ScreenGopher
User Manual

Powered by

Sega Gopher is 16 bit handheld, being produce since 2007. At first, it was known as *Sega Mega Drive Handheld*. Using it, you can play games, that was originally made for *Sega Mega Drive*.

Initially it was planned to sell this handheld only on Chinese market, but becoming popular (due to popularity of *Sega Mega Drive* and its games), this console was exported to USA, Russia, Europe and other countries.

The handheld is equipped with an slot for SD-card, which contains user's games (ROMS). Console can run this ROMs like original cartridges. Also, there is a modified version of handheld, equipped with IR-port for wireless controllers.

http://ru.wikipedia.org/wiki/Sega_gopher
Popular online encyclopedia

Sega Gopher is an excellent present both for children and people who still remember those sleepless nights, spent playing *Sega Genesis* console.

Sega Gopher handheld is equipped with an original Genesis chip, licenced by Sega company. At present, *Sega Gopher* is the only licenced game console, based on original *Sega Genesis (Mega Drive)*.

http://segamd.ru/
Official Sega Gopher dealer in Russia

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1. Introduction

ScreenGopher is a software for Microsoft Windows ® (2000/XP/Vista/7 editions) made for assigning your own pictures in game select menu (from SD-card) for Sega Gopher (sometimes known as Blaze or something else) (see also sect. 2). It is an undocumented feature, but it wouldn't do harm for your handheld in any way – it is completely safe.

The main point is an MDB.DAT file – special file, containing pictures, assigned with game names (by filename). Learn more about this file in sect. 2 – 2.1.

All this word can be illustrated with these photos:

Fig. 1. Preview picture for built-in games.

Fig. 3. No preview pictures for user's games (ROMs), uploaded to SD-card.

Fig. 4. Result of using MDB.dat file – presence of pictures for user's games (ROMs) on SD-card.

Note: originally, MDB.DAT file could only be found at rare SD-cards, selling with pre-installed games for Sega Gopher. A little later it became known which games it was oriented for (a 913 records file is widely spread and well known). Downloading this file from our site http://screengopher.freehosting.com/eng/downloads.html/ you can learn this games list. However, most of its pictures were not satisfying – among them were a lot of pictures showing garbage or non-informative stuff. ScreenGopher is made to solve this problem. Since internal structure of MDB.DAT file was understood it became possible to oneself to organize game list and to assign desired pictures.

So, who and what for is interested in this program?

1. For parents, whose children can't read and have some problems navigating menu by game names.

2. Enthusiasts and amateurs, that wish to create their own and unique game collection for handheld (which are not present in «standard» version of MDB.DAT file).

3. For people unsatisfied with «standard» MDB.DAT file, especially with its pictures' quality (because of their low information value).

4. For people, having any other troubles with navigating in menu.

2. Brief overview of MDB.DAT file structure

As it was mentioned before, MDB.DAT file contains records about pictures, assigned to user's filenames. Files are user's games (ROMs), with following extensions: .gen or .bin., uploaded to SD-card.

Schematically, this structure can be represented by following table:

Table 1. MDB.DAT file structure

Game names (filenames)	Сопоставленные изображения
Game1	Picture1
Game2	Picture2
...	...
GameN	PictureN

Note 1 to table 1: game names may not match the shown above template. It is just an example. Learn more in sect. 3.2.1 about naming games in MDB.DAT file.

Note 2 to table 1: game names (text records) in MBD.DAT file should correspond with filenames of games, uploaded to SD-card.

*Note 3 to table 1: **games may <u>be placed in non-alphabetical</u>** (however, the feature of sorting is implemented in this program and can be called from menu). If presence of two same records occurs, the handheld will take picture from the last of them.*

2.1 Using the MDB.DAT file

No matter if you took «standard» MDB.DAT file or made it with the help of ScreenGopher, it is necessary to do the following:

1. Copy this file to X:\GAME (instead of X the letter of your SD-card is meant) folder, containing user's games (ROMs).

2. Rename files (ROM-files with .gen or .bin extensions) corresponding to records in MDB.DAT file.

For example, if your MDB.DAT file contains 3 records: «Aladdin», «SonicTheHedgehog» and «EarthwormJim», the folder X:\GAME have to be filled, besides MDB.DAT file, with the following files: «Aladdin.gen», «SonicTheHedgehog.gen», «EarthwormJim.gen» (or with .bin extension). After that, while selecting a game in menu you will see a picture for each of this games, like it was shown on fig. 4.

3. Using the program

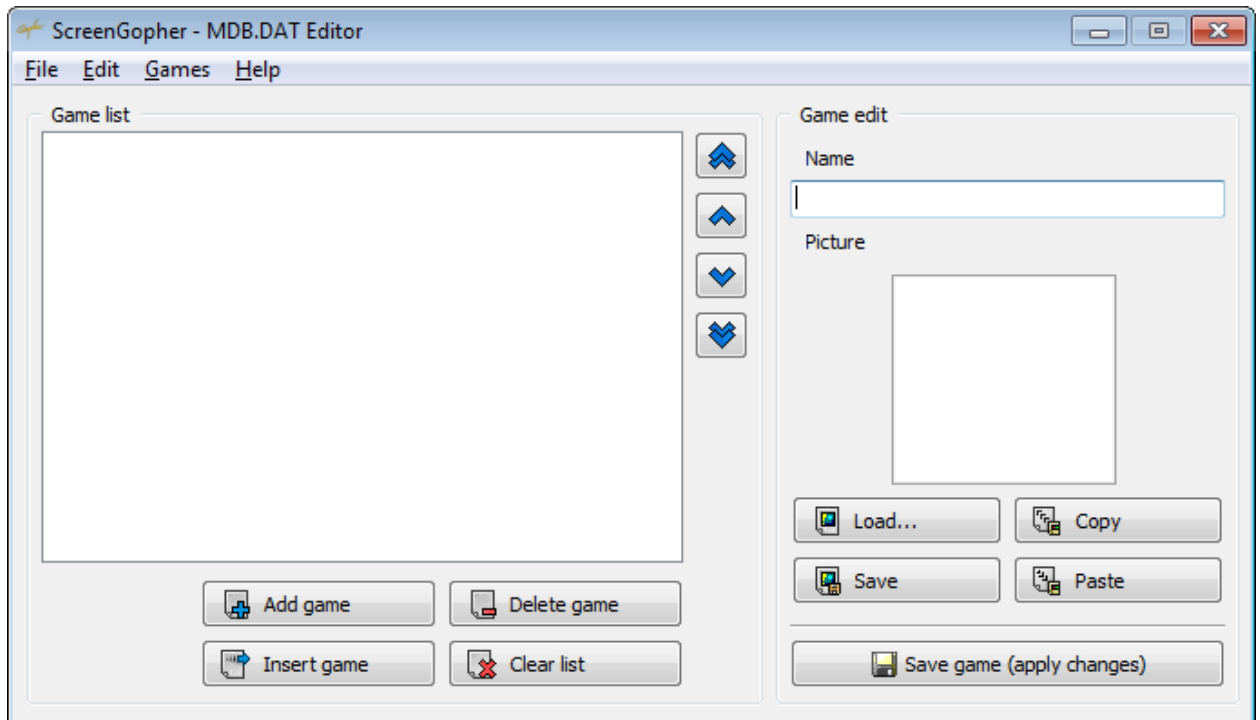ScreenGopher's main window is presented with the following figure:

Fig. 5. Main window.

It consists of two parts: one is for maintaining game list (on the left) and the second is for editing selected game (on the right). The record, containing the pair «gamename + assigned picture», is meant as «game». Also, there is a menu bar.

3.1 Game list:

One can add new games to this list (its capacity is potentially limited by 200.000 pcs.), remove them (by one or all at the time), change their order (this operation have no result in handheld's performance).

To add the game, one has to: click button «Add game» (or the same menu item). New Game will appear at the end of the list, named «NewGame». After that, one can edit this record.

The same happens after button «Insert game» is clicked, except that game doesn't go to the end of list, but appear above selected one.

To delete some game, user has to choose «Yes» in the following dialog:
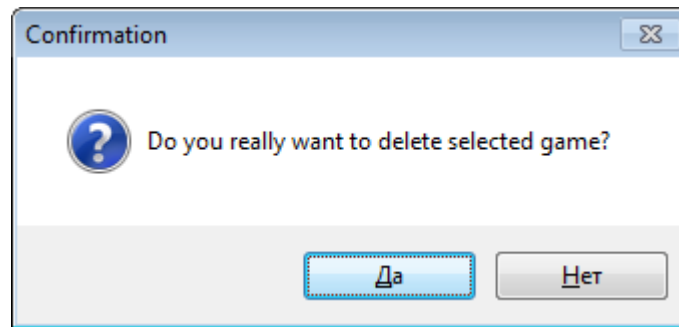
Fig. 6. Game delete confirmation.

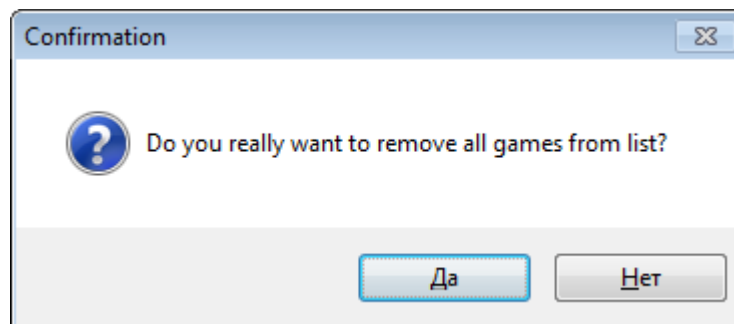The same happens when the «Clear list» button is pushed:

Fig. 7. All games delete confirmation.

To change games order,one has to use four button, placed at the right border of the list – . User can move a record to the top or to the bottom of list, and to move by one position up or down.

3.2 Editing game:
User can name the game (learn more about game names at sect. 3.2.1) and assign a picture for the game being edited (learn more about assigning pictures in sect. 3.2.2 – 3.2.3).
The editing process starts automatically after selecting game in list. After all changes, one has to push «Save game» button.

3.2.1 About game names
While naming games in MDB.DAT file, one has to follow some rules:

1. The following symbols are allowed:
  • Latin alphabet symbols (without umlauts): A-Z, a-z;
  • Signs: ~ ` ! @ # $ % ^ ( ) - + = _ ' ; , [ ] { } space;
  • Digits: 0-9.
2. The dot and national symbols are NOT allowed (Spanish, Chinese, etc.). Erroneously entered names would be automatically corrected (illegal symbols would be deleted).
3. Recommended number of symbols is 18 (the rest symbols are not shown by console due to its screen constraints). Maximal length of name is 55.

4. Starting letter must be capital and must not be a digit.

 Though space is allowed in game names, one should remember, that console formats names after following principle: uato spaces are inserted before every Capital letter, except the first one. So, the name «SonicTheHedgehog» will be converted to «Sonic The Hedgehog». If you put your own spaces you will have them doubled.

3.2.2 Pasting/loading pictures

User can assign any beforehand made picture to any game. To do this, one have to push «Load…» button, placed below image, click corresponding menu item or paste it from clipboard.

3.2.3 Picture formats:

1. User can load picture with one of the following formats (only these formats!):

- BMP (Windows Bitmap);
- GIF (Graphics Interchange Format);
- JPG/JPEG (Joint Photographic Experts Group);
- PNG (Portable Network Graphics).

2. Picture's resolution is strictly set to 120 x 112 px (width x height). The less size is not allowed and the bigger picture would be cropped.

3. Recommended amount of colors in image is 64 or less. If there are more colors in picture, it would be quantized (converted) automatically by built-in algorithm. Its result is worse than the Adobe Photoshop's one, but still is quite satisfying. So, use Adobe Photoshop in case you're not satisfied with the result.

Note: if picture is made from Sega Genesis/Mega Drive game's screenshot (with the help of an emulator), in almost every case it's not necessary to worry about picture's colors amount (it's already optimized due to original console restrictions – simultaneously shown colors must not exceed the number of 64). User have only to take care about picture's size (ScreenGopher have no built-in image resize features) by using one the graphic editors: Adobe Photoshop, Paint, ACDSee, etc).

 Thus, while manually one-by-one creating the game list (and while editing the existing one or «standard» one), one should follow the below algorithm:

1. Add new record (with default name «NewGame»)
2. Enter new name for added record (game)
3. Assign a picture (using any available in ScreenGopher technique)
4. Save the changes («Save game» button)

3.3 Additional features of the program

The program features are not limited to ones, listed above. An additional features can be found in menu bar. Among them there are:

3.3.1 Rapid image import

For speeding up the process of image assigning there is a tool, that can take all image files in specified folder and to add them to the game list by name, simultaneously assigning the pictures. To use this great feature, one has to prepare a folder with only graphic files (meeting sect. 3.2.1 rules), which filenames will correspond to filenames of desired games (planned to add) and to select corresponding menu item (File \ Image import):
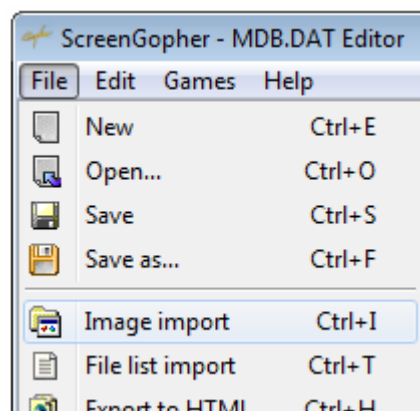

Fig. 8. Image import.

After these actions, the process of import will be started (with naming games according to image filenames):
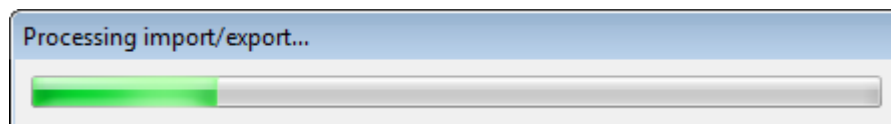

Fig. 9. Processing import.

This feature dramatically speed up the process of creating MDB.DAT for oneself. Duration of import process depends on number of files and its colors amount.

3.3.2 Rapid file list import

For simplification of process of creation of game list, one can use a file list import tool (by choosing a folder with user's ROM-files). With this tool it's not necessary to spent a lot of time, creating and renaming a record for every game. Important: filenames of the ROM-files must follow the rules, listed in sect. 3.2.1. In case of breaking them, such records wouldn't have assigned pictures at all (with no harm for the handheld, though).

To use this tool, one has to select the corresponding menu item (File \ File list import):
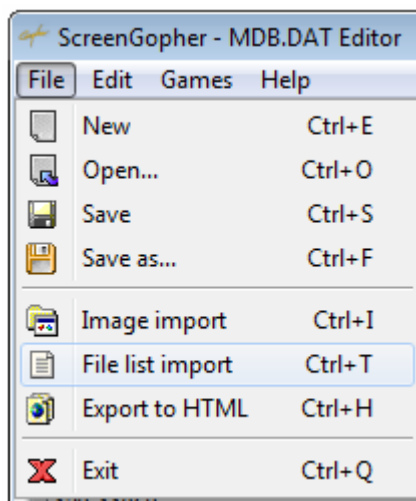

Fig. 10. File list import.

3.3.3 Record export
There is also a feature, using which one can export all data, stored in MDB.DAT file to HTML file (text and pictures are meant as data). It is recommended to save HTML file in an empty folder.

3.3.4 Copying the image
The program can also copy selected game's picture to the clipboard.

3.3.5 Copying game name
This feature is provided for more comfort of using the program, but using standard hotkey (Ctrl+C) in ordinary text copy in the edit field is still possible and ends with the same result.

3.4 Saving file
After all modifications it is necessary to save MDB.DAT file and copy it to SD-card strictly with «MDB.DAT» name. After some changes followed by attempt of closing program, user will get a request-window:
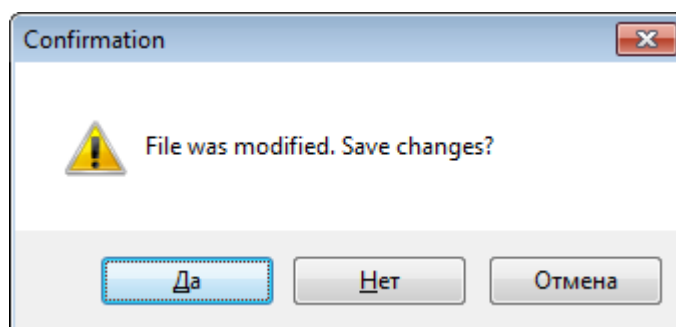

Fig. 11. Saving file changes confirmation.

3.5 Brief «how-to» algorithm of creating MDB.DAT from the start:

1. Start ScreenGopher.
2. Add a game (record).
3. Rename the game.
4. Assign a picture for the game.
5. Save changes.
6. Repeat items 2-5 until all records are at the place.
7. Rename all files in game's folder on SD-card (ROM files with .gen or .bin extensions) according to added records.
8. Save the file with the name «MDB.DAT» to any place.
9. Copy or move this file to your SD-card in \GAME folder.

Item 7 is an out-of-algorithm and can be done at any time you want (but before testing pictures on the console).