

# The KGoldrunner Handbook

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# The KGoldrunner Handbook

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### **Abstract**

KGolddrunner, a game of action and puzzle solving. Run through the maze, dodge your enemies, collect all the gold and climb up to the next level. *Note:* The rules of digging have changed slightly in this version.

# Chapter 1

## Playing KGoldrunner

### 1.1 Introduction

Game type: Arcade, Strategy

Number of players: One

KGoldrunner is an action game where the hero runs through a maze and dodges enemies. You must guide the hero with the mouse or keyboard and collect all the gold nuggets, then you can climb up into the next level. Your enemies are also after the gold. Worse still, they are after you! They will kill you if they catch you!

The problem is you have no weapon to kill *them*. All you can do is run away, dig holes in the floor to trap them or lure them into some area where they cannot hurt you. After a short time a trapped enemy climbs out of his hole, but if it closes before that, he will die and reappear somewhere else.

If you have never played before, try the 'Tutorial' game, which teaches you the rules and basic skills. Then try the 'Initiation' game. Experts might enjoy the 'Challenge', 'Vengeance of Peter W', 'Count' or 'Curse of the Mummy' games, but the 'Initiation' game has 100 levels and some are very difficult. It is a good game for achieving a High Score.

All those games use Traditional rules, which are similar to those used on early home-computers, such as the Apple II or Commodore 64. The 'KGoldrunner' and 'State of Terror' games use KGoldrunner rules, in which the enemies run faster and have a more aggressive search strategy than in Traditional rules. See [Choice of Rules](#) for details.

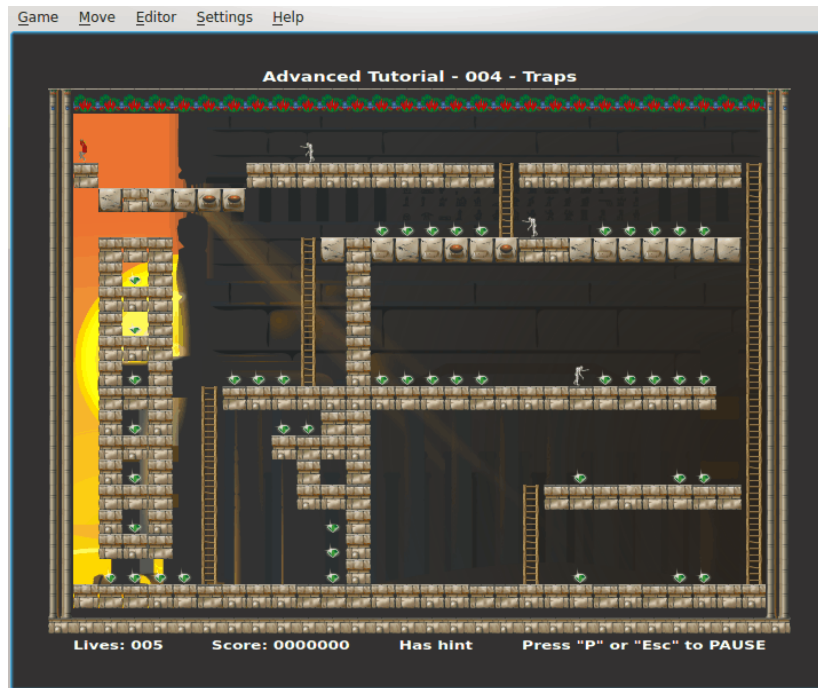
As you move to more advanced levels, you will find that KGoldrunner combines action, strategy, tactics and puzzle solving — all in one game. Good luck!

### 1.2 A Typical Game

Below is a typical game in progress. The hero is at level 4 in the Advanced Tutorial game. The window's lower part shows how many lives he has left and how many points he has scored. It also shows that there is a hint available for this level (as there always is in tutorial games) and that the action is stopped (while taking this snapshot), but can be continued by pressing **P** or **Esc**.

The hero started at the top left, dug a hole and dropped into a line of false bricks and gold where you can now see him falling. The enemy above him will fall into the hole, then climb out and be trapped up there till the end of the level. He could cause the hero some problems then, because that is where the hidden ladders appear when all the gold is gone. The hero has to use them to get to the next level.

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The enemy on the right is falling and carrying some gold. The third enemy is about to come down a ladder to chase the hero, who will have to dodge both enemies when he reaches the floor. This level also shows diggable bricks and undiggable concrete and has lots of traps (false bricks), which look just like ordinary bricks.

### 1.3 How To Play

#### 1.3.1 Starting the Game

KGoldrunner begins by showing you a recorded demonstration of play. You can terminate this by clicking on the playing area with the mouse, pressing the spacebar or selecting a menu item or shortcut (such as **Game** → **New Game...**). You can skip this demonstration in future by using menu item **Settings** → **Demo At Start**. You can also see it again at any time by using menu item **Move** → **Demo**.

If you skipped the demo or used the mouse or spacebar to end it, a quick-start popup dialog box shows you the names, number and a preview of the last game and level you loaded or, if you have not played before, the same information for Tutorial level 1.

Click on the **PLAY** button to begin playing immediately. Otherwise you can click on the **Quit** button, the **New Game** button or the **Use Menu** button. The first will close KGoldrunner, if you do not wish to play, the second will show you a [Level Selection](#) dialog, where you can choose a different game and level and the last will terminate the dialog, leaving you free to use the KGoldrunner menus.

If you have chosen to play a game and level, it will then appear and the pointer will be over the hero. In a tutorial game, an explanatory message appears before each level begins. You start play by moving the pointer, clicking the mouse or pressing any key that can control the hero (e.g. **Space**), but avoid using **Q**, **S**, **P** or **Esc** at this stage. You start each level in the same way.

You have five lives at the start and gain a bonus life for each level completed.

### 1.3.2 Moving Around

By default you control the hero with the mouse, but you can also control him with the keyboard ([see below](#)) or, on a laptop, by using a mix of the keyboard for digging and the touchpad or other pointer device to guide the hero.

The hero moves towards wherever you place the pointer. He cannot move as fast as you can move the pointer, but he will try hard to catch up. If the pointer is above or below his level, he will always go up or down when there is a ladder available or a place to fall into. Otherwise he will move horizontally until he is below the pointer, above it or right at it. You can make him follow simple paths (like — | L or U), but be careful not to get too many twists and turns ahead of him.

You can move left or right over bricks, concrete, ladders or bars and up or down over ladders. If you are on an empty square or a gold nugget and there is no brick, concrete, ladder or bar to hold you up, gravity takes over and you fall. You can also fall by moving down from a bar or the bottom of a ladder, so keep the pointer up there if you want to hold on.

### 1.3.3 Keyboard Control

If you prefer, you can use the keyboard to control the hero. The default keys are the arrow keys and **I**, **J**, **K** and **L** (in honor of the original Apple II game), with the keys **Z** and **C** or **U** and **O** for digging. You can play one-handed by using **U**, **I**, **O**, **J**, **K**, **L** and **Space** (on a 'QWERTY' keyboard) or two-handed by using the arrow keys, **Space**, **Z** and **C**. You can also choose other keys, on the **Settings** menu, using the **Configure Shortcuts** item.

You enter keyboard mode by pressing one of the keys that can control the hero or by selecting **Keyboard Controls Hero** on the **Settings** menu.

The movement keys (**I**, **J**, **K**, **L** or arrows) start the hero moving up, down, left or right. He continues moving in that direction, if he can, until you press another movement key or **Space** to stop. In mouse or laptop mode, he stops automatically when he gets to the pointer.

A word of warning: using the keyboard is much harder, in the long run, than using the mouse. Think of the mouse as a joystick.

### 1.3.4 Taking a Break

You can stop the game at any time by pressing a Pause key (the default is either **P** or **Esc**). You can resume by pressing the Pause key again. There is also a **Pause** option in the **Game** menu, but the problem is to get the pointer up there without moving the hero and getting into trouble.

#### TIP

When you want to use the KGoldrunner menu or do some work in another window, always press a Pause key and stop the game. Otherwise the hero will go on following the pointer and might get into trouble.

### 1.3.5 Winning a Level

The object of the game is to collect all the gold, by moving or falling onto it. When there is none left, you must move to the top of the playing area to get to the next level. Often, as you collect the last piece of gold, hidden ladders will appear and you can use them to climb to the top. Sometimes there are no hidden ladders. Also, very rarely, the hidden ladders could be a decoy that leads the wrong way. If the level has no gold, there will be no hidden ladders and you just have to work out how to get to the top of the playing area.



### 1.3.6 Beware of False Bricks

False bricks, otherwise known as fall-through bricks or traps, are the other hidden feature of the game. They look just like ordinary bricks, but if you run over one you fall. This can be bad if there is an enemy or a pit down there, or good if there is some gold.

### 1.3.7 Enemies

Enemies move in very much the same way as the hero. The main difference is when they fall into a hole the hero has dug (see [The Importance of Digging](#) below).

They will pick up gold either always or at random, depending on the game settings, and will drop gold at random on brick, concrete or the top of a ladder. If an enemy is carrying the last piece of gold, you must get it away from him before you can finish the level.

If an enemy touches you, you die and must start the level again, provided you have some lives left. However, it is possible to walk or stand on an enemy's head and you can ride an enemy down when he is falling. Some advanced levels require such a move.

### 1.3.8 Losing a Level

As explained above, you can lose a level and a life by touching an enemy. You can also lose by getting caught in a dug brick when it closes. Otherwise you can commit suicide by pressing key **Q** or using the menu item **Game** → **Kill Hero**. Why would you want to do that? Well, sometimes you can get trapped in a place from which you cannot escape. You will stay imprisoned for ever unless you commit suicide!

### 1.3.9 The Importance of Digging

Digging is one of the most powerful tactics you have. To dig a hole in a brick to the left or right, just click the Left or Right mouse button, or use one of the digging keys (defaults **Z**, **C**, **U**, **O**.)

You can dodge an oncoming enemy by digging a hole, waiting for him to fall in and then running quickly over his head. At the same time you can collect any gold he was carrying. Usually you can dig two holes to capture and run over two enemies who are close together, but this rarely works if the enemies are separated or there are more than two of them.

You can kill enemies by digging enough holes in their path. It usually takes two or more holes to kill one enemy and up to eight or more holes to kill four or five. When enemies die, they reappear immediately, either where they started the level or near the top of the playing area, depending on whether the game follows 'KGoldrunner' or 'Traditional' rules and settings (see [Choice of Rules](#)).

Finally, in many levels the gold is not immediately accessible and you must dig to get to it. Some of these digging puzzles are quite complex and you must work out a digging sequence then perform it in limited time before you can complete the level.

### 1.3.10 The Rules of Digging

You click the Left or Right mouse button, to dig a hole to the left or right, or use the **Z**, **C**, **U** or **O** keys.

Only bricks can be dug, not anything else. The hole will appear in the floor on one side or the other (i.e. below and to the left or right of the hero). There must be an empty space or hole above the brick (i.e. no digging under a ladder, bar, gold, brick, concrete or false brick). You can be running, standing or riding down on a falling enemy when you dig. Digging while falling

through thin air or false bricks is allowed in some games but not others. See [Digging while Falling](#) below.

The hero can move in any direction through dug holes, including falling right through a hole to escape an enemy. After a short time, dug holes close up, so you must use them quickly. Plan your digging in advance. There is no time to stop and think while you dig.

Enemies are always captured if they fall into a dug hole and will always climb UP to get out of it. Their time in the hole is less than the time the hole stays open, so to kill enemies you usually have to dig several holes in quick succession. Enemies always give up gold as they fall into a hole, so you can quickly run onto the enemy's head and grab the gold before he climbs out.

Enemies will never fall down through a hole from above, but depending on the game rules and **Settings** (see [Choice of Rules](#)), they can run horizontally into a dug hole and not be captured and can fall from there or run into another hole or run out of the hole. Several levels that follow 'Traditional' rules depend on an enemy being able to run through a hole. Some levels that follow 'KGoldrunner' rules depend on an enemy NOT being able to run through a hole.

### 1.3.11 Digging while Falling

In the original game on Apple II and Commodore 64, the hero had to be supported on something solid when digging: a ladder, concrete, a brick, a bar --- or an enemy's head. This rule was overlooked in KGoldrunner and one day the author's son discovered that you could dig while falling! He immediately composed a level to exploit this. Other game composers have now done the same. You have to dig while falling in recent games of Championship skill such as 'State of Terror', 'Curse of the Mummy' and 'Gold Rush'.

On the other hand, digging while falling makes older games too easy. So, as of December 2015, it is forbidden in the 'Tutorial', 'Advanced Tutorial', 'Initiation', 'KGoldrunner' and 'Challenge' games. The 'Vengeance of Peter W' game allows it in just one level and the new 'Beginner's Luck' game, which is aimed at first time players, does not allow it.

### 1.3.12 Winning and Losing the Game

You win by completing the last level in the game. You lose when your last life is gone. Either way, if you have achieved one of the ten highest scores for that game, you can record your achievement in the 'KGoldrunner Hall of Fame'.

### 1.3.13 Recordings, Replays and Solutions

All levels in games are recorded as you play, so you can replay any level you have previously played. Also, some levels have recorded solutions, which may help you work out how to win them. Just use the **Move** menu and items **Show A Solution**, **Instant Replay**, **Replay Last Level** and **Replay Any Level**. The solutions and replays can be interrupted at any time by clicking with the mouse on the playing area, pressing the spacebar or selecting a menu item or shortcut (such as **Game** → **New Game...**).

**Instant Replay** and **Replay Last Level** let you continue playing after an interruption. So if things are not going well, you can use **Instant Replay**, interrupt the replay at some point and then try another approach. Or if the hero died already, you can use **Replay Last Level** in the same way. These features can help you build up a solution to a difficult level in stages, but using them will invalidate any high score you might be working on.

## 1.4 Scoring

- Start with 5 lives.

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- Lose a life and repeat a level when the hero dies
- Gain a life when you complete a level
- 75 points for trapping an enemy
- 75 points for killing an enemy
- 250 points for collecting gold
- 1500 points for completing a level

### 1.5 Choice of Rules

Most of the rules of KGoldrunner are covered in the section [How to Play](#), however there are two major rule settings that affect the style of play: known as 'Traditional' and 'KGoldrunner'. It is important to know which settings are in force when you are playing a game. KGoldrunner automatically chooses the correct settings for a game when you play one of its levels and the rules for each game are shown in the [Level Selection](#) dialog box.

The main difference between 'Traditional' and 'KGoldrunner' settings is the method by which the enemies choose a path to the hero.

- In the 'Traditional' search method, enemies look for vertical paths (ladders and falls) and they try to stay higher than the hero or at the same height. They go below him only as a last resort. The enemies make no attempt to chase the hero in the horizontal direction until they are at the same height and can find a horizontal path. This leads to situations where you can 'control' enemies who are far away from you and make them work for you or at least keep out of your hair.
- The 'KGoldrunner' method searches alternately for horizontal and vertical paths, which tends to keep the enemies over your side of the playing area and at about the same height (i.e. they are more aggressive and not so easy to manipulate). That leads to a more action-packed game, but with less opportunity for strategy and puzzle-solving. However the 'State of Terror' game, added in 2007, uses 'KGoldrunner' rules and has plenty of puzzles to solve while you are on the run. That is why it is such a difficult game.

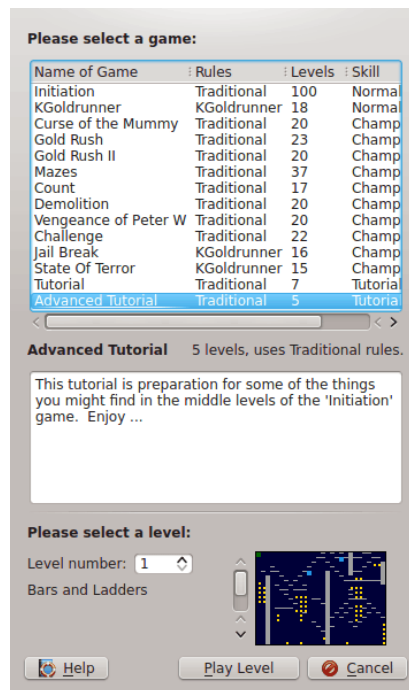
The other differences are listed below:

- In 'KGoldrunner' play, the hero and enemies move at fixed speeds in every level and bricks always take the same time to close. In 'Traditional' play, the game speed depends on the number of enemies in a level. The more enemies, the slower they run. The hero also becomes slower, but not so noticeably.
- In 'Traditional' play, enemies always collect gold nuggets when they run into them. In 'KGoldrunner' play, it is a random choice. The enemies drop nuggets after a random time in both types of play.
- Enemies can run horizontally through holes in 'Traditional' play but not in 'KGoldrunner' play. The trick in several 'Traditional' levels depends on releasing an enemy from behind a brick wall. When you dig away the bricks, he runs out through the hole. In some 'KGoldrunner' levels, on the other hand, you must hide inside or behind a dug brick to escape an enemy.
- When enemies die in 'KGoldrunner' play, they go back to where they started the level. In 'Traditional' play, they reappear at a random place near the top of the playing area. This makes a big difference, especially in levels where you have to get enemies to fetch nuggets down for you, but also because the enemies keep falling down onto you as fast as you can kill them.

## Chapter 2

# The Level Selection Dialog

### 2.1 Using the Level Selection Dialog Box



This box appears when you select the **New Game** action and also when you select items from the **Editor** menu or replays from the **Move** menu. You use it to choose a game and a level to play, replay, edit, save, move, re-number or delete. The main button at the bottom is the **OK** button. Its label changes according to what you are doing: in this case choosing a game and level to play.

#### 2.1.1 Selecting a Game

There are several 'System' games that come with the KGoldrunner release and you can add your own games by using the editor. All these games appear in the list at the top of the dialog box, grouped by level of difficulty. The tutorial games appear last in the list and the games of normal skill appear first. To select one of the games, just click on its name.

The list shows what rule settings apply to each game (see [Choice of Rules](#)) and how many levels there are. When you select a game, a box lower down the screen shows you further information about that game.

### 2.1.2 Selecting a Level

You can choose to start a game at any level, but it is best to start at level 1 and work up, especially if you are going for a high score. In general, the higher numbered levels are more difficult.

When you start the level selection dialog, the default level will be something reasonable, such as the last level you played or edited. You can select another level by using the spinbox arrows, by typing the level number into the spinbox or by moving the slider. The arrows at the ends of the slider increase or decrease the number by one. Also you can drag the slider with the left mouse button held down and change the level number rapidly. Or you can change the level number in steps of 10 by clicking in the space above or below the slider handle.

As the level number changes, a preview of the level appears in the small preview window and the level's name (if it has one) also appears.

### 2.1.3 Completing your Selection

When you have chosen a game and level, just click the main button at the bottom and proceed with your edit, play or replay.

Until you do that, nothing changes, so you can always click **Cancel** and go back to what you were doing earlier. Note that the game action is frozen while the dialog box is active, so you can continue playing where you left off if you choose **Cancel**.

### 2.1.4 Saving Changes

If you select an action on the **Game**, **Editor** or **Move** menu and you were previously editing and had not saved your changes, you will get a message asking you to save, abandon or continue your work. Neither the new action nor its dialog will begin until you have made a decision about your previous work.

### 2.1.5 Playing or Editing 'Any' Level

Note that the menus and dialog allow you to select and play or edit 'any' level. If you start a game after level 1, that is OK, you will just not get such a high score. Dedicated players often prefer to play high-numbered levels for fun, rather than go for a high score, or they might like to 'train' on higher levels before attempting a high score.

If you select a System level for editing, that is OK too, but you must save it in one of your own games: not back in the System game. For example you might want to modify a very difficult level so that you do not go back to the start of the level every time you die.

To see what this means, try the 'Challenge' game, level 16, 'The Three Musketeers'. That level has about ten difficult puzzles in it. When you have solved puzzle 1, you do not want to keep repeating it while you work on puzzle 2. The secret is to make an editable copy, then keep updating it and changing the hero's starting point, until you have solved all the puzzles. Then you can go back and attempt the real thing, from start to finish.

## Chapter 3

# The Menu Reference

### 3.1 Overview of Menus

#### Game

This menu contains options affecting game play, such as starting and finishing games, saving games, loading saved games and showing high scores (if available). The **Game** Menu also contains the **Quit** option, or you can quit by clicking the **X** at the top right of the KGoldrunner window.

#### Move

This menu contains an option to get a hint (if there is one). Championship and Tutorial games have hints on every level. Other games rarely have hints. It also contains options to replay recordings of play, as when running demonstrations, showing examples of solutions and replaying your own efforts.

#### Editor

This menu has everything you need to create your own games and levels and maintain them, including features to help you re-order levels or move them between games or to delete them when no longer needed. When you reorganize your levels, the level numbers in your game remain consecutive (no gaps) and the levels are automatically renumbered.

When you are using the Game Editor a graphical toolbar with tool tip text appears under the menu bar. See the [Game Editor](#) for more details of how to create and edit KGoldrunner levels.

#### Settings

This menu has several groups of KGoldrunner settings, including the choice of mouse, keyboard or hybrid (laptop) control and the choices of themes and game-speed. The current selections are checked. The settings are automatically selected when you start playing, but you can use this menu to vary them if you wish.

There is also an option to re-assign keyboard shortcuts and hero-control keys.

#### Help

The **Help** menu contains access to the KGoldrunner Handbook (this document), **About KGoldrunner** and **About KDE**.

There is also an option to report a Bug or Wishlist item.

If you would like to make a suggestion or you have some new levels to contribute, the current author's email address is in the **About KGoldrunner** menu item.

## 3.2 The Game Menu

### Game → New Game... (Ctrl+N)

Shows the level selection dialog box (see [Using the Level Selection Dialog Box](#)), where you choose a game and a level within that game. At first it is easiest to start at level 1, because the levels are arranged approximately in order of difficulty. Also it is best to start there if you are going for a high score.

### Game → Load Saved Game... (Ctrl+O)

Brings up a table of previously saved games, sorted with the latest first. Each line lists the game, level, number of lives, score, day of week, date and time. If you select a line and click the **OK** button, that game starts at the beginning of that level, with the lives and score you saved.

### Game → Play Next Level (Y)

Loads the next level in the current game, ready to play and without any further dialog. You can use this to browse quickly through the levels of a game.

### Game → Save Game... (S)

Saves the current game, level, lives and score. The option will only save the position and score as at the start of the current level. You can save when you are mid-way through a level, but KGoldrunner will still save the position (and score) as it was at the start of the level. You will receive a warning message about that. Before using this option, you should press a Pause key (**P** or **Esc**), to freeze the game as you move the mouse, but it is much easier to use the **S** key as a short-cut.

### Game → Save Edits... (Ctrl+S)

This option is enabled only if you have been using the Game Editor. It brings up the level selection dialog box and lets you choose a level number and game in which to save your work. Its action is exactly the same as the **Save Edits** option on the **Editor** menu and the **disk** icon on the Editor toolbar.

### Game → Pause (P or Esc)

Stops or restarts the game action.

### Game → Show High Scores (Ctrl+H)

Shows a table of up to ten high scores for the currently selected game. Each line shows the player's rank and name, the level reached, the score achieved, the day of the week and the date.

### Game → Kill Hero (Q)

Kills the hero when he is in a position from which he cannot escape.

### Game → Quit (Ctrl+Q)

Terminates KGoldrunner immediately. If a game is in progress, it disappears forever (unless you have just saved it) and there is no check for a high score. If you were editing a level, you are given an opportunity to save your work.

## 3.3 The Move Menu

### TIP

All the demo and replay moves will replay previously recorded levels. All can be interrupted and stopped by clicking on the playing area with the mouse, pressing the spacebar or selecting a menu item or shortcut (such as **Game** → **New Game...**).

**Move → Hint (H)**

Shows a popup hint, if there is one for the level being played. By convention, Championship and Tutorial games have hints on every level. Other games rarely have hints. The lower part of the KGoldrunner window shows whether a hint is available or not.

**Move → Demo (D)**

Plays a demonstration of play in a few recorded levels. These are the same as in the startup demo.

**Move → Show A Solution...**

Replays a recorded solution of a level, if there is a solution on file in the released game-data.

**Move → Instant Replay (R)**

Stops play in the current level and replays the recorded version from the beginning. If you interrupt the replay, you can continue playing from that point and try another approach. You can use this feature to build up a winning sequence of moves in stages, but that will invalidate any high score you might be working on.

**Move → Replay Last Level (A)**

Replays the recorded version of the last level you played, from the beginning (e.g. if you lost the level). If you interrupt the replay, you can continue playing from that point and try another approach. You can use this feature to build up a winning sequence of moves in stages, but that will invalidate any high score you might be working on.

**Move → Replay Any Level**

Replays the recorded version of any level you have previously played.

## 3.4 The Editor Menu

**Editor → Create Level**

Shows the Editor toolbar and a blank playing area on which you can draw a new level. When done, use **Save Edits** to assign the new level to a game and level number.

**Editor → Edit Level...**

Shows the level selection dialog box, where you choose a game and level to edit. You can choose a System game and level, but you get a warning that you can only save the edited level in one of your own games.

**Editor → Save Edits... (Ctrl+S)**

Shows the level selection dialog box with appropriate default settings for saving a new or edited level. You can change the game and level number and achieve a 'Save As...' effect. This dialog box has a special button, **Edit Level Name and Hint**, which shows a dialog box where you can add an optional name and hint to your level.

**Editor → Move Level...**

This is a two-part operation. Before using **Move Level**, you must load a level to be moved by selecting it for play or edit. The **Move Level** option then shows the level selection dialog box, where you choose a new place for the loaded level. You can change both the game and the level number, to move a level to another game, or you can just change the level number to re-order levels within a game. You cannot move a System level.

**Editor → Delete Level...**

Shows the level selection dialog box, where you choose a level to delete. You cannot delete a System level.



**Editor → Create Game...**

You need to use this option before you start creating your own KGoldrunner levels. It shows a dialog box where you can enter the name of a new game, a 1-5 character prefix for level-file names, the default rules for your game ('KGoldrunner' or 'Traditional') and an optional description or comment about the game.

**Editor → Edit Game Info...**

Shows the level selection dialog box, where you choose a game to be edited, then shows the game information in a dialog box where you can edit the name, rules and description, but not the file name prefix, in case you have saved some levels. That is because the prefix is used in level-file names internally.

## 3.5 The Settings Menu

**Settings → Full Screen Mode (Ctrl+Shift+F)**

Toggles the Full Screen mode on and off.

**Settings → Change Theme**

This submenu offers you a choice of background themes or 'worlds' in which to play. You can change the theme at any time, even as the game is playing. For those who are artistically inclined, it is possible to compose new themes, including graphics or sound or both and add them to KGoldrunner. Just contact the author for details.

**Black on White**

This theme is stripped down to its barest graphical units and painted in black and white only. It is intended to help players who may be visually impaired. The author would appreciate email responses on how effective it is and what improvements in visibility could be made.

**The Treasure of Egypt**

Matt Goldrunner finds himself in an Ancient Egyptian temple, being pursued by mummies who are determined to protect their ancestral jewels at all costs.

**KGoldrunner Default**

Gives you the default KGoldrunner theme, with red bricks and gray concrete.

**Geek City**

Our hero is trapped inside a computer. Will he escape when he finally reaches the last level?

**Nostalgia**

Recalls the days of the original Apple II and Commodore 64 game, as it was when you plugged your machine into your TV set — otherwise you had a monochrome monitor. For those who do not remember such heroic days, this is not an exact reproduction, but it gives you a general idea. For example the hero was all white back then, but today he is blue.

**Nostalgia Blues**

Recalls the Apple II game, where the bricks and concrete were a nice blue color, the hero was white, the enemies had white pants and orange (flesh-tint) tops and the gold was white boxes with orange panels. The whole effect was fuzzier (a sort of hardware anti-aliasing), which made the bricks look almost three-dimensional — difficult to recreate on today's pin-sharp monitors.

**Settings → Play Sounds**

Toggles the sounds on and off.

**Settings → Play Footstep Sounds**

Toggles the sounds of footsteps on and off.

**Settings → Demo At Start**

Toggles the startup demo on and off (see [Starting the Game](#)).

**Settings → Mouse Controls Hero**

Sets mouse control of the hero (see [Moving Around](#)).

**Settings → Keyboard Controls Hero**

Sets keyboard control of the hero (see [Keyboard Control](#)).

**Settings → Hybrid Control (Laptop)**

Sets hybrid control of the hero, for laptops, where the touchpad or other pointer device is used to guide the hero and the dig keys, on the keyboard, are used for digging left and right.

**Settings → Click Key To Move**

In keyboard mode, click a direction-key to start moving and keep on going until you click another key.

**Settings → Hold Key To Move**

In keyboard mode, hold down a direction-key to move and release it to stop.

**Settings → Normal Speed**

Sets normal game speed (10 units).

**Settings → Beginner Speed**

Sets beginner game speed (5 units, half of normal speed).

**Settings → Champion Speed**

Sets champion game speed (15 units, 1.5 times normal speed).

**Settings → Increase Speed (+)**

Increases the game speed by one unit, up to a maximum of 20 units (twice normal speed). You can use the + key as a shortcut.

**Settings → Decrease Speed (-)**

Decreases the game speed by one unit, down to a minimum of 2 units (a fifth of normal speed). You can use the - key as a shortcut.

**Settings → Configure Shortcuts...**

In the KDE desktop this item allows you to change the keyboard assignments (e.g. for keyboard control of the hero) or to assign your own shortcut keys for menu items.

## 3.6 The Help Menu

Contains the following standard KDE Help Menu items:

**Help → KGoldrunner Handbook (F1)**

Invokes the KDE Help system starting at the KGoldrunner help pages. (this document).

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### **Help → What's This? (Shift+F1)**

Changes the mouse cursor to a combination arrow and question mark. Clicking on items within KGoldrunner will open a help window (if one exists for the particular item) explaining the item's function.

### **Help → Report Bug...**

Opens the Bug report dialog where you can report a bug or request a 'wishlist' feature.

### **Help → Switch Application Language...**

Opens a dialog where you can edit the **Primary language** and **Fallback language** for this application.

### **Help → About KGoldrunner**

This will display version and author information.

### **Help → About KDE**

This displays the KDE version and other basic information.

## Chapter 4

# The Game Editor

### 4.1 Getting Started with the Editor

#### 4.1.1 Creating a Game

Before you create or edit a KGoldrunner level, you must create a game in which to save it. Use **Create Game** on the **Editor** menu. If you forget, you will be reminded.

The most important decisions to make when creating a game are to choose the rules you are going to follow ('Traditional' or 'KGoldrunner', see [Choice of Rules](#)) and to choose a unique 1-5 character file name prefix for your game and levels. You also need a name and description for your game, but those can easily be changed later.

The prefix is used internally by KGoldrunner to identify level files, high score files and saved games. You can use your initials as a prefix provided they are not the same as a KGoldrunner prefix. So far, the prefixes 'level', 'plws', 'wad', 'plwv', 'sot', 'cnt', 'CM', 'tute' and 'tutea' have been used.

The four-letter 'tute' prefix is reserved for tutorial games, which show the hint on each level as you play it. If you compose your own Tutorial game you could use the prefix 'tutex', to make it run as a tutorial but not get its files confused with those of the basic Tutorial or Advanced Tutorial (prefixes 'tute' and 'tutea').

#### 4.1.2 Creating a Level

When you have a game set up, use **Create Level** on the **Editor** menu to start creating a level. It provides you with a blank playing area of 28x20 squares, with the hero at the top left. You can put the hero somewhere else if you prefer and you do not have to use the whole 28x20 area. Lots of interesting levels use smaller areas.

The minimum requirement for a level to be playable is to have a hero who is standing on something at the top of the playing area, but that is a trivial case. More realistically, you could have a maze to solve and some visible ladders leading to the top of the playing area, but no gold. You do not have to have enemies, gold, bars, hidden ladders or even bricks. There are many challenging levels that have no enemies or no bricks, however most levels have at least one gold, some enemies and some hidden ladders that appear when the last gold is collected.

## 4.2 Editing and Testing

### 4.2.1 Editing a Level

Use **Edit Level** on the **Editor** menu to start editing an existing level or use **Create Level** to start editing a new level.

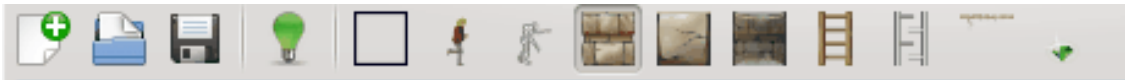
If you choose a System level, you are warned that you will have to save it in one of your own games. Otherwise, the default is to save the level back where it came from, but you can vary that.

### 4.2.2 Painting Objects in a Level

The picture below shows the edit toolbar, which appears when you first choose **Create Level** or **Edit Level** from the **Editor** menu and so change from Play to Edit mode. It disappears when you go back to Play mode. Note also that, in Edit mode, false bricks and hidden ladders are made visible in the playing area.

The three icons on the left of the edit toolbar have the same actions as the menu options **Create Level**, **Edit Level** and **Save Edits**. The other eleven icons are for editing and painting objects in your level.

From left to right the other eleven icons are **Name/Hint** (light bulb), **Erase** (background), **Hero**, **Enemy**, **Brick** (can dig), **Concrete** (cannot dig), **Trap** (also known as a false brick or fall-through brick), **Ladder**, **H Ladder** (hidden ladder), **Bar** (or pole) and **Gold**. The graphics for these icons, except for the light bulb, are copied from whatever KGoldrunner theme you are using.



The **Name/Hint** icon pops up a dialog in which you can create or edit your level's name and hint. Both are optional, but they are essential for tutorial levels and it is usual to provide them with very difficult levels, such as in Championship games (see the 'Vengeance of Peter W' game).

When you click on one of the other 10 icons, the mouse becomes a 'brush' that paints that icon. Initially the brush is set to 'brick'.

You paint either by pointing and clicking the left mouse button, to place a single object in a square, or by holding the left mouse button down and dragging the mouse, to fill a line or area, such as a long ladder, a large block of bricks or a concrete floor. Painting stops wherever you release the mouse button. If you make a mistake, you can use the right mouse button to erase it, or you can select the **Erase** icon and draw with that.

The hero icon works differently, because there can be only one hero. When you paint the hero, he moves from his previous position to wherever you release the mouse button.

### 4.2.3 Saving Your Work

When you have finished painting, save your work using the **disk** icon or **Save Edits** in the **Editor** menu or **Save Edits** in the **Game** menu. You must always save into your own games, never into the System games.

If you are creating a level, you use the Level Selection Dialog to assign it to a game and level number. You use the same dialog if you have been editing a level, but the default is to save it where it came from. You can change the game and level, to get a 'Save as...' effect. If you have been editing a System level you must save it as a copy in one of your own games.

#### 4.2.4 Adding a Level Name and Hint

On the Save version of the Level Selection Dialog box is a button marked **Edit Level Name & Hint**. You can use this to put the finishing touches on your level by adding a name and hint. Both are optional, but they are essential for tutorial levels and it is usual to provide them with very difficult levels, such as in Championship games (see the 'Vengeance of Peter W' game). Of course you can also use the **Edit Name/Hint** icon, at any time, to add or edit a name and hint.

#### 4.2.5 Testing a Level

After saving an edited level, you can test it by using **New Game** in the **Game** menu or the equivalent keyboard shortcut. By default the game and level number are remembered and you can get straight into the level with just a few clicks. If you then want to edit some more, the same is true when you use **Edit Level** again. It is essential to test every level you compose, to make sure that it is possible to complete it and that it is not too easy.

### 4.3 Reorganizing Games and Levels

#### 4.3.1 Moving a Level

You can use **Move Level** on the **Editor** menu to re-order or re-number the levels in a game or to move a level from one game to another. **Move Level** is a two-part operation. You must first load a level by selecting it for editing or play, then when you use **Move Level**, the Level Selection Dialog box appears and you can select the new level number and game (as required).

Moves leave no gaps in the sequence of level numbers in a game. For example, if you move level 10 of game A to level 3 of game B, levels 11 and above in game A are re-numbered down by one (to close the gap) and levels 3 and above in game B are re-numbered up by one (to make room for the newcomer).

#### 4.3.2 Deleting a Level

You can use **Delete Level** on the **Editor** menu to remove an unwanted level. The other levels are re-numbered so as to close the gap in the sequence.

## Chapter 5

# Tips, Tricks and Hints

### 5.1 Overview

This chapter presents some general tips and hints for playing KGoldrunner, as opposed to the specific hints you will find on the levels in tutorial and championship games (see [Move](#) → [Hint](#)). The hints are grouped as follows:

- [Dealing with Enemies](#)
- [Digging Puzzles](#)
- [Tricks with Gold](#)
- [Solving Difficult Levels](#)

### 5.2 Dealing with Enemies

- You can always trap a single oncoming enemy in one hole, get his gold and run on over him without killing him. It is often a good idea to dig behind you and delay him further, but that might kill him. In some levels it is not a good idea to kill enemies.
- You can usually trap two oncoming enemies in two holes, get their gold and run on over them, but this is dangerous if the enemies are separated by two or three spaces. Sometimes two holes kill one of the enemies and the other escapes and sometimes both escape. In KGoldrunner rules it is easier to trap two enemies and run over them, because they stay in the holes for longer.
- It is nearly always impossible to trap three oncoming enemies and run on over them. You will have to kill them, dig and drop through the floor or simply run away.
- Try to get all the enemies running together in one group. That way you will not get surrounded and you can do such fun things as collect gold while they run along behind you.
- Sometimes you can kill an enemy with two holes, but it often takes three to nine holes to kill one to five enemies.
- It is possible to kill an enemy with one hole if he is far enough away when you dig it.
- In the 'Traditional' game, you can trap an enemy permanently in a pit of brick or concrete. Stand near the edge of the pit on the opposite side to the enemy. As he approaches the pit, move down one square (to the level of the floor of the pit) and the enemy will usually run into the pit.

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- In some levels in the 'Traditional' game, you can force an enemy to climb a ladder ahead of you if you stand somewhere above the bottom of the ladder.
- In the 'KGoldrunner' game, you can trap an enemy in a pit by getting him to fall from above you, then running sideways and digging out before he reaches you.
- In the 'KGoldrunner' game, enemies cannot run through dug bricks, so you can sometimes use them as a barrier or hiding place.

### 5.3 Digging Puzzles

- To dig through more than one layer of bricks, start by digging as many bricks as there are layers, jump in, dig one brick less and so on.
- If you dig next to a ladder or a succession of bars, you can dig down through any number of layers and up to five or six bricks horizontally. Just return to the ladder or bars after digging each layer, then move down one square, run out and dig the next layer.
- If a digging puzzle looks impossible, consider that there might be some false bricks in it. Maybe the bottom layer is false or maybe you can stand in a false brick and dig next to it.
- Think about the order in which you will collect the gold. If you pick the right order, the digging might be easier.
- Some levels require you to dig away a brick wall, run in, collect some gold and run out again before the bricks close up and trap you.
- It is possible to dig while falling through empty space, if you can get the timing right. You do not need to have an enemy to ride upon. This is a bug which has become a 'feature' and is used extensively in the 'State of Terror', 'Count' and 'Curse of the Mummy' games.

### 5.4 Tricks with Gold

- If you cannot get to a piece of gold, think about getting an enemy to go there and get it. Even think about using an enemy's head as a bridge to get across a pit or precipice.
- In some levels there is a nugget that must be collected last of all, because you will need the hidden ladders to get away from that position.
- In some situations an enemy can be killed without giving up the gold he is carrying. The gold becomes a 'lost nugget'. You score no points for making an enemy lose a nugget, but at least you can finish the level.
- If there is nowhere to dig, keep the enemies running over concrete and the tops of ladders and so make them release their gold at random.

### 5.5 Solving Difficult Levels

- Try changing the speed settings to Beginner or even lower.
- Use the Editor feature to 'peek' at where the false bricks and hidden ladders are.
- Use the Editor feature to save the level in one of your own games, then you can edit it so that you do not always have to start at the beginning when you die. This allows you to develop the solution in easier stages.



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- In digging puzzles, look for false bricks you can fall into and thus have one less brick to dig. Or consider using an enemy to go ahead of you, so that you can stand on his head and dig.
- Look for a theme or trick in the level, such as riding down on an enemy's head, trapping all the enemies in a pit, luring the enemies to a corner where they will stay and not chase you, luring the enemies into pits you must cross to get to some gold, getting the enemies to fetch gold for you or finding spots where you can stand and make an enemy move to where you want him.
- Use **Move** → **Show A Solution...** to check if there is a recorded solution to the level. This will show you some ways to handle difficulties in the level, but not necessarily the best ways. There are often many ways to win a level and each time you play it there are small differences in timing, etc. So you probably will not be able to copy the recorded solution exactly.
- Use **Move** → **Instant Replay** or **Move** → **Replay Last Level** to replay a level to a point just before you had trouble, then interrupt the replay and try some other approach.

## Chapter 6

# Credits and License

KGoldrunner copyright 2003 Ian Wadham and Marco Krüger.

KGoldrunner is inspired by an early computer game called Lode Runner™ which was written in the USA by Doug Smith© and first released in 1983 by Broderbund Software©. It appeared originally on the Apple II and Commodore 64 computers, which was where the Wadham family and Marco Krüger became hooked. It was a major best-seller in its day and is one of the all-time great computer games.

You can find out more about Lode Runner™ and the various versions that have come out since 1983, on the website [Jason's Lode Runner Archive](http://entropymine.com/jason/lr/) (<http://entropymine.com/jason/lr/>). That site also has the story of the game's original development, in the file [misc/ldhist.html](#). Wikipedia also has a very good article on Lode Runner™, with interesting links to other sites.

KGoldrunner is an attempt to preserve the spirit of the original classic game on a platform that will be portable and will last more than a few years. It is available as free software in source code form. Copies of the original game are unobtainable now and the machines it ran on are going into museums.

Marco Krüger developed KGoldrunner as far as v0.3, out of nostalgia for the original Commodore 64 game. Ian Wadham added several features and levels and created the current version. Ian's elder son Peter composed the 100 levels in the 'Initiation' game and the 20 tricky levels in 'Vengeance of Peter W'. The other levels were composed by Ian, Peter, Marco Krüger and friends and Ian's other children, Simon and Genevieve.

Stuart Popejoy of New York contributed the 'State of Terror' game, in 2007, the first Championship game to use KGoldrunner rules and one of the most difficult games ever.

Steve Mann of Waterloo in Canada contributed the 'Count' game in 2008 and the 'Curse of the Mummy' game in 2008. Both use Traditional rules and both have interesting themes running through them, as well as being quite difficult.

Peter Wadham composed the sound effects in 2008 and Luciano Montanaro incorporated the sounds into the KGoldrunner program.

Special thanks are due to Mauricio Piacentini and Dmitry Suzdalev, who converted KGoldrunner to Qt™ 4 and KDE 4, and to the many graphics artists who contributed to the new SVG graphics and themes in the KDE 4 version: especially Mauricio Piacentini for the 'Default' theme and the new runners, Johann Ollivier Lapeyre for the ladders and bars, Eugene Trounev for the 'Geek City' and 'Treasure of Egypt' themes and, last but not least, Luciano Montanaro for the two 'Nostalgia' themes, the 'Black on White' accessibility theme, improvements to the runners, multiple backgrounds and several other ideas.

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## Appendix A

# Installation

### A.1 How to Obtain KGoldrunner

KGoldrunner is part of the KDE project <http://www.kde.org/>.

KGoldrunner can be found on the [download site](#) of the KDE project.

### A.2 Compilation and Installation

For information on how to compile and install KDE applications visit the [KDE Techbase](#)

Since KDE uses **cmake** you should have no trouble compiling it. Should you run into problems please report them to the KDE mailing lists.

## Appendix B

# Porting KGoldrunner to Other Platforms

KGoldrunner is written in C++, using Linux<sup>®</sup> and the free-software version of the portable Qt<sup>™</sup> object and GUI library. The current version can be compiled and run with KDE 4 and Qt<sup>™</sup> 4.

KGoldrunner depends on the KDE libraries (kdelibs and kdegames), which have been ported to other platforms, and it is possible to obtain Open Source editions of Qt<sup>™</sup> 4 for other platforms, so in principle it should be possible to compile, build and run KGoldrunner on platforms other than Linux<sup>®</sup>.