

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.

Chapter 1

Playing KGoldrunner

1.1 Introduction

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' or 'Vengeance of Peter W' games, but the 'Initiation' game has 100 levels and some are very difficult. It is a good game for achieving a High Score.

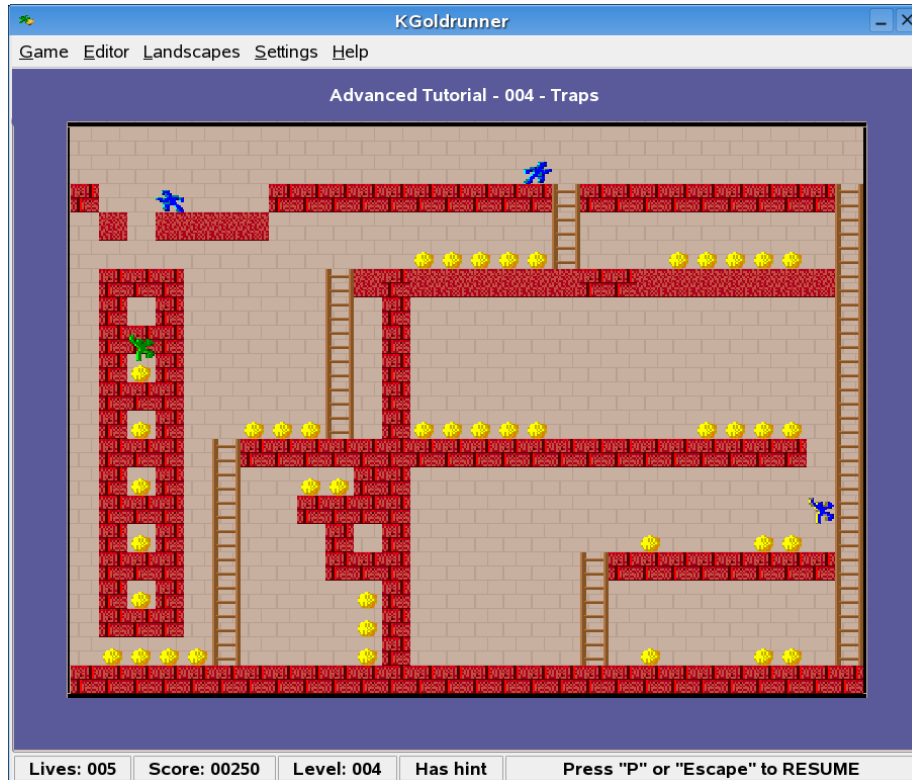
As you move to more advanced levels, you will find that KGoldrunner combines action, strategy, tactics and puzzle solving — all in one game. Good luck!

1.2 A Typical Game

Below is a typical game in progress. The hero (green) is at level 4 in the Advanced Tutorial game. The window's status bar 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**.

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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.



The enemy on the right is falling and carrying some gold. Notice his gold outline. The third enemy is about to come down a ladder to chase the hero. He 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

When the KGoldrunner window appears, click on the name of one of the games in the list displayed, then click on the Start Game button. Level 1 of the game you selected will appear and the mouse pointer will be over the hero. You start

play by moving the mouse, 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 (green) with the mouse, but you can also control him with the keyboard ([see below](#)). He moves towards wherever you place the mouse pointer. He cannot move as fast as you can move the mouse, but he will try hard to catch up. If the mouse 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 above, below or right at the mouse pointer. 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 mouse 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, if you have the KDE desktop version of KGoldrunner.

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 mode, he stops automatically when he gets to the mouse 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 (either **P** or **Esc**). You can resume by pressing the **P** or **Esc** key again. There is also a Pause option in the Game menu, but the problem is to get 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 mouse 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.

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 [Rules 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. An enemy who is carrying gold has a gold outline. You must get the gold away from him before you can finish the level.

If an enemy touches you or you move down onto one, you die and must start the level again, if you have any 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](#)).

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). You can be running, standing or falling when you dig. There must be an empty space or hole above the brick (i.e. no digging under a ladder, bar, gold, brick, concrete, false brick or enemy).

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, 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.

1.3.11 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'

1.4 Scoring

- Start with 5 lives.
- 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. Many 'Traditional' levels are impossible with 'KGoldrunner' settings. Most 'KGoldrunner' levels are easier with 'Traditional' settings, but the 'Traditional' games are no pushover. To make life easier, KGoldrunner automatically chooses the correct settings for a game when you go into it, but you can change them if you wish.

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 above 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.

The other differences are listed below:

- In 'KGoldrunner' play the enemies and hero always move at the same speed 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.

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- 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.
- 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.

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Chapter 2

The Level Selection Dialog

2.1 Using the Level Selection Dialog Box



This box appears when the game starts and also when you select options from the Game or Editor menus. You use it to choose a game and a level to play, edit, save, move 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 edit.

2.1.1 Selecting a Game

There are several 'System' games that come with the KGoldrunner release and they appear at the top of the list box. If you have composed games and levels yourself, they appear below the 'System' games. To select one of the games in the list, just click on its name.

When you select a game, the dialog automatically shows what rule settings apply (see [Choice of Rules](#)) and how many levels there are. The More Info... button shows you further information about the game.

2.1.2 Selecting a Level

When you are starting a game, the level is fixed at '001'. In other cases, such as this example, you can choose a level. The default selection will be something reasonable, such as the last level you played or edited.

You can select a level either by typing it in or by moving the slider. The arrows at the end increase or decrease the number by one. Also you can drag the slider with the left mouse button held down and change the number rapidly or you can change it by 10 if you click in the space to the left or right of the slider.

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) appears below the slider.

2.1.3 Completing your Selection

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

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 this dialog box appears, 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 or Editor 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. The level selection dialog box for the new action will not appear until you have made a decision about your previous work.

2.1.5 Playing or Editing 'Any' Level

Note that the menus 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. If it is a very difficult level, you might want to change it so that you don't 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 don't 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 attempt the real thing.

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, showing high scores and getting a hint (if available). The Game Menu also contains the Quit option. You can also quit by clicking the X at the top right of the KGoldrunner window.

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.

Landscapes This menu offers you a choice of landscapes (actually color schemes) in which to play. All the landscapes have keyboard shortcuts, so you can actually change the landscape as the game is playing. Try **Shift+A**, to switch to the nostalgic Apple II landscape.

Settings This menu has four groups of settings: the choice of mouse or keyboard control, the game-speed options, the choice of of 'KGoldrunner' or 'Traditional' playing rules (see [Choice of Rules](#)) and lastly the options to increase or decrease the size of the playing area. 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.

On the KDE desktop version of KGoldrunner, there is also an option to re-assign keyboard shortcuts and hero-control keys.

Help The Help menu contains an option to get a hint (if available), access to the KGoldrunner Handbook (this document), About KGoldrunner and About KDE (or About Qt Toolkit).

In the KDE desktop version, 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, where you choose a game (which will start at level 1).

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 Any Level...** Shows the level selection dialog box, where you choose a game and a level to play.

Game → **Play Next Level...** Shows the level selection dialog box with the game and level set to one more than previously. You can then choose to play that level or another.

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 must 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 Highscores (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 → **Get Hint** If the current level has a hint, this option pops it up. The option is 'grayed out' if there is no hint. The status bar also has a section to show you whether there is a hint for the current level. It is customary for championship and tutorial games to have a hint on every level.

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 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 Any 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 → **Edit Next Level...** Shows the level selection dialog box with the game and level set to one more than current. You can then choose to edit that level or another.

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.

3.4 The Landscapes Menu

Landscapes → **KGoldrunner (Shift+G)** Gives you the default KGoldrunner landscape, with red bricks and wooden ladders.

Landscapes → **Apple II (Shift+A)** Gives you a nostalgic look at the original Apple II game, as it was when you plugged your Apple II into your TV set — otherwise you had a monochrome monitor.

Actually, 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.

Landscapes → **Ice Cave (Shift+I)** For fans of the movie 'Superman' or the James Bond movie 'Die Another Day' — or you can use it on a hot day.

Landscapes → **Midnight (Shift+M)** For real KGoldrunner addicts, on those late-night sessions.

Landscapes → **KDE Kool (Shift+K)** Inspired by the icon colors on the KDE desktop.

3.5 The Settings Menu

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 → **Normal Speed** Sets normal game speed (12 units).

Settings → **Beginner Speed** Sets beginner game speed (6 units, half of normal speed).

Settings → **Champion Speed** Sets champion game speed (18 units, 1.5 times normal speed).

Settings → **Increase Speed (+)** Increases the game speed by one unit, up to a maximum of 24 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 3 units (a quarter of normal speed). You can use the - key as a shortcut.

Settings → **Traditional Rules** Sets Traditional default playing rules (see [Choice of Rules](#)).

Settings → **KGoldrunner Rules** Sets KGoldrunner default playing rules (see [Choice of Rules](#)).

Settings → **Larger Playing Area** When KGoldrunner starts, it chooses the size of the playing area (in pixels), based on your screen's resolution (e.g. 1024x768). This option allows you to expand the playing area, up to a maximum, and enlarge all the corresponding graphics.

Settings → **Smaller Playing Area** When KGoldrunner starts, it chooses the size of the playing area (in pixels), based on your screen's resolution (e.g. 1024x768). This option allows you to reduce the size of the playing area, down to a minimum, and shrink all the corresponding graphics.

Settings → **Configure Shortcuts...** In the KDE version only, 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

In addition to the standard items listed below, KGoldrunner has the following special entry:

Help → **Get Hint** If the current level has a hint, this option pops it up. The option is 'grayed out' if there is no hint. The status bar also has a section to show you whether there is a hint for the current level. It is customary for championship and tutorial games to have a hint on every level.

The following are standard items:

Help → **KGoldrunner Handbook (F1)** Invokes the KDE Help system starting at the KGoldrunner help pages. (this document).

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.

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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', 'tute' and 'tutea' have been used and 'trad' and 'chmp' are reserved for future use.

The four-letter 'tute' prefix is reserved for tutorial games, which show the game description and hints on levels as they play. 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, a gold nugget he can get to and a visible or hidden ladder leading to the top of the playing area. You do not have to have enemies, bars or even bricks. There are many challenging levels that have no enemies or no bricks.

4.2 Editing and Testing

4.2.1 Editing a Level

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

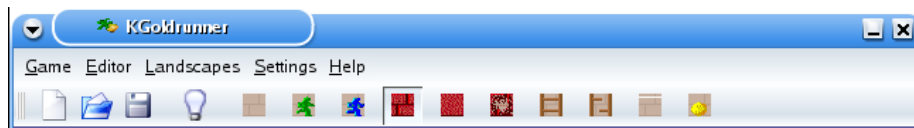
If you choose a System level, you are warned that you will have to save it in one of your own games. Otherwise, the default is to save the level back where it came from, but you can vary that.

4.2.2 Painting Objects in a Level

The picture below shows the menubar and the edit toolbar, which appears when you first choose Create Level, Edit Any Level or Edit Next 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 Any 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 Edit Name/Hint (light bulb), Empty space (background), Hero, Enemy, Brick (can dig), Concrete (cannot dig), Trap (can fall through), Ladder, Hidden ladder, Pole (or bar) and Gold nugget.



The Edit 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 (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 Empty space icon to erase it.

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 (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 Play Any Level in the Game menu. 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 Any Level again.

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

Questions, Answers, and Tips

5.1 Overview

This chapter presents some general hints for playing KGoldrunner, as opposed to the specific hints you will find on the levels in tutorial and championship games (see [The Help Menu](#)). 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.
- 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.

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- 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.
- 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.

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.

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.
- 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.

Chapter 6

Credits and Licenses

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 got 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](http://entropymine.com/jason/lr/misc/ldhist.html).

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.

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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 in the kdegames package on <ftp://ftp.kde.org/pub/kde/> , the main FTP site of the KDE project.

A.2 Compilation and Installation

In order to compile and install KGoldrunner on your system, type the following in the base directory of the KGoldrunner distribution:

```
% ./configure
% make
% make install
```

Since KGoldrunner uses **autoconf** and **automake** 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® and the free-software version of the portable Qt™ object and GUI library. The current version can be compiled and run either with KDE 3 and Qt™ 3 or with Qt™ 3 alone.

The Qt™-only version of KGoldrunner is intended to be almost independent of Linux® and the KDE desktop. That means it should be fairly easy to port to other operating systems, such as Windows® and Macintosh, because the Qt™ library and C++ language are portable to other operating systems and the KGoldrunner source code is available as free software.

If you would like to port KGoldrunner, please email Ian Wadham at ianw@netspace.net.au, to obtain the latest version of the Qt™-only code and the Technical Details document. Of course, you must have your own C++ development setup on your target machine. Also, the Qt™ library is *not* free software on Windows® and Macintosh, so you will need to have access to a system with a paid Qt™ Development licence.