

GTA 1 on modern PC systems

Note: I know this guide is a bit lengthy. So just have in mind that I recommend playing the GTA1 DOS 24-bit version on DOSBOX-X emulator under the DOSBOX-X MS-DOS compatible system (not on the MS-DOS itself). The experience is the best and you will have access to the save/load states.

There are some projects on the web that already pre-pack GTA1, for example GTA1-MAX project. However they get older and outdated over time so this guide will teach you how to make a Grand Theft Auto 1 emulation package by yourself.

Note: First of all, you should decide which version of GTA 1 do you want to play. Of course it might depend on which one you have available, for example you might be in a possession of the original GTA 1 CD.

This article assumes you have original CUE/BIN GTA 1 CD files (probably created from your original GTA 1 CD). If you do have physical CD and CD Drive, just mount the actual CD Drive when we mount the image of the CD. We do not cover Rockstar Classics installation, however it should be generally the same except you won't have to play with mounting CD and you will have to install some patches by yourself in order to not run into some bugs that this version introduced (see below). If you have trouble finding the installation files, maybe someone will unofficially help you on our Discord.

There are (as far as I know) six PC versions of GTA 1:

- Original DOS 8-bit colour
- Original DOS 32-bit colour
- Original DOS 3DFX
- Original Windows
- Rockstar Classics (same as Steam version)
- Rockstar Classics Collection (same as Rockstar Classics but with London expansion packs and CD protection)

The first four come from original 1997 disc release. Rockstar Classics Collection is the re-release from 2004 that contains a collection of GTA 1, GTA: London 1969 and GTA: London 1961.

Rockstar Classics is the one that was available for download years ago for free from Rockstar website (<https://web.archive.org/web/20100701130952/http://www.rockstargames.com/classics/?id=1>). It didn't contain GTA: London 1969 and 1961 though.

Normally, I would say that playing the newest one is the best, however Rockstar Classics introduced some bugs (for most of them the patch exist: <https://misc.daniel-marschall.de/spiele/gta1/patches.html>) and didn't really bring anything new apart from the 1024x768 resolution which reportedly doesn't really change much as the textures aren't prepared for that resolution anyway.

Just for your reference, the most annoying Rockstar Classics bugs: incorrect music, save file corruption. Both patchable.

The same problems were in the Rockstar Classics Collection (as this is basically the same version as Rockstar Classics). Another downside of Rockstar Classics Collection is that it introduced CD-protection and changed some executables so above-mentioned patches, as far as I know, doesn't work on it. I haven't checked it though.

If you are as old as me to remember Voodoo times (3DFX Glide) you might think that 3DFX version is superior, however think twice because this is not always the case. The 3DFX version has only 16-bit color support which results in a bit less colorful graphics (although my eye didn't catch the difference). Apart from that it introduces some filter.

As far as I know, the Rockstar Classics is the only version that installs music on HDD and doesn't need CD inserted.

Rockstar Classics save states and the originals save states ARE NOT compatible. However there exists a converter (on the same website where patches are).

BTW. You can get the London 1961 here for free:

<https://web.archive.org/web/20060101022546/www.rockstargames.com/gtalondon/>

<https://archive.org/details/rockstar-classics>

You probably don't want to read all of this and just want the answer to which version you should play. Let's start eliminating then.

1. Rockstar Classics Collection (2004) has the same bugs as Rockstar Classics, however the patches that apply for the Rockstar Classics doesn't work for Rockstar Classics Collection London add-ons (as far as I know). So basically we will have a broken game.
2. Reportedly (not verified by me so far [TODO]), the DOS version of GTA: London 1961 hangs the game in the DOS versions (normally you would override the problem through playing in 8-bit for a while, but London 1961 doesn't have 8-bit option). The DOS versions are the ones that are packed in GTA1-MAX package. So, if you can, the Windows version might be better.
3. Rockstar Classics is a Windows version, however contains bugs and do not have save state compatibility.
4. 3DFX doesn't support 32-bit color mode.
5. You might think that Windows version is superior however back in 1997 the Windows wasn't that popular. A lot of people still used DOS. So don't feel inferior installing DOS version instead. 1997 was actually the year that Windows gained more attention (see <https://www.youtube.com/watch?v=B7fVOW-zNQI>). Also, Windows version doesn't support 3DFX, it was created with dxdraw (DirectX – a competitor to the 3DFX) as readme states. However Windows version support Microsoft Sidewinder pad, so maybe it's a plus for some of you (probably the normal pad can also be mapped in DOSBox to behave as Sidewinder, but I think I won't look into that here).

In general you can play any of the versions except the Rockstar Classics Collection as you would probably hit the wall (unless there are patches that I am not aware of) if you want to finish 100% of the game.

My recommendation is to go with the original DOS version and since save states are compatible with Windows version so we can always switch to Windows if we hit the wall and that is what we will do here.

Unfortunately I cannot share the original image of the original DOS/Windows version, but you can find them in the archive.org somewhere (I mean you can prepare cue/bin image from the original CD you have). I decided to use Europe version of the CD image since DMA Design was a British company and the GTA 1 was released in Europe first.

The question is: how to run DOS on modern systems? The answer is DosBox. However original DosBox hasn't been updated for years now! The GTA1-MAX package was created with DosBox Daum which is a fork of the original version.

As for the time of writing this article (2024), the most popular (I think) fork of the DosBox is DosBox-X and this is the one I am going to use. Apart from emulating DOS, this freaking thing can emulate early Windows systems and even Voodoo graphics. So it is perfect for our scenario as we can try all of the GTA versions included!

You might tell me that there are VirtualBox and VMWare projects, but they are pretty bad in emulating graphics. I was able to run GTA 1 on Windows XP and actually it worked OK and I even had build-in VirtualBox snapshots (so I was able to "save the game" by dumping whole system memory into the snapshot), but it wasn't perfect. DOSBOX-X version is much smoother. Actually, the best experience is on Linux/macOS and Wine (Windows emulator), however it doesn't come with save/load states (read below).

DOSBox-X can be downloaded from here: <https://dosbox-x.com/>. I assume you will use Windows version, if you have any other system I assume you know its quirks and can handle them. In general, you can install default DOSBox-X, so I will not guide you through the installation process itself. I would say that you should install x86 version of the DOSBox-X for dgVoodoo2 3DFX splash to work (as it was never programmed in x64), however the alternative nGlide version doesn't have such problems (see below where we explore 3DFX).

I assume you already have GTA 1 CD in cue/bin format (I believe ISO won't work as if there is separate audio track on the CD like there is in GTA 1, there has to be cue/bin format). If you have trouble finding the files, maybe someone on our Discord will be able to help you.

Installing GTA1 on DOSBOX-X

Before we start with DOSBox-X, please create a new directory in your C: disk. I have created [C:/dos](#). This directory will be your E: disk in the DOS.

Find DOSBox-X and run it (from Start menu). Select Main → Configuration Tool → AUTOEXEC.BAT.

Type in following content:

mount E: [C:/dos](#)

e:

Click OK → Save → Save → Close.

The AUTOEXEC.BAT is a special file that is being run when you start your DOS console. What we do there is that we mount our host (your system) directory into the main C: drive in DOS. The next command 'c:' switches to the main C: disk by default.

Re-run DOSBox-X and make sure this works as intended.

In general, you can mount your CD image file or real CD and navigate to the mounted disk (probably by typing `D:`) and run SETUP, however you will find out that the SETUP doesn't work properly. It has problems copying the files to your hard drive.

Installing GTA 1 on DOSBOX-X on MS-DOS 6.22

Note: if you have game files already prepared (you do not need to install them from CD, because you have them from e.g. Rockstar Classics version), you don't need to follow these steps. You can import (mount) your files directly to DOSBOX-X and play there. This part of the guide is for people that have original CD or the image of the original CD.

The problem is that DOSBox-X doesn't come with the proper MS DOS installed. It contains more-or-less MS-DOS compatible commands which are probably sufficient to run GTA 1, however they are not enough to run GTA 1 set-up from the CD. So if you already have pre-installed package it might work for you, but I want to go through proper GTA 1 set-up from start to finish.

To achieve that we need to install MS-DOS 6.22 inside the DOSBOX-X. First, we need to create HDD image that will contain our main system. Run DOSBOX-X and select DOS → Create blank disk image → hard disk image size → 1GB. This should be more than enough for our requirements. Name it e.g. GTA1_HDD.IMG and save somewhere on the computer.

Now we need to mount the disk. Select Drive → C → Mount a disk or CD image file. Select previously created GTA1_HDD.IMG.

Now when you type in:

C:

dir

You should switch to the C: disk and see the contents of the disk (empty).

The next step is to get MS-DOS Installation Floppy. You can get one here:

<https://winworldpc.com/product/ms-dos/622>

Let's download the most popular one:

Microsoft MS-DOS 6.22 Plus Enhanced Tools (3.5-1.44mb)

Don't download Upgrade images unless you know what you are doing (you would need to exit the set-up and install the basic system first).

You will need three files: Disk1.img, Disk2.img and Disk3.img. Extract them to e.g. your Desktop.

Now type in in DOSBox:

```
boot C:\Users\icetique\Desktop\Disk1.img C:\Users\icetique\Desktop\Disk2.img C:\Users\icetique\Desktop\Disk3.img
```

Of course adjust the paths to the folders where you have downloaded and extracted the MS-DOS package.

You will see MS-DOS set-up screen. Press ENTER. You can choose your keyboard now, I leave the default US one. Press ENTER and confirm the directory (C:\DOS seems good). Press ENTER. When it asks for next disk just go to DOS → Swap floppy drive. Do it twice. When it asks to remove the disks just go to Main → Reset virtual machine.

BTW. You need to understand the paths you declare in DOSBOX-X most of the time relate to the paths inside the DOS virtual machine, not your computer itself. However, there are some commands (like IMG MOUNT, that relate to the paths on your computer).

Now everytime we want to boot our MS-DOS we need to type in (remember this):

```
IMG MOUNT C GTA1_HDD.img (of course specify full path on your computer; alternatively select it from Drive → C → Mount a disk or CD image file)
```

```
BOOT C:
```

Nice! We are now in our MS-DOS environment. Type:

```
ver
```

To see the version. Anyway, we need now to somehow add CD-ROM drivers to be able to install the GTA1 from the CD.

Installing CD-ROM drivers

MS-DOS doesn't come with automatic CD-ROM driver installation... One of the popular CD-ROM driver is oakcdrom.sys:

<https://www.computerhope.com/download/hardware.htm>

Download OAKCDROM.SYS into the C:\DOS (this will be visible as E: drive in the DOSBOX-X environment and as a D: drive in the MS-DOS environment).

Reset the virtual machine. Boot into MS-DOS (as explained above, mount GTA1_HDD.img and BOOT C: . Remember this as I will not copy/paste this every time).

Type in:

```
MKDIR DRIVERS
```

```
D:
```

```
COPY OAKCDROM.SYS C:\DRIVERS
```

```
C:
```

```
EDIT AUTOEXEC.BAT
```

Add line at the end of the file:

```
LOADHIGH=C:\DOS\MSCDEX.EXE /D:MSCD001
```

BTW. Use ALT key and arrow keys to select Menu → Save and exit.

Now:

```
EDIT CONFIG.SYS
```

Insert the line in the end of the file:

```
DEVICEHIGH=C:\DRIVERS\OAKCDROM.SYS /D:MSCD001
```

(note that D: is not the drive letter in this case)

Again, restart the DOSBOX-X and DO NOT boot the MS-DOS machine.

First, we need to select Drive → D → Mount a disk or CD image file → Select a GTA1 CUE file.

Now, as usual, mount C: drive and BOOT C:.

You should now see our OAK driver working:

```
Drive C does not exist!
You must mount it first. Type intro or intro mount for more information.

E:\>boot C:
Converting drive E: to FAT...
Booting from drive C...
Starting MS-DOS...

HIMEM is testing extended memory...done.

This driver is provided by Oak Technology, Inc..
DTI-91X ATAPI CD-ROM device driver, Rev D91XV352
(C)Copyright Oak Technology Inc. 1987-1997
  Device Name       : MSCD001
  Transfer Mode     : Programmed I/O
  Number of drives  : 1

C:\>C:\DOS\SMARTDRV.EXE /X
MSCDEX Version 2.23
Copyright (C) Microsoft Corp. 1986-1993. All rights reserved.
  Drive E: = Driver MSCD001 unit 0
C:\>
```

As you can see, our GTA1 disk is mounted in drive E: so let's go there:

E:

dir

This will switch to the newly mounted CD drive and list the directory contents. If you want to read e.g.

readme.txt just type in:

more readme.txt

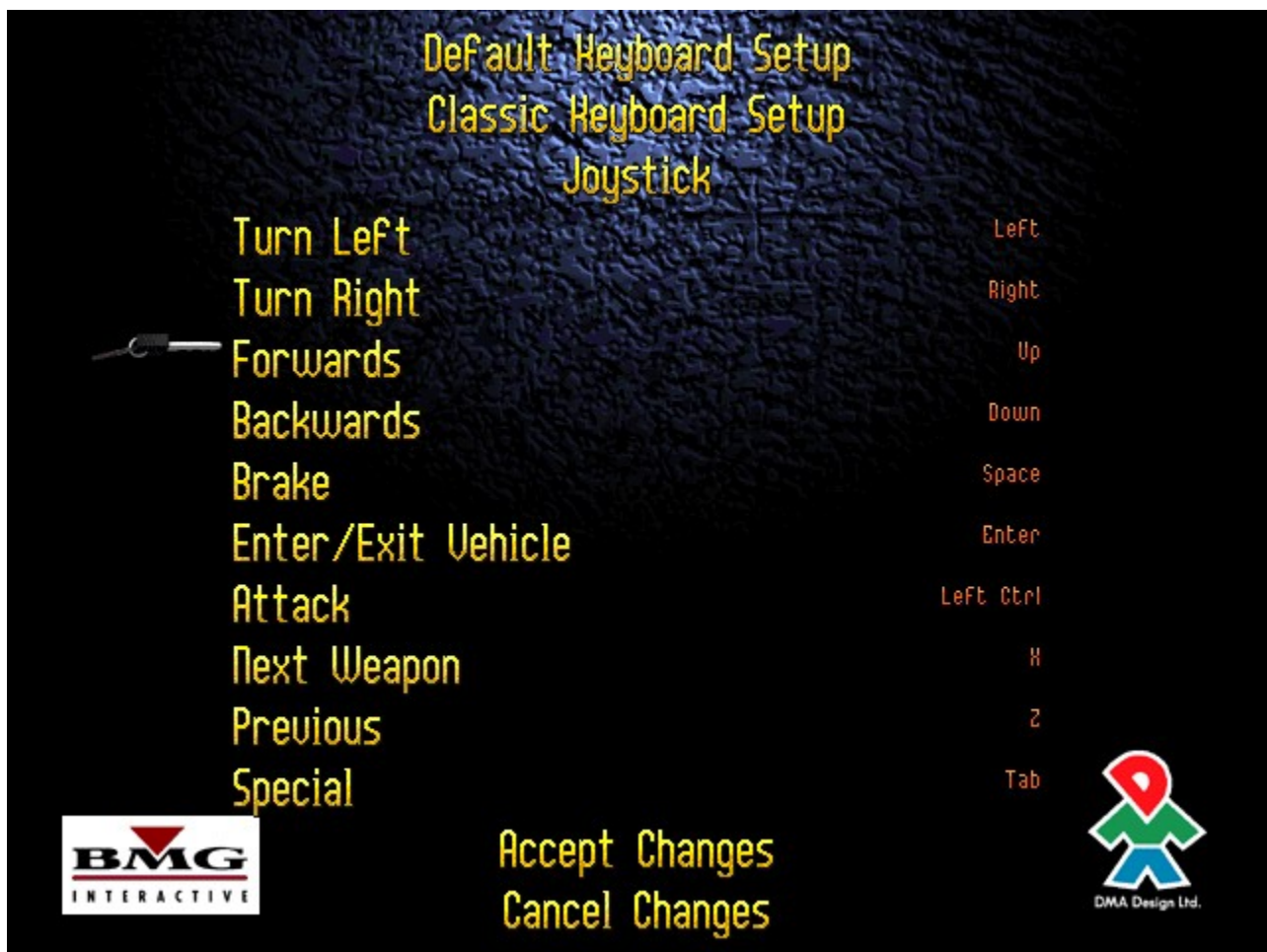
And use space to read more. For now, I don't pay much attention to the problems mentioned, let's see if everything works. Now, which .exe to run? Under Windows the autorun.exe will automatically run, but here we are under DOS and autorun.exe won't work. So we will run install.bat:

install.bat

You should now see language selection screen. I prefer to choose English as I think GTA: London 1961 wasn't translated to any other language so not to fall into problems in the future – let's keep it original.

Please leave the default [C:\GTA](#) folder and wait until the GTA is installed. Now you should be on the configuration screen. Let's start with sound. I selected Creative Labs Sound Blaster Pro.

BTW. You can use F11+F to change your screen to full-screen mode. Or at least use F11+backspace to reset window size if you are stuck with the default one. Check the controls and try to remember them.



When you are ready select Run GTA. Let's check the High Color GTA first. Let it run the test and enjoy the game!

But wait. First thing to do is to change the resolution! After you start the game press F11 and change to 800x600x32. Unfortunately F11 key is conflicting with the DosBox-X shortcut but I don't find it much of the issue and can be changed to e.g. ALT+SHIFT (Main → Select host key).

BTW. You can use DOSBOX-X save states which are very needed in this game! Play with them a bit to make sure you understand how they work! You need to switch save slot if you need more than one save state!



Anyway, to try e.g. 8-bit version of the game, just select it from the setup program from the <C:\GTA> MS-DOS folder. This is how the 8-bit version look like. I think it doesn't have resolution selection as well:



Well, I wouldn't be me if I didn't try the 3DFX glide version as well.

3DFX version of the game

But for this one to work we need some drivers present in the MS-DOS (especially the glide2x.ovl file).

First, we need to have a Voodoo driver and install it in the DOSBOX-X folder. One of the most popular ones is dgVoodoo2:

<http://dege.freeweb.hu/dgVoodoo2/dgVoodoo2/>

Please note different drivers are for MacOS and Linux.

Extract Glide2x.dll from 3DFX/x64 folder into the folder where you have DOSBOX-X exe installed (usually [C:\DOSBox-X](#)). I am assuming you installed x64 version of Dosbox-X. If you decided in the beginning that you want x86 (for example to have 3DFX splash visible) you should unpack x86 version.

Now find the dosbox-x.conf file in the same directory and edit the lines:

```
voodoo_card = true  
glide       = false
```

To:

```
voodoo_card = false  
glide       = true
```

Now when you start DOSBOX-X, you should see the Video → 3dfx emulation → Glide passthrough checked and Internal Voodoo Card unchecked. You might think that voodoo_card should be true, but trust me – the Internal Voodoo Card is a software/opengl version of the 3dfx emulation and apart from being slower I wasn't able to set it up properly with GTA 1. The Glide version is better (faster) because it redirects emulation to the host system. Very clever.

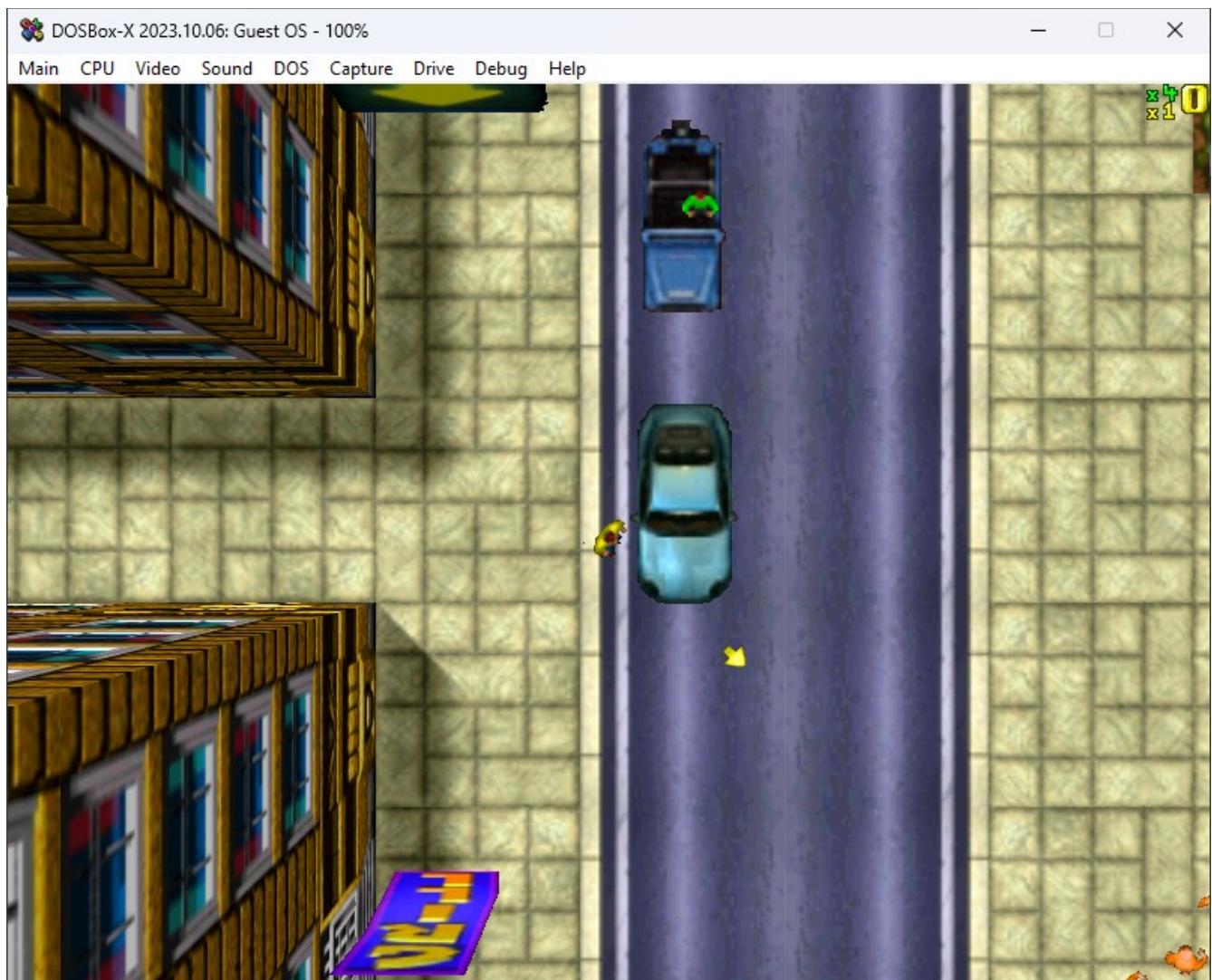
This procedure also creates a special file in the Z:\SYSTEM\ called GLIDE2X.OVL. We need to copy it to our E: drive that will be later available as a D: drive in the MS-DOS system.

COPY Z:\SYSTEM\GLIDE2X.OVL [E:\GLIDE2X.OVL](#)

Now boot up MS-DOS as usual (mount C, D and BOOT C)

COPY [D:\GLIDE2X.OVL](#) C:\GTA\GTADOS

Now if you run GTA1 in 3DFX mode it should work! Here is the screen of the GTA 1 3DFX version:



As you can see there is a special filter applied, so the game looks a bit different. As far as I have tested the 3DFX version on latest DOSBOX-X allows to save and load states as well (though you need to re-select the resolution in F11 after loading).

Also, you might not get famous 3DFX splash, it only works for x86 DOSBOX-X installations. In order to get it, apart from installing DOSBOX-X in x86 you should download the splash DLL from the dgVoodoo2 page: <http://dege.freeweb.hu/dgVoodoo2/dgVoodoo2/>

Last time I checked they were called 3DfxSplashDlls.zip. You need to extract 3dfxspl2.dll to the DOSBOX-X folder (where your DOSBOX-X executable is, right beside Glide2x.dll).

Now you will see the splash – it will display right before playing the actual game, not when you start the game menus!

There is one downside of 3DFX mode, you cannot play it full-screen with the current implementation. If you want to play fullscreen, you will have to install nGlide (instead of dgVoodoo2) on your host system and delete the Glide2x.dll and 3dfxspl2.dll from the DOSBox-X folder. Now the game will automatically start in full-screen mode. I don't find it much helpful as it's impossible to switch (nGlide FAQ tells that we can switch using ALT+Enter but that doesn't work for me, neither F11+F). Anyway, the save/load shortcuts still work – so you can use F11+S and F11+L to save/load the game (which was not possible in GTA1-MAX package).

I prefer the DOS (non-3DFX) version though due to these downsides.

TODO: How to make autoexec

A VERY IMPORTANT NOTE: MS-DOS emulation on DOSBOX-X is somehow bad, you won't get the full performance out of it. It was needed in order to install the game from the CD, however now we can switch to the more “native” DOSBOX-X emulation. Read some chapters below on how to move the files directly to the DOXBOX-X.

In the meantime we can try Windows 95 version.

Windows 95 version

Note: I do not really recommend playing under Windows 95. But it's nice to see how the game installed and worked on Windows 95.

Basically procedure is the same – we need to install operating system inside the DosBox-X and see what happens. We need Windows 95 ISO for sure. Actually, GTA 1 should work just fine up to Windows XP, however I like to feel the oldschool times of 1997 when only DOS and Windows 95 were available. Also, I think the DosBox-X supports up to Windows Me, because Windows XP was built on NT core which is not supported.

The Windows 95 version available in 1997 was the OSR2.5 that can be downloaded here:

<https://winworldpc.com/product/windows-95/osr-3>

I am downloading Windows 95 and Microsoft Plus OSR2.5 (OEM) (ISO) as Plus introduced some nice themes. :)

First of all we need some DOSBOX-X tweaks. Create the file win95.conf in the DOSBOX-X directory (usually [C:\DOSBOX-X](#)) with the following contents:

```
[sdl]
```

```
autolock=true
```

```
[dosbox]
```

```
title=Windows 95
```

```
memsize=64
```

```
[video]
```

```
vmemsize=8
```

```
vesa modelist width limit=0
```

```
vesa modelist height limit=0
```

```
[dos]
```

```
# Set 'ver=7.1' if using Win95 OSR2 (95B) or later
```

```
ver=7.1
```

```
hard drive data rate limit=0
```

```
floppy drive data rate limit=0
```

```
[cpu]
```

```
cputype=pentium_mmx
```

```
core=normal
```

```
[sblaster]
```

```
sbtype=sb16vibra
```

```
[fdc, primary]
```

int13fakev86io=true

[ide, primary]

int13fakeio=true

int13fakev86io=true

[ide, secondary]

int13fakeio=true

int13fakev86io=true

cd-rom insertion delay=4000

[render]

scaler=none

[autoexec]

Make sure you actually create “win95.conf” not “win95.conf.txt” file! Google it if you do not have extension visibility enabled on your system (which I always do).

This is taken directly from the DOSBOX-X guide so do not worry if you do not understand any of this. They prepared this so we do not have to think about it. Just make sure to set proper “ver” (see contents above) based on the Windows 95 version you have downloaded. I assume you stick with the version I have chosen.

The next step is to create HDD for our brand new system (well, this is nice progress from MS DOS, isn't it?). If you were with me during our MS-DOS installation you already know the steps.

Run DOSBOX-X

Select DOS → Create blank disk image → 1GB. This should be enough as usual, 2GB was maximum you could see in 1997. Name it e.g. GTA1_WINDOWS_HDD.IMG

Unfortunately you cannot any longer open DOSBOX-X directly from the Start menu as it has to be run like this:

```
dosbox-x -conf win95.conf
```

Later on we can create shortcut that takes care of it for us, now you should open cmd (Command

Prompt) from the Start Menu. Navigate to [C:\DOSBox-X](#) like this:

```
cd C:\DOSBox-X
```

and run the command:

```
dosbox-x -conf win95.conf
```

Select Drive → C → Mount a disk or CD image file and select the GTA1_WINDOWS_HDD.IMG file.

Select Drive → D → Mount a disk or CD image file and select the .ISO file you have for Windows 95.

It is recommended to COPY the CD-ROM contents into the HDD so the Windows 95 will not ask for additional files later and the installation will be easier. We can do this by issuing this command:

```
XCOPY D:\WIN95 C:\WIN95 /I /E
```

Next step is to run the SETUP.EXE (finally!):

C: (switch to C disk)

```
cd WIN95 (go to WIN95 folder)
```

```
SETUP.EXE (run setup.exe)
```

Accept the routine check. I will not cover all the steps here, just follow the installation and have some retro nostalgia time. You can do ALT+TAB if you do not know how to take back your mouse cursor. :) Or CTRL+F10.

There is an option to speed up the process and I strongly recommend you to use it (CPU → Turbo mode (fast forward)). Please note it will stop when you focus again on the DOSBOX-X Window.

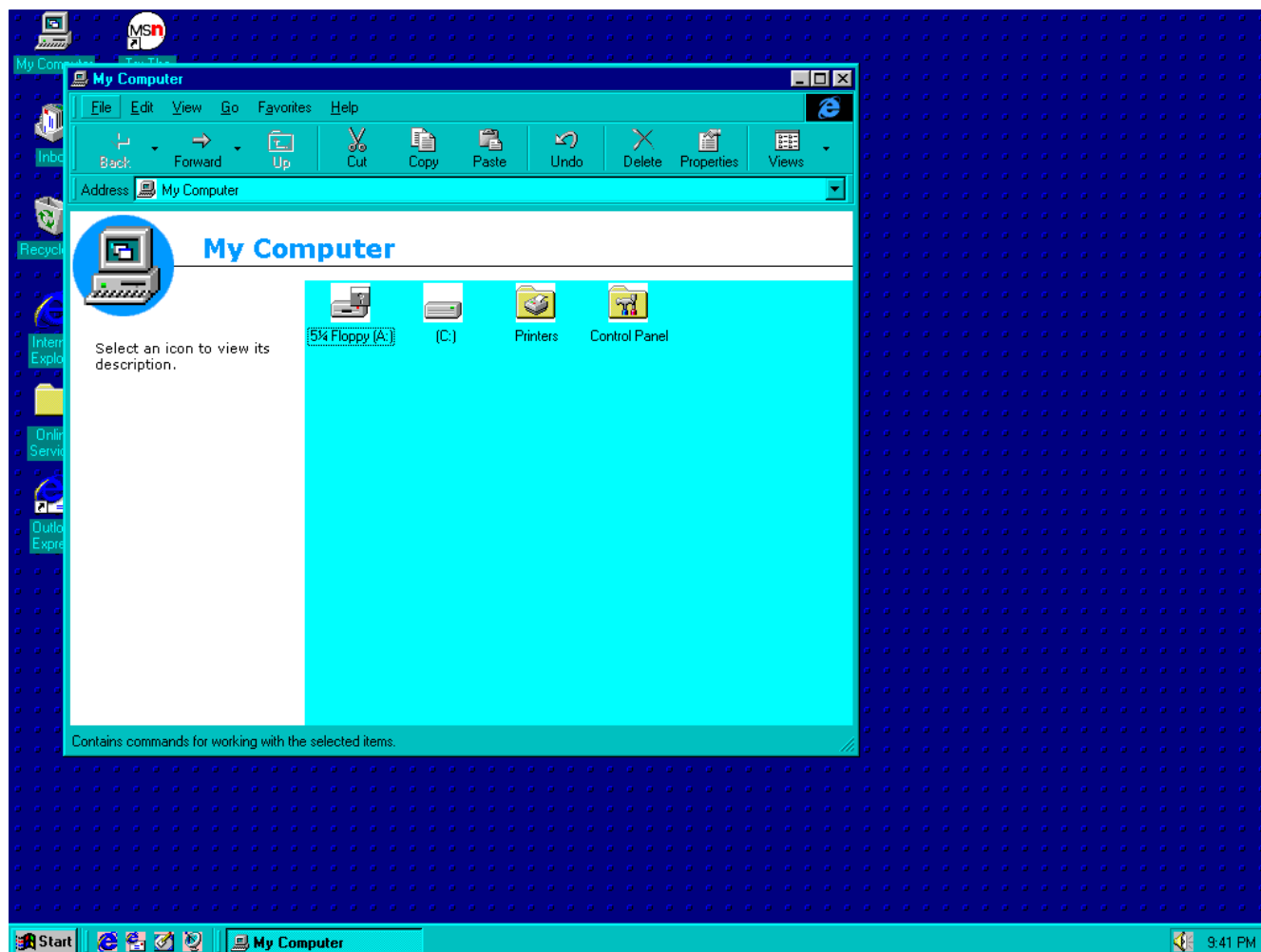
Of course you will need the serial key, probably you will find some in the comments on the site where we downloaded the Windows 95. You can check that you want to install CD-ROM Drive, however it shouldn't actually matter if you check it or not as DOSBox-X reportedly will install it anyway. Network Adapter doesn't have to be checked as we do not have network configured anyway now. I am installing English keyboard/language.

After long installation and restart you will be presented to the DOSBox-X screen again. You do not need to mount Win95 CD disk anymore. Mount our Windows Disk to Drive C and type:
BOOT C:

More waiting is on the horizon, just be patient. You can cancel Printer installation. Wait for Restart.

Mount C again and boot. Go through some IE4 installation. As far as I can see it installs some DirectX components as well, so I think it is advised to install. More waiting, but this is true experience. Back then we didn't have SSD NVME. If you think the installation take longer than it should, it probably is the expected speed. However, if you really get bored you can use CPU → Turbo (Fast Forward) to speed up the system execution. BTW. It's not the same as Turbo mode people used to have in their computers, it's just emulator fast forward function.

First of all, you can clean up your Desktop a bit and set up your preferred wallpaper. Right mouse click on desktop → Properties. Please also click up the Settings Tab and change colors to TrueColor and resolution to 1024x768. If it asks to install monitor – do it. And select Super VGA 1024x768. You will probably have a blue tint now on the Desktop which is not what we want.



There is a way to fix this, however we would have to go back to the previous versions of the graphics drivers (S3 v2.11.03). However the drivers do not have support for 800x600x32 in GTA 1 so I prefer to have broken desktop than broken GTA1. But if you want to do that (it's completely optional and not recommended):

We need different graphic drivers. The recommended are:

https://www.dosdays.co.uk/topics/Manufacturers/s3_downloads.php#Trio32

Find the v2.11.03 (S3 Driver) and download and extract them to the [C:\DOS](#) directory.

Mount our HDD and [C:\DOS](#) as D drive and re-run the virtual machine from cmd with win95.conf.

Go to Start → Settings → Folder Options... → View → Hidden files → Show all files

Copy the drivers from D: to C:\DRIVERS

Desktop → Right Mouse Click → Properties → Settings → Advanced Properties → Adapter → Change... → Have Disk → Browse... → [C:\Drivers](#) → s3.inf → S3 Inc. Trio 32/64 PCI → OK → Confirm replace of the files if needed (the ones we install are older) → Save all and restart.

If you still have some artifacts please re-run the DOSBOX-X fully (mount again etc.). It helped in my case. If it doesn't help for you maybe you will have broken color in the system but since GTA1 is using DirectDraw the GTA it doesn't affect the GTA!

The instructions that follows are applicable for all people no matter if you have chosen to change display drivers:

Now shut down the system. We will make some changes to the win95.conf. Open it again and edit the line:

core=normal

to:

core=dynamic_x86

This should speed things up, but is not recommended to be enabled during set-up that's why we are changing it now. Make sure to start DOSBOX-X now from command line as usual with the win95.conf loaded.

dosbox-x -conf win95.conf

Now mount the C: disk as usual, but as D: disk mount the GTA1 installation disk (CUE). Try double clicking on the GTA1 CD in My Computer. Go through the installation process with default [C:\GTA](#) location. Install newer drivers if asked. And as usual... wait... I think everything was much smoother under the DOS.

TODO: Autoexec

Restart the computer and mount C: and D: same as previously.

Run GTA1 Windows Settings from the Menu Start and click OK.

Now run GTA1 Windows version from the Menu Start (the DOS versions are also available, but will probably work worse then in the MS DOS environment we created earlier).

As usual use F11 in-game to change the resolution to 800x600x32 (if you have it available)!

How are my feelings about all these game versions? I believe the best way to experience GTA1 would be to get some oldschool PC and play on that, however there wouldn't be Save/Load state function.

Most of you will tell me I should just get good in playing the game, but I believe the absence of Save/Load function takes a lot of fun out of the game.

Having tested all these methods I think the best version is the DOS full color version. Easy Save/Load states, nice graphics (I don't really like 3DFX filter) and looks overall smoother than playing Windows Version. I would rewert to Windows version only if you encounter some bugs later in the game (sometimes 8-bit or Windows version help to go through them). I will update this article when I find out these problems and how to overcome them.

Other options (Wine, 86box, Pcem)

Note: I don't recommend playing in them. We try this for fun. I must admit the Wine version works pretty well and it might be actually the easiest one to use if you have at least some Linux/macOS experience. However it doesn't come with save/load states. It's impossible due to the way Wine works.

To be honest I am not quite satisfied with how the Windows 95 works on the DOSBOX-X. 86Box and Pcem emulators – I saw some success stories on the internet, however by design these emulators are even slower and more resource intensive.

I heard good stories about Wine as this is technically a compatibility layer, so it is supposed to work faster. I have good Linux experience so we will try that route as well. I will not guide you through installing Linux, I assume you have Linux ready. I have Ubuntu 22.04 LTS (as I usually work on the LTS versions) and I will try to install GTA1 on Wine 9 as it was recently released.

I will not guide you through installing Wine, as guides get outdated and the installation is described here:

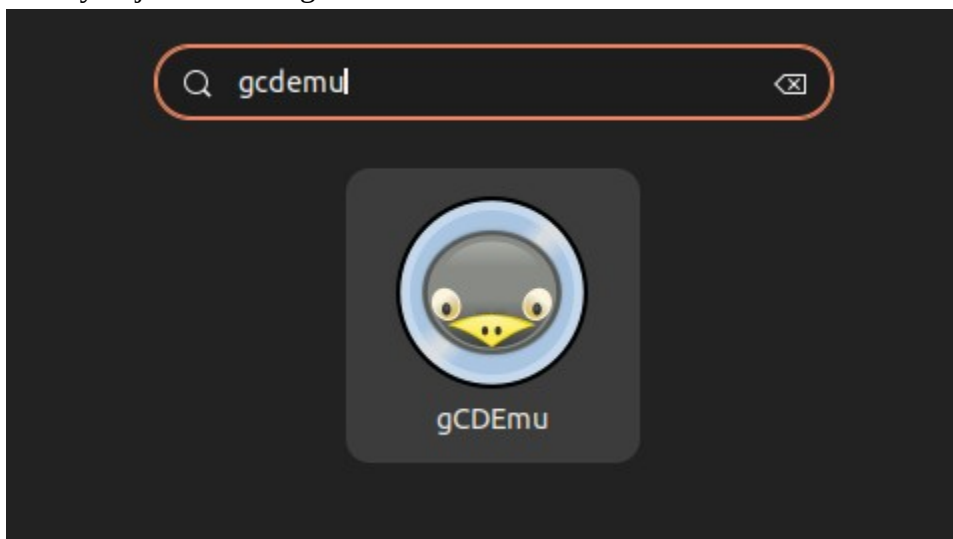
<https://wiki.winehq.org/Ubuntu>

I am installing winehq-stable version.

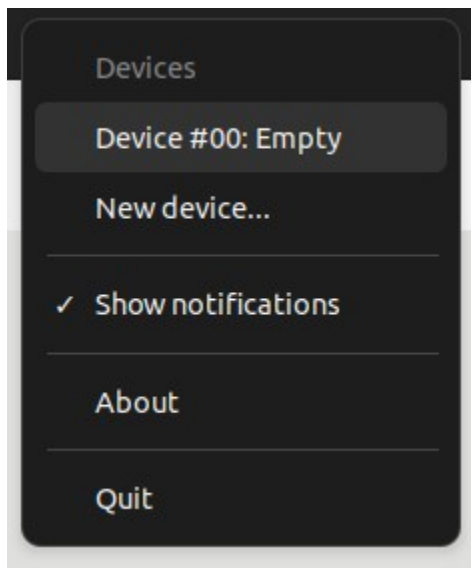
Since our GTA1 is on the CD, we also need a way to mount CUE/BIN files into our Linux system.

<https://launchpad.net/~cdemu/+archive/ubuntu/ppa>

Now you just start the gCDEmu:



Find the ICON in the task bar and Select Device #00: Empty



Click Load and find our CUE file. This will load both Audio Disc and File Disc into the system. Now just go into File Disc and right click autorun.exe → Open with Other Application... → Select Wine and go through the installation again. Restart the “computer” and the Wine will close.

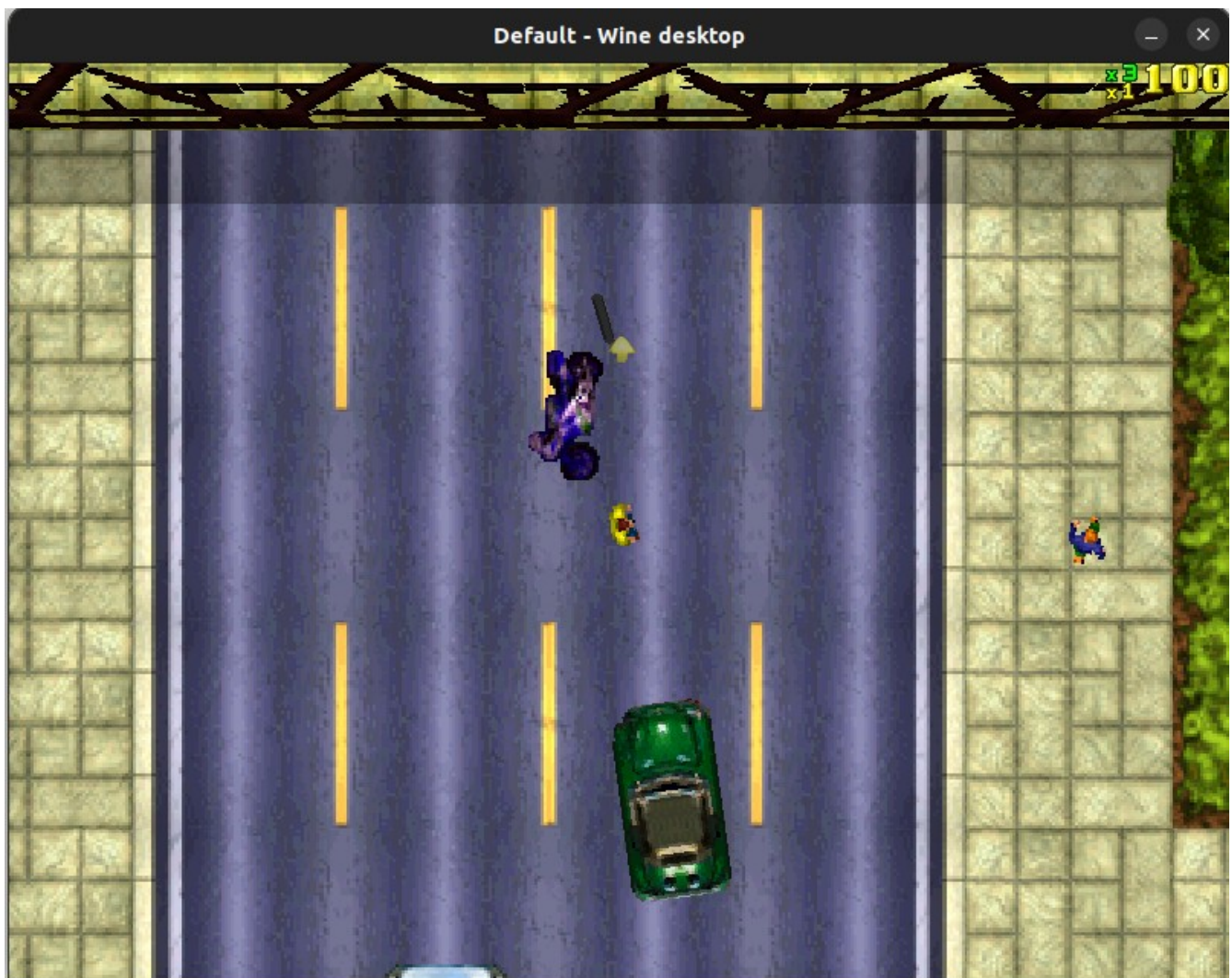
Now run again autorun.exe and this time click Settings → OK. Then click Play. Wow, that was simple compared to our MS-DOS/Windows 95 experience!

The only problem is that the game runs in the top-left corner of the screen, but this is easy to fix. From your user terminal (find application Terminal) type:

```
winecfg
```

Go to: Graphics → Emulate a virtual desktop → 800x600

Re-run the game and enjoy! The menus will probably work too fast because of your computer, but the game seems to handle the speed :)



The big downside of the Wine version is that there are no Save/Load states thus it's only suitable for people that want to enjoy the semi-real experience. But I really must admit the game looks smooth on Wine.

Another problem is that it seems impossible to run full-screen, you have to change your desktop environment to 800x600 or have a second monitor I guess. Still, my choice is DOS version because of the easy Save/Load states and overall smooth experience.

Problems with DOSBOX-X and GTA 1 freezing

Chances are, that you had problems like me that GTA 1 is freezing sometimes when entering/exiting the car (possibly after the save states usage). Maybe my CD image was broken, but probably the problem is that DOSBOX-X is not perfect when emulating internal MS-DOS CD library functions (the one we installed – OAKCDROM). In order to fix it I suggest trying to move installed game to the DOSBOX-X original DOS-like environment where there is a "DOSBOX-native" emulation so it would probably work a bit better. You will lose your save states though as they won't be compatible.

Remember, we needed the MS-DOS environment because the set-up program was not working. But the game itself possibly do not have such problems and we can load it DOSBOX directly as most of the GTA packs do (as they use Rockstar Classics version anyway I guess).

Problem is, that when we load the non-”DOSBOX-native” environment like MS-DOS or Windows 95 we do not have access to the DOSBOX-native environment and we have to find the way to copy the files back to the DOSBOX-X-native environment.

To do that comment out your autoexec commands and restart the DOSBOX-X into the “DOSBOX-X-native” system (so do not load MS-DOS).

Now mount the MS-DOS disk into the C: drive and some folder on your computer [C:\DOS](#) (?) into the D: drive using the Drive menu.

Create new folder called e.g. GTA1 in your mounted D: drive:

D:

```
mkdir GTA
```

Now copy the files from our MS-DOS disk into our DOS “folder”/D: drive.

```
Xcopy C:\GTA D:\GTA /E /H /C /I
```

Now configure your autoexec (dosbox-x.conf) section to load the CD and start the game (note we do not have to mount and load MS-DOS anymore).

[TODO: autoexec]

Resave your GTA configuration at least once. You can see the game is working much faster now and more native-like. Enjoy it, I didn’t run into freeze problems anymore.

How to use save and load states in DOSBOX-X

DOSBOX-X save/load states are tied to the program that is currently running in the emulator. When you run GTA1 you might notice that in fact – there are different programs running depend on where you are in the game. For example, main game menu is a separate exe program than the game itself. Also, GTA 8-bit is different program/executable than the GTA 24-bit version. DOSBOX-X save states are compatible with the program you were running when you saved them. Don’t try to load your save state while you are still in the game menu. Load the new game and only then load your state because you are now in the same “program” that you used to have when you saved the game.

I haven’t checked but I guess GTA 8-bit and 24-bit emulator save states are not compatible.

Playing GTA1 on the Android phone

There exist a build of DOSBOX on Android phones. It is called “Magic DosBox” and comes with free and paid version. Just look out for it on the Google Play store. The game is playable on the free version.

In general you have to copy the game files to your phone and the CUE/BIN images of the CD (applicable if you have CD version of the game).

I won't guide you through the full set-up from the CD on the Android phone as I think it could be hard or even impossible due to the less-developed Android version of the DOSBOX. I just assume you have access to the game files from the steps we did above.

When you set-up Magic DosBox remember of mounting the CD, and setting up proper HDD catalog with the game.

You need to specify the program (C:\GTA\GTA.BAT) you would like to run in the Magic DosBox settings and set up your controls over the screen. They wouldn't be easy to use in the free version, the paid version has virtual pad that seems more comfortable. Possibly you have a real pad that you can connect to your phone – this would help with the controls.

The game was running actually pretty well on my POCO F3 phone with Qualcomm SM8250-AC Snapdragon 870 5G. If you need more help with setting up the game on the Android or on any other system, join our Discord server!

I have only encountered problems with the x32 color mode – the screen was too green and there were a lot of artifacts. I believe this is because the Android DosBox version have similar problems to the ones we had during Windows 95 24-bit color. These problems are related with the graphic adapter and graphic driver. Just use F11 function special key and select the 800x600x16 resolution and the game should look fine.