS_BITMP.LST contains a list of bitmaps that will be used by this screen-saver.
Using the utility WHERE.COM (included in the ULTOMAT directory) you can easily add all bitmaps on your hard disk.

Example: search drives C:, D:, and E:
            WHERE c:*.bmp   >ss_bitmp.lst
            WHERE d:*.bmp >>ss_bitmp.lst
            WHERE e:*.bmp >>ss_bitmp.lst

Note: In the first line, WHERE will create a new file (>). The following lines append to the existing file (>>).

The file SS_BITMP.LST may be edited with any ASCII Editor (like Windows' Notepad). Thus you can easily delete the lines with the bitmaps you don't want to be displayed.

Options
Note on Element Size (Horizontal Size, Vertical Size):
Bitmap Slide Show can only display bitmaps if it finds a common divisor between bitmap size and screen size. You specify a range for this common divisor. Common bitmaps will be a multiple of 8 or 10 in size, so 8 to 10 will usually be a good choice. For odd bitmaps, you may change the size using Windows'

Paintbrush.
On EGA (640 x 350) and HGC (720 x 348), many bitmaps will not work because of the 'odd' display size.
Large bitmaps (e.g. CHESS.BMP) take a lot of memory and should not be used in Real Mode.

Early releases of Windows 3.1 included a file 256COLOR.BMP (in German: KUGELN.BMP). This file was
in the OS/2 bitmap format and could not be read with LGD. However, loading this bitmap with Paintbrush
and re-saving it will make it loadable.

Bitmaps with 256 colours will be displayed with LGD's colour palette. Use BMPCNVRT as described
above to optimize images for use with LGD.

Usage Hints for the Screen-saver Modules

Bitmap Demo

This screen-saver is closely related to <u>Bitmap Show</u>. The information on Bitmap Show also applies to Bitmap Demo.

There are two main differences: Bitmap Demo allows you to define the order of bitmaps, the transition to use and how long a bitmap will be shown.
You may even define more than one demo at a time by copying the files SS_BMSEQ.LGD and SS_BMSEQ.LST to another name (matching SS_*.LGD or SS_*.LST respectively).

Distributing your demo
You may distribute your demo along with the Shareware version of UL-TOMat.
For more professional demos, we can create a Windows 3.1 Screen-saver (.SCR) plus compressed versions of your bitmaps (.IMG files) plus an installation program. This special version may be distributed royalty free.
This service will normally cost DM 75,00 (about £30) per hour. Converting your demo will take between 1 and 3 hours depending on the number of images.

Creating a personal demo
The first step: copy the demo provided with UL-TOMat to a new name. The new "filename" may have up to 5 characters. The name visible in LGD may have up to 18 characters.
In this example, I will use the filename SHOW.
At the DOS prompt (in the UL-TOMat directory) type
  COPY SS_BMSEQ.* SS_**SHOW**.*
Then load the file SS_SHOW.LST with an Editor of your choice. It must be an ANSI Editor like Windows Notepad if you want to use special non-ASCII characters. Normally, MS-DOS's EDIT will do.

In this file, lines beginning with a semicolon (;) mark a comment.
The first non-comment line which contains the name LGD will show in the list of screen-savers. The first character is only used for sorting the savers, but will not be shown. Normally, the first character of the saver name is doubled; you may specify another letter to bring your Show to the top or bottom of the list.
You should chose a name out of this list: Bitmap Demo; UL-TOMat Intro; Demo; Show; Presentation; Display; Exhibition; Exposition
Other names will work, but will not invoke the Help on Saver function (F1).
We want our demo to appear in the normal place, so we name it **SShow**.
The second non-comment line contains the description shown in the right window when the screen-saver is selected. Use the '|' character as end-of-line. This description must not exceed 255 characters; only up to ten lines will be shown by LGD while the text will automatically wrap if single lines are too long.

The following non-comment lines list the bitmaps to use. Behind the file name (relative to the UL-TOMat directory, full filenames allowed) you specify the transition and the period of time (in seconds) for which the bitmap will be shown before the next image is loaded.
These transitions are currently available:
  1: bottom to top
  2: right to left
  3: top to bottom
  4: left to right
  5: spiral
  6: random

The file SS_BMSEQ.LST and its copy, SS_SHOW.LST, have comment lines with information on the structure of the file.

Usage Hints for the Screen-saver Modules

Boxes

Draws Rectangles or Boxes (filled rectangles).
You may select speed, size and shape.

Rectangles will be drawn in 16 different colours (requires colour mode).
Colour Change specifies how many rectangles will be drawn before the colour changes (a randomly picked number within the range you specify).
Boxes are drawn with rasterized colours. This shape is recommended for monochrome systems.

You specify the size of the rectangles/boxes (x and y axis) and their speed. You should enter a range in the speed fields to have the boxes move in randomly picked directions. If the same value is entered for Speed Minimum and Maximum, the direction will always be a 45 degree angle without any randomness (this mode will give some good effects, too, so you might try it sometime).

Using Shape Rectangle, you might select a Size of 17x17 and a speed of 7 to 9.
If you like it slow, you might as well select Shape Box, a Size of 11x11, and a Speed of 2 to 3.
Play with these settings and you'll find many interesting effects.

Frequency: limits the speed of Boxes.

Usage Hints for the Screen-saver Modules

Bubbles

The screen is boiling: bubbles appear, grow, and burst.

You specify the number of bubbles and their size (min. and max.).

Min. size and max. size specify the range where bubbles burst.
Min. size is not the size of new bubbles.

Clicking on CLS allows you to clear the screen first.

Frequency: limits the speed of Bubbles.

Just try different values for number and size.

Usage Hints for the Screen-saver Modules

Cast

Select one of three different **formulas**:

>*Formula 1* very sharp contrast
>*Formula 2* standard (usually best results)
>*Formula 3* little contrast.

Time Out: Is only used when Cast is called from the Randomizer. Click on Time Out if Cast should terminate after the specified time. Otherwise, Cast will finish the image.

Usage Hints for the Screen-saver Modules

Cookies

Cuts Cookies (different shapes) out of the screen image. They wander across the screen until they disappear.

Frequency: limits the speed of Cookies.

Usage Hints for the Screen-saver Modules

3 "D" Saver

The 3 "D" Saver is a nice pun, isn't it?

To make the best of it, you should enter a **Message Count** between 10 and 25 and specify a **Custom Message**.

Arnie-Fans may prefer "I'll be buck".
Your boss probably won't like "I wanna go home" or "I ain't gonna work".

Think positive. How about "I love ????". Replace ???? with anything you love, be it L.A., Big Apple, Basketball, Karla with a K, Lucy (in the sky with ...), Billy the Kid, Billy the Gate, or the Clintstones ("I love Socks"). Whatever or whoever you want!

While testing this saver I discovered a flaw in the true type management of Windows. Windows allocates a block of memory (only 160 bytes) for each font that was ever created.
If you run the Flying Windows saver supplied with Windows, it creates quite a lot memory blocks for the WingDings font, because each different size is considered a new "font" in this respect.

It was much worse for early versions of the 3 "D" saver: take only the Arial font, but in 100 different sizes, bold (several values from light to heavy), italic, and so on. You could create a thousand different "fonts" with Arial.
"What's wrong?", you might say, "That's only 160 kB!"
Yes, only 160 kB. But Windows can manage a total of 8192 memory blocks (selectors). So take only few true type fonts and it's just a matter of time till all the memory was messed up.
So I decided that this saver may use up to 32 fonts, all bold, and only two different sizes.

The size of the fonts depends on the length of the message. You shouldn't change the message often or you may use too many selectors.
This screen saver looked much better when it used different sizes and font attributes, but the True Type management would cause real problems. To give you a reliable screen saver, I had to give a bit of the beauty away.

Usage Hints for the Screen-saver Modules

Drifter

Frequency: limits the speed.

Direction allows you to specify how the screen is manipulated.
If you select **horizontal** or **vertical** then you should try both with or without **Random Generator**.
If you select one of the two **both** settings, you should activeate the **Random Generator**.

If the **Random Generator** is not selected, all rows or columns will move with the same speed. Results are usually better with **Random Generator**.

Usage Hints for the Screen-saver Modules

Drop Out

The screen develops a hole. The image drops through it until it disappears.

Using a combination of **Haystacks** and **Drop Out** in a **Randomizer** selection gives interesting effects.

If called from the Randomizer, Drop Out will terminate when the screen is blank. Therefore you should enter a long period for Drop Out (e.g. 480 seconds).

Frequency: limits the speed of Drop Out.

Usage Hints for the Screen-saver Modules

The Earth Is Flat

The Earth is flat

Pigs can fly

And nuclear power is safe...

(Nice little proverb from the Anti-Nuclear-Power-Movement).

This screen-saver demonstrates that the Earth is flat. You can even see flying pigs! If you believe it then you are as cracked as those storage drums!

You may choose the number and speed of the flying objects. Use Delay to limit the moves per second.

Usage Hints for the Screen-saver Modules

Flags

Shows the flags of different international countries.

Mainly 'simple' flags (tricolours) are implemented. Plus some more tricky ones!
The selection is not a criticism of any countries! Others will follow by and by!

Select display time and brightness of the flags!

Usage Hints for the Screen-saver Modules

Flood Fill

Re-inks areas of the screen. New colours are chosen at random.

There are two different flood-fill functions to chose from:
- The Windows API function is very fast. It doesn't work with rasterized colours. As very light yellow is created by mixing yellow and white dots, the Windows function sees that one point is surrounded by four points in a different colour and will only re-ink one single point.
- The screen-saver has its own flood-fill function. This function is rather slow, but works well with many rasterized colours.

If in Automatic Mode, Flood Fill will decide which function to use (it uses its own function for rasterized colours, or otherwise the Windows API function).

Usage Hints for the Screen-saver Modules

Flower Power

The (almost) ultimate flower-show on your monitor!

This saver allows you to change the speed of drawing.

Usage Hints for the Screen-saver Modules

3D Graphics

An animation of 3D objects.

Currently there are no options available.

Usage Hints for the Screen-saver Modules

Game of Life

Game of Life simulates the life in a colony of cells according to Conway's rules.
There are four simple rules:

        The Rule of Solitude: a cell with less than two neighbours dies of loneliness.
        The Rule of Survival: a cell with 2 or 3 neighbours lives happily.
        The Rule of Death: a cell with more than 3 neighbours dies of overpopulation.
        The Rule of Birth: a new cell is born if it has three neighbouring cells as parents.

The computer randomly spreads cells on the screen. Succeeding generations are calculated according to the rules mentioned above.
The computer will detect when the population reaches stability; the simulation will re-start with a new set of cells.

You specify the number of cells on the screen (by giving the number of rows and columns). Incrementing the number of cells slows down the simulation.
You may specify how much time must elapse before the next generation is displayed. The default is 250 ms (milliseconds), which means 4 generations per second.

Usage Hints for the Screen-saver Modules

GeoMagic

GeoMagic draws and shades different shapes in randomly picked colours.

There are no options.

Usage Hints for the Screen-saver Modules

Gummyworms

Little crawlers move over your screen leaving a trail of destruction.

In the Options dialogue you may specify the number and the length of the crawlers.
The number controls the speed of their movement.

Frequency: limits the speed of Gummyworms.

Interesting effect: length = 2

The sources for this screen-saver (Turbo Pascal for Windows) are included in the PAS sub-directory.

Usage Hints for the Screen-saver Modules

Haystacks

Hordes of wild lines run over the screen.
They leave nothing intact ...

Two Options affect Lines' appearance:

Clear Screen: Lines overwrites the old screen if you don't request the screen to be cleared first.
LapTop Mode: the screen background colour will be white instead of black. This might save some power on some LapTop Computers.
Frequency: limits the speed of Haystacks.

Lines gives nice effects if combined in the Randomizer with Drop Out.

Usage Hints for the Screen-saver Modules

Kaleidoscope

Kaleidoscope lets you play with colours and symmetry.

Many options influence the appearance of this saver.
You may specify the number of dots visible on the screen (or 0 for unlimited).
You may select any combination of small, medium and large dots.
You may specify the number of identical tiles on the screen.

Frequency: limits the speed of Kaleidoscope.

You may clear the screen first or have Kaleidoscope draw over its predecessor.

Usage Hints for the Screen-saver Modules

Lissajous

Lissajous shapes are created by combining sine-functions for the x- and y-axis.
You specify the number of shapes to be drawn and the number of dots visible for each shape (length).

Lissajous looks like the trails of satellites if the **Lines** option is off.
With the **Lines** option on you should turn **Clear Screen** off.
Frequency: limits the speed of Lissajous.

Here are some attractive settings you may test (with **Lines** turned on):

Number	Length
3	100
5	50
15	5
2	360

Usage Hints for the Screen-saver Modules

Loops

When the going gets tough the screen gets going!

Direction and speed are randomly chosen.

However, the screen will eventually return to its original position... if it hasn't driven you loopy first.

Usage Hints for the Screen-saver Modules

Melting Ice

The screen slowly melts away.
The screen becomes blurred - a very puzzling effect!

Frequency: limits the speed of Melting Ice.

Usage Hints for the Screen-saver Modules

Mover

Mover shows many dancing lines on the screen.

Three options affect Mover's appearance:

Clear Screen: Mover overwrites the old screen if you don't request the screen to be cleared first.

LapTop Mode: the screen background colour will be white instead of black. This might save some power on some LapTop Computers.

Number of Lines: specifies the number of lines that are visible at the same time.

Frequency: limits the speed of Mover.

Usage Hints for the Screen-saver Modules

Moon Base

This screen-saver simulates life on a distant lunar sea.

You specify the number of ships and their speed (Min. and Max. in Pels (Picture Elements)).

For Super-Hyper-Turbo-MainFrame-Hexium or -Septium PCs you have a delay setting to slow things down a bit.

Usage Hints for the Screen-saver Modules

Nature

The complete version of this screen-saver contains 46 images - only a few come with shareware.

This images are JPEGged.
The JPEG decompression is based on the work of the independent JPEG group.

JPEG decompression requires a 386 chip or higher.

Typical performance on a 386dx33 [486dx2/66] (timings in seconds):

Colours	Image Size	
	320x240	640x480
16 or less	18 [6]	75 [23]
256	8-9 [3]	35 [12]
32k or more	4-5 [1-2]	17 [6]

The table indicates that reducing an image from JPEG (24 bit True Colour) to 16 or 256 colours takes considerable time.
Using a 386sx and a standard VGA driver (16 or less colours) you may have to wait one minute for the first image to show up.
With 256 colours you shouldn't have to wait longer than 15 seconds.

Nature is a variant of Bitmap Show .

Usage Hints for the Screen-saver Modules

Pik A Program saver

This screen saver introduces our main distributor.

Background controls the background of the screen saver.

Speed controls how many pixels the objects may move.

Frequency: limits the speed of Pik A Program.

Usage Hints for the Screen-saver Modules

Plasma / Plasma 32

Plasma uses 32-bit-code (as Apple 32 does).

This screen-saver was inspired by the Lava sample program provided by Microsoft.
However, no line of code from this sample has been used - everything has been re-written in Pascal or Assembler.

If 256 or more colours are available, you may chose the colour palette for Plasma to use.
With 256 colour modes only, Plasma will animate its palette giving a hypnotizing effect!

Palette: Select the colour scheme.

Colour Width: Should be 1 for the Plasma palette, 4 or 8 for others.

Nodes: More Nodes result in a more complex image, but slower calculation.

Delay: The period for which an image will be visible after calculation, before Plasma starts with a new image.

Frequency: limits the speed of Palette Animation.

Beep when ready: Signals when the image has been calculated with the highest resolution.

Timeout: For use with the Randomizer: if checked, Plasma will terminate after the specified time; otherwise, Plasma ends after the calculation is finished.

Just play with these settings to create new, puzzling images.

Usage Hints for the Screen-saver Modules

Puckman

This screen-saver has two phases:

Clean Up: Puckman eats up the screen image. It does it systematically (though not very efficiently).

Saver: When the screen is blank, Puckman will still wander.

Note: The Windows Clock has a low resolution (about 55 milliseconds). Delay values will be rounded up to match the Windows Clock. A delay value of 1 millisecond will effectively be 50 milliseconds.

Using Puckman alone, you can chose between a (0, 1) setting (which will clean the screen very fast) and a (1, 1) setting which should give a slow moving Puckman.

Using the Randomizer, the values (1, 1) are suggested.

Because there is always a little image moving on the screen, you will not forget to switch your computer or your monitor off. In that way, Puckman is much better than a simple Blackness screen-saver.

Usage Hints for the Screen-saver Modules

Quotations

This screen-saver displays quotations and short texts (up to 254 characters). You may choose any Windows Font and several attributes.

In the Options dialogue you specify for how long a quotation is to be displayed.
If the **Clear Screen** option is checked, the screen will be blanked before a quotation is shown.
If you are using the Randomizer, you might decide to turn **Clear Screen** off.

Adding New Quotations

This saver can handle a maximum of thirty quotations.
These quotations are placed in the SS_TEXT.LST file.
Lines starting with a semicolon are ignored as remarks.
Each quotation uses two lines in the file: the first line describes the font to be used; the second contains the text.

Selecting a Font
The description of a font contains the following elements, separated by commas:

Name of the Font (e.g. ARIAL, COURIER, ...)
Size of the Font (e.g.: 24, 36, 48, ...)
Background Colour (second colour for shadow and outline): specify three numbers in the range from 0 to 255 for Red, Green, and Blue (RGB Colours) (e.g.: 255,0,0)
Foreground Colour: three numbers, specified as for Background Colour.
Weight: besides normal (400) and bold (700) Fonts you may select light (200) or heavy (900); depending on the Fonts available in your system.
Italic: select 1 for italic or 0 for normal fonts.
Shadow: select 1 to create a font with a shadow using the Background Colour.
Outline: select 1 to create a font with an outline using the Background Colour (Shadow and Outline are mutually exclusive)
Block: select 1 to have your quote block-adjusted.

Example:
Arial, 60, 255,255,0, 0,0,128, 900, 0, 0, 1, 0
This selects the Arial Font, Size 60 Points, the Outline Colour is 255 (red), 255 (green), 0 (blue) giving light yellow; the Foreground Colour is 0 (red), 0 (green), 128 (blue) giving dark blue; the weight is 900 (bold); normal (not italic, 0); no shadow (0); but outline (1); the text will be left aligned (0).

A Line of Text
Two special characters may be used within a line of text. The Line Character ('|') marks the end of a line within the quotation. To leave a line empty, enter the Caret Character ('^') as the first character in this line. Example: This line

Poor little Willy is crying so sore,|A sad little boy is he,|For he has broken his little sister's neck|And he'll have no jam for tea.|^|Harry Graham

would result in:

Poor little Willy is crying so sore,
A sad little boy is he,
For he has broken his little sister's neck
And he'll have no jam for tea.

Harry Graham

Depending on the size of the font, long lines might be broken up before being displayed.

<u>Usage Hints for the Screen-saver Modules</u>

Radiation

Many rays move over the screen and delete the original image.

You may enter the number of **Emitters**. To blank the screen quickly, use one Emitter. More Emitters result in interesting effects.

You can change the number of **Rays**, too (1 to 256). More Rays result in slower motion.

You may specify the **Length of Rays**. This has no effect on the speed of motion. Longer Rays make the screen more colourful.

If **Random Directions** is not checked, the rays will be emitted clockwise, and you should only use one Emitter.

Usage Hints for the Screen-saver Modules

Scramble

The image on the screen becomes the picture of a puzzle.
This screen-saver moves the parts around on the screen.

In the options dialogue you specify the number of pieces and speed of movement.

In the Delay field you may enter a period of time (1 ms should be enough due to the low resolution of the clock (Windows 3.x).
If the movement is too slow, you may increase the Width of steps (e. g. 2, 4, 8, etc.).

Usage Hints for the Screen-saver Modules

Shrink

This saver shrinks the screen image. The small image will then wander across the screen.

You may select the size of the shrunken image (half, fourth, eighth). Smaller images show fewer details but move faster.

The StretchBlt Mode affects the shrunken image.
> *Ignore* is recommend for colour modes.
> *And* is useful for black lines on a white background.
> *Or* is useful for white lines on a black background.

If you are using And or Or in a colour mode the shrunken image may contain colours the original image didn't show. Therefore, Ignore is the recommended mode for colour images!

<u>Usage Hints for the Screen-saver Modules</u>

Spores and Pollen

We hope that this is the closest your computer will ever come to a virus invasion.

This saver shows Pollen and Spores under a Scanning Electron Microscope.

The specimens shown are about 20 to 30 µm in size (0.02 to 0.03 millimetres).

The options dialogue specifies the number and speed of the specimens.
You may select **Clear Screen** if you want to see them on a black background.

Usage Hints for the Screen-saver Modules

Stars

This saver shows a starry sky on the screen.

You may enter the number of stars (up to 5000) and their size (small, medium and large or any combination).

Frequency: limits the speed of Stars.

Usage Hints for the Screen-saver Modules

Stretching

Frequency: limits the speed.

Direction allows you to specify how the screen is manipulated.

If **Shrinking** is selected, the image will become smaller. Without **Shrinking** it will grow.

Usage Hints for the Screen-saver Modules

Tilt

Overwrites the screen by reversing randomly chosen rectangles.

There are no options.

Usage Hints for the Screen-saver Modules

Digital Clock

Displays Date and Time.
A simple but useful screen-saver which reminds you that the monitor is on.

LapTop Mode: the screen background colour will be white instead of black. This might save some power on some LapTop Computers.

Usage Hints for the Screen-saver Modules

Blackness

Blanks the screen.

There are no options.

The source code of this screen-saver is included!

Usage Hints for the Screen-saver Modules

Randomizer

The Randomizer runs other screen-savers by choosing unpredictably from your selection.

The Randomizer lets you create 20 "programmes".
(David L. Stewart uses **Programme** to name a planned series, particularly of entertainments, while **Program** is used to differentiate a series of instructions to a computer.)
For each programme you may select any combination of the available screen-savers, and you may specify for how long each of these screen-savers should run.
The program that is selected when you leave the options dialogue will be executed.
You may have one program with all screen-savers, while another just runs Haystacks and Drop Out, for example.

First you select a program name in the Program drop-down list.
Then, for your new program, you select a screen-saver in the Saver list-box. You may change the settings for this saver in the Saver-Settings group-window.
You may specify an individual duration for each screen-saver. For Bitmap Slide Show 2 or 4 seconds will be enough to show each image. For Drop Out you should specify a duration that is long enough to clear the screen (e.g. 480 seconds; Drop Out will terminate when the screen is blank).

If you select only two modules, Randomizer will constantly switch between these modules.

Elements of the Options dialogue:

Program (drop down list): selects the active program.

Button Program Name: allows you to name the selected program. This name has to be unique!

Saver (list box): selects the saver whose settings are to be changed.
Saver Settings: the settings for a screen-saver that are saved in a Randomizer program. Use Saver includes or excludes savers. Duration specifies how long the screen-saver will run (before control is given to another screen-saver). The Options... button is a convenient way to access the Options dialogue for the selected saver.

Button All: lets you activate all savers for your new program. You may then exclude savers you do not want to include by clicking on them.
Button None: excludes all screen-savers from the new program. You may then include those savers you do want to use by a click on each.

Button OK: exits the dialogue window and saves the settings.
Button Cancel: exits the dialogue window without saving the settings.

Button Power ...: This button shows another dialogue where you specify a period (in minutes). After running for this period of time, LGD will blank the screen. This feature was added for the new Automatic Power Down Displays (e.g. TCO92).

Note: Some screen-savers require a non-blank screen (those which do not draw, but manipulate, e.g. Cast, Tilt, Melting Ice, Drop Out), while other screen-savers leave a blank or almost blank screen (e.g. Abstract, Blackness, Digital Clock, Drop Out).
The Randomizer usually does not run a "requires non-blank" saver after a "leaves blank" saver.
If you want to create certain effects (e.g. "casted" Apples or "eaten" bitmaps) you may combine 2 or 3 savers in a program (Cast and Apple, PuckMan and Bitmap etc.).

Creating a Randomizer "programme"

Select the Randomizer screen-saver.
Open the Options dialogue (Alt-P).
In the dialogue, select a program (e.g. "No Name 7"). Press Alt-P and select the program with the cursor keys (direction keys), or use the mouse to select a program in the drop-down list.
Press Alt-M if you want to change the name of the program.
Press Alt-A (Button All) if you want to include many screen-savers, or Alt-N (Button None) if you want to include only a few screen-savers.
Alt-S activates the saver list box. Use the cursor keys to highlight the screen-saver whose settings you want to change. Using a mouse you may as well click on the saver's name.
With Alt-U (Use Saver) you may check/uncheck this saver.
Alt-D lets you specify a duration for this saver.
Press Alt-S to return to the list box or select another screen-saver using a mouse.

Press Enter when your program is complete.

Example:
Select a program you want to change (e.g. "No Name 8").
Assign the new name "PuckMan & Bitmap" (Alt-M).
Press Alt-N to exclude all savers.
Press Alt-S.
Press P until Puckman is highlighted. Press Alt-U to activate PuckMan. You may change the duration with Alt-D.
Press Alt-S.
Press B until Bitmap Slide Show is highlighted. Press Alt-U to activate Bitmap Slide Show. You may change the duration with Alt-D (4 seconds recommended).
Press Enter to save the program.

Usage Hints for the Screen-saver Modules

Password Protection and Data Protection

Password Protection

Select **Options** / **Password** to change the password and to activate password protection.
To change the password, you have to enter the old password once and the new password twice before pressing Enter.
You don't have to type any password to turn password protection on or off.
You may delete the password if you enter your old password and leave the fields for the new password empty.

If password protection is active, you have to enter the password to stop a LGD screen-saver.
The dialogue where you enter your password counts the attempts. Thus you can easily see if somebody tried to crack your password while you were absent!

Enhanced Mode Windows 3.1
If Windows 3.1 is running in Enhanced Mode a running program may be stopped by pressing Ctrl-Alt-Del.
It is possible under very rare conditions to terminate LGD by pressing Ctrl-Alt-Del without typing the password. Just try it: it hardly ever happens, but I just wanted to mention that a security of 99% and above is still not 100% safe!
Anyway, it's always possible to reboot the machine with Ctrl-Alt-Del.
To avoid this, you may add the **LocalReboot=off** line in the **[386Enh]** section of your **SYSTEM.INI** file. With this entry, Ctrl-Alt-Del will always cause the machine to reboot without any confirmation. Use this option only if a security of above 99% is not enough for you.

Protection against rebooting
LGD cannot protect your machine from being rebooted. But the LGDPSW.EXE program may be included in your AUTOEXEC.BAT. If LGD was terminated by rebooting, LGDPSW will demand your password during initialisation.
A command line switch of LGDPSW.EXE will always request your password at initialisation.
Installing LGDPSW.EXE:
I assume that UL-TOMat is installed in the C:\WINDOWS\ULTOMAT directory. If not, correct the entries given in UPPERCASE letters.
Edit AUTOEXEC.BAT. Add the following command as the first command before @ECHO OFF:
> @C:\WINDOWS\ULTOMAT\lgdpsw C:\WINDOWS\ULTOMAT
If you want to verify the password always on starting, enter the /always command line option:
> @C:\WINDOWS\ULTOMAT\lgdpsw C:\WINDOWS\ULTOMAT /always
The following line is needed anywhere in your AUTOEXEC.BAT:
> set lgdpsw=C:\WINDOWS\ULTOMAT
If you are using the /always command line switch, you have to run a screen-saver after setting or changing your password to have LGDPSW prompt for the correct password.

Limitation of Password Protection
If your machine is turned off (or "hardware resetted" using the reset switch on the front panel), all unsaved data will be lost. You should save all files before leaving your PC alone!
The Password Protection means "Keep off" to everybody who touches your PC. The "Intruder" will notice that he can't interfere with your machine without leaving traces. This will stop many people!
There is no protection against rebooting with a system disk.
Nevertheless, the hidden data will be secure! Nobody will see it even if the machine is re-booted.

Data Protection

The Quick Start Mouse Corner in conjunction with its Clear Screen option offers a way to protect confidential data on your screen. If somebody enters the room, move the mouse into the quick start

corner!
If you use Password Protection as well, the information will be secure even if you leave the room.

Typical Questions and Answers

Question:
Why is my old screen-saver still running instead of LGD?
Answer:
Stop all other screen-savers (close all windows and icons).
When using Windows 3.1, start Control, select Desktop and choose LGD Loader as your screen-saver.
Check your Start-up Group and your WIN.INI file (LOAD=) and remove all screen-savers that are loaded there.

Question:
I selected LGD Loader as my Windows 3.1 screen-saver via Control, and Desktop. When the Computer has been idle for some time, why do I get a message box stating that LGD can not be loaded?
Answer:
If you didn't install WEEP in the suggested directory then you have to run LGD from the WEEP group at least once to configures LGD. Using the Windows 3.1 Screen-saver Facility should work then.
The Blank Now! icon does exactly the same as Windows' Screen-saver Facility, so you might use Blank Now! as a test.
However, this message might have another cause (e.g. low memory situation), in which case, other programs will also be causing problems.   New hardware is needed!

How do I write my own Saver Modules?

Using Turbo Pascal
After installation, the WEEP directory contains a SDK sub-directory. In the PAS sub-directory you'll find a complete screen-saver (Blackness) written for Turbo Pascal for Windows.

Using C or other languages
The SDK\C sub-directory contains a complete screen-saver (Blackness) written in C. It was developed and tested with Borland C. The documentation lists the files you have to include in your project file.

The screen-saver modules are DLLs that export 4 functions. You may program modules for LGD with any language that is capable of creating Windows DLLs. A description can be found in the Pascal program.

The example simply blanks the screen. You may use the WM_TIMER message to call some drawing functions. Another solution is a PeekMessage loop to detect idle time.

If you create your own screen-savers I'd be glad to receive a copy.
I might distribute your screen-savers along with mine. Let me know if you are interested in that!

For a detailed description see API.HLP

Can LGD run during other programs?

If your computer is processing a lengthy task, then you should select a screen-saver that consumes very little CPU time.

Blackness would be the optimal solution.

The following take very little CPU time:
Abstract
Bitmap Slide Show
Stars (*)
Digital Clock
(*) activate Clear Screen (CLS) option
You should use one of these savers without the Randomizer.

The majority of screen-savers (e.g. PuckMan, TArty, Haystacks and many others) consume no CPU time when your computer is working very hard. Alas, perhaps you won't even be able to notice that the screen-saver is running! This is good for the process you are running, but it isn't good for your screen!
Bitmap Slide Show (with small elements (e.g. range 8 to 10)) will save your CPU time and your screen!

However, there are 2 screen-savers that perform complicated operations and consume a good deal of CPU time:
Apple
Drop Out
You shouldn't use these savers when your computer is performing lengthy or time-critical tasks (e.g. communication via Modem).

Automatic Power Down Displays

The TCO92 standard from Sweden requires displays to reduce power consumption to less than 30 watts if the screen is black for 3 minutes. After 60 minutes, power consumption has to be less than 8 watts.

LGD's Randomizer supports these Displays!
You specify for how long LGD may generate varied and colourful displays. After this period the screen will go black to activate the Display's Power Saver feature.

For example, you might active LGD after 2 minutes idle time, but just for 5 minutes. Then the screen will be blanked and the Power Saver will work.

I believe this feature is unique to LGD at the time of writing (March 28, 93)!

This function is supported only by the Randomizer. This is no restriction because you can use the Randomizer even to run just a single screen-saver. Do not enter 0 as duration for any screen-saver, because the Power Saver will blank the screen only when the currently running screen-saver terminates. Specifying 0 as duration in the Randomizer will run a screen-saver endlessly - thwarting the Power Saver.

Activating Randomizer's Power Saver feature

Using Screen Peace SPX modules with LGD

Screen Peace as a screen saver by Anthony Andersen that is distributed as CharityWare - the author asks for a contribution to charitable organizations if you use his screen saver.
The SPX modules included with the Shareware version of The Lights Go Down have been written by John Ridges who asks to support Anthony Andersen. Refer to the CONTENTS.DOC file in the J_RIDGES directory for further information (only included with the shareware-version - installation is optional).

To use Screen Peace modules with LGD, proceed as follows:
  * Copy the *.SPX files you want to use with LGD to the Ultomat directory (some other files may be needed, too, e.g. *.DLL or *.BMP).
  * Run the migration tool **SPXCNVRT.EXE**. SPXCNVRT runs under Windows and is included with the registered version only. (Click on the bold word to start it.)
  * SPXCNVRT asks whether you want to use the No-Questions-Mode. If you answer yes, it will convert all modules with default settings.
    If you deny No-Questions-Mode (recommended), SPXCNVRT will ask for each module, whether or not you want to migrate this module. If you answer Yes, you are asked two questions that help the Randomizer to create puzzling effects. Some savers like Melting Ice do not draw anything. So they need a non-blank screen at program start or you wouldn't see anything! Other savers like Drop Out will leave the screen blank. Savers like PuckMan let you choose whether or not you call the results a blank screen as it is almost but not quite black!
    You may specify a description for the screen saver that is displayed in LGD's main window when you select the saver. You shouldn't exceed 8 lines with about 30 characters each (a total of 254 characters). Type the caret sign (^) if you want to include line-feeds.
    Tip: You may run SPXCNVRT in the No-Questions-Mode first so you can use the SPX modules with LGD. If you know the "needs" and functions of each SPX module, you can run SPXCNVRT again and specify which modules blank the screen (like e. g. "Fade to Black") and which require a non-blank screen (like e. g. "Puzzle" or "Flashlight").
  * Hit RETURN when all modules are migrated.

SPXCNVRT converts LGD modules with filenames like SS_XXXXX.LGD for each SPX module, where XXXXX usually represents the first five characters of the SPX module name.
To use the modules you have to copy the *.LGD and *.SPX files to your Ultomat directory (you may need additional files like *.BMP or *.DLL depending on the SPX module).

The next time you run LGD, the new savers will appear in the listbox in the main window. They will not appear in the saver menu (it would get too big!).

Limitations
LGD can load a maximum of 81 savers at the same time. I wrote about 40 LGD modules and found 31 SPX modules so far, so there isn't a problem yet. I can enable LGD for more savers in future releases if there is need to do so!
The SPX modules are supplied by different software developers all over the world. Thomas Hövel Software doesn't comment the quality of specific SPX modules.
My testing has shown that some SPX modules do "eat" system resources by allocating GDI objects that are never released. This was a common problem in the days of Windows 3.0 because this version didn't detect "memory eaters". The debug kernel of Windows 3.1 helps to identify resource wasters.
I have 10 SPX modules by John Ridges that seem flawless to me!
All "my" SPX modules work with LGD as good (or bad) as they do with Screen Peace. However, they can use LGD's password protection and Randomizer!

SPX modules included
The Shareware version of Ultomat includes 10 Freeware SPX modules written by John Ridges. I tested them and didn't encounter any problems. I think you can use them without any risk. However, the only guarantee I give you is that I do not guarantee any program to be free of errors.

I include them for your convinience - otherwise you would have to search BBSs and CD-ROMs for suitable SPX modules. They are FreeWare and aren't part of Ultomat!
See the file CONTENTS.DOC in the J_RIDGES sub-directory of your Ultomat directory for information about John's saver package.

Copyright

```
LGD: (p) 1989-1995 Leo Minor
     (c) 1989-1995 Thomas Hövel Software-Entwicklung
     All Rights Reserved!
     Alle Rechte vorbehalten
```

Address:
```
     Thomas Hövel
     Saturnstraße 45
D-53842 Troisdorf (BRD/FRG)
(Germany/Allemagne)
```

Bei Anfragen bitte Rückporto beilegen!

Windows <TM> und AfterDark <TM> sind Markenzeichen der jeweiligen Markenzeicheninhaber.