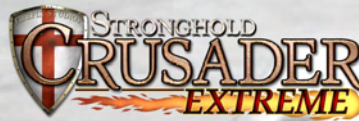




STRONGHOLD

CRUSADER *EXTREME*





In 1094 the Greek Emperor Alexius I asked Pope Urbab II for aid.

Turkish armies had overrun the Eastern provinces of the Greek empire empire and were getting close to the capital, Constantinople.

The Pope appealed to Western European knights to put their differences and petty squabbles aside and help the Greeks in the east.

He summoned them together to take part in a Holy War that would also serve as a pilgrimage to Jersalem.

The first Crusade would soon begin.



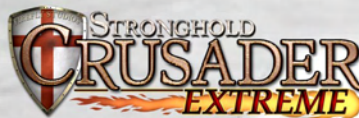
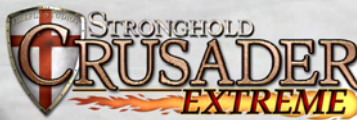


TABLE OF CONTENTS

1.0 GETTING STARTED .....	.4
1.1 System Requirements and Installation .....	.4
1.2 Starting the Game and Game Modes .....	.5
1.3 Game Options .....	.6
1.4 Game Overview .....	.7
1.5 About the Manual .....	.7
1.6 Winning and Losing .....	.8
1.7 Playing a Multiplayer Game .....	.9
1.8 Map Editor Overview .....	.11
1.9 Crusader Games .....	.12
 2.0 GAME BASICS .....	.15
2.1 Main Screen Overview and Navigating the Map ....	.15
2.2 Camera Interface .....	.15
2.3 Placing your Keep .....	.17
2.4 Population Growth .....	.17
2.5 Rationing and the Granary .....	.18
2.6 Setting Taxes .....	.18
2.7 Popularity in Brief .....	.19
2.8 Gathering Food and Resources .....	.20
2.9 Increasing Your Population .....	.21
 3.0 INFLUENCING YOUR POPULARITY .....	.22
3.1 Food .....	.22
3.2 Tax .....	.23
3.3 Crowding .....	.24
3.4 Fairs and other events .....	.24
3.5 Religion .....	.24
3.6 Working Inns .....	.25
3.7 Fear Factor .....	.26
 4.0 MANAGING YOUR ECONOMY .....	.28
4.1 The Stockpile .....	.28
4.2 Resources .....	.29
4.3 The Granary .....	.30
4.4 Food Types .....	.31
4.5 Tax Rate .....	.32
4.6 The Marketplace .....	.33
 5.0 MILITARY FORCES .....	.34
5.1 Military Goods and the Armory .....	.34
5.2 The Barracks .....	.34

5.3 The Mercenary Post .....	.35
5.4 Available Units .....	.35
5.5 Gathering your Forces .....	.38
5.6 Marching Orders .....	.39
5.7 Changing your Units Stance .....	.39
5.8 Military Commands .....	.40
5.9 Map Bookmarks .....	.42
 6.0 DEFENDING YOUR PEOPLE .....	.42
6.1 The Gatehouse .....	.42
6.2 Building High and Low Walls .....	.43
6.3 Turrets and Towers .....	.43
6.4 Placing Stairs .....	.44
6.5 Traps .....	.44
6.6 Moat Digging .....	.44
6.7 Mounted Siege Equipment .....	.45
6.8 Boiling Oil .....	.45
 7.0 SIEGE WARFARE .....	.46
7.1 Capturing the Gatehouse .....	.46
7.2 Portable Shields .....	.47
7.3 Battering Rams .....	.47
7.4 Siege Towers .....	.47
7.5 Catapults .....	.47
7.6 Trebuchets .....	.48
7.7 Fire Ballista .....	.48
7.8 Digging Tunnels .....	.48
7.9 Filling in Moats .....	.48
 8.0 REFERENCE SECTION .....	.49
8.1 Non-military Characters .....	.49
8.2 Food Flowchart .....	.53
8.3 Weapon Flowchart/Setting Up Your Identity .....	.54
8.4 Buildings Table .....	.56
8.5 European Unit Table .....	.62
8.6 Arabian Unit Table .....	.63
8.7 Hotkeys .....	.64
8.8 Multiplayer Commands .....	.65
8.9 Map Editor Commands .....	.65
9.0 Crusader Extreme .....	.66
Credits .....	.68
Technical Support .....	.70



1.0 GETTING STARTED

1.1 SYSTEM REQUIREMENTS AND INSTALLATION.

OS: Windows 98SE/ME/2000/XP/XP Media/Vista
CPU: Pentium® III 500 mhz (1 ghz Recommend)
RAM: 128MB (256MB recommended for multiplayer)
DVD Drive Required.
HDD: 850 MB

VIDEO: DirectX 7 (or greater*) compatible 4MB video card
SOUND: DirectX 7 (or greater*) compatible sound card
MODEM: 56k for Internet Play (Broadband connection recommended)
OTHER: Microsoft compatible mouse and keyboard
* DirectX 8.1 included

New Install

Place the CRUSADER EXTREME DVD in your DVD-ROM drive. If the DVD auto runs, left click on the INSTALL button. If the DVD does not auto run, click on the START button then select RUN followed by BROWSE. Using the pull down arrow, select your DVD-ROM drive with the CRUSADER EXTREME DVD inserted. Click on 'autoplay.exe' and select OPEN, followed by OK then select the INSTALL button.

Follow the onscreen instructions to install the game.

Once CRUSADER EXTREME has been installed you will be asked if you wish to install Gamespy. This will allow you to play on-line. Follow the on screen prompts to install Gamespy.

Upgrade

If you already have CRUSADER installed on your computer the installer will upgrade your installation to CRUSADER EXTREME. Follow the instructions as if it was a New Install.

Please Note: If you are upgrading CRUSADER on Windows Vista, user created maps and savegames will now be stored in My Documents/Stronghold Crusader. To use old user created maps and save games please copy them from your CRUSADER EXTREME installation directory (default: c:\Program Files\Firefly Studios\Stronghold Crusader) to My Documents/Stronghold Crusader.

Uninstall

To remove CRUSADER EXTREME from your PC use Add/Remove Programs. Alternatively insert the CRUSADER EXTREME DVD in your DVD-ROM drive and when the auto run screen appears, click on the UNINSTALL button and follow the onscreen instructions.

We recommend you view the Readme file before running CRUSADER EXTREME as this contains the most recent information on the game.

Each time you insert the CRUSADER EXTREME DVD into your DVD-ROM drive, the game will auto run and a PLAY button will be available. Click the PLAY button to run the game.

You can also run the game by selecting the game from the Start Menu by clicking on START, PROGRAMS, FIREFLY STUDIOS and selecting CRUSADER EXTREME from within the folder (not Windows Vista). To run the game on Windows Vista to use the Game Explorer.

1.2 STARTING THE GAME AND GAME MODES

When you load FireFly Studios' CRUSADER for the first time you are presented with a screen prompt asking you to enter your name. Type in the name you wish to be known as and then press OK to continue to the main menu screen.

If you are new to Crusader, we recommend playing the Crusader and/or Warchest trails, before attempting the Crusader extreme trail. The Crusader extreme trail has been created for veterans of our Stronghold titles. Gird your loins and let battle commence!

a.) Crusader

Crusader Trail: Fight through 50 linked Crusader Games.

Custom Game: This game mode allows you to play against up to seven AI opponents.

b.) Historical Campaign - This button allows you to select one of the four campaigns.

The Call to Arms: Follow the route of the first crusaders and learn the ways of the desert.

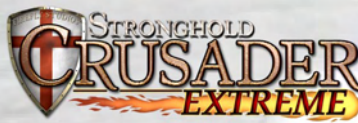
Saladin's Conquest: Take charge of the Arabian forces as they attempt to regain control.

The Kings' Crusade: Joins forces with the Kings of Europe as they attempt to hold out against the Arabian attackers.

Crusader States: Play the skirmish campaign and battle multiple opponents.

c.) Castle Builder - Here you can build to your hearts content. You have no enemy to fight, no goals to achieve and no deadline to stick to. You merely choose the map you wish to building.





on and away you go! Pressing the F1 key during a Castle Builder game will allow you to bring on an invasion or trigger an event of your choice.

- d.) Multiplayer - Play a multiplayer game with up to eight friends via a local area network (LAN) or with up to four human players and four computer opponents on the Internet using Gamespy.
- e.) Custom Scenarios - This allows you to build and play your own maps.
- f.) Options - From here you can adjust the game settings to suit your machine. You can also load previously saved games from the options menu.
- g.) Tutorial - This will take you through the basic concepts of the game.

1.3 GAME OPTIONS



The game options panel can be accessed by selecting the key icon to the left of the mini-map within the game.

Save - This allows you to save your game using a file name of your choice.

Load - From here you can load a previously saved game.

Options - This allows you to change the following elements of the game:

Game Play Options - This lets you change the game speed and turn the in-game help on or off.

Video Options - This allows you to change the resolution of the game as well as how fast the map scrolls. You can also select the standard mouse pointer if you are having problems with the Crusader pointer.

Sound Options - From here you can turn the sound on or off and adjust the volume levels for the music, sound effects and speech. The sound options include an additional option, which is Genie speech. This will turn off general speech in the game, such as the 'greatest lord' speech. This option will also turn off the 'game paused' and 'game running' speech.

Help - This takes you to the contents page of the in-game help facility.

Restart Mission - This option will reset the mission back to the beginning.

Quit Mission - This option quits the current mission and takes you back to the main menu.

Exit CRUSADER - This closes CRUSADER and returns you back to the operating system.

Resume Game - Selecting this returns you to the game.

1.4 GAME OVERVIEW

CRUSADER is a castle simulator set in the barren wastelands of the near east. You begin the game at the dawn of the eleventh century with only the lowliest of troops and fortifications at your disposal.

As you progress through the campaigns you will gain more weapons and resources to add to your arsenal. To succeed you will need to master the ways of the desert and learn to fight a new enemy under harsh conditions.

For those among you who have played STRONGHOLD we have put together a shortlist of the major game play differences you will come across in CRUSADER.

- a.) Farms can only be placed on grassland near an oasis.
- b.) An additional seven Arabian units, all with varying strength, skills and weakness have been added. These can be hired from the mercenary post.
- c.) The bonuses you receive from religion and ale have been increased significantly so religious and ale production buildings come into play much more often.
- d.) Getting units to the top of gatehouses will now capture them.
- e.) Low walls have been introduced to replace wooden walls and a lookout tower has been introduced.

Good luck my liege, go forth and conquer.

1.5 ABOUT THE MANUAL

This vast tome may appear a little daunting at first but luckily there is no need to read all of it to begin playing. You may find it useful to go through the in-game tutorial first by selecting the tutorial button from the start screen. Alternatively, 2.0 Game Basics will introduce you to all of the main concepts. Once you know the basics you





can read through the sections that you want more information on.

'Notes' will appear now and again to give you more information on the last topic discussed.

Note: You do not have to read these bits if you don't want to, as they are only here to answer frequently asked questions on the last topic

'Tips' will also appear throughout to give you information relating to game dynamics such as shortcut keys or other alternative ways of doing things.

Tip: It is quicker to skip these sections to start with as they are only here to suggest different ways of doing something you have just learned about.

There are also 'Hints' which suggest possible game play strategies.

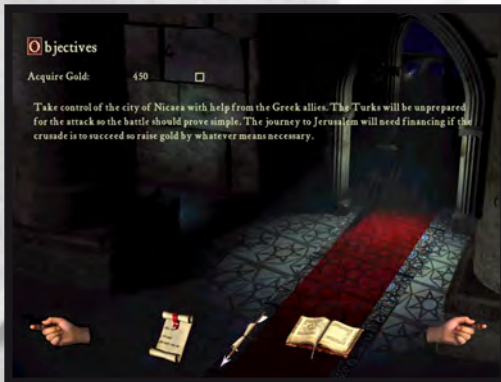
Hint: Don't read hints if you prefer to figure things out on your own.

1.6 WINNING AND LOSING

Each historical mission within CRUSADER has a unique set of objectives.



To view the objectives you have yet to complete, select the briefing button to the left of the mini-map.



You will see the mission briefing text for the current scenario. All of the completed objectives will have a dagger through their checkbox

If the objective of the mission is to eliminate all the enemy unit, then you will also see a timeline. This indicates the time until the last invasion arrives on the map.

To complete each mission, you will need to complete all of the objectives shown during the mission briefing. On completion you will be shown how well you scored. Extra points are scored or subtracted depending on, how much you exceeded an economical goal and how many troops you lost.

If the lord is killed, or you run out of time, the mission is lost and you will have to try again.

1.7 PLAYING A MULTIPLAYER GAME.

You can start a CRUSADER multiplayer game either via the Gamespy Arcade™ matchmaking service or by setting up a local connection.

a) Looking for a game on Gamespy Arcade™

Launch Gamespy Arcade and move to the CRUSADER lobby. Here you can find other players to compete against. Once all the players are ready the host will launch the game and you will be sent into the CRUSADER multiplayer options screen.

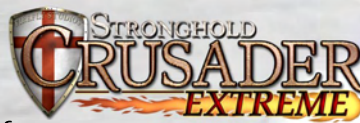
Note: You can autorun Gamespy Arcade™ from within the CRUSADER multiplayer Service Provider screen in which case CRUSADER will exit and Gamespy Arcade™ will start, re-launching CRUSADER once you have chosen your opposition.

b) Setting up a local connection

Clicking on Multiplayer in the Combat Options screen brings you to the Service Provider screen. Here you will see the list of available connection methods installed on your machine. Click on your preferred method and follow the on screen instructions to connect. One player will host the game and the remaining players can join the game set up by the host.

After you have connected to a multiplayer game you will arrive at the multiplayer options screen. After you have joined a game you should signal that you are ready to start the game by clicking on the





ready icon. You can then tell the host which type of game you would like to play by using the chat window, but you cannot see any of the game parameters as only the host has control over these.

Players Connected - Here you can see a list of connected human players or AI opponents along with their ready status or, in the case of AI opponents, a shield with CPU written on it. All human players must be set to ready before the game is launched. You can also form teams here. By default each player plays separately but the host can ally players together by clicking on the table icon. Being in an alliance with another player means that your troops will not attack each other, you can trade commodities between each other's castles and you will win the game if the victory conditions are met jointly.

You can trade gold and goods with your allies. To do this, go to the Allies screen (click on the 'Talk to Allies' button) then into the 'Send Goods' or 'Request Goods' section.

When playing a multiplayer game the host will be shown with a star next to their name. Within the 'Send Goods' or 'Request Goods' screen, click on a good type (i.e. wood) then click on the amount buttons along the bottom to specify the quantity you wish to send or receive. You can clear this amount, by pressing the thumbs down icon. If you are hosting the game you can change any of the detail game type options below.

The game type (Normal, Crusader, Deathmatch) - This allows you to set the initial levels of gold and troops that this human players or AI opponents begin the game with.

Remove this player - Clicking one of these buttons will remove that player from the game.

The Chat Window - You can send messages to the other connected players from here by typing a message and then pressing return.

Map Selection - The maps available will differ depending upon the number of players joining. Maps can be selected from the bottom right window. You will see an overview of the selected map appear in the top right window and a short description of the map below it. You can send another player your map if they do not have it in their game.

Within Play Options you have the following options:

Strong Walls - Setting the strong walls option to on will prevent standard military units from damaging defensive structures such as walls and towers. Only siege weapons will be able to deal out damage to these structures.

No Cow Throwing - Cows cannot be launched from trebuchets or catapults.

No Dogs - Caged war dogs cannot be used.

No Rush - This option allows for a timed amount of peacetime before any players can attack each other or build troops.

Extreme Mode (Extreme exe only) - This turns the extreme mode bar on and off.

Game Speed - Slow down or speed up the game.

Auto Save Game - You can choose whether you want the game to save at a set amount of time or not at all.

When every player is ready and you are happy with the game settings, the game can be launched.

In Game Chat - During the course of a multiplayer game you can send messages to other players by bringing up the chat entry panel. You do this by pressing the Enter key. Before you start entering your message you need to decide who to send your message to. The default is to everyone but if you wish to send a message to a specific player, click to deselect the other players. Once you have typed your message, press Enter to send it. If you want to cancel the message press the Esc key.

Taunts - Clicking on the numbered buttons will send a taunts message out to your opponents.

1.8 MAP EDITOR OVERVIEW.

After selecting the map editor button, you will be presented with four additional options.

Play a Map - Allows you to select a map created within the editor and play it.

Load a Map - This option allows you to load and edit a previous saved map.

New Map - This contains the following options :

New Castle Builder Map - From here you can create a newly landscape map. The 'To Map' button will take you to the map-editing screen and the 'Edit Scenario' button will let you change the various starting conditions for the map.

New Custom Scenario Map - From here you can create your own scenario map, containing it's own events.

Mini-map Icons:

Circle - The Keep is enclosed.

Exclamation mark (!) - An event is occurring. You can click on the '!' to go to the location the event is happening.

Shield - This shows the identity of the person who is speaking to you.

Note: The map type can be changed while editing the map by pressing Alt+comma.





The date in the top left corner of the Crusader Trail Map screen records how long you have taken overall. If you go back and replay a crusader game you have already conquered in a quicker time, your overall date will be reduced accordingly. See how fast you can complete the Crusader Trail, if you can complete it at all that is...

Press and hold the left mouse button while selecting a player's picture to drag them around the screen. Dragging players on top of each other puts them on the same team. To remove a player from team, drag their picture onto the portcullis at the center of the table. When you are happy with the teams, click OK to go back to the skirmish lobby and you will see each team has been assigned a different color.



The buttons below the player set up box allows you to change the game type (Normal, Crusader, Deathmatch) - This allows you to set the initial levels of gold and troops that the human players of AI opponents begin the game with.

Maps can be selected from the bottom right of the screen. A thumbnail and brief description of the map will appear above the map selection panel.

Once in the game you can ask your allies for support by pressing the 'Enter' key or by pressing the bugle shield at the bottom of the screen.

Selecting the 'Set Orders' button from the panel that appears allows you to give military orders such as attack an enemy or defend your castle.

The 'Send Goods' button will send the goods that have been requested by one of your allies.

The 'Request Goods' button allows you to request a certain amount of a specific food, resource or weapon type from one of your allies.

After you have made your demands the AI player will consider your request and respond accordingly.

Icons will appear around the portraits of your allies to let you know which goods they are requesting, if they need help and whether they are attacking or defending. An icon in the top right of their portrait shows which resources your ally is requesting. A flashing exclamation mark in the bottom right of their portrait shows that your ally is under attack and is requesting assistance. A shield displayed in the bottom left shows your ally is defending and a sword shows your ally is attacking.

Clicking on the crown shield will bring up the Order of Merit panel. This shows who the greatest lord is and the amount of gold and troops each player has. You can sort these by clicking on the icons at the top of the window.

Skimish masters screen - This screen lists the maps you have played in either a Crusader custom game or the Crusader trail. You can sort the names by score, name, amount of time played or date. You can also click on the map name and view further information about it. Right clicking on the map name allows you to delete it. The scores are saved out to the 'skmasters.dat' file. You can have up to 250 games displayed on this screen.

2.0 GAME BASICS

This section will take you through all of the main features within CRUSADER. If you rarely play computer games it is recommended that you go through the in-game tutorial by selecting the tutorial button. If you play computer games regularly, then scan this chapter to familiarize yourself with the basics.

2.1 MAIN SCREEN OVERVIEW AND NAVIGATING THE MAP.

After starting a new game the screen will look like this :



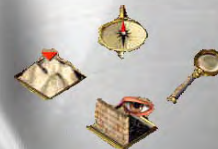
To scroll around the map, push the mouse pointer to the edge of the screen. As you scroll around, the overhead mini-map will move with you.



Tip: You can also use the cursor keys to scroll around the map.

Another way to get to a specific location is by left clicking on the overhead mini-map in the bottom right of the screen.

2.2 CAMERA INTERFACE



When you press and hold the right mouse button on the main display you will see the full camera interface icons appear.

To Rotate the Map:



Move the mouse pointer upwards onto the rotate icon, it will highlight and the map will rotate ninety degrees. The map will continue to rotate if you leave your mouse over the rotate icon and won't stop until you release the right mouse button

Tip: You can also rotate the map by pressing the 'X' or 'C' keys.

To Zoom:



Holding down the right mouse button and moving the mouse pointer over the zoom icon, will zoom out your view, allowing you to see more of the map. Repeating the process will zoom back in again.

Tip: You can also zoom in and out using the 'Z' key.

To Peek Behind Things:



Moving the mouse pointer downwards onto the peak icon will pull the landscape, trees, walls and some buildings down to the same level. Releasing the button will make the landscape spring backup.

Tip: For a quick peek press the 'V' key.

Hint: This feature will prove very useful later on when you want to peek behind walls

To Flatten the Landscape and Buildings:



Moving the mouse pointer to the left over the flatten icon, flattens the landscape and buildings. To restore the landscape and buildings to their original height repeat the process.

Tip: You can also use 'Spacebar' to flatten the landscape and buildings.

Hiding the Management Panel:

To hide the management panel and make the game go full screen press the 'Tab' key. To restore the management panel, press the 'Tab' key again.

2.3 PLACING YOUR KEEP

If not already built, you must place your starting keep on the map before any other buildings become available. To construct a building, select it from the building selection scroll at the bottom of the screen then left click on the main display when you are happy with it's position.



Note: If you happen to place a structure over an area of inaccessible ground, parts of the footprint will turn red warning you that you cannot build there.



Once the keep is placed a lot of things will start happening. One of the first things you will see is your starting resources being transferred from your starting goods onto your stockpile. These resources are now available for you to use in construction.

2.4 POPULATION GROWTH.

In addition to the Keep and the stockpile you will see a campfire. Moving the mouse pointer over it will reveal the population growth indicator. The more popular you are, the faster it will fill and the quicker your population will grow. Every time the indicator turns red, a peasant will arrive and stand by the campfire until work becomes available.



Note: Only 24 peasants will fit around the campfire, after this limit is reached you will need to find them work.

If the halo turns red it means that you are unpopular. The halo will then show how quickly people are leaving your castle.

2.5 RATIONING AND THE GRANARY.



When you build a Granary the food in your starting goods will be transferred to it and the game will begin.

Note: In single player invasion missions the game timer doesn't start until both the keep and granary have been placed, but this is not the case for multiplayer missions.

Left clicking on the granary will bring up the granary panel.

Tip: Left clicking on any building or person will bring up a screen giving you more information on them. Right clicking after placing a building will clear the building cursor and give you back the standard mouse cursor.



This panel lets you see your food details and allows you to make changes to your rationing. On the right of this panel there are five plates with varying amounts of food on them, which symbolize the different ration settings from 'no rations' up to 'double rations'. Reducing your rations below the default of 'full rations' will have a negative effect on your popularity whereas increasing them will have a positive effect. You will see the rate of consumption sumption by watching the speed of the bar in the granary panel or by watching the units of food disappear from your granary.

2.6 SETTING TAXES

Left clicking on your Keep will bring up the tax panel, which lets you view your tax details and change your tax rate.



You can set your taxes to anything from a 'generous bribe' all the way up to a 'crueller than cruel' tax by moving the slide bar left or right. Increasing your tax rate above the default setting of 'no taxes' will have a negative effect on your popularity and reducing taxes to hand out bribe money will have a positive effect.

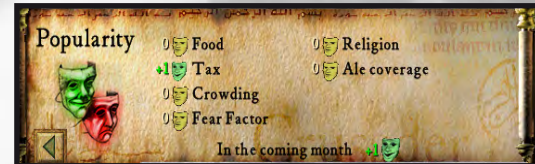
2.7 POPULARITY IN BRIEF



The scribe holding up an open book allows you to see critical information at a glance. The expression on his face reflects your popularity and he will also let you know what he thinks about some of your actions! Left clicking on the report book will bring up the reports panel.



Left clicking on the popularity button will show you all the information regarding your popularity.



At the bottom of the panel, after the words 'In the coming month' you will see the overall effects of your actions on castle popularity for the coming month. Making changes to your tax rate and rationing are the two main ways of manipulating your popularity. Ensure your popularity rating remains above 50 otherwise people will begin leaving your castle.



If your scribe stops smiling and your popularity rating starts being displayed in red, you will begin to lose workers. Your popularity will be displayed in red if it is below 50 and displayed in green if it is 50 or higher.

Tip: Listen out for announcements from your advisor. He will let you know if you are running into any problems

2.8 GATHERING FOOD AND RESOURCES

Running along the bottom left of the screen you will notice six shields



Castle
Buildings



Industry
Buildings



Farm
Buildings



Town
Buildings



Weapon
Buildings



Food
Processing
Buildings

These are the building category buttons, which change the type of buildings displayed on the building selection scroll above them. Moving your mouse pointer over these shields will highlight them and bring up a brief description of the button above the building selection scroll.

Tip: If you can't work out the function of any of the icons in the game, move your mouse pointer over the icon and its descriptions will appear.



The most basic resource in the game is wood and is required in the construction of almost every building. Left clicking on the shield with the picture of a hammer will select the industry buildings category. When you place a woodcutter's hut on the map an available peasant will turn into a woodcutter and get to work cutting down trees.



A quick and easy way to gain food early on is by hunting deer by building hunter's huts found in the farm buildings category. Once the meat is prepared they will place it in your granary, swelling your food stocks. You should always be aiming to balance the rate at which you consume food with the rate at which it is being put into your granary.



Undo - If you change your mind when placing a structure, left click on the undo button to the left of the mini-map and your last action will be cancelled. All of the resources will be recovered.



Delete - To remove a structure from your settlement, left click on the delete button to the left of the mini-map then select the structure you wish to remove. Half of the resources spent in construction will be recovered.

2.9 INCREASING YOUR POPULATION



To increase your available housing build more hovels found in the town buildings category. Your available housing will increase by eight and your settlement will continue to grow, but so of course will the mouths to feed.

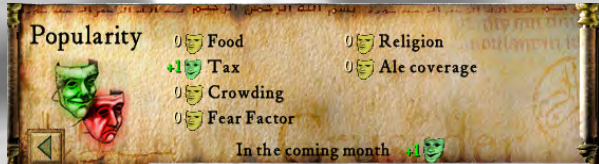
Recap:

Use the camera interface and mini-map to help you find a suitable location for your settlement. Don't forget to use the spacebar to flatten the landscape! The keep and granary must be placed before any other buildings become available. Popularity is your key game variable. Changing your tax rate and rationing will influence your popularity.

Make sure you start gathering wood and food early on. Build more housing to increase your population, keeping an eye on your food supply and popularity as you expand.

3.0 INFLUENCING YOUR POPULARITY

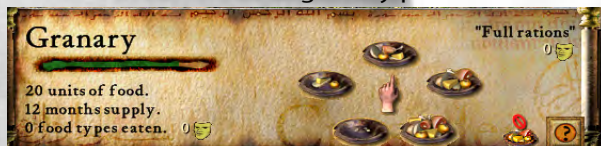
This chapter will take you through each of the factors governing popularity. These are listed for you when you open the popularity ty panel from the report menu.



To the left of each is a face . A green smiling face means that you will gain a positive effect from that factor; a yellow face shows that there is no effect and the red sad face represents a negative effect. The sum of these reflects either a bonus or penalty to your overall popularity. This is shown after to the words 'In the coming month'. There are a total of six ways to effect popularity with the two main factors being food and tax.

3.1 FOOD

Changing your rationing is one of the quickest ways to influence your popularity. Both the number of food types eaten and your ration setting affect your food bonus or penalty. These separate influences can be seen in the granary panel.



Your people will be happier with you if you supply them with more than one type of food. Less than full rations damages your popularity while increasing your rations boosts it

The bonuses and penalties from food types eaten and rationing are as follows:

Foodtypes eaten	Bonus to popularity
1	0
2	+1
3	+2
4	+3

RATIONS	BONUS TO POPULARITY
None	-8
Half	-4
Full	0
Extra	+4
Double	+8

Tip: You can press the 'G' key to quickly center on your granary and bring up the granary panel.

3.2 TAX

The people of CRUSADER do not enjoy paying taxes so any positive tax rate you set will have a negative effect on your popularity.



When you have sufficient gold in your treasury you may decide to give your peasants a handout in the form of bribe money each month.



Doing this will have a positive effect on your popularity.

Hint: You will find bribery proves useful when you are running low on food. Change your rations to half then hand out bribe money to offset the worst of the penalty until you find a way of restoring your granary stock.

The following table shows the popularity bonuses and penalties that you will receive from the various tax settings.

Generous Bribe	Large Bribe	Small Bribe	No Taxes	Low Taxes	Average Taxes
+7	+5	+3	+1	-2	-4
High Taxes	Mean Taxes	Extortionate Taxes	Downright Cruel Taxes	Even Crueler	Crueler than Cruel
-6	-8	-12	-16	-20	-24

Note: Attempting to give out bribe money when your treasury is empty will not have any additional effect on popularity

Tip: Pressing the 'H' key quickly centers the view on your keep and brings up the keep panel.

3.3 CROWDING

Your keep provides you with some starter housing for your people after which you need to place houses to increase your maximum population level. Each house provides shelter for another people.



Crowding will occur when your population exceeds your available housing. The population indicator will turn red if you have an over crowding problem. Overcrowding may occur if a house is deleted on destroyed by the enemy. To remedy overcrowding, simply build more housing

3.4 FAIRS AND OTHER EVENTS



Occasionally during the course of the game, travelling fairs will pay surprise visits to your castle and provide entertainment. Whilst they are in town you will gain a temporary bonus to popularity.

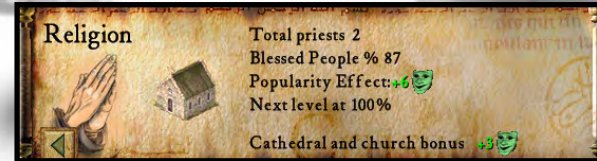
Other events such as lions attacking or disease will also occur, bringing temporary changes to your current popularity.

3.5 RELIGION



When a religious building is placed, priests will arrive and begin blessing your people

By opening the Religion panel from the advisors report menu, you can see the percentage of people who have been blessed as well and the bonus you are receiving to popularity



The blessing given by the priest wears off after a short while, at which point that person must be blessed again. Covering the religious needs of the community therefore is a continual process. The higher the percentage of blessed people, the higher the bonus you will receive to your popularity.

As your castle population grows the percentage of your people blessed will start to fall, thus lowering your bonus. To rectify this you will need to place extra religious buildings. The bonuses you gain from blessing your people are as follows.

PEOPLE BLESSED	POPULARITY BONUS
25 %	+2
50 %	+4
75 %	+6
100 %	+8

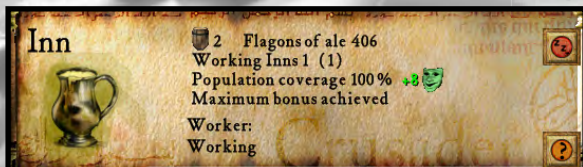
In addition to the bonus you gain from blessing your people, having a church in your castle gives you an additional +1 bonus to popularity and having a cathedral gives you a +2 bonus.

Cathedrals also allow you to recruit fighting monks.

The available religious buildings can be seen in the town buildings category

3.6 WORKING INNS

A working inn is one with a supply of ale and an innkeeper. The innkeeper will collect ale from the stockpile and deliver it to the inn automatically. Once ale is available at an inn, your people will start to drink it. To check to see if an inn is working, select it and look at its panel.



This panel shows how many barrels and flagons of ale the inn has in stock. It also shows the number of working inns (ones with ale) you have and the percentage of your people that are supplied by them. As this percentage grows the popularity boost you gain, rises also.

As your population rises however this percentage will fall, requiring you to build more inns. Ale is drunk from each inn at the same rate regardless of its location but inns further away from the stockpile will take longer to get re-supplied by the overworked innkeeper. Inns are in the 'Food Processing Buildings' category. The bonuses you gain from providing your people with ale are as follows

ALE COVERAGE	POPULARITY BONUS
25 %	+2
50 %	+4
75 %	+6
100 %	+8

3.7 FEAR FACTOR

Fear factor lets you know how people see you, as either cruel and ruthless or easy going and forgiving. Your fear factor determines how productive your workers are as well as the moral of your troops

Placing good things around your castle will make you seem easy going, boost troop moral and increase your popularity but at the same time will reduce your workers efficiency.

Constructing some gardens in the castle for example will make everyone happy, but you will find that your workers tend to loiter about at the gardens after delivering their goods instead of heading straight back to work.



To see these structures left click on the 'good things' button in the 'Town Buildings' category.



On the other hand, you may wish to appear more cruel and ruthless. You can increase work efficiency by placing bad structure around your castle. This will unsurprisingly have a negative effect on your popularity and reduce troop moral

Placing a few gallows for example may not be the most popular of decisions but it has the effect of encouraging people to work extra bit harder. Your workers will even start to deliver extra goods when they make deliveries to the stockpile, granary or armory.



To see these structures, left click on the 'Bad Things' button from the 'Town Buildings' category.



The bonuses and penalties to troop moral for good and bad structures are as follows:

FEAR FACTOR	ATTACK RATING BONUS
-5	00000 -25%
-4	00000 -20%
-3	00000 -15%
-2	00000 -10%
-1	00000 -5%
0	0
+1	00000 +5%
+2	00000 +10%
+3	00000 +15%
+4	00000 +20%
+5	00000 +25%

Tip: You can see how many good and bad things you have as well as how many more you need to reach the next fear factor level by clicking on the fear factor button from the advisors report menu

4.0 MANAGING YOUR ECONOMY

This section will take you through how to manage your food, resources and money. In CRUSADER, there are three types of commodities available:

Food
Resources
Weaponry

Note: For information on weaponry, see section 5.1.



Upon starting a new game you will see a cart travel across the top of the screen, this signals the arrival of your starting goods.

Your starting goods are displayed in the top left of the main-display until you provide space for them by building a stockpile, granary or armory

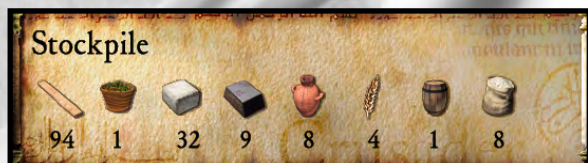
4.1 THE STOCKPILE

All of the resources you gather or produce will be placed in the stockpile. Each stockpile square can hold up to four resource types



You can gauge the approximate amounts of resources you have by simply looking at the stockpile. To see the exact amount of each resource left click on the stockpile.

Tip: You can also use the stores button from the advisors report menu to get to the same panel.



When you run out of space, extra stockpile squares can be added adjacent to your original stockpile

Hint: It is a good idea to leave some space around you stockpile in case you need to expand it later in the game.

4.2 RESOURCES

In total, there are eight resource types, which are stored in your stockpile. Some are raw materials and others are processed.



Wheat: This grows on your wheat farms and is at the start of the most productive food chain in CRUSADER. Wheat is required to make flour. Wheat farms can only be placed on an oasis.



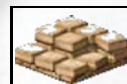
Flour: This is produced at the mill and requires wheat. Flour is required to bake bread.



Hops: These grow on your hop farms. If you want to brew ale, you will first need to grow hops, which can only be grown on an oasis.



Ale: This is produced at the brewery and requires a supply of hops. When ale is finally distributed through your inns, you will gain a bonus to your popularity.



Stone: The quarries that extract this from the ground must be placed on sandstone boulders. Stone is required for building most of the castles defensive structures.



Iron: The mines, which extract this, must be placed on the reddish color rocks found on the tops of hills. You will need iron to craft the more advanced weapon and armor types



Wood: This is gathered by woodcutters and is used in the construction of most buildings. It can also be used to craft basic weapon types.



Pitch: You will find this bubbling up through marshes. Once you have placed a pitch rig on some oil in the marsh, pitch diggers will extract pitch. Pitch is used for boiling oil and pitch ditches.

4.3 THE GRANARY

The granary is where all of your food is stored. Left clicking on your granary will allow you to set the amount of food that is distributed to your population. This is referred to as your ration level.



The green bar in the top left is the food consumption indicator. Each time the indicator fills with green; one unit of food is consumed from the granary. The larger your population is and the higher you set your ration level, the quicker your granary stocks will be depleted.

The three numbers underneath this show the units of food remaining in the granary, how long this food will last and the number of food types your people are eating.

On the right of this panel, there are five plates with varying amounts of food on them, which symbolize the different ration settings from 'no rations' up to 'double rations'. Reducing your rations below the default of 'full rations' will have a negative effect on your popularity whereas increasing them will have a positive effect.



If you hold your mouse pointer over the granary, the roof of the granary will be removed so you can see inside. Looking at the granary now should give you a rough idea of how much and what types of food you have stored.

To find out exactly how many units of each food type you have in stock, left click on the food report button on the granary panel

Tip: You can also get to this panel by selecting food from the scribes report menu



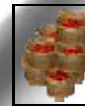
From here you can see which foods you are running low on. Clicking on the individual food types allows you to stop or start consuming that type of food. To increase your food storage capacity, additional granaries can be placed adjacent to your existing granary.

4.4 FOOD TYPES

There are four types of food available in CRUSADER, all of which are stored in the granary. Each food type has its own benefits and drawbacks.



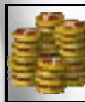
Meat: Hunters will gather this for you when a hunters hut is placed. This is quick to get working and can generate quite a bit of food, however animal migration and over hunting can make meat an unreliable food source.



Apples: These are grown in your orchards, which must be placed on an oasis. These are quick to get working, but require a large area of land for each orchard. Apple production proves to be more reliable than meat and much more productive than cheese.



Cheese: This is produced in your dairy farms that must be placed on an oasis. Dairy farming is slow to get going. Only when three cows have been raised will your dairy farmer begin milking them to produce cheese. Once up and running dairy farming is a little more efficient than hunting. If you are producing leather armor or launching cows at the enemy then cheese production will suffer.



Bread: This is made in the bakery and requires a supply of flour, which in turn requires a supply of wheat. The food chain leading up to bread requires more time and resource, to set-up but when your wheat farms, mills and bakeries are all in place, it proves the most efficient food source in the game. As with apple farming, wheat farms must be placed on an oasis so at times you may need to think carefully about how to maximize this limited space.

Hint: A working mill can support as many as twelve bakers and three wheat farms.

4.5 TAX RATE

Left click on your keep to bring up the tax panel.



The slider bar allows you to raise taxes or bribe your people.

Note: 3.2 Tax deals with how your tax rate influences your popularity

If you have plenty of gold in your treasury you may decide to move your tax rate down to a point where you actually pay your peasants bribes to encourage them to stay. This will provide you with a popularity bonus.



On the other hand you may decide to move your tax rate up to raise money. Raising taxes will have a negative effect on your popularity. The highest tax rate that can be set is a 'Crueller Than Cruel' tax where you take every penny your peasants earn this will have a devastating effect on your popularity and should be used only for brief periods



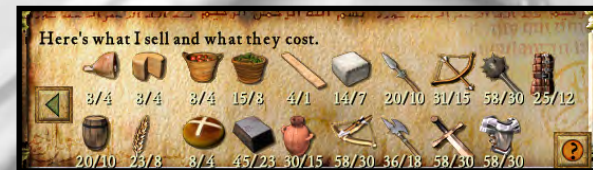
Go to the Treasury report to see details of the castles current financial situation.

4.6 THE MARKETPLACE

The marketplace allows you to buy and sell goods. Left clicking on the marketplace will bring up the trade panel.

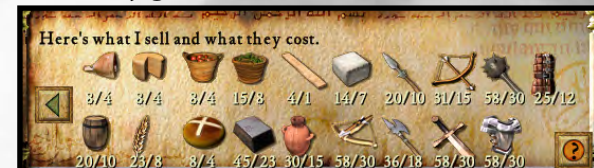


The scale icon on the right will bring up a price list of all available goods. This panel shows the buying and selling price for each good that the trader has available.



Note: Some goods may not be available to trade depending upon where you are in the game.

The first three icons will take you to the trade panel for food, resources or military goods.



From here, click on the commodity you wish to trade then select the buy or sell button.

Note: Markets only deal in bulk so you must purchase or select batches of five goods at a time.



Tip: Pressing the 'M' key will bring up the trading panel and centre ter you on the marketplace.

5.0 MILITARY FORCES

This section will take you through everything you need to know about building and commanding an army.

5.1 MILITARY GOODS AND THE ARMORY

There are eight types of weapon in CRUSADER. These are stored in the armory. To see how many weapons and suits of armor you have, left click on the armory.

WEAPON	MADE BY	REQUIRED RESOURCE
 Bow	 Fletcher	 2 Wood
 Crossbow	 Fletcher	 3 Wood
 Spear	 Poleturner	 1 Wood
 Pike	 Poleturner	 2 Wood
 Mace	 Blacksmith	 1 Iron
 Swords	 Blacksmith	 1 Iron
 Leather Armor	 Tanner	 One cow for three suits
 Metal Armor	 Armorer	 1 Iron

5.2 THE BARRACKS

This is where you hire and train your troops. Selecting this building will bring up the barracks panel.



To find out which weapons are required to build a military unit, move your mouse pointer over each of the troop types and the required goods will become highlighted at the bottom of the panel.

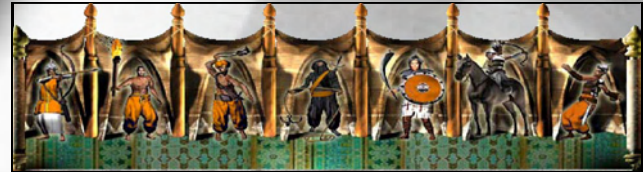


If you have peasants available, as well as the correct military goods, left clicking on a troop type will hire and train them. Your troops will appear at the campfire and walk to the barracks. Troops are not considered part of your workforce so do not require additional housing.

Tip: Pressing the 'B' key will quickly center your view on the barracks and bring up the barracks panel.

5.3 THE MERCENARY POST


Later in the game you will be able to place a mercenary post. Left clicking here will allow you to hire Arabian mercenaries for a price in gold.



To find out how much gold is required to hire a mercenary, move your mouse pointer over each of the troop types and the required amount of gold will be displayed at the bottom of the panel.

5.4 AVAILABLE UNITS

There are seven European troop types available for hire in the barracks, three special units who are trained in your guilds, the mysterious Black Monks and an additional seven that can be hired from the mercenary post.



Archers: These are your standard long-range troops. Their lack of armor makes them one of the quickest units in the game but in hand-to-hand combat, archers are virtually useless. They have a long firing range and are very effective against units that don't wear metal armor.

STRONGHOLD CRUSADER EXTREME



Crossbowmen: These units are slow to move and reload and have a shorter range than archers. They are however very accurate and their deadly bolts can easily penetrate metal armor.



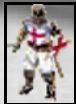
Spearmen: These are the first melee troops you have access to and the cheapest to produce. Having no armor makes them quicker than most troops and they prove useful for pushing ladders off of walls and digging moats. They are also one of the few units able to use ladders to scale walls.



Pikemen: Their heavy pike and metal armor make pikemen slow to move but also make them the ultimate defensive unit. They are able to take a lot of damage and are ideal for blocking access to areas of the castle.



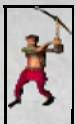
Macemen: These thuggish brutes are quick and deal out a lot of damage, making them ideal assault troops. They are not heavily armored and like spearmen they can use ladders to scale castle walls.



Swordsmen: These are your elite foot soldiers. Their heavy armor makes them the slowest unit in the game but when they reach their target they prove devastating. They have both great offensive and defensive capabilities.



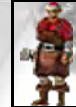
Knights: The ultimate trained soldier, knights are both fast and deadly in combat. They are also especially useful for surprise attacks, sallying forth from the castle to destroy siege equipment. Each knight needs a horse bred for him in your stables.



Tunnelers: These special units can burrow beneath the foundations of enemy walls and turrets, causing them to collapse. They are trained (for a cost in gold) at the tunneler's guild.



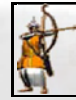
Laddermen: If you can't bring a wall down then these units will allow you to go over the top. Laddermen are cheap to produce but very vulnerable so need to be deployed quickly.



Engineers: These are perhaps the most versatile and useful unit in the game. They are required to build and man all of your siege equipment in and out of the castle. These units are trained in the engineer's guild.



Black Monks: These are mysterious individuals to say the least. They are slow and cumbersome and fight with a quarterstaff. These can be trained in the cathedral.



Arabian Bows: These units are similar to their European counterparts and are relatively cheap to hire.



Slaves: These are the cheapest units in the game. They are armed with a flaming torch and if they get through your defenses can reduce your castle to a smoldering heap of rubble.



Slingers: These units fire small rocks at their attackers and deal out some hefty damage but they only have a short range.



Assassins: These units can use a grappling hook to climb up enemy walls and are useful for capturing enemy gatehouses. The assassins are now invisible to your enemies and can be seen when they have been spotted by the enemy's troops. An '!' will appear above the assassin's head to show you they have been seen.



Horse Archers: These fast moving mounted archers are a major thorn in the European's side. Their ability to fire while on the move allows them to run circles around the opposition.



Arabian Swordsmen: These units are not as well armored as their European counterparts but they are a little quicker.



Fire Throwers: These units throw fiery grenades of Greek fire at the enemy and are devastating to both buildings and troops.

5.5 GATHERING YOUR FORCES



Selecting units :

You can select a single unit by left clicking on it. To select a group of units press and hold the left mouse button then drag the pointer to create a box around them. When you release the mouse button, all of the units that were within the box will now become selected.

Additional options for selecting units :

Units can be added or removed from a selection by holding down the 'Shift' key then left clicking on them. Multiple units can be added to a selection by holding down the shift key and dragging a box around them. Double clicking on a unit will select all of that unit type visible on the screen.

Army Interface Panel :



When units are selected you will see the army interface panel appear at the bottom of the screen with the units command box on the left and the unit information panel on the right.

The unit information panel shows you the type and amount of units currently selected and allows you to select and deselect specific unit types. Left clicking on a unit type from this panel will select only that unit type whereas right clicking will remove that unit type from the current selection.

Grouping units :

Grouping units allows you to form a group of units that you can command at the same time.

1. To form a group of units, first make a selection.
2. Next hold down the 'Ctrl' key and press a number on the keyboard to assign to the group.
3. Once a group has been assigned a number, pressing that number on the keyboard will select it. For example pressing the number 1 on the keyboard will select group 1. Pressing the same number again will take you to the groups current position on the map.

5.6 MARCHING ORDERS



When you have a unit selected, your pointer will change to the movement cursor. The green pointer means that you can move to a specific spot while the red cross with the rotating no entry sign means the area is inaccessible

Moving units to the tops of walls and towers :



To position troops on top of your walls and defensive structures select a unit then when the fortify mouse cursor appears, left click to send units to that destination.

Note: If the red cross appears it is likely to mean that there are no stairs leading up to the top of your building or wall.

Patrolling:



You can also set units to 'patrol' between two points. Move the unit to where you want their patrol to start. select the patrol button then left click where you wish the patrol to end. The unit will patrol back and forth between the two positions.

Setting up advanced patrols :

1. Select a unit then the 'patrol' button.
2. While holding down the 'Shift' button, left click to place additional patrol markers (you can place up to 10).
3. When you are happy with the patrol markers, press the right mouse button to finish
4. Units will patrol in the order you have placed the marker.



Note: If a group of selected units are on the move you can prevent them from going further by clicking the 'stop' button.

5.7 CHANGING YOUR UNITS STANCE



The top three buttons in the command box change the way your units behave in combat.

Stand Ground - Units set to stand ground will not move from their posts unless ordered to do otherwise. They will defend themselves when attacked and if they are a missile unit they will fire when enemy units come into range.

Defensive Stance - Units set to a defensive stance will move a short distance from their post to engage any enemy units that come close to their position. Once there are no more enemy units to engage, they will return to their original position.

Aggressive Stance - Units set to an aggressive stance will look a long way to engage or chase down enemy units. When the enemy is defeated your units will look for another potential target before returning to their original position. Units in aggressive stance will also respond actively to missile attacks

5.8 MILITARY COMMANDS

Attacking the enemy:

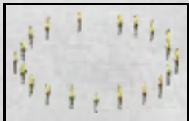


To attack the enemy select a unit and click on the enemy you wish to attack when you see the red movement pointer appear.

In addition to your standard attack some units have an extra attack option accessed by using the 'special attack' button in the bottom left of the unit control box. This button will change depending upon the unit selected.



With range units selected this button will become the 'attack here' button. Selecting this button will allow you to designate an attack radius.



You will see a circle of torches appear to show the area the unit will attack. This type of attack is very useful for attacking units behind castle walls



When an engineer with a pot of boiling oil is selected this button will appear as the 'pour oil' button.



After the 'pour oil' button has been selected a circle will appear above the engineers head to show the direction that the oil will be poured. Moving the mouse changes the pour direction and left clicking pours the oil.

After the oil has been poured your engineer will automatically run back to the oil smelter to replenish his oil then return to his designated post.

Hint: Setting oil engineers to aggressive will make them pour the oil when one unit comes into range. Set them to defensive and they will pour their oil when three units come into range.



With a tunnel digger selected this button will appear as the 'dig here' button. After this button is selected and the left mouse button is pressed on the map the tunnel digger will begin his decent then dig his way to the nearest potential target.

Note: Section 7.8 covers tunnel digging in more detail.

As well as these special attacks, some units have additional commands. When engineers are selected you will see a 'build' button appear in the unit control box. Selecting this will bring up a list of available siege engines to build.

Note: See section 7.0 for more information on building siege equipment



Catapults and Trebuchets also have a 'launch cow' button available on certain missions as long as you have a supply of cattle to fire (shown by the number on the icon).



Catapults and Trebuchets have a limited amount of stone and will stop firing when this supply is exhausted. Assuming you have enough stone in your stockpile you can re-supply them by clicking on the this icon. 10 stone will buy you 20 rocks to fire.



To retire a unit, select it then click on the 'disband' button in the units control box. The unit will turn back into a peasant and go to the campfire until work is assigned.

Note: If the campfire is inaccessible the peasants will vanish from the map.

Hint: Make sure you build extra housing soon after disbanding troops to prevent yourself from getting a hit to your popularity from overcrowding.

Attacking units with your Lord:

The Lord can be used to target and attack enemy units, but cannot be ordered to move anywhere but back to the keep in a single player game. If there are enemy units on the map, the lord will return to the safety of the keep, unless you give the order to attack. In a mutiplayer or Skirmish game you have full control over the lord.

Lord Strengths—Different computer Lords have different strengths. This is shown by the colored dots above the Lords' heads. The blue dots are shown for a stronger opponent and the yellow dots are displayed for a weaker one. They can have as many as five dots over their heads. A player's Lord has an average strength so no dots are displayed.

5.9 MAP BOOKMARKS

Areas on the map can be bookmarked by holding down the Ctrl and Alt keys then pressing a number. To quickly return to this position later hold down the Alt key and press the number. For example to bookmark your quarry area, scroll over to your quarry. Now while holding down the Ctrl and Alt keys press the number 1 on your keyboard. To quickly return to the quarry area hold down the Alt key and press the number 1 on the keyboard. The additional map hotkeys are as follows:

	= Keep
	= Granary
	= Marketplace
	= Barracks
	= Signposts

6.0 DEFENDING YOUR PEOPLE

This section will take you through the various ways you can defend that which you have built.

6.1 THE GATEHOUSE

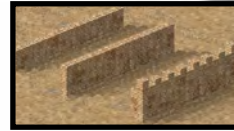


This should be one of your first considerations when piecing together your defenses, because once your walls are built your workers will need a gatehouse to get in and out of the castle. To build one, first select the castle buildings category then click on the gatehouse button. Left click on the gatehouse of your choice then select the appropriate orientation before placing it.

Hint:

Always ensure that you have troops defending your gatehouse! Should enemy units manage to get on top they will capture it and be able to open your gatehouse.

6.2 BUILDING HIGH AND LOW WALLS



Walls are selected from the castle buildings category. When walls are selected, press and hold the left mouse button on the main display then slowly drag the mouse. If you have enough stone in your stockpile, the wall will appear in front of you. The wall will finally be placed when the button is released.

Tip: Walls can be built to any thickness, with thicker walls taking much longer to bash through than thinner ones.

Crenulated walls can be added to the front of your standard walls to give added protection. Low walls are cheaper to build than high walls but are much easier to knock down.

Note: When dragging to create walls, if any piece of the wall is not in a valid building location, the whole wall will turn red.

6.3 TURRETS AND TOWERS

These can be found in the defense section of the castle buildings panel. They are impervious to ladder and assassin attacks and can withstand much more damage than walls. They also give your missile units further firing range and provide all units with a defensive advantage against enemy missile troops.



Lookout towers and turrets are cheap to build but only have room for a small number of military units, don't support siege equipment and can be collapsed by tunneling attacks.



Towers are more expensive but have space for more military units, can be used to mount defensive siege equipment and are immune to tunneling attacks. Troops get into towers via the walls.

You must build a wall adjacent to a tower to create a door for troops to use then provide stair access up onto that wall (See next page).



6.4 PLACING STAIRS



To give troops access to the tops of walls, there must be stairs or a gatehouse connected to them. Stairs are built in the same way as walls but must be attached to your walls or the side of your gatehouse. To build them, select stairs and move your mouse pointer next to a section of wall. Now press and hold the left mouse button on the main display then slowly drag the mouse. You will see an

outline of stairs appear. When you are happy with the placement, release the left mouse button to build them.

Tip: To connect high walls and low walls drag out two squares of stairs from the high wall. The lowest part of the stairs will now be at the same height as the low wall.

6.5 TRAPS

There are two types of trap available in CRUSADER.



The first one is the killing pit, which is a covered pit with sharpened stakes at the bottom. Killing pits are visible and harmless to your people but invisible to the enemy who fall to their deaths inside them.



The second trap is the pitch ditch. This is an area or trench of oil extracted from the marsh that ignites into a deadly inferno when you fire a burning arrow into it. You will need an archer with access to a brazier close by to ignite the pitch. Target him at the pitch and he will fire a burning arrow into it.

6.6 MOAT DIGGING



This is a mucky job but provides an excellent defense. To dig one you first need to layout a plan for where you want a moat to be dug. You do this by selecting 'dig' from the castle buildings category then left clicking on the map. If you

are unhappy with the plan, select the 'don't dig' button then left click to correct it. When you are happy with the plan, select some units then move your cursor over the plan area. When the cursor turns into a shovel, left click and the units will move to that position then start digging out the moat. You can delete your moat later by using the delete button. If you want to fill in an enemy moat, select some troops and click on the moat.

Tip: Some of your units will dig more enthusiastically than others and some will refuse to dig altogether.

A drawbridge can be attached to your gatehouse. This allows your people across the moat but can also be raised in times of siege to delay the enemy.

Note: Moats can only be dug on the low ground.

6.7 MOUNTED SIEGE EQUIPMENT

Castle siege machines such as ballistae and mangonels can be placed on top of towers to protect your castle. Engineers must man these siege machines after they are built.



Mangonels throw out a spray of rocks and are devastating against infantry, but are quite inaccurate.



Ballistae are more accurate, shooting a single bolt at one time and are very effective against enemy siege engines.

6.8 BOILING OIL



Boiling oil is an awesome defense against besieging units. To equip an engineer with a pot of boiling oil you must assign him to boiling oil duty. First select an engineer and move your cursor over the oil smelter. When the cursor turns into a down

arrow, left click and the engineer will be assigned to boiling oil duty. The first engineer assigned has the job of keeping the smelter filled with pitch and filling up the boiling oil pots of other engineers. Subsequent engineers assigned to the smelter will receive pots of boiling oil, which they can now use against attackers!

Note: See section 5.8 Military Commands for more information on using boiling oil.

7.0 SIEGE WARFARE

This chapter will help you to master the art of getting into someone else's castle!



In order to get your siege engines up and running, you need engineers to build and man them. With an engineer selected, click on the siege equipment button to see a list of machines that are available to build

Select the piece of siege equipment you wish to build then left click on the map and presuming you have enough gold in your treasury, a siege tent will appear. Selecting this tent will give you an idea of how long the equipment will take to build

Hint: Siege tents are easy to demolish with melee weapons and the engineers inside are vulnerable until the equipment is finished. Ensure you protect them well.

All siege engines need to be manned. To do this, select a group of engineers then move your cursor over the piece of siege equipment you wish to man. When the cursor turns into a down arrow, left click and the engineers will move to the equipment and man it. Depending on the type of siege equipment, a different amount of engineers are needed to man them before they become operational.

7.1 CAPTURING THE GATEHOUSE

Moving units to the top of an enemy gatehouse will capture it. The main methods of accomplishing this are by using ladders, assassins or siege towers. When you have a unit on the top of a gatehouse a flag will be raised to show that it has been captured and the gate will open.

7.2 PORTABLE SHIELDS



1 siege engineer to man it before it will become operational.

Hint: Try moving a group of these into range of enemy fire then removing and retreating the engineers. Your engineers can now be used to build more siege equipment and the shields will still offer cover!

7.3 BATTERING RAMS



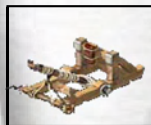
Battering Rams are slow but can take a lot of damage and prove a superior weapon for bringing down gatehouses. They are also effective against castle walls and towers when they manage to reach them. Each ram requires 4 siege engineers to man it before it will become operational.

7.4 SIEGE TOWERS



When in position, these gigantic mobile constructs will give all your troops quick access to the top of enemy walls. To use a siege tower, select it then select an enemy wall. Once it is close enough, the tower will dock and a gangplank will drop onto the enemies' wall. Once the gangplank is in place, units will be able to climb up through the siege tower onto enemy walls. Each siege tower requires 4 siege engineers to man before they become operational.

7.5 CATAPULTS



These siege machines allow you to demolish enemy structures from a distance. Catapults are mobile, fairly accurate, have a medium range and do a medium amount of damage. They fire with a low trajectory so are good for precision attacks to take out enemy structures. Catapults can also fire diseased cattle into an enemy castle to spread the plague. To do this select the fire cow button from the catapult menu then select a target. Each catapult requires 2 siege engineers to man before they become operational.

7.6 TREBUCHETS



Trebuchets are awesome siege machines for knocking down castle structures. Trebuchets are huge machines and once built, stay in a fixed position. They lack the accuracy of catapults but have a very long range and do a large amount of damage when they hit enemy structures. Trebuchets fire with a high arc, so are ideal for firing over castle walls. As with catapults you can fire diseased cattle into enemy castles to spread disease. Each trebuchet requires 3 siege engineers to man in before they become operational.

7.7 FIRE BALLISTA



The Arabian Fire Ballista is similar in design to the European fixed ballista, but is mobile. They are exceptionally accurate and superb against enemy units, taking many of them out in a single shot. The flaming javelins they fire can also be devastating to the enemy's buildings but do no damage to defensive structures.

7.8 DIGGING TUNNELS



Another way to bring the opposition to their knees is by digging tunnels. Tunnelers dig under defensive structures then collapse their tunnel demolishing the foundations above. To do this, select a tunneler then click on the 'dig' button. You need to

choose an area close to the castle as there is a maximum distance the tunnel can extend before it collapses in on itself. Once underground the tunneler will make his way towards the nearest wall, turret or gatehouse and set fire to the pit props holding up the tunnel causing it to collapse. This will damage or destroy the structure above the tunnel. It is impossible for tunnel diggers to dig under moats or towers although they can attack the smaller turrets and lookout towers.

7.9 FILLING IN MOATS





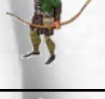



Military units can be ordered to fill in the enemies' moats. To do this select a group of units then click on the moat. when you see the shovel pointer appear. They will go to the moat then begin filling it in.

8.0 REFERENCE SECTION

This chapter gives you additional information, which you may find useful in your conquest.

8.1 NON-MILITARY CHARACTERS

	Lord: His Lordship is the most important character in the game. He is an absolutely deadly fighter as well as the master of all he surveys. Should he fall in combat the game will be lost.
	Lady: Although she has the good of the castle at heart, she can come across as a little bossy. She used to live in a luxurious manor house with her father and now complains plains profusely about the squalid conditions she is forced to live in.
	Jester: The jester runs around your castle teasing people whilst doing acrobatics, so he has a very short life expectancy.
	Woodcutters: They cut down trees, are very vain and enjoy showing off their bulging muscles to passers by.
	Hunters: Hunters kill deer for food, taking the meat to your granary. They are rough and ready folks who have a strong appreciation for fine ale.
	Farmers: These lowly citizens tend to your various crops grown on the farmland around the oasis. They enjoy grumbling about their poor treatment and have a bitter dislike for town folk.



Peasants : They spend their days sitting around the fire and hoping to be given work.



Children : These little scamps run around causing mischief all day. You will occasionally see them playing in classic games such as catch and patty cake.



Mothers and Babies : They appear when a hovel is placed. The mother is responsible for keeping the baby happy and making the house neat and tidy whereas the baby cries and makes a mess. They will be seen running to their hovel when enemies appear at the castle.



Stone Masons : They work in the quarry cutting and carving stone. Some say they have their own mysterious society where masons indulge in a sacred ritual known as trouser leg rolling.



Iron Miners : They work long hours underground, smelting and delivering iron. Iron miners are coldhearted individuals with a bleak outlook on life and it can prove difficult to break through their hardened exteriors.



Pitch Diggers : These people extract pitch from the surrounding marshland. Unfortunately, working in this environment has had an adverse effect on their sense of smell so pitch workers have an even more acute personal hygiene problem than your average medieval citizen.



Mill Boys: These young lads rush wheat to your mill, hastily grind it up then quickly deliver the flour. Mill boys seem to have an endless supply of energy.



Baker: He bakes bread to help feed your people. The baker comes across as a happy and sensitive gentleman. He is also at the center of much village gossip.



Brewer: She brews the ale for your inns. The brewer has a problem focusing and walking straight. She regularly tastes what she brews and gets into trouble for shouting slurred insults at strangers in the street.



Innkeeper: He distributes ale among your workers. The innkeeper is a jolly red-faced gent who has his thumb on the pulse of the nation and knows about all the latest fads.



Drunkard: These wobbly individuals will appear when your inns are up and running. You will see them staggering around in zigzag patterns only stopping to drink some more ale.



Fletcher: He crafts bows and crossbows for your troops. The fletcher regularly invites people around for tea so he can tell them all about his bad leg.



Armorer: He crafts metal armor for your soldiers. The armorer is a military veteran and a well-respected figure in the castle, always ready with a new tale to tell the children.



Blacksmith: He forges your swords and maces. The blacksmith is usually a quiet and reserved gentleman. Unfortunately he has a rather short fuse and has a tendency to burst into fits of rage without notice.



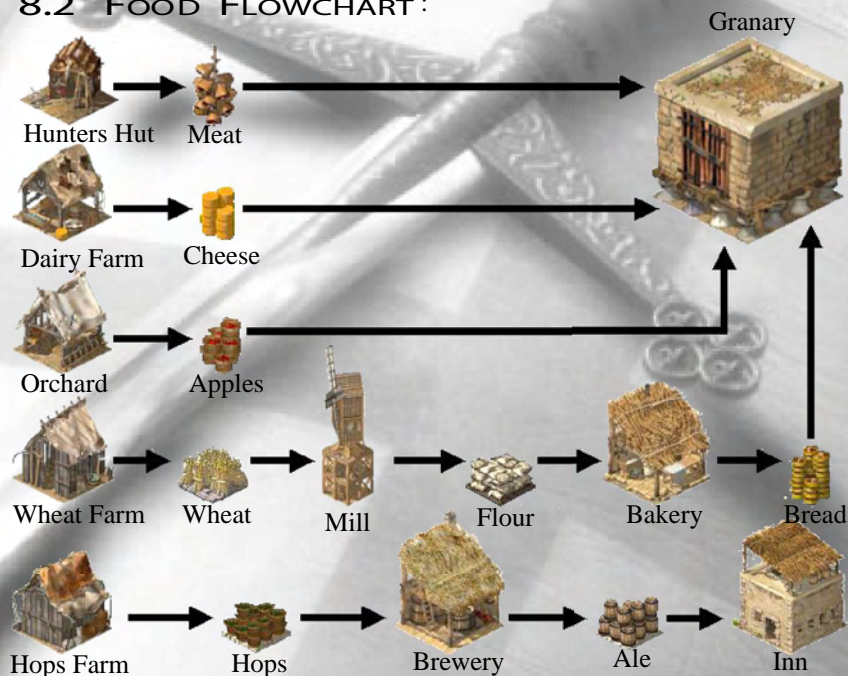
Poleturner: He turns spears and pikes for your troops. The poleturner spends his days contemplating the mean behind a spinning piece of wood and comes across as a subdued introvert but is in fact the wisest character in the game.



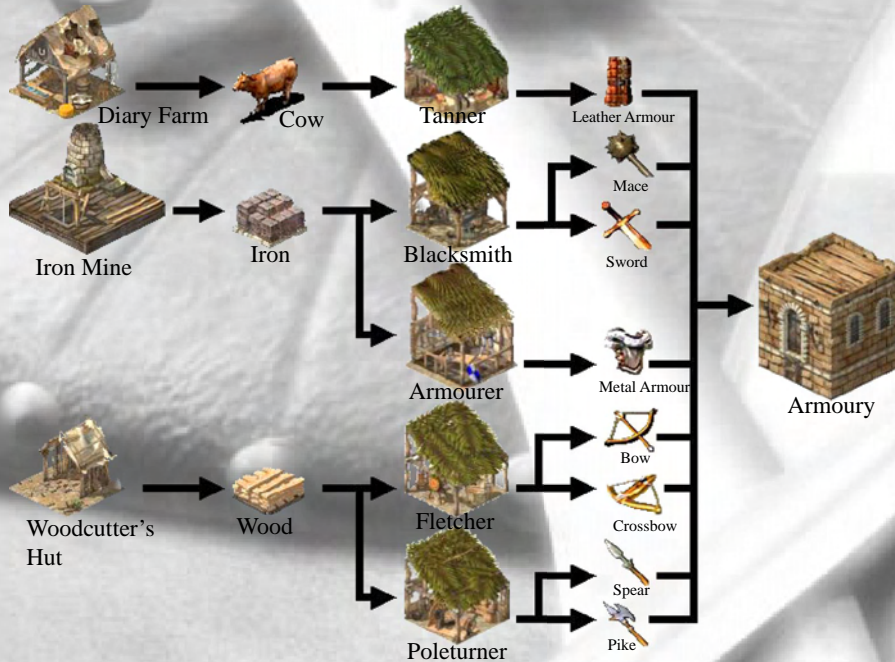
Tanner: She is a strong-willed woman and has no problem dispatching your cows then sewing them into attractive leather garments for your soldiers to wear. The tanner has an abrasive manner about her, which is coupled with an exceptionally dominant personality.

	Priests : They spread joy by carrying out blessings and weddings. Due to their strict order, medieval priests are not allowed a sense of humor.
	Healer: He clears up any clouds of disease, which float around your castle. The healer spends a lot of time walking in the woods to gather his herbs and sometimes disappears for days on end.
	Market Trader: He will arrive when a market place is built. The trader is a quick talking fellow low who holds himself confidently. He is always ready to negotiate the fairest and best possible deal for himself.
	Juggler: He comes to your castle with the travelling fair to entertain your people. The juggler is a skittish character that finds it impossible to sit still for two minutes and has a fear of commitment.
	Fire-eater: The fire-eater is also part of the travelling fair and really knows how to captivate the audience with his collection of cunning stunts. He no longer has any body hair due to an unfortunate incident over a brazier.

8.2 FOOD FLOWCHART :



8.3 WEAPON FLOWCHART




















Setting Up Your Identity





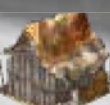



You can choose which type of Lord you wish to play within the game. You can choose from either a Crusader Lord or Arabic Lord. This does not affect which units you can build, but the Lord type will affect your starting troops.









You can also choose the portrait you wish to have shown when you hover the mouse over sections of your castle (this picture will also be shown to other users in multiplayer mode). You can create your own portrait, if you load the 'faces.bmp' file (located in the root of the game folder) into a paint package. You will notice we have left two free slots for you to add own portraits. The size for each portrait should be 64 x 64 pixels.


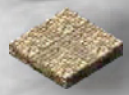









8.4 BUILDINGS TABLE

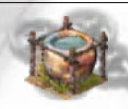





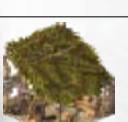


	Small stone gatehouse	Castle	Free	N/a	Selecting this building let you to change your tax rate. The manor house provides you with 8 peasants. A keep must be placed before any other buildings become available.
	Large stone gatehouse	Castle	20 stone	N/a	The next step up from the manor house. The Stone keep provides you with enough housing for 10 peasants.
	Drawbridge	Castle	10 wood	N/a	These can be added to the front of your gatehouse to slow down the enemy.
	Lookout Tower	Castle	10 stone	N/a	This is the tallest of the towers and attacking ranged units will need to get very close before being effective.
	Perimeter Tower	Castle	10 stone	N/a	These will add to the defensive strength of your castle.
	Defence turret	Castle	15 stone	N/a	These can take more of a pounding than perimeter turrets.
	Square tower	Castle	35 stone	N/a	These give added defence and are big enough to support mounted siege equipment.
	Round tower	Castle	40 stone	N/a	These are stronger than square towers due to their shape and can also hold mounted siege equipment.

	Armoury	Castle	5 wood	N/a	Weapons and armour produced by your workshops are stored here.
	Barracks	Castle	15 stone	N/a	Troops can be trained from this building as long as you have peasants, weapons in your armoury and gold.
	Mercenary Post	Castle	10 wood	N/a	Arabian troops can be hired from here for a price in gold.
	Enginner guild	Castle	10 wood 100 gold	N/a	This building allows you to recruit laddersmen & enginner.
	Killing pit	Castle	6 wood	N/a	These add to the defence of your castle and cannot be seen by the enemy. Killing pits will kill most units outright.
	Oil Smelter	Castle	10 iron 100 gold	1 enginner	This creates pots of boiling oil for your enginner to pour on the enemy. The first enginner you move here will man the smelter than any additional enginner will collect pots of oil.
	Pitch Ditch	Castle	2 pitch every 5 squares	N/a	These are trenches filled with flammable pitch. An archer standing close to a brazier will be able to ignite it.
	Caged War dogs	Castle	10 wood 100 gold	N/a	When opened, killer dogs will be released and attack the closest unit or worker.
	Siege tent	Castle	N/a	1 or more enginner	These appear after you order your enginner to construct siege equipment. Ensure they're protected, as melee weapons will destroy them easily.

	Stable	Castle	20 wood 400 gold	N/a	Each of these will produce four horses, which you can use to create knights.
	Tunneler guild	Castle	10 wood 100 gold	N/a	This structure allows you to recruit tunnelers.
	Apple orchard	Farm	5 wood	1	Apples are grown here and sent to the granary.
	Diary farmer	Farm	10 wood	1	Cheese is produced here and sent to your granary. Diary farms are also required in order to produce leather armour. Cows can also at the enemy to spread disease.
	Hops farmer	Farm	15 wood	1	Hops are grown here. Hops are used to brew ale, which will give you a massive popularity bonus.
	Hunter Post	Farm	5 wood	1	Meat is prepared here before being sent to the granary.
	Wheat farmer	Farm	15 wood	1	Wheat is grown here which is ground into flour at the mill.
	Bakery	Food processing	10 wood	1	This building turns your flour into bread.

	Brewer	Food processing	10 wood	1	Ale is brewed here using hops from your hops farm. The ale can then be distributed via your inns to gain massive popularity boost.
	Granary	Food processing	5 wood	N/a	This is where your foods is stored Clicking on this building allows you to change your rationing and food consumption settings. Additional granaries must be attached to your original granary to increase it's capacity.
	Inn	Food processing	20 wood 100 gold	1	Ale is distributed through these to give you a massive popularity boost.
	Mill	Food processing	20 wood	3	This is where your wheat is ground into flour ready to be baked into bread at the bakery.
	Iron mine	Industry	20 wood	2	The building extract iron from the ground. Iron is used to forge maces, swords and metal armour. Iron is also needed to build an oil smelter.
	Market	Industry	5 wood	1	Clicking on this building will allow you to buy and sell commodities.
	Ox tether	Industry	5 wood	1	Oxen are required to lug stone from quarry to your stockpile.
	Pitch rig	Industry	20 wood	1	These can be placed in swampland and extract flammable oil. The pitch can then be used to defend your castle.

	Quarry	Industry	20 wood	3	Quarries extract stone from the earth. Once your oxen have carried the stone to your stockpile, you can use it to build your walls and towers.
	Stockpile	Industry	N/a	N/a	This is where all of your resources are stored.
	Woodcutter	Industry	3 wood	1	These produce wood, which is required in the construction of the majority of buildings. Without wood your castle will not be able to expand.
	Apothecary	Town	20 wood 150 gold	1	This building will reduce the damage done from disease. The more of them you have the less damage your troops will take from disease. Additionally, each apothecary will give a healer who will rush towards disease clouds and disperse them.
	Hovel	Town	6 wood	N/a	Each hovel you place provides eight additional housing spaces.
	Chapel	Town	250 gold	N/a	The more of these you place, the better the popularity bonus you will receive from religion.
	Church	Town	500 gold	N/a	This religious building gives you an additional +2  bonus to popularity on top of the usual bonuses. Fighting monks can be trained in the cathedral.
	Cathedral	Town	1000 gold	N/a	This religious building gives you an additional +2  bonus to popularity on top of the usual bonuses. Fighting monks can be trained in the cathedral.
	Well	Town	30 gold	1	This structure helps to put fires.

	Water pot	Town	60 gold	3	This structure works in the same way as the well but provides three well boys so is more efficient.
	Good Things	Town	20 to 30 gold	N/a	These buildings come in many shapes and sizes. The positive side of these buildings is that they increase popularity and improve troop moral. The downside is that work efficiency decreases. Larger good things cost less than smaller ones.
	Bad Things	Town	40 to 50 gold	N/a	There are many types of bad structure to place around your castle. The positive side of these buildings is that they increase efficiency. The downside is that they reduce popularity and moral. Larger bad things cost less than smaller ones.
	Armourer	Weapons	20 wood 100 gold	1	The armourer turns iron into metal armour.
	Blacksmith	Weapons	20 wood 200 gold	1	The blacksmith creates maces and swords from the iron in your stockpile.
	Fletcher	Weapons	20 wood 100 gold	1	Bows and crossbows are crafted here from the wood in your stockpile.
	Poleturner	Weapons	10 wood 100 gold	1	Spears and pikes are made here from the wood in your stockpile.
	Signpost	Miscellaneous	N/a	N/a	This shows where the enemy appears from.
	Tunnel entrance	Miscellaneous	N/a	N/a	These appear when you order a tunneler to dig.

8.5 European Unit Table.

	UNIT	ATTACK RATING	DEFENSE RATING	SPEED	WEAPON	ARMOR	CAN THE UNIT CLIMB LADDERS?	CAN THE UNIT DIG MOATS?
	Archer	Low	Low	Fast	Bow	N/A	Yes	Yes
	Crossbowmen	Low	Medium	Slow	Crossbow	Leather	No	No
	Spearmen	Medium	Very Low	Average	Spear	N/A	Yes	Yes
	Pikemen	Medium	High	Slow	Pike	Metal	No	Yes
	Macemen	High	Medium	Average	Mace	Leather	Yes	Yes
	Swordsmen	Very High	Very Low	Extremely Slow	Sword	Metal	No	No
	Knight	Very High	High	Very Fast	Sword	Metal & Horse	No	No
	Tunneler	Medium	Very Low	Fast	Pick Axe	N/A	No	No
	Laddermen	N/A	Very Low	Fast	N/A	N/A	No	No
	Engineer	N/A	Very Low	Average	N/A	N/A	No	Yes
	Black Monk	Medium	Medium	Slow	Staff	N/A	No	No



8.6 Arabian Unit Table.

	UNIT	ATTACK RATING	DEFENSE RATING	SPEED	WEAPON	ARMOR	CAN THE UNIT CLIMB LADDERS?	CAN THE UNIT DIG MOATS?
	Archer Bow	Low	Low	Fast	Bow	N/A	No	Yes
	Slave	Extremely Low	Extremely Low	Fast	Torch	N/A	No	Yes
	Slinger	Low	Very Low	Fast	Sling	N/A	No	No
	Assassin	Medium	Average	Average	Scimitar	N/A	No	No
	Horse Archers	Low	Average	Very Fast	Bow	Horse	No	No
	Arabian Swordsman	High	High	Very Fast	Scimitar	Metal Armour	No	No
	Fire Thrower	High	Low	Very Fast	Greek Fire	N/A	No	No

8.7 HOTKEYS



= Pause



= Assign unit group



= Multiple Waypoints



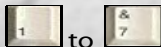
= **Bookmark Locations.** (Pressing CTRL & ALT & 0 to 9 creates a bookmark of the current location on the map. Press ALT & the appropriate number to return to this location.



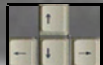
= Display's the building panel at any time.



+ Center on building key = returns to one the building and then return to the previous location by pressing one of the keys assigned to a building, such as: A (Armory), B (Barracks) M (Market), N (Mercenary Post), G (Granary), I (Engineer guild), T (Tunneler guild), you can then press SHIFT and the key previously pressed, to return to the previous location.



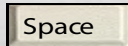
(While in the Barracks or Mercenary post) = You can create a assembly points for each troop type in the barracks panel & mercenary post. Open the (B) Barracks then press 1 & 7 & you will be able to place a flag. The troops you create from building will walk to the flag. You can set assembly points for other building types such as enginner's guild, tunnelers guild & cathedral.



= Scroll around the map



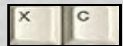
= Castle Management Panel



= Flatten the landscape



= Zoom



= Rotate the screen counterclockwise/clockwise



(On the number pad) = Increase / decrease game speed



= Screenshot



= Multiple Screenshots



= Pull down landscape



= Cycle through signposts



(or mouse wheel up) = Center view on the keep



= Center on the granary



= Center on the barracks



= Center on the marketplace



= Center on the Mercenary post



= Engineer guild



= Tunneler guild



= Cycles through the Lords



= Go to the Lord



= Stand ground



= Defensive



= Aggressive



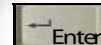
= Skips the briefing

Double Click on unit : Select all units of that type.

Mouse wheel down : Cycle through bookmarks.

Speed up the credits : Cursor Down or SHIFT Cursor Down.

8.8 MULTIPLAYER COMMANDS.



= Chat



to = Taunt

8.9 MAP EDITOR COMMANDS.



= Halt the game



= Kill all animals



= Set initial levels (Within Edit Scenario Section)



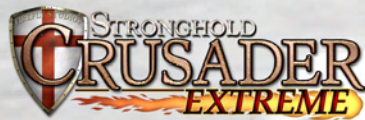
= Re-spawn the Lord



= Show connection and linkage layers



= Change map type (Within main screen)



9.0 Crusader Extreme

The Stronghold Crusader Extreme edition adds several new features to the standard Crusader game, to produce a more intense playing experience. Primarily these are the new 'Tactical Aid' bar, Outposts and a vastly increased number of troops in play.

To play Stronghold Crusader Extreme choose Stronghold Crusader Extreme from the Start Menu or Game Explorer.

Main Menu:

The extreme Campaign.

This is a trail of 20 missions that provide an ever increasing level of difficulty.

Extreme Multiplayer

Extreme mode only multiplayer - featuring all the new extreme mechanisms.

Extreme Map – Maker

A map creator - to enable you to make extreme maps to play over multiplayer

New Extreme Features:

Outposts

These can be either Western or Arabic. Outposts produce a lot of troops for either you or your enemies. The number of troops produced by an outpost slowly increases over time. Map makers can set the type and quantity of troops directly in the editor.

More troops

Stronghold Crusader Extreme has a higher troop/worker limit than Crusader allowing for 10,000 troops on the map at once.

New Enemies

Stronghold Crusader Extreme also includes the eight additional new AI characters, which were previously only found in the Stronghold Crusader Warchest edition.

Tactical Aid Bar

The Tactical Aid (TA) bar fills up over time and gives the player a range of increasingly valuable tactical benefits that the player must make good use of in order to survive in the Extreme environment.



As the TA bar fills up the TA power icons light up as the powers become active. Left click on the icon, and then (in most cases) left click on the map to target the power. The corresponding amount of TA points will then be removed from the TA bar. In this way low level powers can be used multiple times from a full bar.

The Tactical Aid abilities available are (in ascending order) :-

Arrow Volley Attack



Left click on an area anywhere on the map to launch a volley of arrows. Good for instantly destroying large groups of weaker opponents.

Heal



Left click over a group of your troops anywhere on the map to restore or completely heal damaged units.

Spearmen



Left click on an area close to your Keep to deploy these reinforcements.

Engineers



Left click on an area close to your Keep to deploy these reinforcements

Macemen



Left click on an area close to your Keep to deploy these reinforcements

Uncover gold



This power will give you a random amount of gold. Perfect for getting you out of a sticky economic situation.

Knights



Left click on an area close to your Keep to deploy these reinforcements

Rock Volley Attack



Left click on an area anywhere on the map to unleash a devastating volley of hurled rocks. This is good for obliterating groups of troops, as well as pummeling an enemies castle into the ground!



FIREFLY STUDIO'S

GAME DESIGN
Simon Bradbury

ADDITIONAL DESIGN
Eric Ouellette

GAME PROGRAMMING
Simon Bradbury
Andrew McNab
Andrew Prime

EXECUTIVE PRODUCER
Eric Ouellette

ART DIRECTOR
Michael Best

ARTISTS
Jorge Cameo
Robert Thornley
Darren White

ADDITIONAL ART
Darrin Horbal
Jason Juta

MULTIPLAYER PROGRAMMING
Andrew Prime

SOUND DESIGN &
ORIGINAL MUSIC
COMPOSED BY
Robert L. Euvinio

MANUAL AND STORY
WRITER
Casimir C. Windsor

QUALITY ASSURANCE MANAGER
Darren Thompson

FIREFLY TESTING
Niall Benzie
Phil Busuttill
Stephen Pomphrey
David Robertson
Casimir C. Windsor

MUSICIANS
Bill Vanaver - Oud, Laouto,
Lyra, Kemenche, Dumbek,
Bouzouki, Tambur
Steve Gorn - Bansuri Flute,
Clarinet, Sona, Mizmar
Lydia Pidlusky - Vocals
Patricia Bresnahan - Vocals
Nadege Foofat - Violin, Viola
Thomas Workman - Overtone
Flute, Percussion
VOICE ACTORS &
PRODUCTION

SENIOR AUDIO ENGINEER
Adam Chapman

SENIOR PROJECT MANAGER
Helen Pix - SDL Agency

VOICE ACTORS
Robert L. Euvinio
Luis Soto
Christopher Kert
Jay Simons
Basel Abbas
Issam Ikimawi
Ray Greenoaken
Jerry Kersey

Anthony Mulligan
John Tearney

SCENARIO CREATORS
Phil Busuttill
Eric Ouellette
Darren Thompson
Casimir C. Windsor

BETA TESTERS
Alex Klotz
David Thurston
Denise Steele
Francis Cermak
Gaál Viktor
Gill Bilski
Hans Egon Hansen
JanJaap van den Hurk
Joel Pridgeon
Jon Breckon
Jonathan Herman
Meredith Meadows
Robert Philips
Robert Taylor
Rocklyn Lien
Thomas Kamenick
Tom Meschere
Trevor Cape
Trevor Winney
Vernon Suddaby

SPECIAL THANKS
David Lester
Megan Ouellette





NOTES

NOTES



NOTES

NOTES