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Menues

[File][Load car]

Loads a BMP file, containing the car image
The BMP file should be 256 color, 256*164 pixels.

[File][Load helmets]

Loads a BMP file, containing the helmet images.
The BMP file should be 256 color, 256*180 pixels, and the helmets should be placed as in the original HELMETS1.BMP

[File][Load wheels]

Loads a BMP file, containing the wheels images.
The BMP file should be 256 color, 64*160 pixels

[File][Save image]

Saves the current screen image to a BMP file. Only the original GP2 colors will be used.

[File][Exit]

Saves the current settings, and exits the program.

[Screen][Update]

Updates *car.BMP*, *wheels.BMP* and *helmets.BMP*. Then redraws the image.

[Screen][Popup on change]

Works only if the program has been minimized.
Checks *car.BMP*, *wheels.BMP* and *helmets.BMP*. If one of the files has changed, all the files will be reloaded, and the program will pop up to reflect the changes.

[View][Set as default]

Uses the current view as new default view. Center button on controlpanel selects default view.

[View][Setup]

Setup of light effects and helmet selection.

[View][Large]

Toggles between 300*200 and 600*400 image size.

[View][Light]

Toggles light effects on/off.

[View][Helmet]

Toggles helmet on/off.

[View][Wheels]

Toggles wheels on/off.

[View][High nose]

Toggles high nose on/off.

[View][Wings]

Toggles wings on/off.

[View][2. Driver]

Toggles 2. Driver information on/off.

[Help][Contents]

You found it.....

[Help][About]

Information about version.

User interface

The nine buttons in the view panel is used to control the view.

The center button, will set the default view.

The buttons with the red arrows, will rotate the view.

The corner buttons will select one of four fixed views.

If the user changes any settings, the drawing will be interrupted. If the settings includes a new view, or new objects shown or hidden, the interrupted drawing will be dropped.

This way the user will be ably to ex. rotate the car very fast, even on a slow mashine.

Likewise, you will be able to change from ex. large to small view, without waiting for the large view to finish drawing.

Saving of an image might be very slow on a 486 or lower mashines. This is due to the color approximation routines used, and the scanning of the screen image.

If you decide that that you will not wait for the saving to finish, press [escape], and the saving will be aborted.

Note that the file you started saving to will be a bunch of unusable bytes....

Wheels & Helmets

Wheels are drawn from the file *wheels.BMP*.
Helmets are drawn from the file *helmets.BMP*

These files can be located in any directory, having any name, as long as the formats are right.

Specify the file from the [File][Load wheels] menu and the [File][Load helmets] menu

Upon exiting the program, the directories and filenames will be saved, and automatically loaded the next time

Dont change the dimension of the wheels to make them smaller, GP2CV expects the wheels to be 64*64 pixels.

The piece in the lower left corner is used for the tyre surface.

Light & Setup menu

Light effects will try to give the impression of a spotlight on the car.

If you run in 256 color mode, the light effect will be reduced, due to the number of colors available.

Experiment with the setup menu, to get a good view.

The setup menu enables to to set the light effect, and select the helmet shown in the cockpit.

Intensity

Set to minimum, the brightest color will be the same brightness as without the light effect.

Set to maximum, the brightness in the spot center will be increased about 50%.

Focus

Set to minimum, the spot will be out of focus, and the colors will shade.

Set to maximum, the spot will only add light in a very defined range.

Spot size

Set to minimum, the spot will only illuminate the driver seat.

Set to maximum, the spot will illuminate the complete car.

Room light

Set to minimum, the room will supply none of the light

Set to maximum, the room will supply most of the light

Helmet

Selects witch helmet to show.

Colors

The colors used, are the palette RGB values from the BMP file. This means, that if the colors in the BMP file not matches the colors used in GP2, then GP2CV will show wrong colors, compared to GP2.

Colors may differ slightly from your paint program to GP2CV. GP2CV simply sets the color to the corresponding RGB value found in the BMP palette. No corrections are made.

If you are using a paint program corrected for use with your monitor, there might be a small difference.

INI file

GP2CV uses the inifile GP2CV.INI, located in the same directory as GP2CV.EXE
All settings are stored in this file

[Settings]

Version=Version information

Top=Top position of window

Left=Left position

Large=Large view (0=small 1=large)

Light=Light used (0=no 1=yes)

Draw helmet=Draw helmet (0=no 1=yes)

Helmet no=Helmet used (1-28)

Draw wheels=Draw wheels (0=no 1=yes)

High nose=Draw high nose (0=no 1=yes)

Draw wings=Draw wings (0=no 1=yes)

2 driver=Draw 2. Driver information (0=no 1=yes)

Light room=Room light (0-100)

Light intensity=Light intensity (0-100)

Light focus=Spotlight focus (0-100)

Light spotsize=Spotlight size (0-100)

Auto popup=Auto popup (0=no 1=yes)

View X=Default X view

View Y=Default Y view

View Z=Default Z view

Carpath=Path to last car loaded

Helmets=Path and filename to last helmets loaded

Wheels=Path and filename to last wheels loaded

File formats

In general, GP2CV does not check the file format. If the file is big enough, it will be loaded. On the other hand, if the file is too small, nothing will happen. I didn't want to put in a lot of file checking. You know what files to load....

All files are in the BMP format, 256 colors.

<i>car</i> .BMP	256*164
<i>helmet</i> .BMP	256*180
<i>wheels</i> .BMP	64*160

Troubleshooting

What operating system, and witch settings do I need

Any operating system stating with W will do.
Any color depth.
Any resolution

Does the program requires any kind of add-ons, drivers ect.

You will only need a *wheels.BMP* to view wheels.

Can I run it on a 386

If you have Windows, Yes. But no guarantee concerning the drawing speed ;-)
The interface has been improved, with slower mashines in mind.
But then again, GP2 on a 386 ?????

[View][Helmets] are grayed.

No helmets are loaded. Select [File][Load helmets], and find a valid helemts file, including all 28helmets in the format 125*180*256

[View][Wheels] are grayed

No wheels are loaded. Select [File][Load wheels], and find a valid wheels file.

Strange green planes are drawn in one ore more places.

The background, ie. transparent color, used in the BMP file, does not have the colorindex 0.
Check this carefully when you modify the car or change from 256 colors to more, and back again. Only color 0 will be transparent. Even though high colors in most GP2 car files, look the same as color 0, ONLY color 0 will do.

The focus control doesnt seem to work

On a 256 color system, the number of colors are limited, and the light fading will be allmost none.

Some of the shading affects are lost on a saved image.

When saving, GP2CV uses the same palette as the standard car BMP files. There is a limited number of colors available, and some shading will be lost. Some colors are worse than others.

About GP2CV

Version 1.11

Improved user interface, now enabling to rotate faster
Seperat loading of helmet BMP
Seperat loading of wheels BMP

Version 1.10

Improved graphics and accuracy
Included wheels, high nose, helmet ect.
BUG Car was drawn twice on popup
BUG Top of helmet was drawn backwards

Version 1.00

Basic version

GP2CV was written in Delphi.

The developement time in Delphi is faster than in C (havnt tried out the new C builder yet)

GP2CV spiltts the BMP file up in about 200 smaller pieces, places them in 3D space, calculates screencoordinates according to view, calculates the position in the texture, adds light, and draws the pixel.

In the large view, around 100000 pixels are calculated, lightcorrected and drawn in views where most surfaces are seen. In the small view, around 2000 pixels are drawn, viewing the car directly from the front.

All code has been written from scratch, ie. no libraries ect. has been used.

No speed optimizing has been made. All angle calculations ect. are made in floating point.

Some speed could be gained, rewriting the code to use 16 bit operators.

Most of the drawing time is spent, painting the pixels. Speed could be gained, compiling the code in 32 bit, or starting using some direct-crash interface.

This would mean, that all the Win3 users would be unable to use the program, and that some Win95 users would have to download several MB of direct-something just to get a 200 KB program to work.

I feel, that as long as the program is accurate, it doesnt relly matter if the drawing takes 0.1 or 5 seconds, as long as the alternative is to shut down Windows, start GP2, wait a hole lap, view the car ect. ect.

But, with slower maskines in mind, I added faster rotation to the interface.

If you change the view, the drawing will be interrupted, so that you dont have to wait for each drawing to complete.

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