

Ubi Soft Entertainment
TOM CLANCY'S SPLINTER CELL
MARCH 2003
Readme

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Thank you for buying Tom Clancy's Splinter Cell. This README file will attempt to explain the basics of "Splinter Cell" on the PC. To play the game you must have DirectX 8.1b (tm) or higher installed. The latest version (DirectX 9.0) can be installed from the CD.

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1- IMPORTANT NEWS

This version of Splinter Cell includes the fixes for both patch 1.1 and 1.2. You do not need to download and/or install them.

PROBLEMS SOLVED IN THIS VERSION:

- In Shadow Projector mode, the shadow filter design was changed to LOW/MEDIUM = 2x2, HIGH = 3x2, VERY HIGH = 3x3 depending on the value of Effects Quality in the video settings menu.
- Holding or Pushing CTRL while going back to the main menu no longer bring you back to a cube map with a default texture.
- Laser micro success/failure computation fix.
- Benchmark mode (see instructions below).

- No more guard/unguard, check/uncheck to speed up performance.
- No more Shadow Details in Shadow Buffer mode (that setting was useless on GF3/GF4Ti/FX cards).
- No more bugs submitted to EPIC.
- 800x600 is now supported by 32 MB video cards.
- GeForce 256, Radeon 7500 cards are now officially supported.
- Night vision fix for several graphic cards.
- Video memory optimization.
- RenderingModeNormal.cpp: Fix Radeon 9700 rendering issue with double sided reflective transparent surfaces.
- ETexSFX.utx: Fix “static wall/floor fire” texture issue + water quality issue.
- UnShadowProjector.cpp: Fix visibility issue with dynamic actor being clipped by the visibility engine and still being rendered because of the static shadow texture cache. Massive performance improvement on shadow filtering by removing 5 passes from the filtering algorithm.
- ETexEGO.utx: Fix reflection issue on moving vehicles in Chinese 2 (Feirong limo and Unimog truck).
- 0_0_2_Training.scl: Fix projector not associated to light gameplay object and causing detection (lightmeter) in the first gun trial.
- EButterfly.uc: Butterfly is now a soft body actor to disable the static shadow texture cache when a butterfly is in a projector range.
- EFish.uc: Fish is now a soft body actor to disable the static shadow texture cache when a fish is in a projector range.
- EPCSoundConfigArea.uc: Fix a bug with the real time sound slider when one of the slider was set to 0 then playing until a map transition happened, then all sounds sliders were reset to zero.
- UnRenderVisibility.cpp: Software light beam rendering is now used by any card unable to render the shadow buffer algorithm to allow for the GF2MaxDistance parameter to take effect.
- Most maps: General design quality improvement with shadows.

RECOMMENDATIONS:

- We recommend closing all applications when playing the game.
- We recommend not to install the application in the Windows folder or in the root of the C: drive.
- For all cd-rom's 16X or lower (16X, 12X and 8X), you must choose the full install. Splinter Cell will not function properly with minimal install.
- Microsoft® DirectX® 9 included in the CD-ROM.
DirectX Latest Runtime: <http://www.microsoft.com/windows/directx/downloads>
- Splinter Cell PC does not support Game pads.
- We do recommend to use the latest graphic card drivers:
 - For the NVidia GeForce1-2-3-4 owners (see above for supported cards), we recommend the 41.09 or latest drivers.
 - (Very important: set performance&quality settings to application) drivers.
 - You can get the latest NVidia drivers @ <http://www.nvidia.com>
 - For the ATI Radeon, we recommend the Catalyst 2.5 (6218 for 2000/XP) or better.
 - You can get the latest ATI drivers @ <http://www.ati.com>
 - For the Matrox Parhelia owners, we recommend the 1.02.00.042 drivers.
 - You can get the latest Matrox drivers @ <http://www.matrox.com>
- You can get the latest Hercules drivers @ <http://www.hercules.com>
- You can get the latest Creative Labs drivers @ <http://www.creative.com>
- For more information visit our site <http://www.splintercell.com>

2- MINIMUM/RECOMMENDED SPECIFICATIONS

Minimum Configuration:

- 800 MHz Pentium III or AMD Athlon
- 256 MBytes RAM
- DirectX 8.1b
- 32 MBytes video card
- DirectX 8.1b compatible sound card
- 16x speed CD/DVD-ROM drive
- 1,5 GB Hard Drive Space

Recommended Configuration:

- 1000 MHz Pentium III or AMD Athlon or better
- 256 MBytes RAM or better
- DirectX 9
- 64 MBytes video card
- DirectX 9 compatible sound card with surround system
- 24x speed CD/DVD-ROM drive
- 2,1 GB Hard Drive Space

Splinter Cell supports the following graphic cards:

- Nvidia GeForce 256
- Nvidia GeForce2 Ti/Ultra/Pro/GTS/MX400/MX
- Nvidia GeForce3 family
- Nvidia GeForce4 family
- ATI Radeon 7500/8500/9000/9500/9700
- Matrox Parhelia

3- CONTROLS

Default Keyboard Controls for an American QWERTY keyboard:

W - Move Forward
S - Move Backward
A - Strafe left
D - Strafe right
C - Crouch
Q - Back to wall
E - Use/Equip
X - Reset camera
Z - Change rate of fire
R - Reload
2 - Night Vision
3 - Thermal Vision
Left Mouse - Fire
Right Mouse - Alternate Fire
Left Shift - Jump
Left Ctrl - Quick Inventory
Spacebar - Interaction
Esc - PALM OPSAT menu
Mouse Wheel up - Zoom in/Accelerate
Mouse Wheel down - Zoom out/Decelerate
Pause Break - Pause the game
F2 - Console
F5 - Quick save
F8 - Quick load

4- TROUBLESHOOTING

Crashes and Performance

Q: Every time i launch Splinter Cell, i get the following message « General Protection Fault » or my screen becomes black and/or white and my PC freezes.

A: Try this:

- Your desktop resolution must be configured in « true colours (32bits) »
- If you are playing in WinXP, deactivate the option « Sticky keys » in Windows™, or change the jump setting from « Shift » to another key. To deactivate this option in WinXP, press 5 times in a row on « Shift » and a message window will appear. You should be able to deactivate the option.
- If you have a NVIDIA graphic video card, please install the « 41.09 drivers » or better at www.nvidia.com Make sure they are official drivers.
- If you have an ATI graphic video card (Radeon 7500/8500/9000/9500/9700), please install the « Catalyst 2.5 (6218 for WinXP/2k) » or better at www.ati.com
- If you have a Matrox Parhelia, please install the 1.02.00.042 drivers from www.matrox.com
- If you are using AMD technology, make sure to have the latest drivers for the processor as well as the latest BIOS. The best place to find all this is to visit the website of your motherboard company.
- Make sure the option « AGP textures » is activated in the dxdiag tool (under display).
- Make sure you have the required material to play SC.
- Try to edit the « splintercelluser.ini » file located in the « system » folder where you installed the game. Open it and you'll find a line that says « Resolution ». Change it manually, for example 640x480 to 800x600. Then save the file and try to launch the game.
- You can also try to lower the material acceleration that you'll find in the « sound » section of the dxdiag tool.
- If you are using a GeForce2, we recommend to keep the lowest resolution to play the game.

Q: What are the official video cards supported by Splinter Cell?

A: The official video cards are:

ATI : Radeon 7500/8500/9000/9500/9700

Nvidia : GeForce 256, GeForce 2 Ti/Ultra/Pro/GTS/MX, GeForce 3, GeForce 4.

Matrox : Parhelia

Q: My video card has 32Mo of video memory but Splinter cell won't start! Why???

A: The supported video cards listed on the box or in this readme file have been tested with the game and are compatible. If you video card isn't in the list, it might not work because it is not supported.

Q: Splinter cell returns to the desktop when the intro launches.

A: Splinter cell does not support cd-rom's that are lower than 16X of speed when the game is installed in « minimum install ». If your cd-rom is lower than 16X, please re-install the game with a « full install ».

Q: The game lags when i play.

A: Please refer to the « General protection fault » section. The solutions are the same. We also recommend to lower the game options in the menus.

VIA Motherboard: Make sure that the 4 in 1 VIA driver pack is installed.

Video

Q: When i play Splinter cell, the lights seem to 'bleed' through the walls and through Sam. Lighting coming out of windows is blasted and spreads on the whole screen. What's this problem?

R : This problem is do to the anti-aliasing feature on certain graphic cards. Splinter Cell does not support anti-aliasing. This feature can easily be deactivated on GeForce or Radeon cards:

- Click on your desktop with the right mouse button and select « properties ».
- Click on « settings », and then on the « advanced... » button located in the lower right corner of the window.
- Click on the tab that has your graphic card's name.
- Under the Direct3D option, find the « antialiasing » option and deactivate it.
- Click on « apply » and then on « ok » to save your changes.
- Restart the game and the problem should be solved.

Q: When I start the game the monitor goes into power saving mode, what can I do?

A1: Update your monitor driver. Look at the website of your monitor's manufacturer to get the latest update.

A2: If the problem persists, add the following lines in the SplinterCell.ini file, in the D3DDrv.D3DRenderDevice section:

- OverrideDesktopRefreshRate=true
- DesiredRefreshRate=60

Q: I own a Matrox Parhelia and the graphics seem to be incorrect in the game. Why is that?

A: We are experiencing issues with the Matrox drivers. These issues will be corrected with a driver release. Here is a list of known bugs:

- OIL REFINERY
 - Animation of water not working.
- DEFENSE MINISTRY
 - NightVision mode: You may experience texture flickering on Sam in the stairs area when you are under a light in Aim mode.
- KALINATEK
 - You may experience flickering in the infirmary room.
- CIA
 - NightVision mode: Before the elevator area (after the metal detector), we've experienced white screens.

- CHINESSE EMBASSY
 - Near the end of the map, you may notice black textures on walls when in AIM mode.

Install

Q: Splinter cell requires the « play disk » continuously. Which one is the « play disk »?

A: All three disks are named Disk1, Disk2 and Disk3. Only Disk3 is required at all times when playing the game.

Q: Splinter cell always asks for SCx during the installation phase. What does that mean?

A: The installer assistant is asking to have the right cd put in the cd-rom. Here's what he might be asking for:

SC1 = Splinter cell Disk1

SC2 = Splinter cell Disk2

SC3 = Splinter cell Disk3

Q: The Splinter cell installation crashes when I put in the Disk3.

A: Make sure you are not using a CD-RW to install the game. The CD-RW are not considered compatible with this software.

Sound

Q: I experience sound problems. I hear weird sounds after i fire the gun.

A: Lower your sound options to the minimum. Same thing goes for the « audio virtualization » option. Un check the 3D audio option and the EAX option. If this doesn't solve the problem, do the following:

Click on « start », « run », type « dxdiag » and click « ok ». Click on the « sound » tab and lower a notch the material acceleration. Close the dxdiag application and retry pplaying the game. If the problem persists, repeat the opération (lower the material acceleration another notch) until you find the correct setting.

The problem still persists? Make sure you have the latest drivers for your video card.

Once you've installed the latest drivers, install the latest version of DirectX. You'll find DirectX at the following website <http://www.microsoft.com/DirectX>

Q: My card is supposed to support EAX, but I can't enable it in the game

A: To enable EAX, be sure to have audio hardware acceleration set to FULL.

(win2k): start_menu/settings/control_panel/sound_and_multimedia/audio_tab/advanced/performance

General

4-Button and 5-Button Mice

Additional buttons on 4-button and 5-button mice cannot be used inside Splinter Cell in their default configuration, as they are assigned to two simultaneous keys. To use these buttons correctly inside Splinter Cell, use the application supplied by your hardware vendor to reassign them to a single key. These hardware-vendor-supplied applications usually let you create program-specific profiles, which you might want to use to play Splinter Cell.

Q: Where can i find information about support for the game?

A: <http://www.splintercell.com/>

Q: Why are certain options not functioning properly with my gamepad or joystick?

A: Unfortunately, Splinter Cell does not support either of these accessories.

5- ADVANCED SOUND OPTIONS

- **Audio Virtualization:** Selects the 3D audio emulation mode for a 2 channel monitoring configuration (2 speakers, Headphones). The HRTF emulation is done in software thus, using CPU. It is recommended to select "No Virtualization" for minimum requirements computers.
- **3D Audio Hardware Acceleration:** Enables sound card's hardware support if available and may reduce CPU usage. Must be enabled to activate EAX's support.
- **EAX:** If your sound card is compatible with Creative Labs EAX Processing, enabling this option will greatly improve your sound experience.

Recommended Sound Settings:

Minimum requirements:

- Audio Virtualization: No Virtualization
- 3D Audio Hardware Acceleration: Enabled (if available)
- EAX: Enable (if available)

Recommended system:

- Audio Virtualization: High HRTF
- 3D Audio Hardware Acceleration: Enabled (if available)
- EAX: Enable (if available)

Notes:

- The game is optimized for sound card supporting EAX Advance HD (Audigy).
- For quadraphonic & Surround systems, you'll need to select their corresponding monitoring option in the "Speaker Setup" scroll window found in the "Sounds & Multimedia Properties" Tab (Multimedia Tab under win98).
- The ideal monitoring option for a 2 channel setup (2-Speakers with/without Subwoofer & Headphones) is Desktop Stereo Speakers.

- Low & High HRTF (Audio Virtualization options) won't give good results in a 4-Speakers/more configuration. Use it only with a 2 channel monitoring setup.

6- DETAILS – BENCHMARK MODE / SPLINTER CELL DESIGN

The Splinter Cell benchmark mode was a tool created to validate our performance optimization in the engine. This tool can be especially useful to determine the performance of a specific PC configuration (GPU and CPU). 3 demos are included in this release (1_1_1TbilisiDemo.bin, 1_1_2TbilisiDemo.bin, 2_2_1_Kalinatek.bin)

Some basic understanding of the Splinter Cell renderer and settings are needed to accurately use it as a performance analysis tool. UbiSoft does not support this feature at the consumer level but will answer questions asked by hardware reviewer magazines or OEMs.

Splinter Cell has 3 different rendering pipes:

Class 2 Graphic Adaptors:

NV2x/NV3x chips

Dynamic Lighting system = Shadow Buffer

Vertex position modifiers = Yes

Light beams stopped by depth texturing = Yes

Pixel Shader effects/filters/water = Yes

Reflection/Details texturing/Specular = Yes

Class 1 Graphic Adaptors:

R2xx/R3xx/Parhelia/Xabre 200/Xabre 400/Xabre 600/chips/Creative P9

Dynamic Lighting system = Shadow Projector

Vertex position modifiers = No

Light beams stopped by depth texturing = No

Pixel Shader effects/filters/water = Yes

Reflection/Details texturing/Specular = Yes

Class 0 Graphic Adaptors:

R1xx/NV1x chips

Dynamic Lighting system = Shadow Projector

Vertex position modifiers = No

Light beams stopped by depth texturing = No

Pixel Shader effects/filters/water = No

Reflection/Details texturing/Specular = No

Class 2 adaptors can run as Class 2, Class 1 or Class 0 adaptors while Class 1 adaptors can run as Class 1 or Class 0 adaptors. Class 0 adaptors are only able to run Splinter Cell as Class 0 adaptors.

You can force a class 1 or class 2 adaptor to run as a different class by editing the splintercell.ini file in the \system directory. Uncomment "ForceShadowMode = 0" to force the card to run as

class 1 adaptor (if able to) or change “EmulateGF2Mode=0” to “EmulateGF2Mode=1” to run as a class 0 adaptor.

Why does Splinter Cell have a special mode for NV2x/NV3x graphic chips?

Splinter Cell was originally developed on XBOX™. Features only available on NV2x chips were used and it was decided to port them to the PC version even if these chips would be the only one able to support them. Considering the lighting system of XBOX™ was well validated, it was easy to keep that system intact.

Splinter Cell Dynamic lighting system

Splinter Cell shadow system is a major part of the game. On NV2x/NV3x hardware, it runs using a technique called Shadow Buffers. This technique is rendering the scene from every shadow casting light and store a depth buffer that represent each pixel viewed by this light source. Each pixel has an X, Y, Z coordinate in the light system and these coordinates can be transformed, per pixel, in the viewer coordinate system. It's then easy to compare with the actual depth stored in the Z buffer to figure out if the pixel viewed by the camera is the same or is occluded by the pixel viewed by the light. If they are the same, it means the pixel is lighted, if the light pixel is in front of the viewer pixel, it means the pixel is in the shadow. On all other current hardware, the game is using another technique called projected shadows (shadow projectors). The technique is somewhat similar, we render the scene from the light point of view but instead of storing the depth, we are storing the color intensity in a texture. That texture is then mapped per vertex on each object that is going to receive the shadow. To be able to have objects casting shadows on other objects that are themselves casting shadows, Splinter Cell is using a 3-depth levels shadow casting algorithm. In general, the first level is used to compute the shadow to be used on the dynamic actors like Sam. The second level is used to compute the shadow used by the static meshes like a table or boxes. The final level is used for the projection on the BSP. This system is allowing Sam to receive the shadow of a gate on him, then Sam and the gate can cast on a box and finally all three objects can cast on the BSP (ground). This system also has a distance check algorithm to determine if Sam's shadow should be projected on a static mesh (like a box) or if it shouldn't base on their relative position. Both systems have their own strength/weaknesses. The main advantage of the Shadow Buffer algorithm is how easy it is to work with. Shadow Projectors are tricky and difficult to use.

Shadow Resolution

The Shadow Resolution setting represents the size of the texture render targets where the scene objects are rendered from the shadow casting lights point of view. The determining factor that allows a graphic card to render the shadows at a higher resolution is the “fillrate” of the card.

Shadow Resolution	Shadow Projector	Shadow Buffer
LOW	128x128	1024x512

MED	256x256	1024x1024
HIGH	512x512	2048x1024

Shadow Details

The Shadow Details setting is only available in Shadow Projector mode. This setting performance is guided mainly by the CPU performance.

Shadow Details	Shadows on Actors	High details model Shadows
LOW	NO	NO
MED	YES	NO
HIGH	YES	YES

Effects Quality

The effect quality setting mainly determines how powerful and how expensive the special effects inside the game are going to cost. In addition, this setting also has an impact on the size of the filtering kernel of several post-rendering filters in the game. Fillrate is the characteristic that governs this setting.

Class 0 HARDWARE

Effects Quality	LOW	MED	HIGH	VERY HIGH
Rain layers	SOME	LOT	LOT	LOT
Thermal Vision Quality	NOMINAL	GOOD	BETTER	EXCELLENT
Night vision Render Target	512x256	512x512	512x512	512x512
All Actor rendered	NO	YES	YES	YES
Light beams	NO	YES	YES	YES
Shadow Filtering kernel	2x2	2x2	3x2	3x3

Class 1 HARDWARE

Effects Quality	LOW	MED	HIGH	VERY HIGH
Thermal Vision Quality	NOMINAL	GOOD	BETTER	EXCELLENT
Shadow Filtering kernel	2x2	2x2	3x2	3x3

Class 2 HARDWARE

Effects Quality	LOW	MED	HIGH	VERY HIGH
Thermal Vision	NOMINAL	GOOD	BETTER	EXCELLENT

Quality				
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Important information about Splinter Cell benchmark

- Be sure to reset to default your control settings before doing the playback of a recording. If you record one yourself, the playback will only work if you use the exact same settings you used when doing the recording. As such, the recordings included with this demo are working exclusively with QWERTY keyboards.
- This benchmark will scale in a radically different way than previous fillrate limited benchmark released by the industry. Resolution is not the only important factor limiting performance. Shadow Resolution and Effects Quality are just as important if not more.
- Splinter Cell is a DX8.1 game and is using PS 1.1 exclusively.
- If possible, use Catalyst 3.1 drivers with ATI cards and Nvidia 43.xx drivers when benchmarking with Splinter Cell.
- Ubi Soft recommends benchmarking cards using the same class to compare apple to apple. It is our opinion that it's unfair to benchmark a NV card running in Buffer mode against an ATI card running in Projector mode.
- The TimeDemo.bat batch file is an example on how to use the benchmarking system.
- The output is all added to a single file (timedemoresults.xls). It is highly recommended to use a single batch file that would look like:

```
splintercell.exe 1_1_1Tbilisi.scl PLAYTIMEDEMO=1_1_1TbilisiDemo.bin -NOSOUND
RESOLUTION=640x480 SHADOWLEVEL=HIGH SHADOWRESOLUTION=HIGH
EFFECTSQUALITY=VERYHIGH SHADOWMODE=PROJECTOR
splintercell.exe 1_1_1Tbilisi.scl PLAYTIMEDEMO=1_1_1TbilisiDemo.bin -NOSOUND
RESOLUTION=800x600 SHADOWLEVEL=HIGH SHADOWRESOLUTION=HIGH
EFFECTSQUALITY=VERYHIGH SHADOWMODE=PROJECTOR
splintercell.exe 1_1_1Tbilisi.scl PLAYTIMEDEMO=1_1_1TbilisiDemo.bin -NOSOUND
RESOLUTION=1024x768 SHADOWLEVEL=HIGH SHADOWRESOLUTION=HIGH
EFFECTSQUALITY=VERYHIGH SHADOWMODE=PROJECTOR
splintercell.exe 1_1_1Tbilisi.scl PLAYTIMEDEMO=1_1_1TbilisiDemo.bin -NOSOUND
RESOLUTION=1280x1024 SHADOWLEVEL=HIGH SHADOWRESOLUTION=HIGH
EFFECTSQUALITY=VERYHIGH SHADOWMODE=PROJECTOR
splintercell.exe 1_1_1Tbilisi.scl PLAYTIMEDEMO=1_1_1TbilisiDemo.bin -NOSOUND
RESOLUTION=1600x1200 SHADOWLEVEL=HIGH SHADOWRESOLUTION=HIGH
EFFECTSQUALITY=VERYHIGH SHADOWMODE=PROJECTOR
```

Command line options

-NOSOUND

The sound engine doesn't run reliably in recording/playback mode and should not be use. There is no guarantee all the sound will be played when omitting this option.

PLAYTIMEDEMO=RECORDINGNAME

Play an already recorded demo

RECORDTIMEDEMO=RECORDINGNAME

Record a demo

SHADOWRESOLUTION=SCALE

SCALE CAN BE {LOW,MED,HIGH}

SHADOWDETAILS=SCALE

SCALE CAN BE {LOW,MED,HIGH}

EFFECTSQUALITY=SCALE

SCALE CAN BE {LOW,MED,HIGH,VERYHIGH}

SHADOWMODE=TYPE

TYPE CAN BE {PROJECTOR,BUFFER,NOSHADOWS}

-DUMPGRAPH

Will output the average frame rate over a moving window over the duration of the recording playback.

RMODE=X

Force playback to render in special rendering mode

X = WIREFRAME → Wireframe rendering

X = NOLIGHTING → Base texturing only

X = NIGHTVISION → Night vision filter on

Limitation: If the recording is switching to night/thermal vision, this setting will become useless.

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Kyle Bennett

Lars Weinand

Beyond3D

HardOCP

Nvidia

ATI

ATI

Nvidia

HardOCP

Tom's Hardware / RivaStation

7- HOW TO USE ME

Camera Jammer:

1. Select the Camera Jammer from your Quick Inventory.
2. Press and hold Fire to start using it.

Chemical Flare:

1. Select the Chemical Flare from your Quick Inventory.
2. Press the Use/Equip key to equip Sam.
3. A series of reticules on screen will show your aiming trajectory.
4. Using the mouse, move the reticule to aim.
5. Press Fire to throw the object.
6. Press the Use/Equip key to abort the throw.

Disposable Pick:

1. Select the Disposable Pick from your Quick Inventory.
2. Press Fire to start using it.

Diversion Camera:

1. Select the Diversion Camera from your Quick Inventory.
2. Press the Use/Equip key to equip Sam.
3. Press Alternate Fire to fire the Diversion Camera with the launcher.
4. Move the mouse to look around.
5. Press Interaction to make noise.
6. Press Alternate Fire to spray gas.
7. Press Fire to exit.

Flare:

1. Select the Flare from your Quick Inventory.
2. Press the Use/Equip key to equip Sam.
3. A series of reticules on screen will show your aiming trajectory.
4. Using the mouse, move the reticule to aim.
5. Press Fire to throw the object.
6. Press the Use/Equip key to abort the throw.

SC-20K:

1. Select the SC-20K from your Quick Inventory.
2. Equip SC-20K (Press the Use/Equip key).
3. Enter Sniper Mode (Wheel up to zoom in, wheel down to zoom out).
4. Hold breath and steady aim (limited time) (Press the Alternate Fire key).
5. Fire (Press the Fire key).

SC-Pistol:

1. Select the Pistol from your Quick Inventory.
2. Equip the Pistol (Press the Equip key).
3. Fire (Press the Fire key).

Frag Grenades:

1. Select the Frag Grenade from your Quick Inventory.
2. Press the Use/Equip key to equip Sam.
3. A series of reticules on screen will show your aiming trajectory.
4. Using the mouse, move the reticule to aim.
5. Press Fire to throw the object.
6. Press the Equip key to abort the throw.

Laser Microphone:

1. Select the Laser Microphone from your Quick Inventory.
2. Press the Use/Equip key equip Sam.
3. Press and hold Fire to start using it.

Lock Pick:

1. Select the Lock Pick from your Quick Inventory.
2. Press Fire to start using it.
3. To release a pin, you must press the correct movement key (W or S or A or D by default).
4. Once you hear and see the pin begin to move, press the same key repeatedly until it is released.
5. Repeat operation until all the pins are released.

Medical Kit:

1. Select the Medical Kit from your Quick Inventory.

Optic Cable:

1. Select the Optic Cable from your Quick Inventory.
2. Press and Fire to start using it.
3. Move the Mouse to change your view with the Optic Cable.

Ring Airfoil:

1. Select the Ring Airfoil Round from your Quick Inventory.
2. Press the Use/Equip key to equip Sam.
3. Press Alternate Fire to fire the Ring Airfoil Round with the launcher.

Smoke Grenade:

1. Select the Smoke Grenade from your Quick Inventory.
2. Press the Use/Equip key to equip Sam.
3. Press Alternate Fire to fire the Smoke Grenade with the launcher.

Sticky Camera:

1. Select the Sticky Camera from your Quick Inventory.
2. Press the Use/Equip key to equip Sam.

3. Press Alternate Fire to fire the Sticky Camera with the launcher.
4. Move the mouse to look around.
5. Press the Accelerate key to zoom in.
6. Press the Decelerate key to zoom out.
7. Press Night Vision key to switch to night vision.
8. Press Thermal Vision key to switch to thermal vision.
9. Press Fire to exit.

Sticky Shocker:

1. Select the Sticky Shocker from your Quick Inventory.
2. Press the Use/Equip key to equip Sam.
3. Press Alternate Fire to fire the Sticky Shocker with the launcher.

Wall Mine:

1. Select the Wall Mine from your Quick Inventory.
 2. Press Fire to place on a wall.
-
1. To deactivate a wall mine, sneak to it.
 2. Select the deactivation interaction (light must be green when you make your selection).

8- TECHNICAL SUPPORT

Before contacting Ubi Soft Entertainment's Technical Support Department, please browse through our FAQ listings or search our support database at our website, <http://support.ubi.com>. Here you will find the most recently updated information since the games release.

Also please make sure that your computer meets the minimum system requirements, as our support representatives will be unable to assist customers whose computers do not meet these criteria.

Whenever you contact the Technical Support Department, please include the following information or have it available if you are calling:

- Complete product title (including version number)
- Exact error message reported (if applicable) and a brief description of the problem you're encountering
- Processor speed and manufacturer
- Amount of RAM
- Operating system
- Video card that you are using and amount of RAM it has
- Maker and speed of your CD-ROM or DVD-ROM drive
- Type of sound card you are using

Contact Us Over the Internet

This is the best way to contact us. Our website is open 24 hours a day 7 days a week and it contains the most up to date Technical Support information available including patches that can be downloaded free of charge. We update the Support pages on a daily basis so please check here first for solutions to your problems <http://support.ubi.com/>.

Contact Us by E-mail

For fastest response via e-mail, please visit our website at:

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From this site, you will be able to enter the Ubi Soft Entertainment Solution Center where you can browse through our listings of Frequently Asked Questions (FAQ), search our database of known problems and solutions, or, for fastest e-mail response, you can send in a request for Personal Assistance from a Technical Support Representative. It may take up to 72 hours for us to respond to your e-mail depending upon the volume of messages we receive.

Contact Us by Phone

You can also contact us by phone by calling (919) 460-9778. Note that this number is for technical assistance only. No hints or tips are given over the Technical Support line. When calling our Technical Support line, please make sure you are in front of your computer and have all of the necessary information listed above at hand. Be advised that our Technical Support Representatives are available to help you Monday-Friday from 9 am- 9 pm (Eastern Standard Time). While we do not charge for technical support, normal long distance charges apply. To avoid long distance charges, or to contact a support representative directly after these hours, please feel free to use one of the other support avenues listed above. E-mail issues usually receive a response within 2 business days.

Contact Us by Standard Mail

If all else fails you can write to us at:

- USA

Ubi Soft Technical Support
3200 Gateway Center Blvd
Suite 100
Morrisville, NC 27560

- CANADA

Ubi Soft Technical Support
5505 St-Laurent blvd, suite 5000
Montreal, Quebec
H2T 1S6

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- The brand and speed of the processor
- How much RAM you have
- The version number of windows you are using (if you aren't sure, right-click on the my computer icon on your desktop and select 'properties')
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