Odin User Guide

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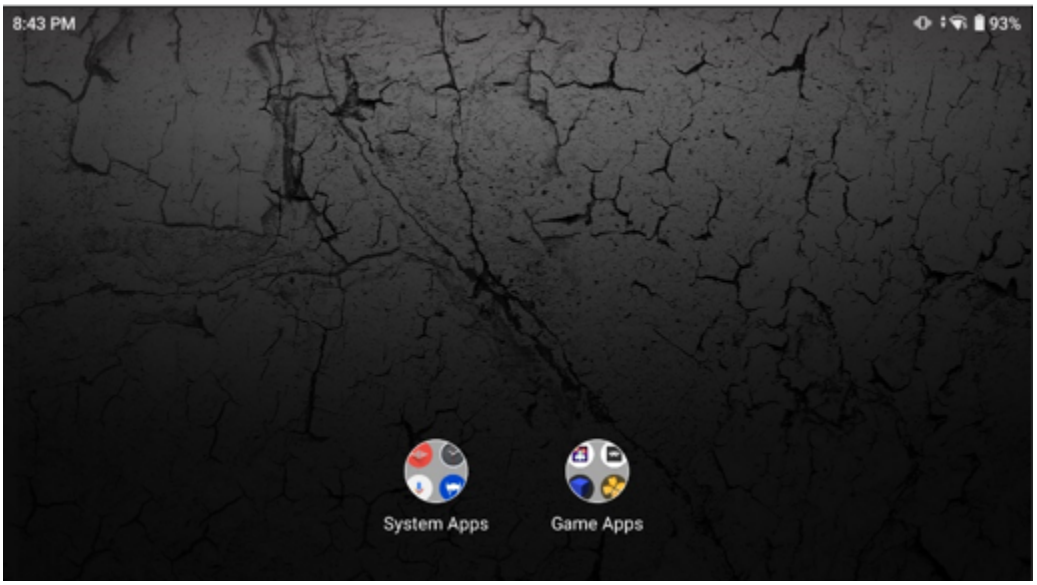
Operating System

The Ayn Odin has been built with a custom Android operating system that features 2 launchers for access to installed programs (the Odin Launcher and Quickstep Launcher.) Other launchers can be installed per the user's preference. The operating system has the Google Store application installed by default so that the user may install games and applications from that service. Users that wish to use applications previously purchased through the Amazon Store will need to download and install the application and sign in. The application may be downloaded using the following QR code. When updates become available for the system, a prompt will direct the user to download and install the update.

Chapter 4. Home Screen Setup

The writer uses a single home screen for his system with two folders. The first- titled System Apps- contains programs native to, or extending the functionality, of the underlying operating system such as internet browser, file browser, archiving program, settings, and cloud storage. The second folder- titled Game Apps- collects all game emulation programs, front ends, and android gaming applications.

This simplified setup reflects the writer's preference to use the system solely for game emulation. By setting the default launcher program as the Reset Collection, the system foregoes any underlying operating screens to go straight into a game selection screen. The screen below is typically only viewable when some adjustment of the emulation software is necessary.



Chapter 5. Emulated Systems List

Table 1.

System Name	Application Provided Through	Application Name
Android	Amazon App Store	
Arcade	RetroArch	Final Burn Neo
Arcade	Google Play Apps Store	MAME4droid (0.139u1)
Atari 2600	RetroArch	Stella
Atari 7800	RetroArch	ProSystem
Atari Jaguar	RetroArch	Virtual Jaguar
Atari Lynx	RetroArch	Handy
ColecoVision	Google Play Apps Store	ColEm ColecoVision Emulator
Neo Geo CD	RetroArch	NeoCD
Nintendo 64	Google Play Apps Store	Mupen64Plus FZ Pro
Nintendo Gameboy	RetroArch	Gambette
Nintendo Gameboy Advance	RetroArch	gpSP
Nintendo Gameboy Color	RetroArch	Gambette
Nintendo GameCube	Google Play Apps Store	Dolphin Emulator
Nintendo Entertainment System	RetroArch	Mesen
Super Nintendo Entertainment System	RetroArch	Mesen-S
Nintendo Wii	Google Play Apps Store	Dolphin Emulator
Sega CD	RetroArch	Genesis Plus GX Wide
Sega Dreamcast	RetroArch	Flycast
Sega Game Gear	RetroArch	Genesis Plus GX Wide
Sega Genesis	RetroArch	Genesis Plus GX Wide
Sega Master System	RetroArch	Genesis Plus GX Wide
Sega Saturn	RetroArch	YabaSanshiro

Table 1. (continued)

System Name	Application Provided Through	Application Name
Sony Playstation	RetroArch	DuckStation
Sony Playstation 2	Google Play Apps Store & Open-Source Modification	NetherSX2
Sony PSP	Google Play Apps Store	PPSSPP Gold
TurboGrafx 16	RetroArch	Beetle PCE Fast
TurboGrafx CD	RetroArch	Beetle PCE Fast

Chapter 6. Other Software

Table 2.

Software Name	Applicaton Provided Through	Used For
Icedrive	Google Play Apps Store	File transfer between devices
Reset Collection	Google Play Apps Store	Frontend for all emulated systems
zArchiver	Google Play Apps Store	Unzipping and manipulating files

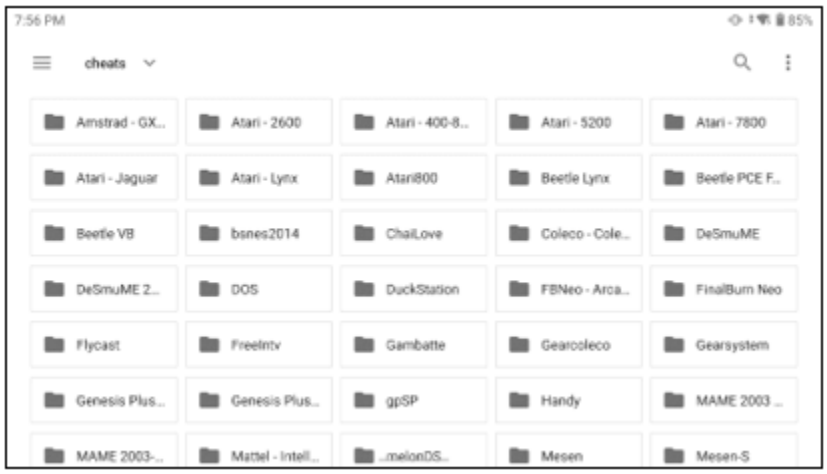
Chapter 7. RetroArch

Preamble

RetroArch functions much like a frontend for several different emulators, providing a single access point for loading games and adjusting settings. The biggest difference is that RetroArch also allows for the user to download, install, update, and change settings for the emulators (or cores)- that it hosts. RetroArch itself is available for download through the Google Play Apps Store.

File Structure

Once RetroArch is installed, a corresponding “RetroArch” folder will be created under the main drive of the system. From inside of that folder, the user can find a “cheats” folder that stores cheat files for individual systems. If some downloaded cheats don’t work in the program, the user can find ones that do off of the internet and insert them in the appropriate system folder to access them while playing the game.



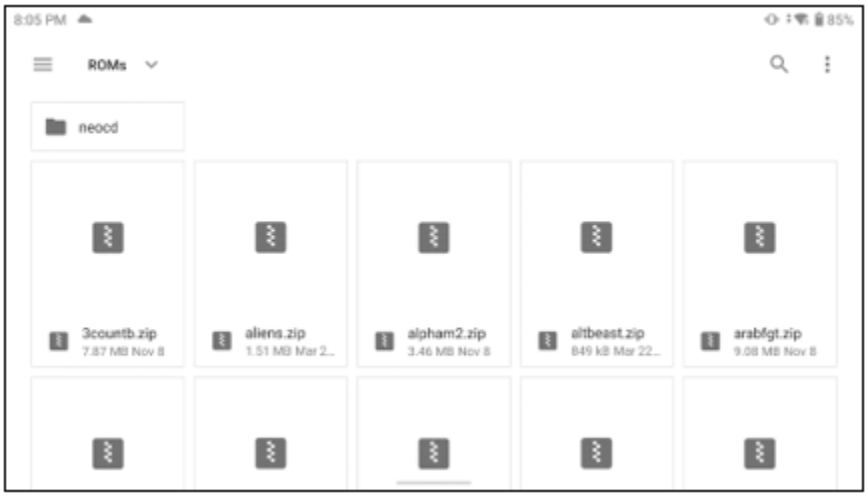
A “system” folder can also be found within the “RetroArch” folder where BIOS files may be stored for the program to find. The program will also create folders here named after systems that use restore points so that game saves can occur. For MAME 2002 Plus, cheat files will go in the Retroarch/System/Mame2003-Plus folder. This is usually a file that is named cheat.dat and can be found online- usually as a part of the Libretro site (https://forums.libretro.com/t/cheats-for-mame-2003-plus-ra-1-7-8/38224.)

Note:

RetroArch can be very picky and won't run if the correct BIOS files are not present for each emulator. If an emulator will not run and gives an error message:

- Make sure the emulator core is loaded
- Scroll down and select *information*
- Select *core information*
- Scroll down on this screen and look for error messages specifying needed ROM files
- Conduct an internet search to find the files and download them
- Put the BIOS files into your system folder within RetroArch's folder
- Retry loading the core and game content
- If there are still issues- some BIOS files may need to be renamed to match what the emulation program is expecting, or you may need to find other BIOS files since some older ones may not work

Finally, a ROMs folder is found here. This folder can be used to store ROM files for each system. Some people, including the author,prefer to put most system ROM files under a different directory that stores to expandable memory- like an external SD Card- so that less internal storage is used. For arcade game emulation through the MAME core, the ROM files should all be stored here so that the emulator can provide cheat codes. Because these are very small files, even quite a few will take up a very small space on internal memory.



Note:

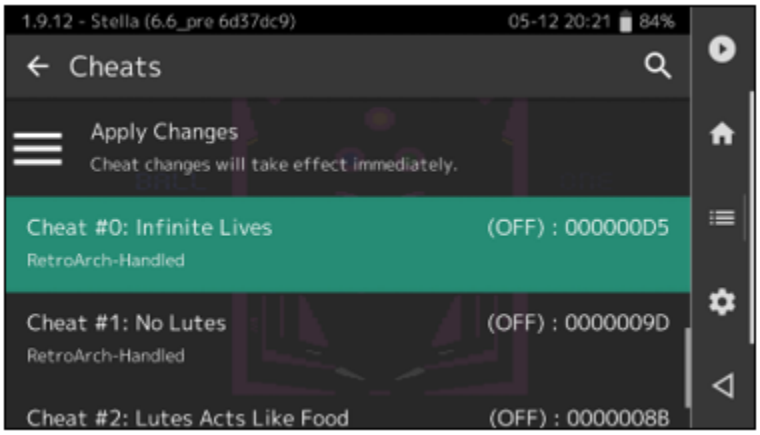
Dreamcast emulators are very picky in regard to the file types used for ROMs. For best results, make sure each ROM file is in the chd file format. The link below is a resource where these files can be obtained in this format. Also- within the Dreamcast ROM folder, have each ROM stored in its own folder (Example: the Soul Calibur chd file would be found in the SOULCAL folder within the Dreamcast folder.)

https://archive.org/download/dreamcastchd

Loading Systems, Loading Games, and Activating Cheats

Once the user opens the RetroArch program, they can load cores for each program using the *Load Core* selection. After the core is loaded, they may then use the *Load Content* selection to browse for the file folder where that system's game files are stored. Once a game is selected, it will load and the user will see the various game start screens. If the user wants to use a cheat code, they can:

- Click the "RetroArch Alien" icon on bottom right of the touchscreen
- Scroll down to *cheats* and select that option
- Select the *Load Cheat File (Replace)* option
- Select the name of the game system being played
- Scroll down through the game list and select the name of the game
- Scroll down and enable or disable the desired cheat(s)



Cheat codes that the user activates here will stay active the next time they play that game if the *Auto-Apply Cheats During Game Load* is selected from the cheats menu. The *Apply After Toggle* option should also be enabled to ensure that the cheats being to work immediately. If cheats don't work, the user should be sure that they are selecting the cheats for the right version of the game and from the correct country. If cheats still don't work, they may have to look online for new codes to load to the RetroArch cheats folder.

Activating cheats for Arcade games emulating through MAME is slightly different. The user will load the MAME core and select the game they wish to play from browsing the ROMs folder under the RetroArch folder. Once the game screen loads, the user should:

- Screentap the "RetroArch Alien" icon on the bottom right of the touchscreen
- Scroll down and select *options*
- Scroll down and select *system*
- Click the *Display MAME Menu* switch to the on position
- Press the "B" game button three times to step back several menus
- Select *quick menu* and tap *resume*
- From the mini menu on the screen, select *cheat* and press the "B" game button
- With *Enable/Disable a cheat* selected, press the "B" game button
- Toggle the switch to the on position for each cheat being enabled
- Scroll down and select the *Return to Prior Menu* option, and press the "B" game button
- Screentap the "RetroArch Alien" icon on the bottom right of the screen
- Select *options*, then *system*, disable the button next to *Display MAME Menu* and tap the "B" game button three times
- Select quick menu and resume

Much like cheats selected for other games, the cheats applied to games running under MAME will start with the game the next time the user plays.

Remove/Display Game Control Overlays

To remove or display the touchscreen overlays when games are running, simply tap the arrow on the bottom right of the screen as the games are running. To bring the overlay back, tap the arrow button a second time.

Starting Games

For most games, the user will need only press the physical “Start” button on the front of the system. However, if arcade games are being emulated through the MAME core, the user will be required to tap the “select” button from the game overlay screen to add credits before they can play.

To then start a game, the user will need to press the “play” button from the game overlay screen to begin.

Save/Load Game States

This feature captures a snapshot of where the user is at in a game. All settings, current inventory, lives, level, and control setup will be captured. Essentially, this is a way to quickly “save” a game at any point so that it can be resumed at another time. Not every core will support this, but most do. To save a game:

- Display onscreen controls
- Tap the "RetroArch Alien" icon on the bottom right of the screen
- Scroll down and tap *save state*

To load a saved game state:

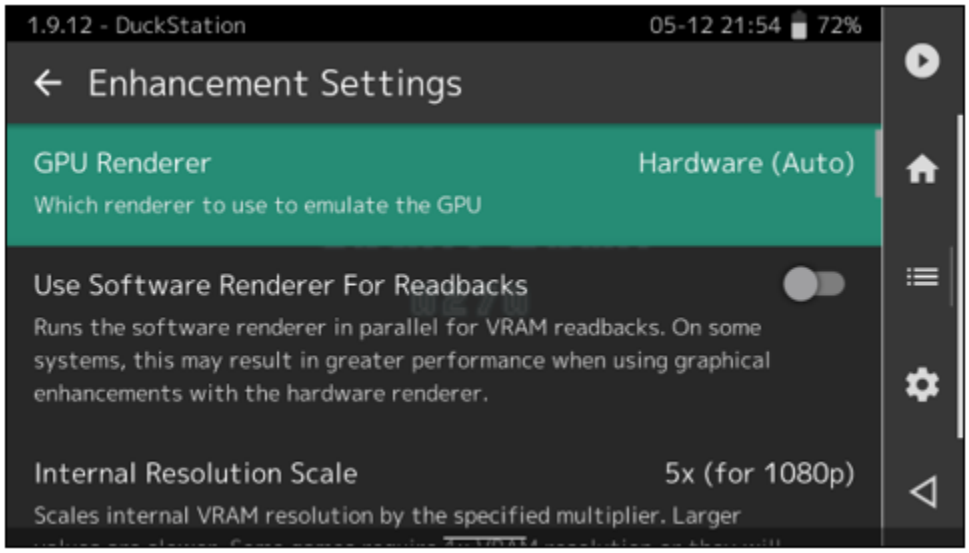
- Start RetroArch
- Load the core the game is being played under
- Load the game that was being played
- When the game starts, tap the "RetroArch Alien" at the bottom right of the screen
- Click *load state* and the game will begin from the save point

Adjusting Enhancements

Sometimes, the game cores will allow for settings that enhance the way the original games run or look. Because each core was developed by a different person or organization, the options can differ in terms of what they offer and how they are implemented. One example is the DuckStation core for playing original PlayStation games. It offers resolution options that greatly increase the graphical output from what may

have been experienced during original gameplay. Often, the way to access those options from RetroArch the user would:

- With onscreen controls visible, tap the "RetroArch" alien on the bottom right of the screen
- Scroll down and select *options*
- Scroll down and select *enhancement settings*
- Flip the switches on and off to enable and disable the desired effects



Adjusting for Pixelation

For cores that are run through RetroArch, using the 4xsoft shader helps to make games less pixelated. To apply this filter:

- Launch your game using whatever core is applicable
- Tap the "RetroArch Alien" icon on the bottom right of the touchscreen
- Scroll down and select *Shaders*
- Scroll down and select *Load*
- Click on the *shaders_glsl* folder
- Scroll down and select the *xsoft* folder
- Tap on the *4xsoft.glslp* option
- You will see a notification appear announcing the shader has been applied
- Press the "B" button twice to step back several menus
- Scroll up and select the *Resume* option to get back into the game

If you want to apply that filter to all games for that core, and for it to load automatically:

- Tap the "RetroArch Alien" icon to get into the quick menu with a game running
- Scroll down and select *Shaders*
- Scroll down and select *Save*
- Scroll down and click on *Save Core Preset*
- A notification appears to cofirm success
- Tap the "B" button twice to go back two screens
- Scroll up and tap *Resume* to get back into the game

Adjusting Conrollers

Most of the time, controller settings under RetroArch may differ slightly, but overall, they are easy to figure out since most mappings are automatic and require a very little trial-and-error from the user. Often, this is due to the fact that most emulated games are older and require less buttons and button combinations to operate.

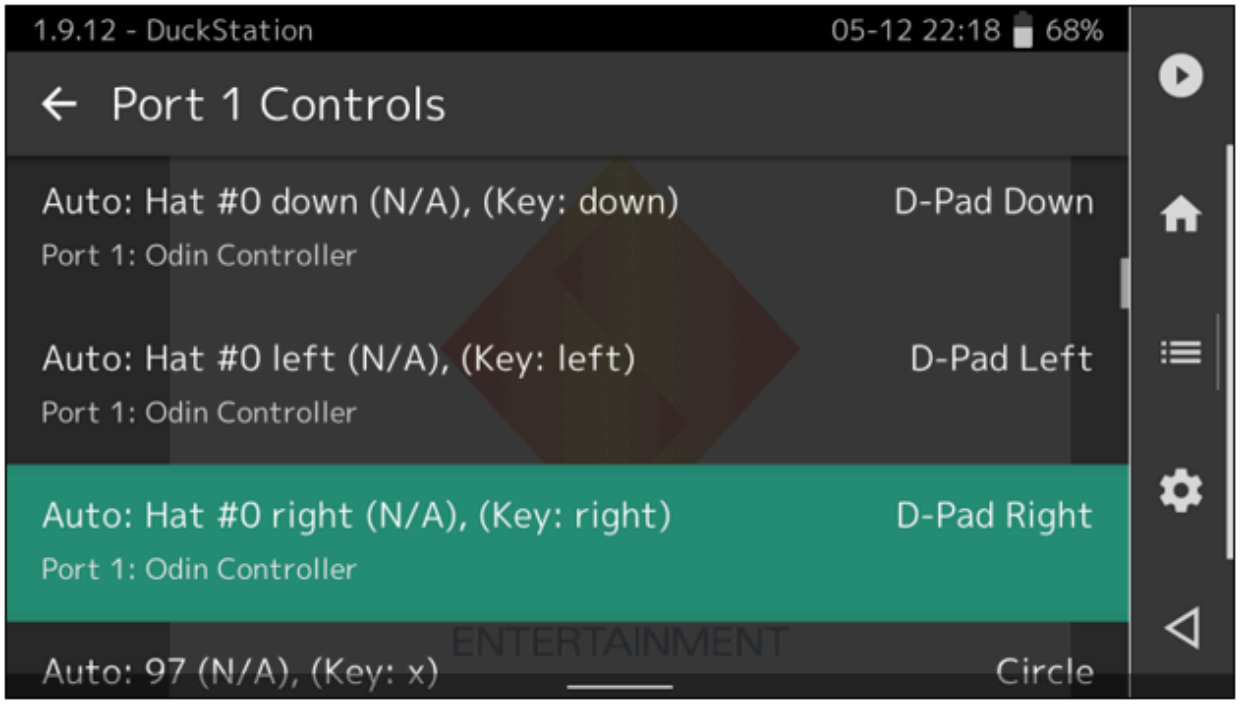
Sometimes, a minor bit of mapping is required to get the controls adjusted per user preference. In these instances, the best way to adjust mappings are to:

- Start RetroArch
- Load the emulator core the corresponds to the game being played
- Load the game's ROM file into the emulator being used
- With onscreen controls displayed, tap the "RetroArch Alien"
- Select *controls* from the menu list

From the menu that populates, select the port that corresponds with the main controller (usually this will be *Port 1 Controls*.) The user can scroll down to make changes to the way each button functions. Perhaps the most adjusted setting: users often want to use an analog control stick instead of the directional pad when playing. To make that adjustment:

- Select the *Analog to Digital Type* option
- Select the left analog or right analog option (forced choice is the only option when the system doesn't recognize an analog stick)
- Click the "B" game button four times to back out to the quick menu
- Tap the "A" game button
- Tap the *Resume* option

For all other types of controller reassignment, RetroArch uses naming conventions that refer to buttons as numbers. This can be confusing.



The best way to know which buttons you're reassigning is to refer to the screenshot below, which displays the controls by the numbers referred to by the emulation cores in RetroArch. To assign buttons close to original control schemes, an internet search can usually locate button assignments native to the systems the games were originally played on. By coordinating between the original schematic and the program naming conventions, the user can typically make adjustments that mimic the original control schemes of the game they are playing.

Note:

With Dreamcast emulator controls, the right and left triggers do not map correctly in RetroArch. This is most notable with the Street Fighter games. To correct this:

- Tap the "RetroArch Alien" icon on the touchscreen
- Scroll to *controls*
- Tap the "A" button
- Scroll to *Port 1 Controls* and tap the "A" button again
- Assign *102* to the *L1* button
- Assign *103* to the *R1* button
- Tap the "B" button twice to step back several screens, scroll up and tap the "A" button on the *Resume* option

Physical Controller Location	RetroArch Numeric Name
L2	23+
R2	22+
L1	102
R1	103
Left Analog Stick Up	Axis 1-
Left Analog Stick Right	Axis 0+
Left Analog Stick Down	Axis 1+
Left Analog Stick Left	Axis 0-
Direction Pad Up	16-
Direction Pad Right	15+
Direction Pad Down	16+
Direction Pad Left	15-
Button Y	100
Button X	99
Button B	97
Button A	96
Right Analog Stick Up	Axis 14-
Right Analog Stick Right	Axis 11+
Right Analog Stick Down	Axis 14+
Right Analog Stick Left	Axis 11-
Select Button	109
Start Button	108
Left Back Button	98
Right Back Button	101

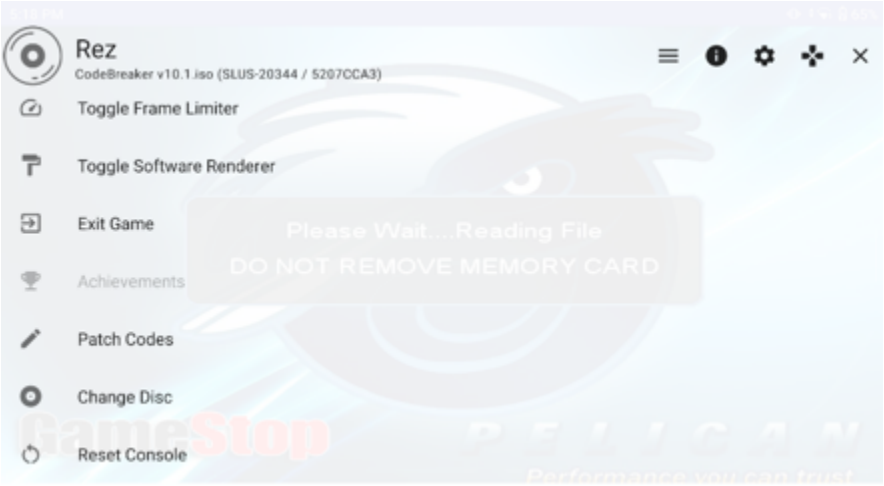
Chapter 8. NetherSX2 Playstation 2 Emulator

Preamble

AetherSX2 was an emulator external to RetroArch because it was not a core option that could be downloaded. AetherSX2 was a more recent emulator designed to play PlayStation 2 games that was available through the Google Play Apps Store. The version of the software was free, and displayed ads within its menu system.

When the team behind the emulator ceased to exist, a group of external developers stepped in to update the code in several ways to remove ads and to make minor modifications the initial team left out. A patch was released to update AetherSX2 into what is now called NetherSX2.

Because of the newness of this software, some games would not run at time this guide was written (Twisted Metal: Black and the first-person shooter Black being two such examples). Also of note: there is no cheat engine built into the software. However, Codebreaker software works much the same as it would for a physical PlayStation 2 game system (see Appendix for operating instructions). A second choice for implementing cheat codes is to use the similar Action Replay software.

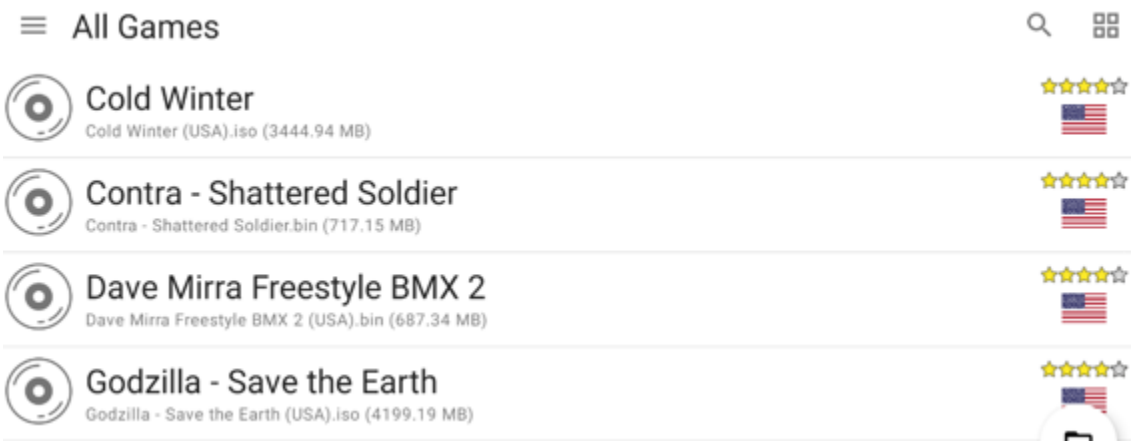


Note:
Some hacking software- such as Codebreaker and Action Replay- will autopopulate with titles different from what they are actually named. This is because those programs were not officially licensed by the game system manufacturers and must use an alias to work. In NetherSX2 there isn't an option to rename this description. However, because the Reset Collection frontend is used as the main way to access games once they are set up, the proper names for the programs- and artwork- can be fixed to display accurately.

Similar to RetroArch, a ROM file folder will need to be created to store game ROMs and save information. Once the emulation software is installed, the user simply needs to go into the emulator settings and tell the program where to find the games- it will populate the rest from there.

Playing Games

Game loading within NetherSX2 is as easy as opening the program and selecting a game from the populated list. Tapping and holding on each game will open a submenu that lets the user change game options. With this being a newer emulator, it is recommended not to change too many technical settings. Once the Reset Collection frontend has been set up to work with NetherSX2 (as AetherSX2), the games can be run and accessed from there.



Chapter 9. PPSSPP Gold Emulator

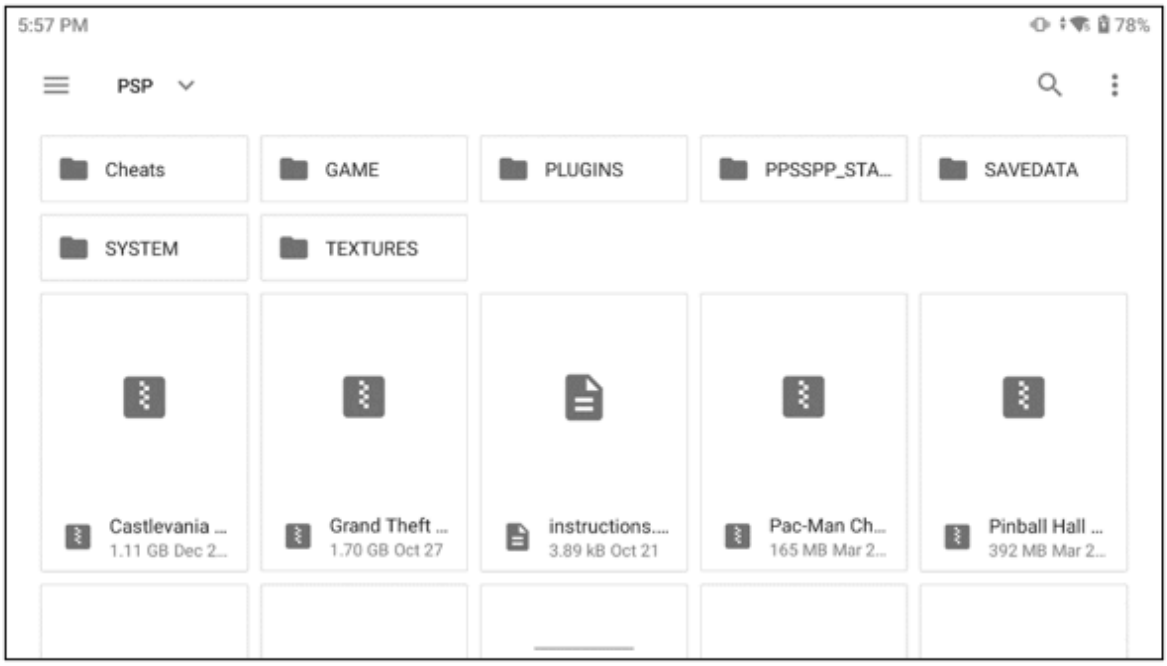
Preamble

PPSSPP is another external emulation program used to play PlayStation PSP games. As this was being written, there was an option to run this core from within RetroArch, yet it consistently crashed- even with BIOS files in place. Therefore, it became necessary- and easier- to simply use the external program. The gold version is the purchased version of the software, so there are no ads and some minor options available that the free version lacks. This program is found within the Google Play Apps store.

The emulator itself has been around for quite some time and seems to be one of the most stable and dependable options for playing PSP software titles.

Much like NetherSX2, or RetroArch, the user should have a file folder created to store game ROMs. The user will then go into the settings menu and select the folder where the system can locate game ROMs. Once these are in place, the system will populate corresponding information.

PPSSPP does have a cheat engine build in. However, cheats do not automatically download. There is a specific format for these files, and finding codes that work can sometimes prove difficult.



Playing Games

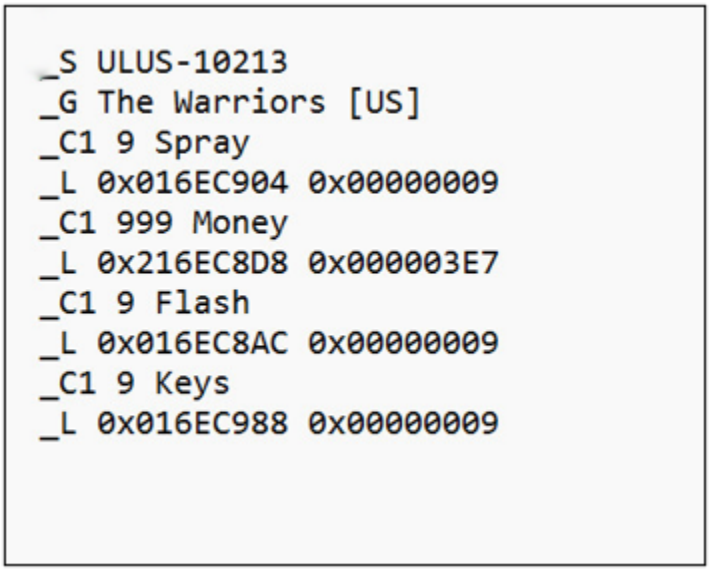
Once games ROMs are put into the corresponding game folder, those games should show up as available for play from the main screen.

Simply clicking on the icon associated with the game will start the game running. Once games are running, the player can swipe the touchscreen from the left edge toward the right side to open a submenu that allow for cheat codes to be activated, save states to be created, and settings adjustments to be made. Because this emulator has been available for some time, most games seem to work without difficulty and enhancements such as running at higher resolutions are possible. PPSSPP games can be accessed within the Reset Collection once it is set up.

Adding Cheats

Cheats for PSP games can often be found online by conducting an internet search. One very important factor in making sure the cheats work is that the file for the cheat will be named after the manufacturer's game identification. For example: most North American PSP games have a manufacturer name that looks something like ULUS18653. The corresponding cheat file would be a plain text file that has codes inside and is named ULUS18653.ini. This is vital because the emulator needs to tell which game those cheats go with.

The cheat files themselves look like this when opened:



The format above is consistent with all cheats, so editing and renaming can be done to create new cheat files for other games. Once the files are placed in the cheat folder within PSP's general folder, the cheats will become visible when the player opens the menu screen within the game. One resource for finding codes for PSP games is https://gamehacking.org/. The user can sort cheats by game type and then copy codes available for that game to the cheat file being used in the cheats folder.

Chapter 10. Dolphin Emulator

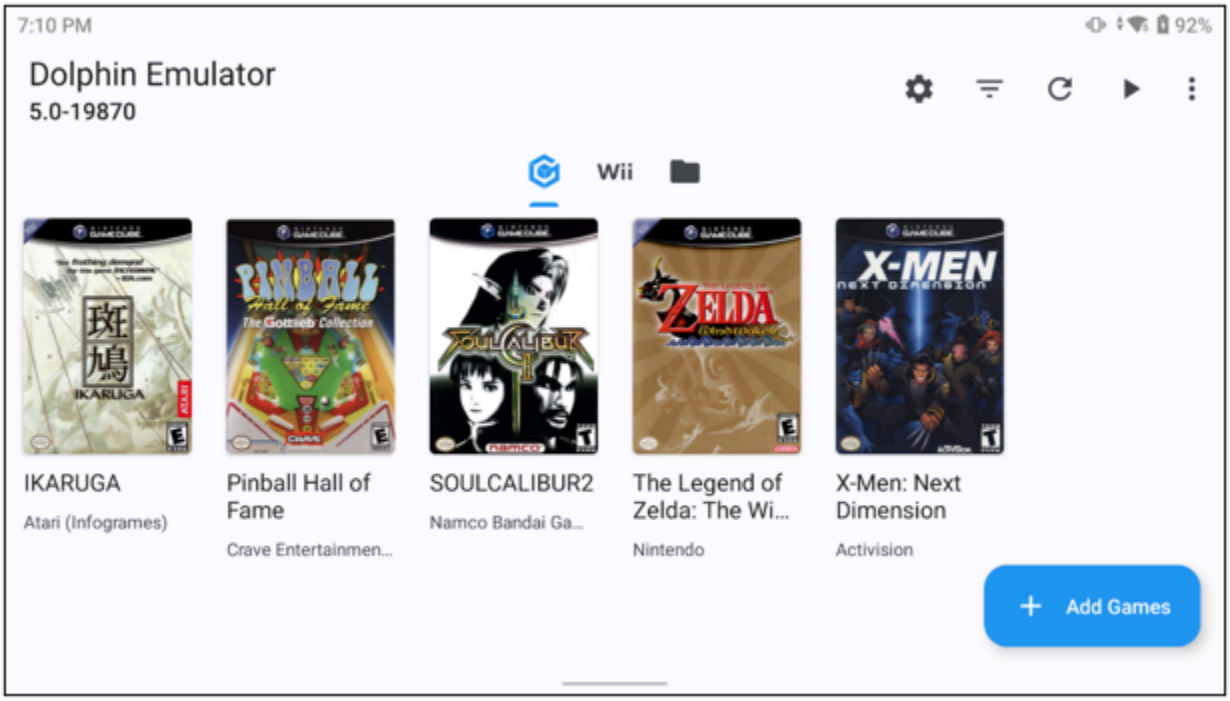
Preamble

The Dolphin emulator is used for playing GameCube and Wii games. Much like some of the other external emulators used, there are options for downloading and running these cores from within RetroArch. The difficulty with this emulator is that it functions for two different systems and can be difficult to setup within RetroArch. Using it as an external program allows the user some visual elements that help with setup and management. The software itself is free and available through the Google Play Apps store.

As an emulator that is fairly recent, there are still issues being addressed on a daily basis. Many, many GameCube games run with little or no issues since that system is older. Wii emulation can be very much hit or miss. This is due to the fact that the Wii system is not very old and people are still trying to figure out how those games can be emulated. The second issue is that the Wii control schemes were so innovative that there are still some uncertainties regarding how this can be adapted for emulation.

Because this emulator is still very new, crashed do occur and therefore it is suggested that the user leave technical settings at the default. One issue that has been noted is that controller settings and bindings can be lost by the program. At times this seems to coincide with program updates.

As with any emulated system, there should be ROM repository folders set up for each system for ease of management. Once this has been accomplished, and the software has been directed to where those game can be found, they will populate in the game selection window. It is worth noting that the icons at the top correspond to each system. GameCube games display when that icon is selected, Wii games show only when that icon has been selected.



The Dolphin emulator does offer access to cheat codes that auto populate. Much like NetherSX2, swiping from the left side of the screen toward the right will open a menu that allows for the user to work with settings and enable and disable cheat codes. For “Wii-ware” games, like Contra Rebirth and Gradius Rebirth, gecko codes can be found on https://gamehacking.org/ and manually entered.

Note:
Resident Evil games can be picky when cheat codes are used. For Resident Evil 0- make sure to run through a scenario and collect items, even when using cheats, so that the game won't lock up. For Resident Evil (the remake of the original game), it is fine to use cheat such as Infinite Health, Zero Saves, Low Finishing Time, and Unlimited Health. However, if cheats are being used to gain items, enable one at a time and save, disable the cheat for that item, enable the new item, and repeat. If the player doesn't do things this way, the game will overwrite previously gained items in the inventory screen.

Note:
For Wii emulation, there is great difficulty in setting up controller profiles for this system. The author of this manual has only been able to get a few games to function properly and recommends using only the games listed in the Appendix.

Controller Setup

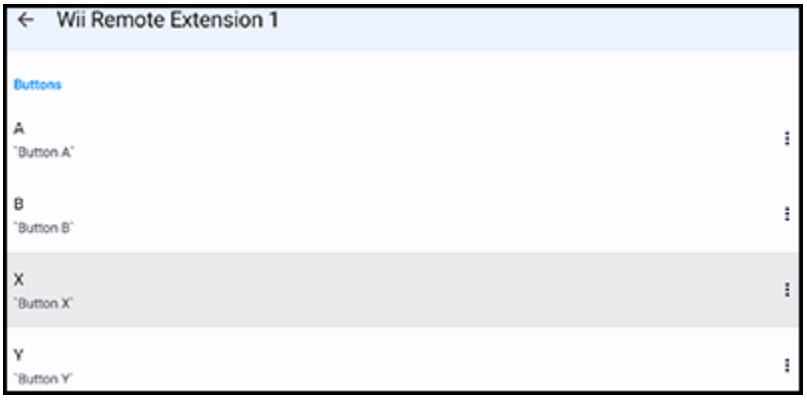
Because the Dolphin emulator works for both GameCube and Wii systems, there are two different setups for controllers.

For GameCube setup:

- Open the Dolphin emulator
- Tap the gear icon on the upper right of the screen
- Tap on *GameCube Input*
- Tap on *GameCube Controller 1*
- Select *Standard Controller*
- Tap the gear icon to the right of *GameCube Controller 1*
- Scroll down and select each button mapping
- For each popup, select the corresponding physical button to assign it to

For Wii setup:

- With the Dolphin emulator open, tap the gear icon on the upper right of the screen
- Tap on *Wii Input*
- Tap on *Wii Remote 1*
- Select *Emulated Wii Remote* from the popup
- Tap on the gear icon to the right of *Wii Remote 1*
- Scroll down and tap on *Extension*
- Select *Classic* from the popup menu
- Click the gear icon to the right of *Extension*
- Scroll down and select each button mapping
- For each popup, select the corresponding physical button to assign it to


Wii Remote Extension 1
Buttons
A
`Button A`
B
`Button B`
X
`Button X`
Y
`Button Y`

Chapter 11. ColEm Emulator

Preamble

The ColEm emulator is another example of an external emulator being necessary because the ColecoVision core offered through RetroArch doesn't seem to function. Similar to some of the other external emulators mentioned, the games that are set up to operate through this program can be set up and loaded from within the Reset Collection. There are two versions of the software available through the Google Play Apps store: ColEm and ColEm+. The ColEm+ version requires a purchase and has a few settings lacking in the free ColEm version. However, the Reset Collection program recognizes only ColEm and ColEm Deluxe. Because the "Deluxe" version was renamed and the frontend has not been updated to recognize this at this time, the free version is the version that is used by the author for playing games.

This emulator also requires a ROMs folder for game files. Once the emulator's settings have been set up to recognize the game folder, the available games will populate to the main game screen.

Playing Games

Because the ColecoVision system used complex controllers, starting a game in ColEm is slightly different than with other emulators. The "Y" game button activates an onscreen keypad layout that allows the user to enter number of players and difficult setting. Pressing the "Y" button a second time will hide the keyboard. Also of note: the onscreen controller overlay will disappear after a few seconds.

Due to the age of the ColecoVision system, there are not many cheats available for its games. Most games from this era were designed only for the players to achieve high scores, so the lack of cheating options does not hurt decrease the level of fun involved.

Chapter 12. Mupen64PlusFZ Pro Emulator

Preamble

The Mupen64PlusFZ Pro emulator is used to play Nintendo 64 games. It is yet another example of an emulator that has a corresponding core available through the RetroArch program, but has great difficulty in setup and operation. Using this emulator as an external tool is much easier to set up and administrate. This program is available for purchase through the Google Play Apps store.

The emulator itself has been around quite some time and comes in a variety of slightly different configurations and names. It is largely a very stable and reliable program and very, very few games have difficulty being run with this program.

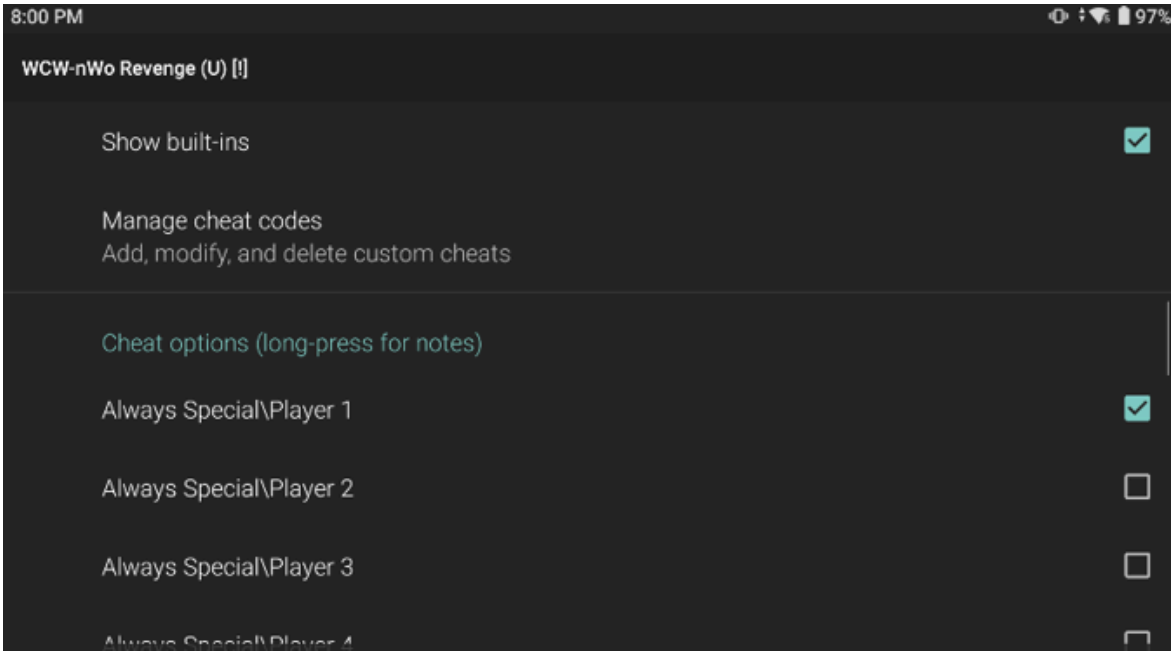
As with many of the other emulators discussed, once a ROM folder is set up for game aggregation and the emulators settings are directed to that folder, the games become available for play from the main screen.

There are cheat codes available for this emulator and codes prepopulate as long as the game file is correctly named.

Using Cheat Codes

Where this emulator differs slightly is that the cheat codes for games must be set up before games are started, and they cannot be disabled or enabled during actual gameplay. To activate cheat codes for a game:

- With the emulator loaded, tap on a game from the game select screen
- A menu will pop out from the left side of the screen, select *settings*
- Select *cheats*
- Scroll through and check each box next to the cheat being enabled, or uncheck to disable a cheat
- After the selection has been made, swipe left across the screen twice to return to the menu
- Click *resume* or *start* to to step into the game with cheats activated or deactivated



Note:
The user may also access enhancements such as boosting resolution- or other technical settings- from the above screen used to access cheats.

Controller Configurations

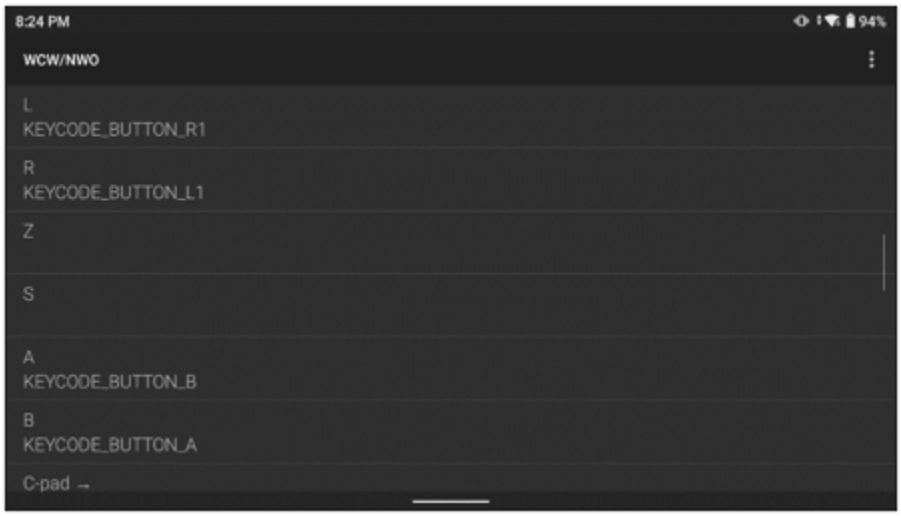
One of the few drawbacks of these emulators is that controller setups can be quite difficult to figure out. As with the Wii game console, the Nintendo 64 utilized a very non-traditional controller with setups that prove a challenge when using standard game controllers.

Perhaps the easiest way to address this issue is to look up each game's original control scheme online and then set up a controller profile that can be assigned in settings. To adjust or apply a controller profile:

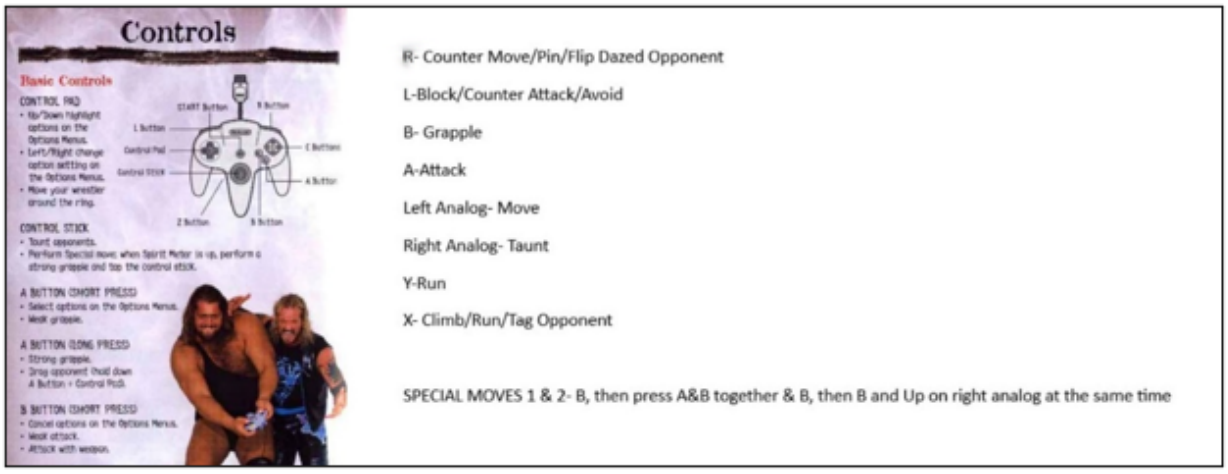
- Tap the game that requires a control adjustment
- When the menu populates from the left side of the screen, select *settings*
- Select *controller*
- Select *Controller 1 Profile*
- From here, you may choose another profile, or make an adjustment to a profile- select *manage profiles*
- You may create a new profile, or make an adjustment to an existing profile from this screen

- Select new and then use the button bindings from the controller *adjustment* section of the *RetroArch* section of the manual to assign buttons consistent with the controls from the original game and to name the profile
- When done, swipe from the bottom of the screen to close the profile creation and editing section

The recent controller profile should be set to your game for testing- review the steps to get to the controller adjustment screen to make any changes necessary.



The below screenshot is an example of how bindings can look when patterned after original game layouts to a more standard controller. Often, an internet search can help locate original game button bindings.



Chapter 13. Mame4Droid (0.130u1) Emulator

Preamble

RetroArch's MAME cores were initially used to emulate arcade games. However, those cores began erasing Sega game cores and when the Sega cores were reinstalled, the MAME core wouldn't work.

By installing MAME4Droid as an external emulation program through the Google Play Apps Store, these games could then be set up to run under the Reset Collection frontend side-by-side with Sega games.

The main difference in using MAME4Droid involves a bit of setup, which will be covered here in case of the need for reinstallation.

Setup

MAME4Droid can be downloaded and installed through the Google Play Apps Store, as it was purchased by the writer a long time ago. It will require the usual installation routine. After that installation is finished, the system will create a new icon on the second desktop screen for the system. To minimize the interface, that icon should be added to the Game Apps folder on the home screen.

From the home screen:

- Swipe from the right edge toward the left edge of the screen to see the additional screen that has the Mame4Droid icon
- Tap and hold the Mame4Droid icon, the icon will get slightly bigger when it is selected- swipe your finger to the right to pull the icon to the main home screen
- With the icon still held under your finger, position the icon over the "Game Apps" folder and take your figer off to release the icon
- The program icon should now be grouped with all other game emulation software on the device

With the application installed and the icon in the proper folder, tap on the program icon to open the program for the first time. When prompted by the software, select the option for the ROM and system files to be installed to an external location. Then tell the software which folder the ROM files can be found in. The program should now auto populate with all available games as a list.

Note:
For this particular emulator, most of the compatible ROMs will be for MAME 2010. These can be located though the link below. When issues are encountered with specific ROMs, the user can try older or newer ROM versions to test for compatiblity.

https://ia800905.us.archive.org/view_archive.php?archive=/5/items/MAME_2010_full_nonmerged_romsets/roms.zip

Controller Setup

The next thing you should do is to set up the controller. To do this:

- From the main screen, swipe from the top of the screen downward to get to the *settings* menu
- Tap on the *input* option
- Tap on the *external controller* option
- For the *mode* option, the *controller autodetection* option should be selected
- Tap the *define keys* option
- Tap the *player 1* option
- For each of the control options on this screen, tap the description on the left side of the screen and then tap the controller button you want to execute that action
- One you've set up all the mappings, tap the physical "B" game button to exit by stepping back through each menu to the main screen

Considering that most older games only used directional buttons and two physical buttons, the recommended layout below assigns the extra physical "C" and "D" buttons to the "X "and "Y" physical buttons for the rare game- such as Neo Geo games- that may use them. Most games that use six physical buttons- such as the Street Fighter games- are not emulated by the writer of this manual from within an arcade emulator. Therefore, this setup works quite well for most occasions.

Table 3.

Button Action	Physical Button Assignment
Up	Dpad Up
Down	Dpad Down
Left	Dpad Left
Right	Dpad Right

Table 3. (continued)

Button Action	Physical Button Assignment
Button A	Button A
Button B	Button B
Button C	Button X
Button D	Button Y
Coin	Select Button
Start	Start Button
Exit	L1 Button
Option	L2 Button

Starting a Game

Once the program has been installed, the ROM installation folder is indicated, and the controls have been assigned, the user is ready to add the system and games to the Reset Collection frontend. After that part is complete, the user is ready to play games.

Like every other system housed in the frontend, the user will scroll through systems and then tap on the game they wish to play. Often, the first screen will require the user to tap left and right on the directional pad to begin emulation. Afterward, the game is available to play. To begin:

- Tap the select button to add credits
- Tap the start button to begin the game

From within the game, the user can exit at any time by swiping upward from the bottom of the touchscreen and choosing the *exit* option, select the *yes* option from the next menu screen, and then tap the "A" button.

Applying Cheat Codes

Once a game has been started, the player can view and select cheat codes available for the game by pressing the select and start buttons at the same time. To apply a cheat:

- From the menu that opens, scroll down to the cheat option and tap the "B" button
- Scrolling through the menu, tap the right or left directional pad to enable or disable whatever cheat is highlighted

- Once all cheats are selected or disabled, scroll all the way down to return to the prior menu option and tap the "B" button
- From this menu, scroll to return to the game option and tap the "B" button

Chapter 14. FinalBurn Neo Emulator

Preamble

At times, MAME4Droid is unable to run a game's ROM or it has significant issues in emulating a particular game. FinalBurn Neo is another arcade emulator available through RetroArch which has a stronger history of running games. The downside is that the emulator has very limited cheat codes available compared to MAME4Droid.

Basic Setup

Download the core for FinalBurn Neo through the RetroArch program. Create a file folder to hold your ROM files- the writer chose to do so within the same directory that held files for Nintendo, Sega, and other common systems.

ROM files can usually be found here: https://archive.org/download/fbnarcade-fullnonmerged/arcade/

Cheat Files Setup

Cheats for FinalBurn Neo come in two varieties with the ini and cht file extensions. The cht files are usually already within the cheat file structure and can be found under RetroArch>Cheats>FBNeo- Arcade Games. Where this emulator is concerned, there are basically no cht files beyond what comes in that folder. There are also no outlets that the writer was able to use to locate others.

The more prevalent kind of cheat file, although still limited, are the files with the ini extension. These may be found at:https://github.com/finalburnneo/FBNeo-cheats/tree/master/cheats

Ini files can be placed in the same directory as cht files under RetroArch>Cheats>FBNeo-Arcade Games.

Activating Cheats

The procedure for activating cheats that are under the cht file extension is similar to activating cheats for other games in RetroArch:

- With a game running, click the "RetroArch Alien" on the bottom right side of the screen
- Scroll down to *Cheats*
- Select *Load Cheat File (Replace)*
- Scroll down to select *FBNeo- Arcade Games*
- Click on the name of the game the cheat is being selected for
- Toggle the desired cheats on/off by selecting that option to the right of the cheat
- Make sure that *Auto-Apply Cheats During Game* is toggled to the "on" position

- Make sure that *Apply After Toggle* is turned to the "on" position
- Tap the "B" button to go back one menu, scroll up and click *Resume*

The procedure for activating cheat files that use the ini file extension are different. These cheats are selected as dipswitch options. To activate one:

- With the game running, click the "RetroArch Alien" on the bottom right of the screen
- Scroll down and select *Options*
- Scroll down and select *DIP Switches*
- Scroll down to see what cheats are available and make the selection by clicking on the description- sometimes this will lead to another selection among a list, other times it may be an on/off switch that can be toggled
- When done, tap the "B" button twice
- Scroll up and select *Resume* to get back into the game

Chapter 15. The Reset Collection Frontend

Preamble

The Reset Collection application is a frontend program meant to provide users with a single menu for selecting the games they may have running under several different emulation programs. The easiest way to visualize it is as a way to present the user with a single menu for selecting every single game they have running under a different program. It's a one-stop-shop for just picking a system and playing games.

The Reset Collection does not look at what the controller configurations are, or what cheat codes the user may have running in the background each time they start a game. It only catalogs the games the user has, and what core or program is used to run those games.

Where the program is truly amazing is that it can also run as a launcher. So, if it is set as the system's default launcher at start, once the system powers up, the menu system will launch and present the gamer with a list of what they can play. This is useful for those of us, like the author, who only want to use our hardware to game on, not caring to see the underlying connective tissue that makes it all possible.

It's easy to set up, easy to update, and provides a visually appealing and unified way to start gaming.

Adding Systems

The Reset Collection program may be purchased through the Google Play Apps Store. Once purchased and installed, the user can launch the software to begin adding systems.

- From the settings menu, click the *Add New System* option
- Select the system being emulated from the *Choose System* list
- Select the emulation program being used from the *Select Emulator App* list
- Select the folder for where the games for that system will be stored
- From the screen that appears, select *Scrape and Add Games* from the bottom right
- The main game menu will display, showing the newly added system and games it found

Refreshing the Game List for Emulated Systems

To add new games to a system, the user only has to download the ROM file and put it in the folder for the game system. The game will not show up in the front end until the user manual does a refresh. To do this:

- Scroll down through the available systems to find the system the game was added to
- Tap and hold your finger on the icon for that system
- From the menu that appears, tap *Scan Game Folder for New Games*
- The new game will scrape and then appear in the game list for that system

Adjust Game Names, Logos, and Information

The Reset Collection gives the user quite a bit of control regarding how the games appear for each system. The user only has to tap and hold over a specific game for a menu to come up that lets the user choose different backdrop images, box art, logo, and banner. These populate based on the game name, so if the game name appeared wrong in the scraping, the user will need to fix that first. To do so:

- Tap and hold your finger on the game that needs adjustments made
- From the menu that appears, scroll down and select *Fix Game Match*
- Type in the actual name for the game and tap the game name
- Tap the game's name a seond time, from the menu that opens, select *Fix Match*
- The frontend will close and reopen, the game name should now be correct, along with any other information populated from the name

Backing Up the Frontend

The Reset Collection software has a backup feature that allows the user to make a backup of how they have the frontend configured. This is useful if the system ever crashes or the program needs to be re-installed. Using the backup option from time to time means that the configuration can be regained simply from reloading a backup file. To back up the settings:

- Swipe from the left edge of the touchscreen to the right two times
- Tap the gear icon, scroll down to the *Data Settings* category
- Tap the text that reads *Back Up Data...*
- Tap *Continue*
- The dialog box that appears will tell where the backup files are stored at-

  /storage/emulated/0/Android/data/com.retroloungelab.resetcollection/files- tap on that box to continue
- Click the *Create Backup* option
- When finished, click *Okay*
- From the right edge of the screen, swipe left twice to return to the system selection screen

To restore from a backup:

- Swipe from the left edge of the touchscreen toward the right two times
- Tap the gear icon, scroll to the *Data Settings* category
- Tap the text that reads *Restore Data...*
- Tap the *Continue* option
- Scroll down to the file that contains the backups and select the appropriate file
- The process will now take over and restore from the backup
- Once finished, swipe from the right edge of the screen toward the left to go back two pages to the system select screen

Chapter 16. Appendix I- Video Game List

Sega Dreamcast	
	Dave Mirra Freestlye BMX
	Gauntlet Legends
	Mortal Kombat Gold
	Shadow Man
	Sonic Adventure
	Sonic Adventure 2
	Soul Calibur
	Street Fighter- Double Impact
	Virtua Fighter 3tb
Sega Genesis	
	After Burner II
	Batman
	Battle Squadron
	Blades of Vengeance
	Castlevania- Bloodlines
	Contra- Hard Corps
	CrossFire
	Crue Ball
	Dragon's Revenge
	Gaiares
	Lightening Force- Quest for the Darkstar
	Midnight Resistance
	Psycho Pinball
	RoadBlasters
	Sonic the Hedgehog
	Streets of Rage II
	Twin Cobra- Desert Attack Helicopter
	Vapor Trail
Sony Playstation	
	Castlevania Chronicles
	Crisis Beat
	Deception III- Dark Delusion
	Dynasty Warriors
	Einhander
	Extreme Pinball
	G Darius
	In the Hunt
	Intelligent Qube
	Kagero- Deception II
	Kiss Pinball
	Marble Master
	Mass Destruction
	Pro-Pinball- The Web
	RayStorm
	Resident Evil 3- Nemesis
	R-Type Delta

System Name	Game Title
	Samurai Shodown III- Blades of Blood
	Shipwreckers
	Street Fighter Alpha- Warriors' Dreams
	Thunder Force 5- Perfect System
	True Pinball
	Worms Pinball
	Xevious 3D/G+
	X-Men- Children of the Atom
	X-Men Mutant Academy 2
	X-Men Vs. Street Fighter
Sony Playstation 2	
	Cold Winter
	Contra- Shattered Soldier
	Downhill Domination
	Godzilla
	Gradius 5
	Mat Hoffman's Pro BMX 2
	Raiden III
	Resident Evil 4
	Resident Evil- Code Veronica X
	R-Type Final
	The King of the Fighters- Maximum Impact 2
	Trapt
	Ultimate Pro Pinball
	Virtua Fighter 4
	X-Men Legends
Atari 2600	
	Demon Attack
	Midnight Magic
	Missile Command
	Pitfall!
	Star Wars: The Empire Strikes Back
	Video Pinball
Atari 7800	
	Asteroids
	Dark Chambers
	Donkey Kong
	Donkey Kong Jr.
	Joust
	Mario Bros.
Nintendo Entertainment System	
	Bump 'N Jump
	Contra
	Defender II
	Double Dragon
	Galaga
	Gyruss
	Karnov

System Name	Game Title
	Pinball
	Rygar
	Sky Shark
	Super C
	Super Mario Bros. 2
	Super Pinball
	Vice- Project Doom
	Xevious
Super Nintendo Entertainment Syste	
	Earth Defense Force
	Fighter's History
	Final Fight 2
	Imperium
	King of Dragons
	Legend
	Magic Sword
	Pinball Dreams
	Pinball Fantasies
	Raiden Trad
	Soldiers of Fortune
	Space MegaForce
	Super Pinball- Behind the Mask
	Super Pinball II- The Amazing Odyssey
	Super Punch Out
	Thunder Spirits
	Timeslip
	True Lies
Sega Saturn	
	Last Bronx
	Last Gladiators- Digital Pinball
	Loaded
Nintendo Gameboy	
	Burgertime Deluxe
	Ninja Gaiden Shadow
	Operation C
	R-Type II
	SolarStriker
	Super Mario Land
	Super Mario Land 2- 6 Golden Coins
Nintendo Gameboy Color	
	1942
	Cool Bricks
	Frogger
	Hollywood Pinball
	Tetris DX
Nintendo Gameboy Advance	
	Godzilla -Domination
	Gradius Galaxies

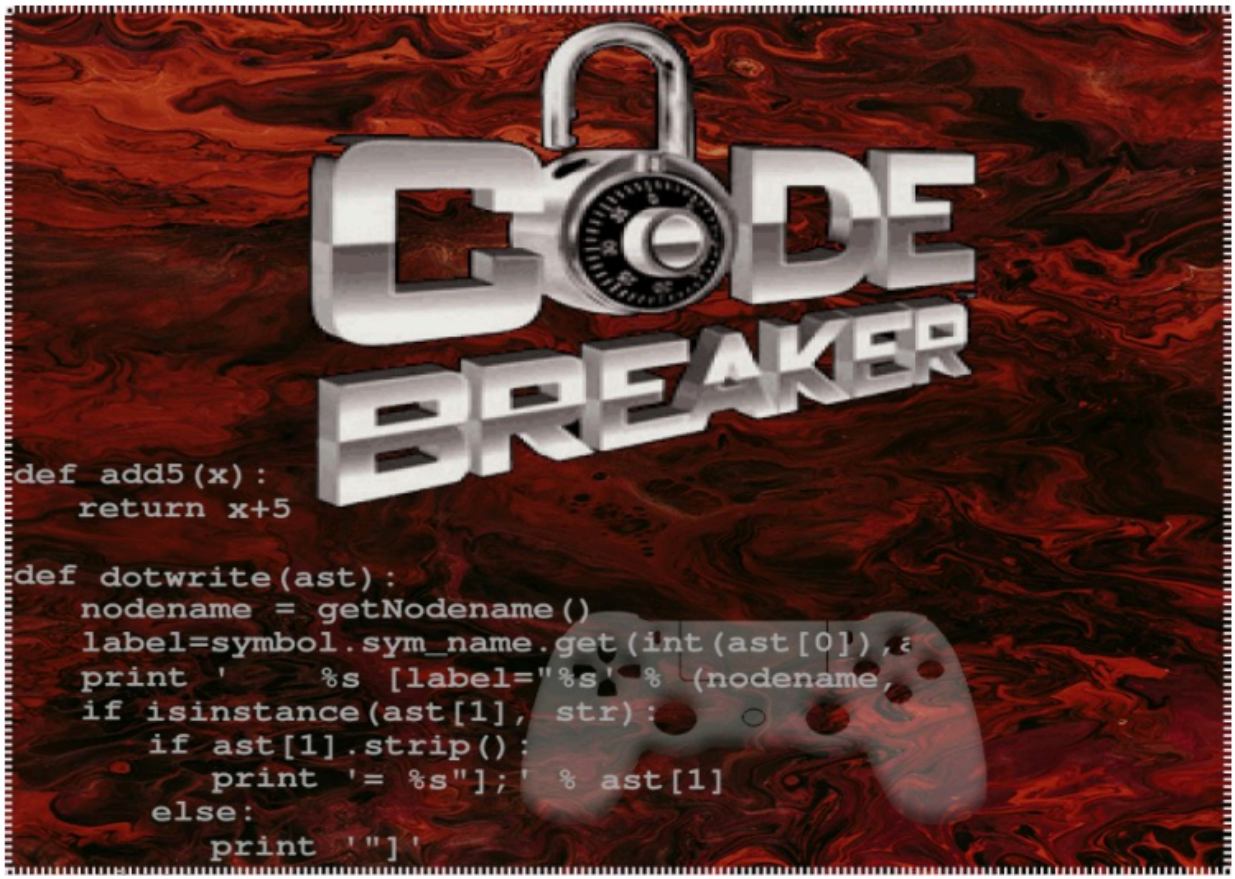
System Name	Game Title
	Invader
	Mario Kart- Super Circuit
	Pinball Challenge
	Space Invaders
	Super Mario World-Super Mario Advance 2
	Super Street Fighter II- Turbo Revival
	X-Men Reign of Apocalypse
Sony PSP	
	Castlevania-The Dracula X Chronicles
	Pac-Man- Championship Edition
	Pinball Hall of Fame- The Williams Collection
	Street Fighter Alpha Max 3
	Tekken- Dark Resurrection
	Tetris
	The Warriors
	Twisted Metal- Head On
Sega Master System	
	Aerial Assault
	After Burner
	Bomber Raid
	Out Run
Sega Game Gear	
	Batman Returns
	Galaga '91
	Halley Wars
	Wizard Pinball
Atari Jaguar	
	Soccer Kid
Nintendo Gamecube	
	Dave Mirra Freestyle BMX 2
	Ikaruga
	Pinball: The Gottlieb Collection
	Resident Evil
	Resident Evil 0
	Resident Evil 2
	Soul Calibur II
	Teenage Mutant Ninja Turtles
	The Incredible Hulk- Ultimate Destruction
	The Legend of Zelda- The Wind Waker
	Waverace- Blue Storm
MAME	
	3 Count Bout
	Aliens
	Aliens Vs. Predator
	Alpha Mission
	Alpha Mission 2
	Altered Beast
	Arabian Magic

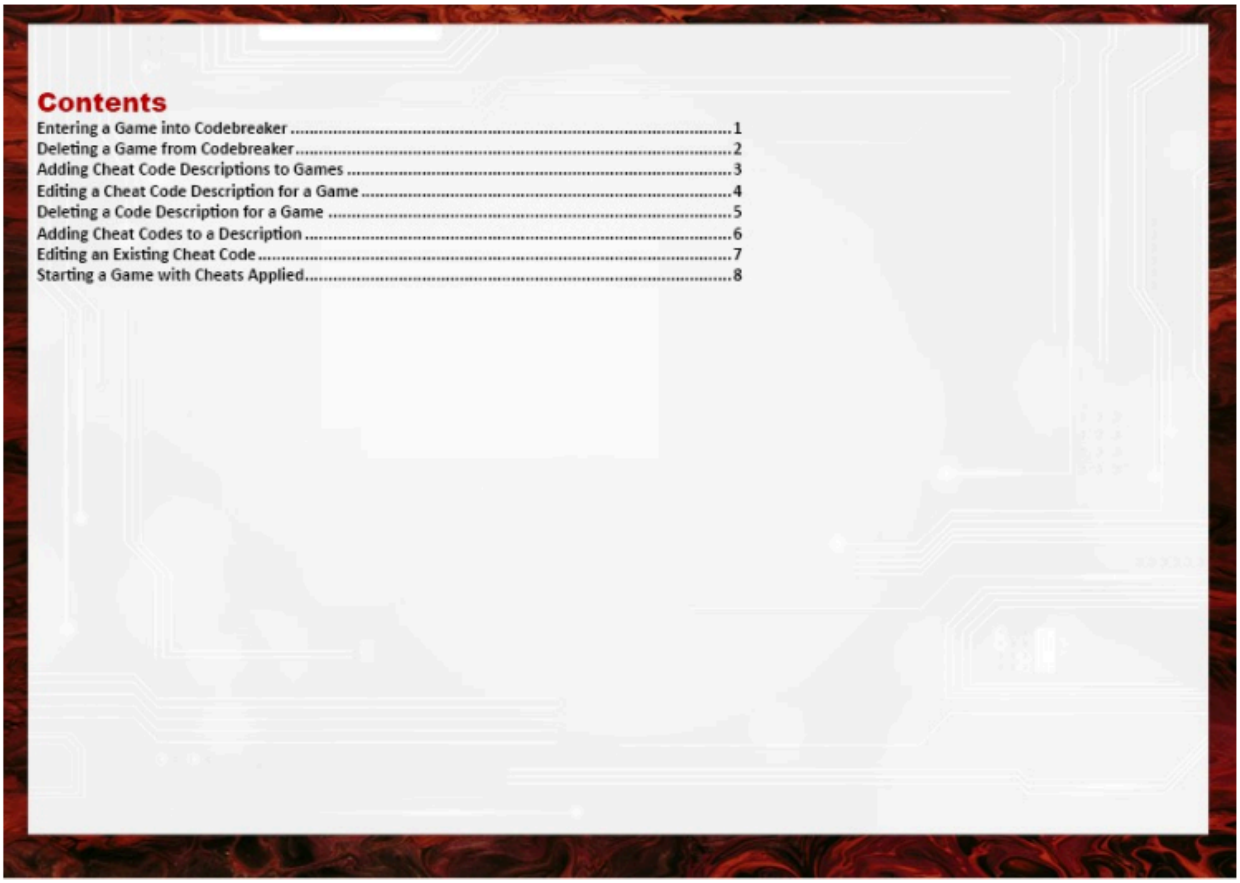
System Name	Game Title
	Blade Master
	Breaker's Revenge
	Captain America and the Avengers
	Dig Dug
	Dungeons and Dragons: Tower of Doom
	Final Fight
	Ganryu
	Ghost Pilots
	Golden Axe: The Revenge of Death Adder
	Hammerin' Harry
	Hit the Ice
	Image Fight
	Jail Break
	Kangaroo
	King of the Monsters
	Last Resort
	Lightening Fighters
	Magician Lord
	Mercs
	Metal Black
	Moon Patrol
	Mystic Warriors
	NebulasRay
	Night Striker
	Ninja Combat
	Out Zone
	Rastan
	Robo Army
	Robotron 2084
	S.T.U.N. Runner
	Samurai Shodown
	Samurai Shodown IV: Amakusa's Revenge
	Shadow Force
	Silent Dragon
	Steel Force
	Super Cobra
	Super Xevious
	The Last Blade
	The Legend of Silk Road
	The Punisher
	Thunder Blaster (Lethal Thunder)
	Thunder Cross
	Thunder Cross II
	Truxton
	Truxton II
	Twin Eagle
	Undercover Cops
	Vendetta
	WWF WrestleFest

System Name	Game Title
	X-Men
	Yie Ar Kung Fu
Nintendo 64	
	Asteroids 64
	Big Mountain 2000
	Robotron 64
	Star Soldier- Vanishing Earth
	WCW/NWO Revenge
	WWF No Mercy
Android	
	Cyclone 2000
	Radiant
	Riptide GP2
Atari Lynx	
	Blue Lightening
Colecovision	
	Beamrider
	Defender
	Keystone Kapers
	River Raid
	Spectron
	Spy Hunter
Neo Geo CD	
	Breakers
	Burning Fight
Nintendo Wii	
	Contra- ReBirth
	Gradius- Rebirth
	Mariokart Wii
	New Super Mario Bros. Wii
Sega CD	
	After Burner III
	The Terminator
NEC TurboGrafx 16	
	Aero Blasters
	Alien Crush
	Blazing Lasers
	Bomber Man
	Bonk's Adventure
	Devil's Crush
	Ninja Spirit
	Super Star Soldier
	The Legendary Axe
NEC TurboGrafx CD	
	Riot Zone
	Splash Lake
FinalBurn Neo	
	Ghox

System Name	Game Title
	Vimana

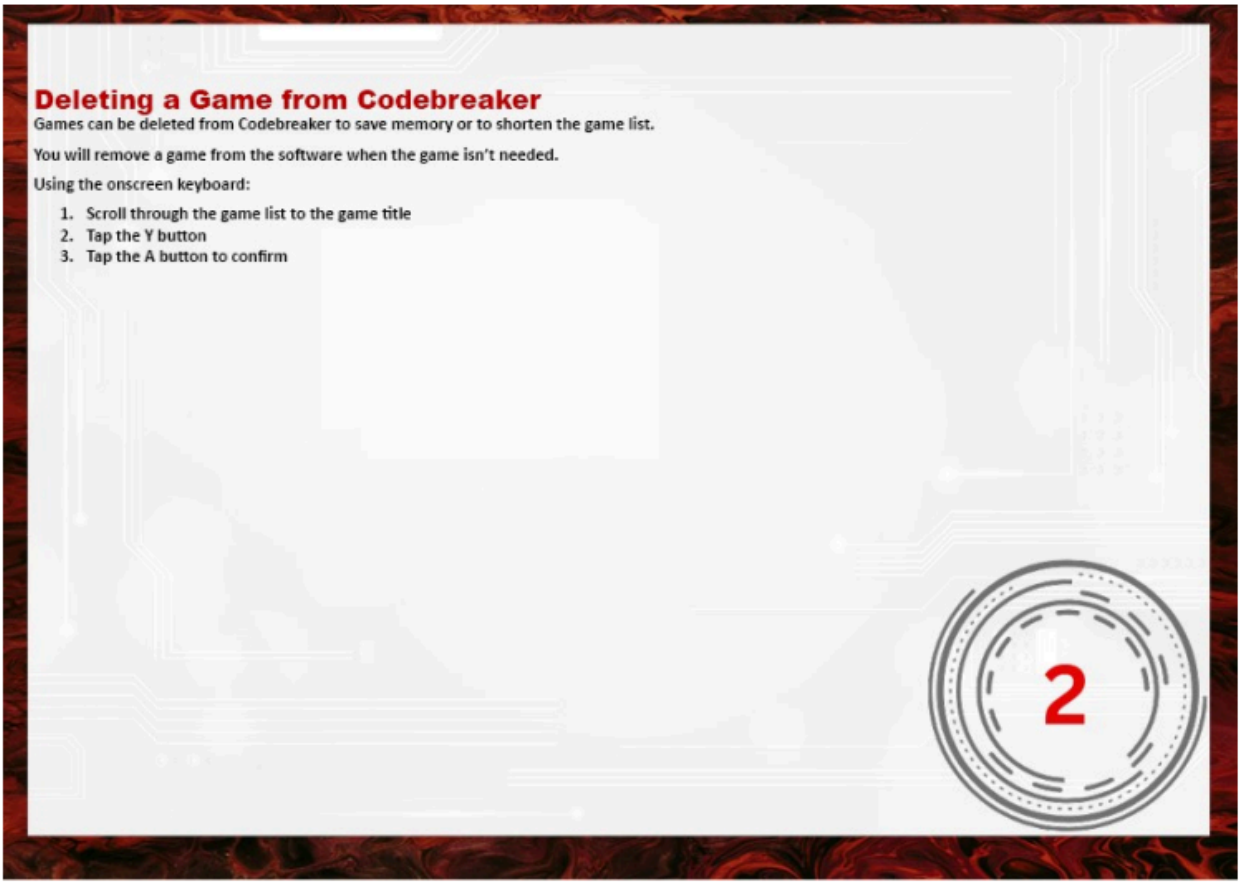
Chapter 17. Appendix II- Codebreaker Manual





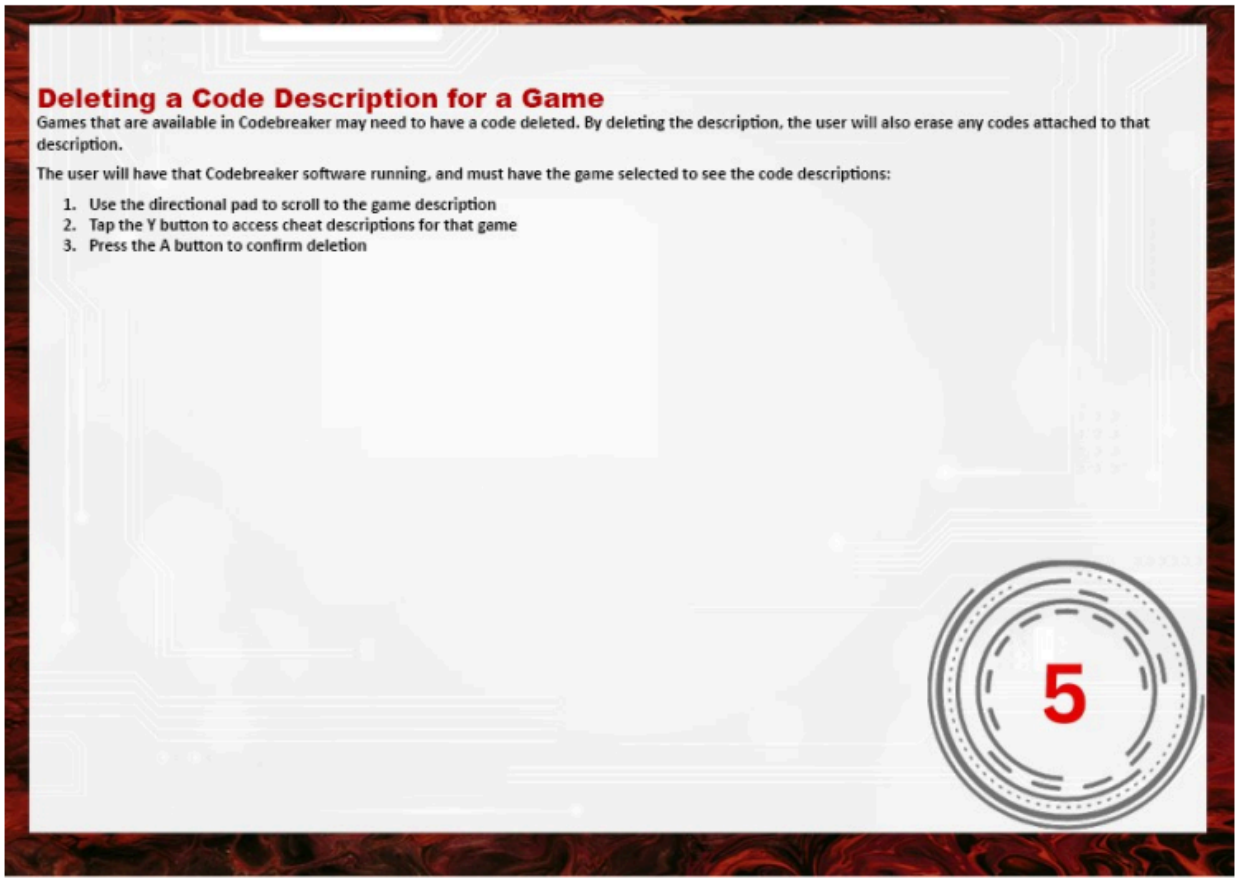
Contents

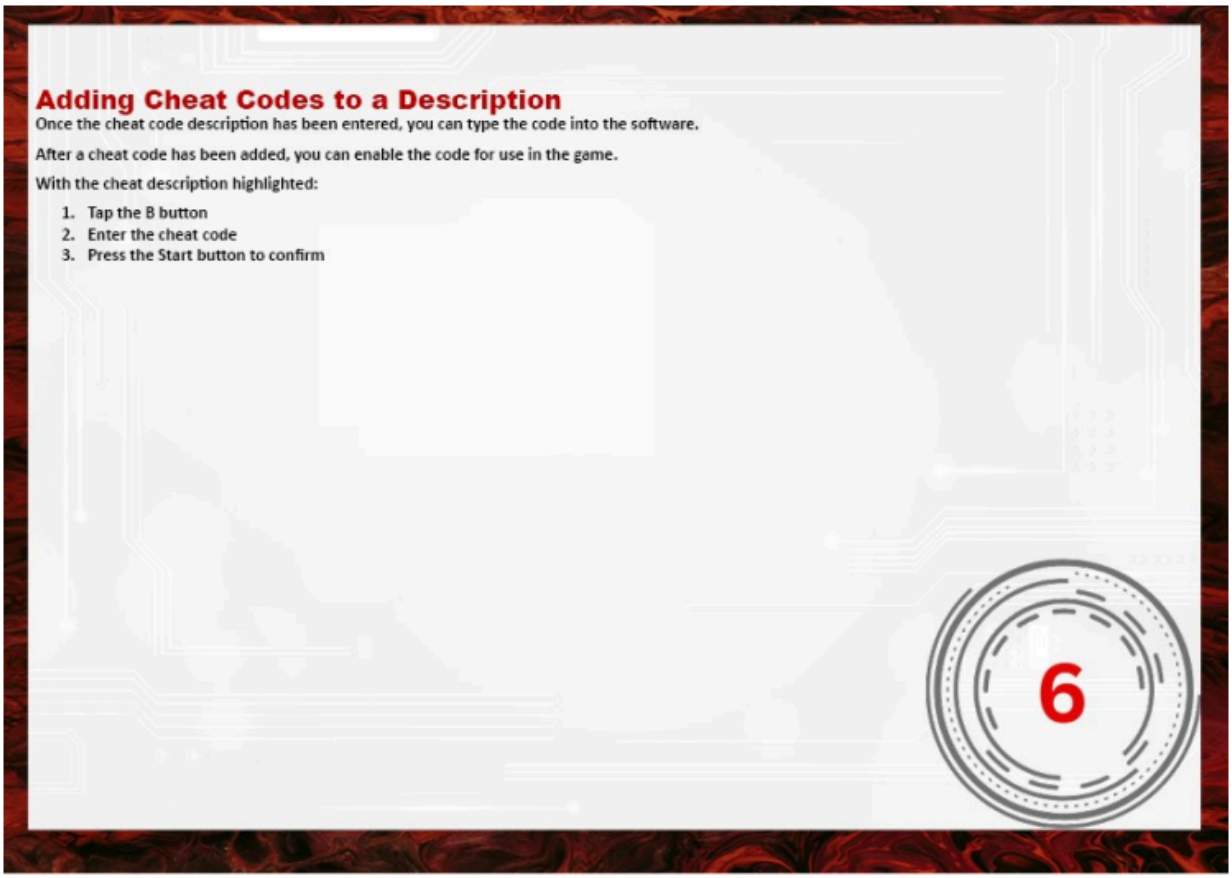

Entering a Game into Codebreaker
Codebreaker presents users with a list of games that have cheat codes available for use.
You will enter the game title to the software so that cheat codes can be added.
With the Codebreaker software running, and the main menu screen displayed:
1. Click the "select cheats" icon
2. Tap the A button
3. Tap the B button
4. Use the onscreen keyboard to enter the game title
5. Press the Start button to save the game and go back to the main menu
1

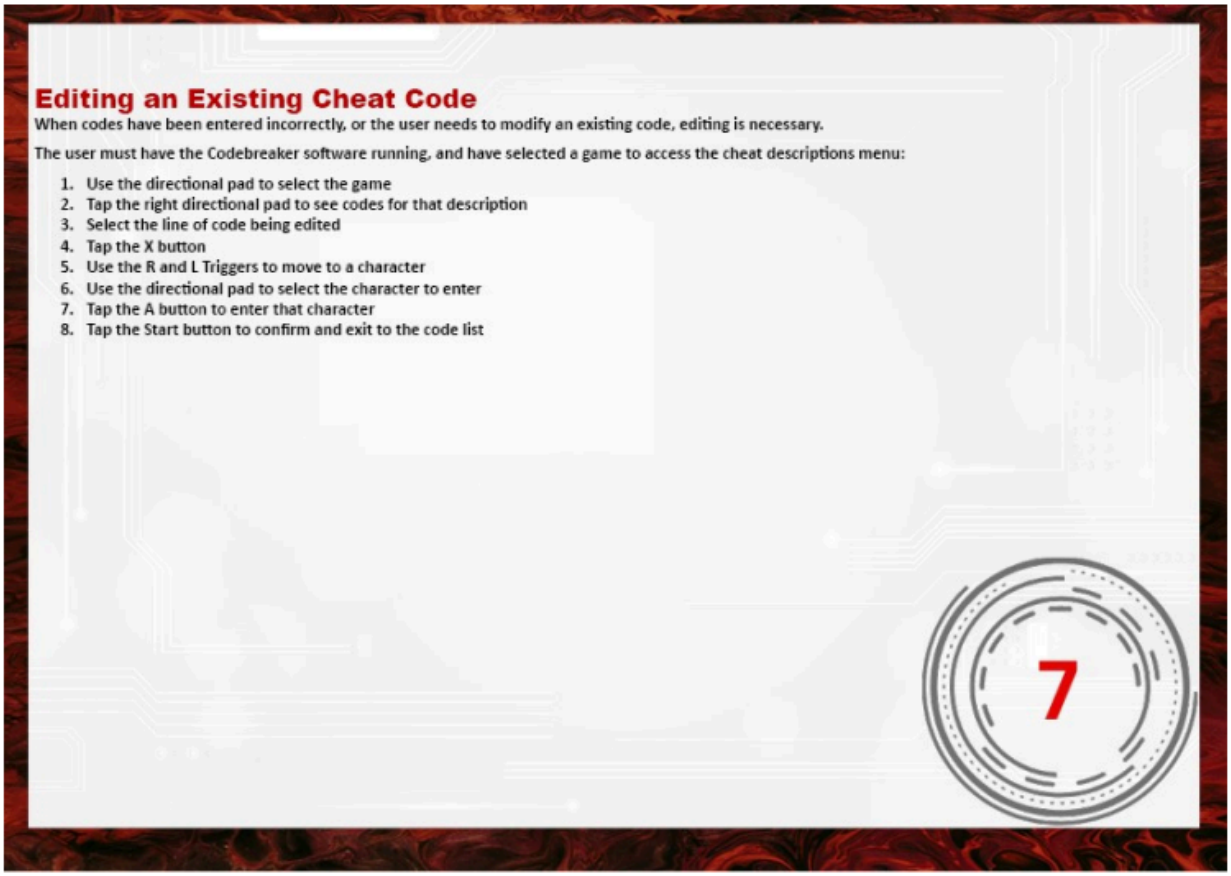

Deleting a Game from Codebreaker
Games can be deleted from Codebreaker to save memory or to shorten the game list.
You will remove a game from the software when the game isn't needed.
Using the onscreen keyboard:
1. Scroll through the game list to the game title
2. Tap the Y button
3. Tap the A button to confirm
2


Adding Cheat Code Descriptions to Games
Once a game title has been entered into Codebreaker, the user must enter cheat code descriptions for that game.
Before a code can be entered, you will need to create a description about what the code will do.
From the game list, you will use the keyboard to type in a description:
1. From the game list, select the game title
2. Press right on the control pad
3. Tap the B button
4. Use the onscreen keyboard and enter a description for what the code will do
5. Press the Start button
3

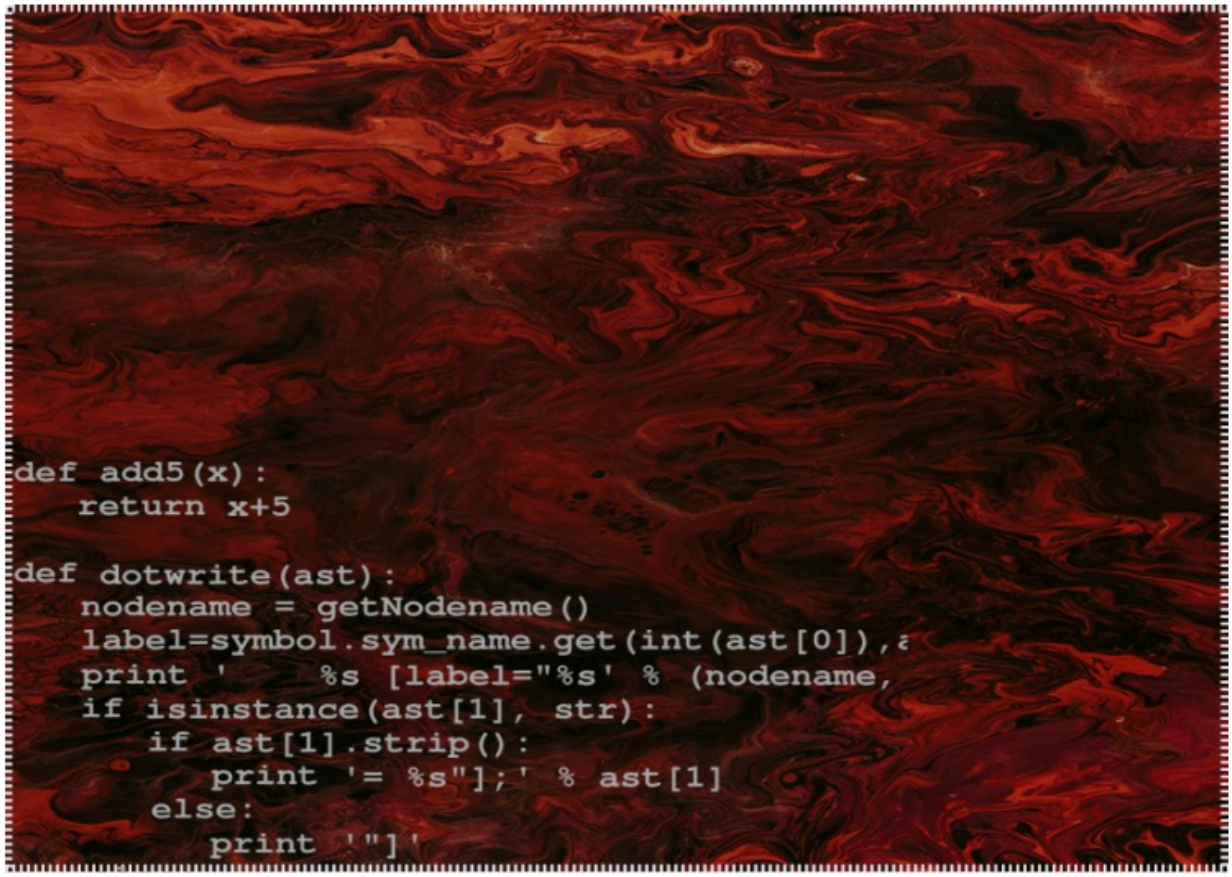

Editing a Cheat Code Description for a Game
Codebreaker cheat code descriptions sometimes may be edited to remove a mistake or improve clarity about what it does.
With the Codebreaker software running, the user must have the game selected to see the available cheat descriptions:
1. Use the directional pad to scroll to the cheat description
2. Tap the X button to access cheat descriptions for that game
3. Use the onscreen keyboard to make adjustments to the description. The Y button will delete characters
4. Tap the Start button to save the edited description and return to cheat selection menu
4


Deleting a Code Description for a Game
Games that are available in Codebreaker may need to have a code deleted. By deleting the description, the user will also erase any codes attached to that description.
The user will have that Codebreaker software running, and must have the game selected to see the code descriptions:
1. Use the directional pad to scroll to the game description
2. Tap the Y button to access cheat descriptions for that game
3. Press the A button to confirm deletion
5


Adding Cheat Codes to a Description
Once the cheat code description has been entered, you can type the code into the software.
After a cheat code has been added, you can enable the code for use in the game.
With the cheat description highlighted:
1. Tap the B button
2. Enter the cheat code
3. Press the Start button to confirm
6

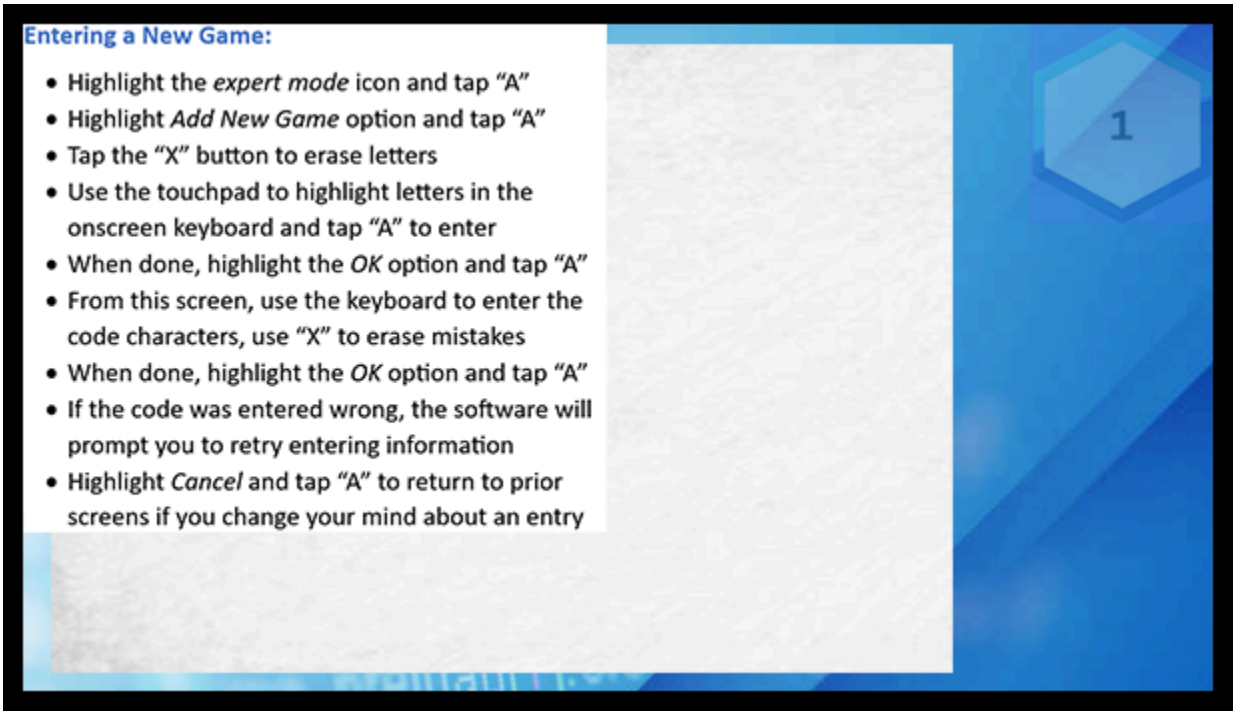

Editing an Existing Cheat Code
When codes have been entered incorrectly, or the user needs to modify an existing code, editing is necessary.
The user must have the Codebreaker software running, and have selected a game to access the cheat descriptions menu:
1. Use the directional pad to select the game
2. Tap the right directional pad to see codes for that description
3. Select the line of code being edited
4. Tap the X button
5. Use the R and L Triggers to move to a character
6. Use the directional pad to select the character to enter
7. Tap the A button to enter that character
8. Tap the Start button to confirm and exit to the code list
7

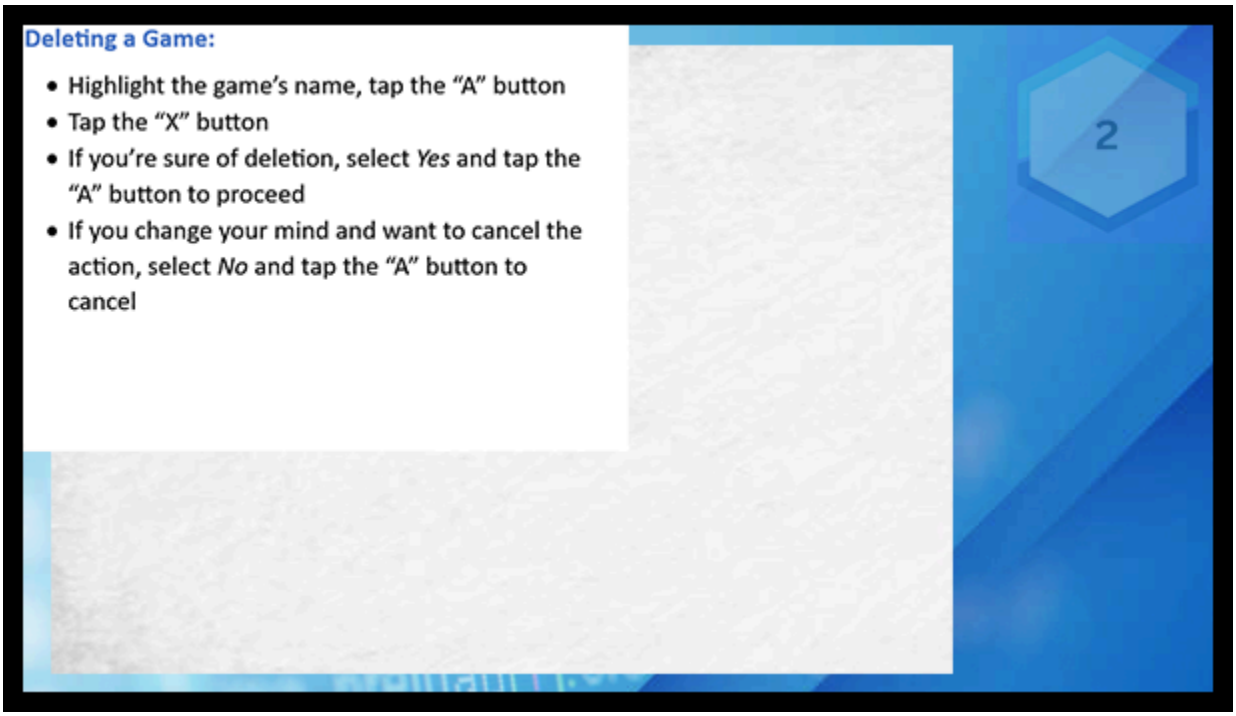

Starting a Game with Cheats Applied
Codebreaker software allows you to apply cheat codes to gain more firepower, lives, and time so that you can finally beat all your games.
By enabling cheat codes with Codebreaker software, any number of modifications can be applied to help win through even the hardest game.
With the Codebreaker software running, you will select the cheats you need:
1. From the main menu, click the "select cheats" icon
2. Tap the A button
3. Scroll through the game list and tap the right directional pad on the game title
4. From the cheats listed, tap the A button for each code being used
5. Press the Start button when all selections are made
6. You are now back on the main screen, select the "start game" icon and tap the A button
7. Put the physical disc, or game file, in your system
8. Tap the A button to start the game with your cheats applied
8

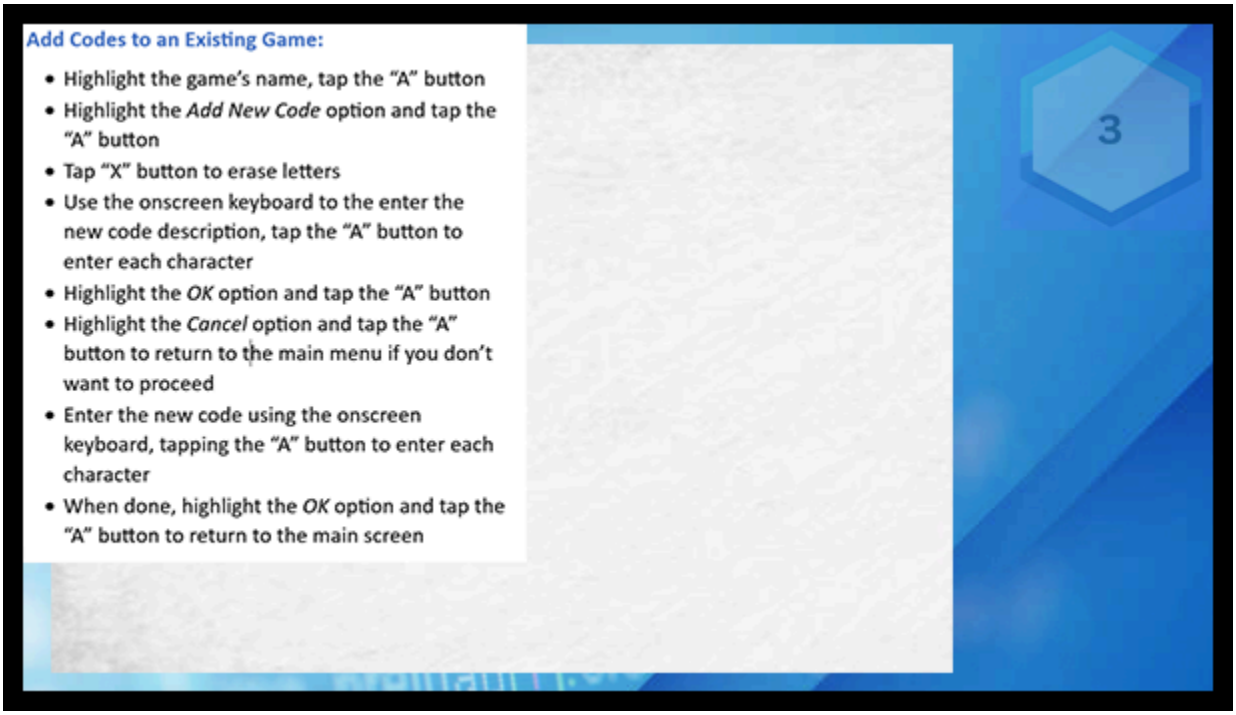

def add5(x):
return x+5
def dotwrite(ast):
nodename = getNodename()
label=symbol.sym_name.get(int(ast[0]),
print ' %s [label="%s' % (nodename,
if isinstance(ast[1], str):
if ast[1].strip():
print '= %s"];' % ast[1]
else:
print '"]'

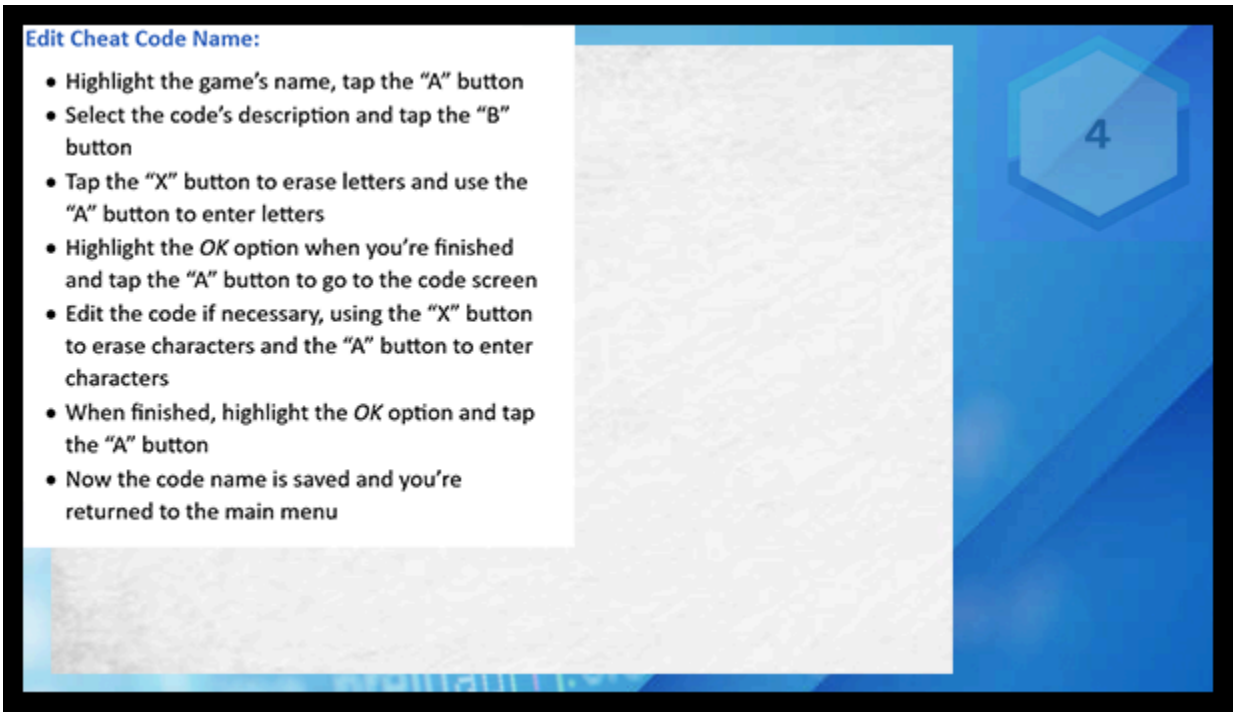
Chapter 18. Appendix III- Action Replay User Manual

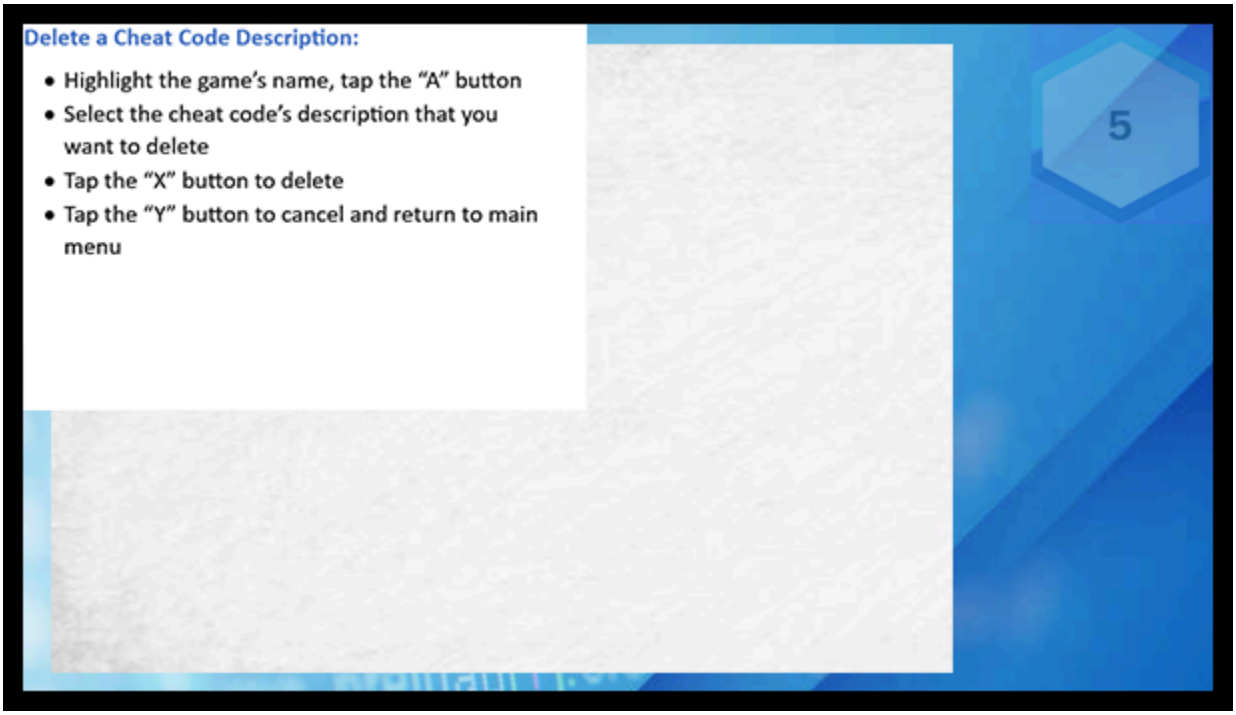
Contents

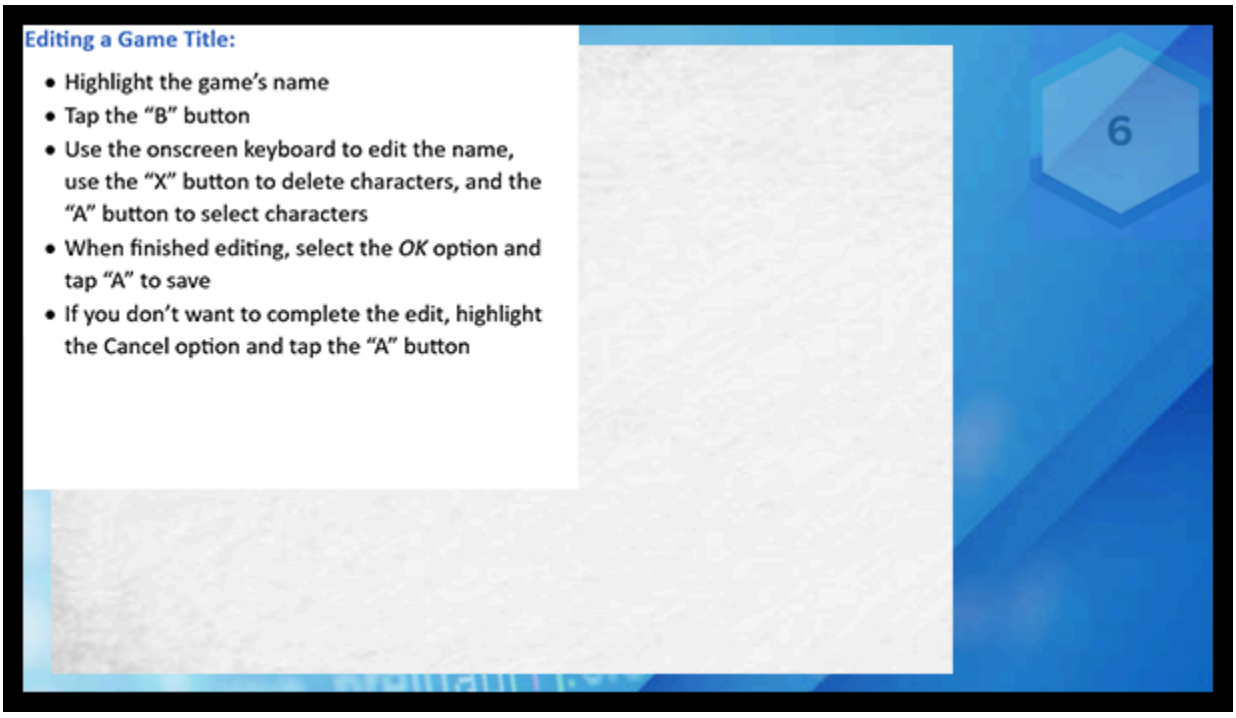

Entering a New Game:
• Highlight the *expert mode* icon and tap "A"
• Highlight *Add New Game* option and tap "A"
• Tap the "X" button to erase letters
• Use the touchpad to highlight letters in the onscreen keyboard and tap "A" to enter
• When done, highlight the *OK* option and tap "A"
• From this screen, use the keyboard to enter the code characters, use "X" to erase mistakes
• When done, highlight the *OK* option and tap "A"
• If the code was entered wrong, the software will prompt you to retry entering information
• Highlight *Cancel* and tap "A" to return to prior screens if you change your mind about an entry
1

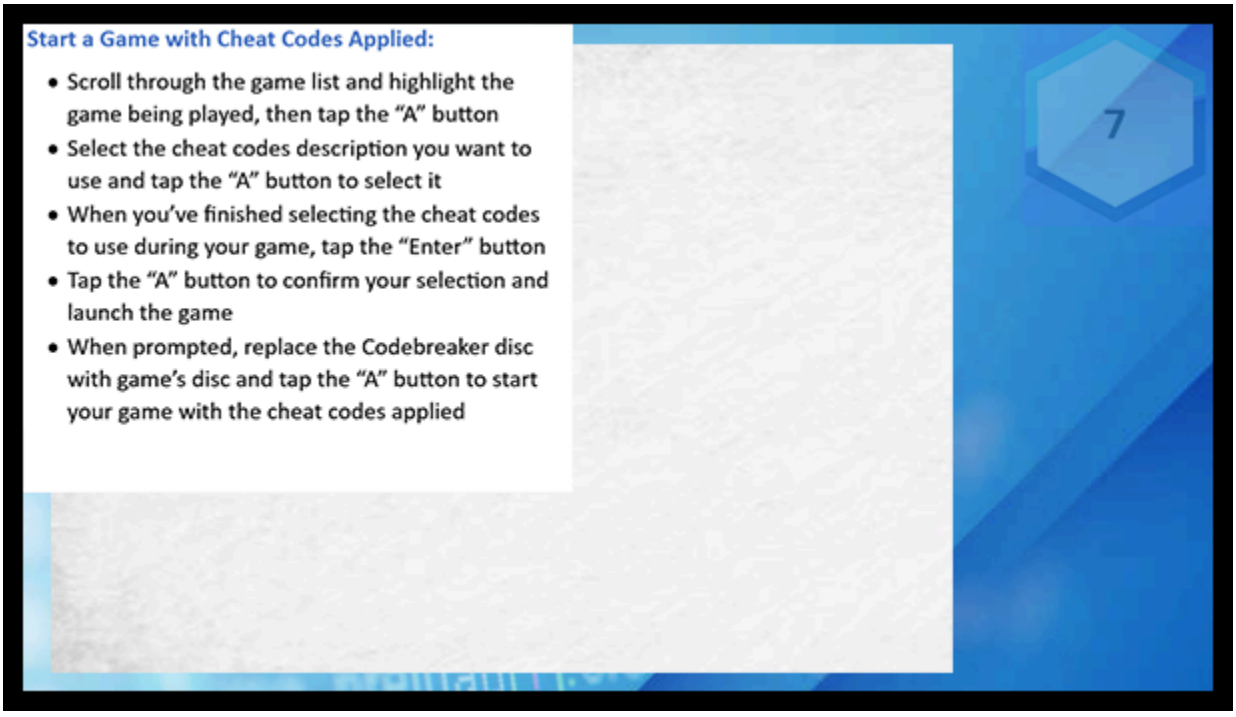

Deleting a Game:
• Highlight the game's name, tap the "A" button
• Tap the "X" button
• If you're sure of deletion, select *Yes* and tap the "A" button to proceed
• If you change your mind and want to cancel the action, select *No* and tap the "A" button to cancel
2


Add Codes to an Existing Game:
• Highlight the game's name, tap the "A" button
• Highlight the Add New Code option and tap the "A" button
• Tap "X" button to erase letters
• Use the onscreen keyboard to the enter the new code description, tap the "A" button to enter each character
• Highlight the OK option and tap the "A" button
• Highlight the Cancel option and tap the "A" button to return to the main menu if you don't want to proceed
• Enter the new code using the onscreen keyboard, tapping the "A" button to enter each character
• When done, highlight the OK option and tap the "A" button to return to the main screen
3


Edit Cheat Code Name:
• Highlight the game's name, tap the "A" button
• Select the code's description and tap the "B" button
• Tap the "X" button to erase letters and use the "A" button to enter letters
• Highlight the OK option when you're finished and tap the "A" button to go to the code screen
• Edit the code if necessary, using the "X" button to erase characters and the "A" button to enter characters
• When finished, highlight the OK option and tap the "A" button
• Now the code name is saved and you're returned to the main menu
4


Delete a Cheat Code Description:
• Highlight the game's name, tap the "A" button
• Select the cheat code's description that you want to delete
• Tap the "X" button to delete
• Tap the "Y" button to cancel and return to main menu
5


Editing a Game Title:
• Highlight the game's name
• Tap the "B" button
• Use the onscreen keyboard to edit the name, use the "X" button to delete characters, and the "A" button to select characters
• When finished editing, select the *OK* option and tap "A" to save
• If you don't want to complete the edit, highlight the Cancel option and tap the "A" button
6


Start a Game with Cheat Codes Applied:
• Scroll through the game list and highlight the game being played, then tap the "A" button
• Select the cheat codes description you want to use and tap the "A" button to select it
• When you've finished selecting the cheat codes to use during your game, tap the "Enter" button
• Tap the "A" button to confirm your selection and launch the game
• When prompted, replace the Codebreaker disc with game's disc and tap the "A" button to start your game with the cheat codes applied
7


ACTION REPLAY
MAX