True Mandel 1.5 Index

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You can edit or modify this program in no way without the author's permission.
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Password license is intended for a single person that uses it on a single computer.
All private uses of fractal images are allowed.
If you use them for a commercial project (i.e. books or poster) please contact the author.
For other questions you can always contact the author.

Introduction

True Mandel was born when I had to print some fractal images and some simple posters with epson stylus color. I realized that there was no true color fractal generator for windows in shareware market... So I programmed it by myself.

I did not optimize the first version's algorithm 'cause I didn't need it, I called it UbiMandel (from my name) and I wrote it with Visual Basic 3.

When I bought Delphi I wondered what simple program I could do... So I restarted to code another fractal program. I begun it in May 1995 and I finished in October 1995. I released it on internet as True Mandel 1.0 (trmand10.zip). True Mandel stands for True Color Mandelbrot Set Generator.

Meanwhile I was employed as a programmer in a small multimedia publishing house.

I planned to work on it a lot during the Winter for the next versions. However my new job took me a lot of time. So this version is two months late...

Your feedback was very appreciated... I received tens of letters both email and paper.

So you'll go on writing me and I'll continue to develop this program.

Hardware requirement

True Mandel 1.5 runs quite well on a Pentium 166 Mhz with 32 Mb of ram and a Matrox Millennium with 4Mb of Wram. ;-)
However you need a 486 (er.. actually 386 + 387 works too) or better and MS Windows 3.1 or later. I didn't test it under MS Windows NT and Os/2 but I think they should give no problems.
True Mandel doesn't need a true color graphics card. However I strongly recommend it, at least with 32000 colors. True color means over 16 million colors (2^ 24).
With Windows 95 you have to right click on desktop to set number of colors.

How to install True Mandel 1.5

Simply copy all the files in a new directory. Guided setup will come with next versions.
Previous version user can delete all file but images (*.mnd, *.bmp) and then copy new files. However both TrueMandel versions can run together.
If you want you can associate mnd and mnl extansions to Trmand15.exe from File Manager or Explorer. In this case you can start True Mandel with selected fractal simply double-clicking on fractal file. If you don't know how to do it... check it on Windows manual or Help.

Tutorial

If you like to know more about the magical word of fractals let's follow my instructions.

Press START and you will see MAND001 color STANDARD, which is the whole Mandelbrot Set.

Observe DONE on the left lower corner and you will know the executing time of your pc, beside the percentage of execution.
The function, involving complex numbers, is globally described. The more or less approximation is represented by different colors.
IMAGE MAIN PARAMETERS shows the location of the center with reference to the system of axes (see REAL PART and IMAGINARY PART) and the grade of precision (see ITERACTIONS). It is possible to modify the parameters,

Click on -0.75 REAL PART OF CENTER, write 0, press START and note the displacement of the center.

Click on 0 IMAGINARY PART OF CENTER, write 1, press START and note the displacement of the center.

Click on 100 ITERACTIONS, write 1000. press START and   note the variation from the original, the present configuration of colors is due to the less of approximation of the function.

Now we are going to examine particular portions of the whole. We can find the instruments in the TOOLBOX.

Press ZOOM IN and direct the lens to the fractal. You can select a square portion of the fractal and enlarge it. Reiterate the enlargement successively and observe the result.

Press ZOOM OUT and direct the lens to the fractal. You can reduce the image.

Press ZOOM IN A RECTANGLE and direct the lens to the fractal. You can select a rectangular portion of the fractal and enlarge it.

Using the lens you can explore your fractal obtainig many suggestive images. You can save your favourite ones pressing SAVE CURRENT IMAGE AS BMP.

Using this function you can save the image only, the mathematical data concerning it will be lost. It will be possible to use the fractal again recalling it to   other programs.

SAVE CURRENT FRACTAL FILE (NOT ONLY THE IMAGE) consents to save data allowing you to obtain the fractal. You can choose to associate the image too. In this case opening the file you'll have at your disposition the fractal and the parameters. The choice is determined by the large space necessary to store drawings in the memory of your   pc. Saving the image can be useful   when the executing time is excessive.
True Mandel is provided with some interesting images. Press OPEN A NEW FRACTAL FILE, look at the square on the left and you will see a list of the available fractals. Select BRAIN.MND, press OK and observe the result. Of course as above it is possible to change IMAGE MAIN PARAMETERS and to ZOOM IN and ZOOM OUT, saving the fractals.

We can try again. Press OPEN A NEW FRACTAL FILE, select FOSSIL.MND. Now you can ZOOM IN till you find an interesting portion of the fractal. Change REAL PART and IMAGINARY PART and save the image using SAVE CURRENT IMAGE AS BMP or SAVE CURRENT FRACTAL FILE.

Now we're going to examine some more details about MAIN PARAMETERS.
TITLE proposes a standard name, progressively numbered to be attributed to the fractal. If you prefer you can substitute it, not exceeding 32 letters. The name will be saved together with other parameters. let's try, open the file AMEBA, using the TOOLBOX you can obtain a portion of it. Now select the proposed title and substitute it with BOILED POTATO, here's the new name characterizing your fractal. Select SAVE CURRENT FRACTAL FILE,

as you can notice BOILED POTATO already appears on the display.
MAGNIFICATION shows the grade of enlargement of the fractal. The standard value is 0.4 but you can increase or diminish it. Look at the last image appearing on the display. Now select MAGNIFICATION 0.4 and write 0.1, press START and note the going away image.

Select MAGNIFICATION 0.1, write 3, press START and note the image getting near.
As you can notice MAGNIFICATION can be useful for you to refer whatever portion to the whole Mandelbrot diagram which allows a knowledge of the spatial collocation

IF>16000 concerns the relation between the greatest possible degree of colors and the highest value of iteractions. Since the maximum is 16000 for colors and 64000 for iteractions, it is necessary to approximate the divergence. To use   this function it is necessary to select a nomber of iterations greater than 16000. Let's try, select ITERACTIONS and write 40000. Now it is possible to utilise the drop down list showing four alternatives: MOD 10000+6000, MOD 16000, DIVIDE BY 3. =15999. The first one is the standard value. We can compare the diagrams, noting the differences.

JULIA MODE is another way for drawing fractals. Restore the whole Mandelbrot diagram, select JULIA MODE and press START. As you can see the formula is just the same, the variation is due to a different starting point (see REAL PART OF CENTER O and IMAGINARY PART OF CENTER 0). Of course it is possible to try JULIA MODE with the other fractals we've found up till now. For example open the file GALAXY, you'll obtain a quite interesting image, now select JULIA MODE, press START and another beautiful image will appear. Compare the coordinates and note the effects of the variation.

DELTA COORDINATES allows you to convert the coordinates from the system used by TRUE MANDEL to systems used by other programs. If you are not provided with mathematical notions I think you should ignore the function. If you already know something about fractals, click on DELTA COORDINATES. A dialog will appear showing the parameters necessary to translate the fractal appearing on your display for example to FRACTINT.

In fact TRUE MANDEL draws fractals using   the coordinates of the center as parameters (see REAL PART OF THE CENTER and IMAGINARY PART OF THE CENTER) and the coordinates of a side (see number of ITERACTIONS).
FRACTINT and some other programs use   the coordinates of   BOTTOM LEFT POINT as parameters and TOP RIGHT POINT.

Let's use IMAGE LAYOUT now. Press LAYOUT and you will see other parameters.
WIDTH and HEIGHT show the extent of the display As you can note the standard measures are WIDTH 256 and HEIGHT 256. Now we are going to change them.

Select 256 WIDTH, write 400. Select 256 HEIGHT,write 600. Press START and you'll see larger dimensions of the display. The dialog beside shows a list of pre-arranged measures to facilitate the selection.For example you can select 32x32 SQUARE, press START and observe the reduced dimensions of the display.
ASPECT RATIO, standard value 1, consents to see the image in monitors and printers endowed with no square pixel. Anyway we can observe the effects on our display. Select ASPECT RATIO, write 0.5, press START and you'll see a stretched out image. Select ASPECT RATIO, write 3, press START and you'll see a compressed image.

PRIORITY indicates the impact of TRUE MANDEL relating to operating Windows. It can be important when you use True Mandel and other programs at the same time.
The standard value is HYGH. Select the drop down list, it shows: VERY HYGH. HYGH, MEDIUM, LOW, BACKGROUND.
BACKGROUND is the lower one. TRUE MANDEL works very slowly but other programs can be used easily.
VERY HEIGHT is the highest one, it consents the use of TRUE MANDEL quickly but almost esclusively.

OPTIMIZATION tells us about the connection between the time necessary for realization of the fractal and the grade of approximation.
The standard value is NORMAL. Select the drop down list and you'll se the alternatives: NONE, NORMAL,

TURBO.

Select NONE, press START and you'll get a more precise drawing and a longer time of execution.

Select TURBO, press START and you'll get a less precise drawing and a shorter time of execution.

It is also possible to change the arrangement of colors. Direct the cursor to the right of COLORS and you will get a list of the available colors. You can start from Mandelbrot diagram, Select OPEN A NEW FRACTAL FILE, select MANDEL 01, press START and you'll obtain the fractal. Now you can select the color, for example you can chose SUNSET and press START and you will obtain a different association between colors and points approximating our function. Using COLOR you can variate your starting fractals obtaining new images.

Yet another curious stuff to change your fractal, try with ADVANCED in the floating board PARAMETERS. We'll start from the whole Mandelbrot diagram again.

Let's practise restoring the necessary values after our variations. Have you succeded in doing it?

Well now press ADVANCED, first we are going to change REAL PART OF PERTURBATION and IMAGINARY PART OF PERTURBATION both showing the standard value 0.
Select 0 REAL PART OF PERTURBATION, now write 1, press START and note the variations. Select 0 IMAGINARY PART OF PERTURBATION, write 0.1, press START and note the variations. Of course it is possible to substitute other values observing many different drawings.

BAILOUT VALUES refers to the range of colors. For a better appreciation of its action, modify the IMAGE LAYOUT with the following values: WIDTH 800, HEIGHT 6OO, COLOR GREY AND PINK.
Now select BAILOUT VALUES and write for example 8888, press START and observe the change. It is very interesting to compare the different diagrams.

APPLY COLORS BY ITERACTIONS is the standard form. However four alternatives are allowed, as shown in the drop down list. They are: REAL, IMAGINARY, REAL+IMAG (MOD), INTERNAL SUM, MOD*ITERACTIONS and MOD+ITERACTIONS.
Restore whole Mandelbrot diagram and try APPLY COLORS. First select LAST REAL, press START and contemplate another evocative drawing. Then select IMAGINARY, press START and compare the result with the previous images.
You can do the same selecting REAL+IMAG and INTERNAL SUM.

FORMULA shows the mathematical function generating fractals. If you haven't got theoretical rudiments involving complex numbers, don't worry. You can use it at the same time.
Up till now we have used the standard formuula raised to the second power. If you select the drop down list you'll see the same function raised to the third and fourth power.It is very interesting to compare the three different diagrams.

As you have seen ADVANCED contains many useful instruments. Utilise them together with MAIN, LAYOUT and ZOOM IN and you'll get other beautiful drawings.
If you like you can write a COMMENT to the fractal, the text must be not more than 255 letters long.
It can be saved with the fractal. Pay attention, the comment must be written after the drawing.

LIST enumerates all the fractals we've carried out up till now.
Press LIST in the floating board PARAMETERS and you'll see the last fractal you've selected together with a summary of its parameters (we've examined them in IMAGE MAIN PARAMETERS. LAYOUT IMAGE and ADVANCED). It isn't possible to modify them.
Select the drop down list and you'll see the summary of the fractals beginning from the starting of the program. They are progressively numbered, the first one is always Mandelbrot whole diagram marked with Mand000.
You can select a fractal and restore it pressing RESTORE. Pressing DEFAULT it is always possible to restore Mand000.

SAVE LIST permits to save the data and the image concerning a certain group of fractals at the same time. You can open the file using ADD LIST. The dialog will show the lists previously saved, you can select one of them. The corresponding fractals will be added in the drop down list.

Menu voices

FILE
OPEN FILE - You can see a list of the fractals saved, select one of them and open the file. True Mandel is provided with a list of fractals concerning the image and its parameters. You can open old True Mandel file too.
SAVE FILE - You can save the image and all the parameters or the parameters only. The parameters file is about 500 byte long,   image size can be pre-calculated. It's Width for Height for 3 (3 stands for 3 bytes i.e. 24 bit for pixel). So an 640 x 480 image occours 921600 byte on disk.
SAVE IMAGE - You can save the image only using it with other programs to print and adjust it. True Mandel supports bmp format only. Future versions would support PNG compression format.
ADD LIST - You can open a file containing a list of fractals. The corresponding fractals will be shown on the floating board LIST in the drop down list, but it will not draw. However you can draw them from list. You can import a single file too, useful to read parameters without drawing image. For example to check esecution time.
SAVE LIST - You can save a group of fractals at the same time.
REGISTER NOW - If you like to register fill the form. To have registration instructions   see orderme.txt or the index of help.
DEREGISTER - If you decide to deregister use this function.   I don't see any use for this ,)
EXIT - consents to leave the program.

FRACTAL
START - Direct the cursor to START and click. It consents to start the drawing.
PAUSE - Directing the cursor to PAUSE you can suspend the drawing. And re-click for continue...
ZOOM IN - It permits to select a rectangular portion of the fractal and enlarge it from its center.
ZOOM OUT - It permits to reduce the fractal appearing in the display by 4 times.
ZOOM WINDOW - It permits to select a rectangular portion and enlarge it from a corner.

OPTIONS
AUTO HIDE FLOATING - Concerns the presence or absence of the floating boards TOOLBOX and PARAMETERS during the execution of the fractal.
RESTORE OLD VALUES - You can select a fractal from the drop down list of LIST and restore it on your display.
DEFAULT VALUES - You can restore the first fractal of the list, it will be drawn automatically.
SELECT STARTING VALUES - True Mandel usually starts with standard values. If you prefer you can choose another starting image.
TEST FLOATING POINT SPEED - How fast is my computer ? My pentium 100 marks 2.336.000 iteration for second, my former 486/33 marked 245.000... Every iteraction has 6 floating point additions and 3   floating point multiplications.

VIEW
TOOLBOX - permits to cancel the TOOLBOX and restore it.
PARAMETERS - permits to cancel the PARAMETERS and restore it.
STATUS BAR - permits to cancel the STATUS BAR and restore it.

Parameters floating box

This is a complete list of parameters functions:

Main

Title   Name of the fractal. Note that you have to fill this field AFTER fractal is drawn.
Real part of center   This is real part of the center of the image, that is X coordinate.
Imaginary part of center This is imaginary part of center of image, that is Y coordinate.
Magnification   This is magnification value, that is 1/(top-bottom). It affects imaginary coordinates (top and bottom), real coordinates (left and right) are calculated with Aspect Ratio value. Note that some other program like fractint use diagonal lenght to calculate this field.
Iteractions   This is maximum iteraction. All pixels that reach this value are drawn as belong to Mandelbrot Set. Maximum value for iteractions is 64000 (will be 2.000.000.000 in future versions).
If >16000   This decides the color to apply when iteration override 16000 (max number of colors).

      Mod 10000 + 6000   Get iteractions then module them by 10000 and add 6000. For example 23000 became 9000.
      Mod 16000   Get iteractions then module them by 16000. For example 23000 became 7000.
      Divide by x   Get iteractions then divide them by x (x is calculated every time). For example 23000 became 11500 (x equal 2).
      =15999   Get iteractions then put equal 15999. For example 23000 became 15999.
Julia mode   This is to switch between Julia Set and Mandelbrot Set. Here Julia is intended not properly but as computation style. That is changing starting point versus C value. When you click on this check box, you exchange among them Perturbation coordinates with Center coordinates.
Delta Coordinates   This is to change the coordinates system between center + magnification and top+bottom+left+right. It's useful to import/export image from/to other fractal program.

Layout

Width   This is the width in the pixel of the image. For unregistered version it can't be greater than 1000. No limits for registered one.
Height   This is the height in the pixel of the image. For unregistered version it can't be greater than 1000. No limits for registered one..
Aspect Ratio   This is the shape of the pixel. 1 stands for square. <1 means rectangle, higher than larger. >1 means rectangle, larger than higher.
Priority   This is how much cpu time is left to other programs. Very High means almost all time for True Mandel. Background means very little time for True Mandel.
Optimization   This is how to optimize image drawing when are present large single color spot, expecially Mandelbort bud.

      Turbo   Faster but not too precise.
      Normal   Quite fast and quite precise.
      None   All pixel will be calculated. Exact but slow. However it is the FASTEST when image is complex and it doesn't show large part of Mandelbrot Set.
Colors   This is coloration of the image. Every style listed (like Sunset or Standard) represents a color calculation method, not just a palette. This means that if you choose 16000 iteractions you'll get 16000 different colors. Of course it depends on the kind of colors you have chosen, as a matter of fact there are only 256 degrees of gray in 24bit graphic so you cannot have more grays in MSWindows!
True Mandel hasn't got animation palette option because it has no palette!

Advanced

Real part of Perturbation   This is real part of perturbation, that is starting point when Julia mode is switched to off and C coordinates when Julia mode is set to on.
Imaginary part of Perturbation   This is imaginary part of perturbation.
Bailout value   This is the value to compare to iteractions to decide whether a point belongs to Mandelbrot Set or not. Note that you compare the square of module of last iteraction.

Apply colors by   This specifies which value is used to color pixel.
         Iterations   Normal mode. It shows the number of iteractions necessary to reach bailout
value. That is the nearness of the point necessary to belong to Mandelbrot Set.
         Real^2   This shows the square of the real part of last iteraction.
         Imaginary^2   This shows the square of the imaginary part of last iteraction.
         R.^2+I.^2 (mod)   This shows the square of the module of the last iteraction.
         Iteractions*mod   This shows the square of the module of the last iteraction for thr number of
iteractions.
         Iteractions+mod   This shows the square of the module of the last iteraction plus the number of
iteractions. It seems to produce images with continuos bands. I'm working on this yet.
         Internal mod   This shows the square of the module of the last iteraction but only inside the
Mandelbrot set.
Formula   This shows the formulas used to calculate fractal. If you don't understand just
try them...
Comments   This allows to comment freely your best images.   Note that you have to fill this field
AFTER fractal is drawn.

List
         Dropdown list   This shows a list of the names of the images that you did. Select one of them to see all
its parameters. If you change the name of the last fractal you have to reselect it to read a new name.
         Default   This is to return to default value.
         Restore   This is to redraw   images with selected parameters.
         Add list   This is to add a list of images to the current list. So you can redraw or just compare
their values.
         Save list   This is to save the current list of images. You can save the whole list but not a part of
it.

New features and future versions

True Mandel 1.5 has some new features:
1) New formulas of fractals.
2) Julia mode.
3) Images database.
4) Remembering last windows positions.
5) You can choose starting fractal.
6) Help file.
7) Other small improvements.
8) Some bugs fixed.

Incoming adds:
- Floating window to show Julia, orbits, coordinates and other stuff related to the mouse position.
- 32 bits code.
- Win 95 full support.
- Guided setup.
- Anti-alias images.
- Multi threating support.
- More database features as deleting single record.
- Auto-draw whole fractals into a list.

Under studing adds:
- Import/export from *.dbf files.
- Arbitrary precision algorithm.
- Save images in *.png files.
- New faster algorithms.
- Editing and creating new coloring styles.
- Export as 3d file for Persistence Of Vision.

Scheduled dates (don't take them for sure):

TrueMandel 1.6	April 96	32bit version of TrueMandel 1.5. (for win95 only).
TrueMandel 1.7	May 96	It'll have some new features.
TrueMandel 1.9	August 96	It'll have a lot of new stuff.
TrueMandel 2.0	October 96	Wholly new version.

If you want new versions for win3.x write it to me.

How fast is True Mandel?

It's very difficult to understand the speed of a fractal program. I tried to value a lot of programs both Windows and Mac. Mostly are very fast simply 'cause they use very poor precision algorithms. Besides they don't always show all the parameters you need to compare the drawings among them.
Another problem is the kind of optimisation, I know three types.
First there are 'adjacent colors based' algorithms. They can greatly decrease execution time when the images are charaterized by large spots of a single color. True Mandel uses two algorithms of this kind. You can choose them from optimisation combobox. Normal is a good chance (I think it's the same of Fractint), Turbo is faster but it lacks in precision, expecially where near round areas touch themself.
The second kind is based on the behavior of the iteration coordinates. It's worth for very high iteraction value only (greater than 1000). I didn't include it because it doesn't work in most of the cases.
The third type is based on pre-calculated zones. It consists in checking if every point lies in a area mathematically defined as belonging to Mandelbrot Set. Another similar algorithm is based on the symmetry of Real axe of Mandelbrot Set. I didn't include (for now) any of them 'cause they speed up only low magnified images.
You can also improve calculation code for a specific processor (I worked a lot on Pentium).
But every month someone announces a new wonderful fractal algorithm...
Fractal Witchcraft uses a very interesting new algorithm (synchronous orbits) that in some cases improve speed from 10 to 100 times... I'll try to implement it in future versions.
However I'm looking for a parallel multi-tasking algorithm to use all windows NT features. Can you imagine fractal generation on a four 200 Mhz Pentium Pro system ? (The fastest pc you that can buy at the moment).

My computer is a Pentium 100Mhz with 16 Mb ram chipset Triton, 256k writeback cache, Avance Logic 2302 video card with a 1 Mb Dram PCI, hard disk WD Caviar 850Mb.
I tested WinFract 18.21 Fractint 19.2 and Fractal Witchcraft (rumored as the fastest fractal program) with these values:
===
Dimension: 640 x 480 pixel
Min - max X (real part): -0.74366666666   -0.73833333333
Min - max Y (imaginary): 0.134   0.138
Iteractions: 500

Winfract 18.21 (floating point and 16bit values on, other parameters as default)   38 seconds.
Fractal Witchcraft (edge on, warp on) 37 seconds.
Fractal Witchcraft (edge off, warp off) 51 seconds   (note that warp on decrease precision).
True Mandel 1.5 (priority Very high, optimisation Normal) 43 seconds.
True Mandel 1.5 (priority Very high, optimisation Turbo) 37 seconds.
===
Dimension: 640 x 480 pixel
Min - max X (real part): -1.16235   -1.16227
Min - max Y (imaginary): 0.22726   0.22732
Iteractions: 10000

Winfract 18.21 (floating point and 16bit values on, other parameters as default)   7' 29".
Fractint 19.2 (floating point on, other parameters as default)   6' 22".
Fractal Witchcraft (edge on, warp on) 5' 01".
Fractal Witchcraft (edge on, warp off) 8' 08".
Fractal Witchcraft (edge off, warp off) 10' 28"   (Warp on decrease precision).
True Mandel 1.5 (priority High, optimisation Normal) 5' 00".
True Mandel 1.5 (priority Very high, optimisation Normal) 4' 55".
True Mandel 1.5 (priority Very high, optimisation Turbo) 3' 54".
===
Dimension: 640 x 480 pixel
Min - max X (real part): -0.5510313972380302   -0.55103139721913384
Min - max Y (imaginary): 0.6271333416120786   0.6271333415748123

Iteractions: 12000

Fractint 19.2 (floating point on, other parameters as default)   6' 10".
Fractal Witchcraft (edge on, warp on) 1' 07".
Fractal Witchcraft (edge on, warp off) 1' 21".
True Mandel 1.5 (priority High, optimisation None) 5' 16".
==
True Mandel is the slowest at low iteraction values (probably due to windows too) but it runs greatly for slower images. But in some cases Fractal Witchcraft seems fly...
Note that Fractal Witchcraft egde detection method doesn't reduce precision.
Note also that 24 bit graphics is slower than 8 bit...

Registration form and feedback

To register your copy of True Mandel you have to compile and send me the form.
Registered version will give you:
1) A clean conscience that lets you sleep better at night.
2) Fractal images as large as you want. You'll be no more limited to 1000 x 1000 pixels.
3) You will be not annoyed with splash forms again.
4) 66% discount on radically new versions (2.x) and other programs of mine. Minor upgrade (1.x) can be registered with the same password.
5) You will get adviced on every new version.

You can print the form, fill it and send it to my address:
Uberto Barbini - Cannaregio 517 - Venezia - 30121 - Italy

If you have email address you can send a message to me (but not cheque).
uberto66@unive.it   home
canal@mbox.vol.it   job (if you want a faster reply)

Registration form

Program: True Mandel
Version: 1.5
Organization: _____
Name: _____
Surname: _____
Address:_____
City: _____
State (region): _____
Country: _____
Zip code: _____
Email (if any): _____
Fax (if any):   _____

My computer is: _____
                _____
My o.s. is: _____

I want (check your choice):
[ ] Registering password (I included a 25 $ cheque).
[ ] Latest version on a HD disk (I included a 30 $ cheque).
[ ] Get adviced on every new version (I didn't include a cheque).

I found program on:
[ ] Bbs, please enter name _____
[ ] Mirror of   Cica   _____
[ ] Mirror of Simtel   _____
[ ] Other on internet   _____
[ ] Cdrom   _____ (if you paid for it, please write the price)
[ ] Friend   (I don't need his name)
[ ] Other   _____

Bugs and problems: _____
        _____
        _____

          _____

Impressions: _____

                     _____

                     _____

                     _____

Wishes, lacks: _____

                     _____

                     _____

                     _____

                     _____