Rule the Rail!
User's Manual

www.brainbombers.com

1. General Description

1.1 The Builder

The game is a plotting table constructor. It can compile fully functioning plotting tables. The Builder provides the player with the possibilities of constructing and altering the railway network; placing and tinting field objects, plus editing relief and applying texturing. The individual editorial functions are accessible in the Main Menu and in the Builder windows. While still under construction, the plotting table is already fully operational, therefore both the editing and operating of the plotting table is carried out in the same section of the game. Parts of the completed scenario can be selected and relocated with a single click, and edited in a straightforward manner, while operation on the railway under construction is not interrupted.

1.2 The Railway Network

The table can be operated either by analogue or digital control.

1.2.1 Analogue Control

In analogue control, engines placed on the tracks will start moving if there is a power source attached. Tracks can be isolated from each other, so certain sections of a network can have their own power supply system. Operating power sources can either be carried out manually via the control board or through the controls located along the railroad. Controls are set into operation when an engine crosses them and it is at this point that they will have their effect along the parameters previously set during the phase of construction. Through the controls as well as the control board it is not only power sources that can be operated but also switches, detachments, signals and crossing gates. In analogue control signals mark the power supply status of the track, so the control of power supplies and signals have a mutual effect on each other.

The advantages of analogue control are that:
- engines can travel at any speed set, up to their maximum speed.
- it is easy to set a particular part of the track where an engine can travel back and forth.
- it is easy to control the engines directly from the Control Board.

1.2.2 Digital Control

In digital control, there are no power supplies, and tracks cannot be isolated. All trains are controlled by signals. To start an engine, the respective signal must be set to 'GO'. The engine will set off at its maximum speed, and will keep going until it reaches another signal, set to 'STOP'.

The advantages of digital control are that:

- it is not necessary to place power supplies and insolations as engines are controlled only by signals.
- trains can travel on the same track, even in opposite directions without complicated control.
- the travelling direction of an engine can be altered easily by a switch in a loop.

1.3 The Trains

One engine is capable of towing up to 20 wagons at differing speed, depending on their type. It is also possible to include more than one engine into one single train: in this case the number of wagons that they can tow grows proportionally.
Please Note!
If an engine or wagon runs over a switch not in the right position it will be damaged and will start to smoke and spark. All the trains will stop at once and they will start again only after the faulty engine or wagon has been selected and deleted.

1.4 Viewing of the Table Under Construction

The game generates a fully 3D world. In this 3D world, the view can be altered via the use of icons available in the Main Menu by one single click of the mouse. It is possible to zoom in very close and also take a look from a bird's eye perspective. There is also another special way to view this 3D world. It is possible to place the camera into the compartment of the engine-driver, to examine the already prepared plotting table from there while travelling. The game is also capable of generating daylight and night viewing. This can be chosen from the Main Menu. While using the night function it is also possible to edit the table continuously: in this case the effect of placing individual lamps and candelabra can be experimented with better effect.

1.5 Constructing a New Plotting Table

The first step is to specify the dimensions of the newly created table. The default is 4x3 units and naturally, this can be modified. 1 unit approximately equals 100 metres. The maximum size is 10x10 units.

It is also here that the player specifies whether the table is to be digital or analogue with respect to control.

2. The Main Menu

2.1 Changing View #1 ( )

Click this icon to change the view. Hold the left mouse button pressed: moving the mouse forward and back will change the distance of the camera from the table, while moving right and left will rotate the camera around the point that it is focusing on.

2.2 Changing View #2 ( )

Click this icon to change the viewing angle. Hold the left mouse button pressed: moving the mouse forward and back will change the viewing angle, while moving right and left will rotate the camera around the point that it is focusing on.

2.3 Camera Placement ( )

Click this icon to activate the Camera Placement function (also indicated by the pointer). It is now possible to click on one of the engines or wagons: this will place the camera above the selected object. In this mode you can control the camera with the X, <=, => buttons. A second click on the icon will change the camera back to default viewing.

2.4 System info ( )

The objects that can be placed on the table (buildings, plants, engines, wagons, etc.) are contained in so called Object Files. Parts of these files are free (base_objects.xli and base_trains.xli) and the others are available separately for the program. If you click on the icon, the Object Files and their state that can be found on the system will be in a list. You can find out here whether the installation of the particular Object Files were successful, or the password to activate them is missing.

2.5 Toggle Day-Night View ( )

Click this icon to toggle between Day or Night Viewing. The Night View will only show objects if lamps, buildings with illuminated windows, engines or passenger cars with lighted windows have been placed on the table.

2.6 Activate System Menu ( )

Click this icon to activate the System Menu, which contains the following items:

1. Save
2. Load / Construct New Table
3. Options
4. Quit

2.7 Enable Editor Pointer ( )

If the Edit Terrain, Edit Tracks or Object Selection window is active, click this icon to access the default building functions (select, move, copy, paste, delete) irrespective of whatever object is currently being dragged by the pointer.

2.8 Selection Options ( )

Click this icon to activate a window in which it is possible to specify what groups of objects will be included in the selection. The 4 groups of objects are as follows:

1. Tracks
2. Buildings
3. Plants
4. Wagons and engines

By using this window, it is possible to select with the marquee, e.g. only the plants, within a given area.

2.9 Copy ( )

Click this icon to copy the selected objects to an inner clipboard. Please note that engines and wagons cannot be copied.

2.10 Paste ( )

Click this icon to paste the contents of the inner clipboard. The newly pasted objects are immediately selected to indicate their location.

2.11 Delete ( )

Click this icon to delete the selected objects.
Please Note!
Once deleted, the selected objects are lost forever!

2.12 Field Objects ( )

Click this icon to activate the Place Objects window. Select the object you wish to place, then click on the table to place it. Prior to placement, hold the right mouse button pressed and move the mouse left and right to rotate it. Field Objects are assigned to the following subcategories:

1. Residential buildings
2. Plants
3. Railway buildings
4. Industrial objects
5. Miscellaneous objects / Others

2.13 Place Trains ( )

Click this icon to activate the Place Trains window. Select the wagon or engine you wish to use, then click on a track to place it. If the engine or wagon you have selected cannot be placed on a given piece of track the pointer will display a 'no parking' sign. To rotate an engine or wagon

before placement keep the right mouse button pressed and move the mouse left to right. Wagons and engines are assigned to the following subcategories:

1. Engines
2. Goods wagons
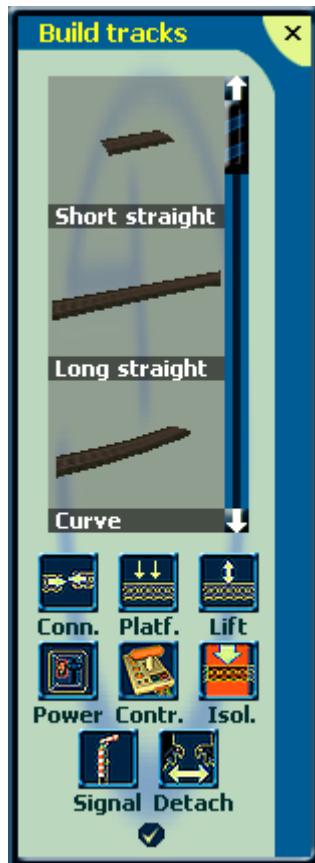3. Carriages

2.14 Build Tracks ( )

Click this icon to activate the Build Tracks window. For a detailed description: see below.

2.15 Edit Terrain ( )

Click this icon to activate the Edit Terrain window. For a detailed description: see below.

3. Builder Windows

3.1 The Build Tracks Window

The following functions are accessible in this window:

1. Scrollable List
Use this list to select tracks and click the table to place them. Prior to placement, hold the right mouse button pressed and move the mouse left or right to rotate the track to be placed. When, on placement, the ends of two tracks are close to each other and their positions are also appropriate, they will automatically connect.

2. Connect Tracks

This function is to be utilized when a railroad has been constructed but cannot be closed since there is no straight track of the required length. First, click on this icon, then click the two tracks to be connected. Provided that it is possible, the track ends will automatically connect.

3. Levelling Tracks ( )

This function works in two different ways depending on whether there are already selected tracks or not.

- In the latter case use the function to level tracks. When tracks are lifted, the neighbouring ones will downgrade. If you would like to place more tracks at a given height, pick this option. Click the icon first, then pick the track with the reference height, click it, and hold the left mouse button pressed. After this, move the pointer over the tracks to be levelled: their height will be set to that of the reference track.
- If the player has already selected tracks prior to using the function it works in a different way: it will adjust the level of the surface exactly to that of the selected tracks. This is the simplest way to create tracks running on highlands or climbing hills.

4. Lift Tracks ( )

Use this function to lift connected tracks from the ground level. First select this function, then click on a track section, and hold the left mouse button pressed to lift the selected section.

5. Place Power Supply ( )

Click this icon to give power supply to tracks. While the pointer is floating above the tracks, a red arrow will appear to mark where it will attach to the railroad. While placing, it is required to specify the default values of the power source (-10 +10), to name the power source, and whether or not it is to be displayed on the Control Board. This function cannot be chosen in the case of digital control.

6. Place Control ( )

Click this icon to place control units. First, specify the location by clicking on one of the tracks, then make your choice among the objects marked by red arrows (switch, power source, detachment, signal, crossing gate). Finally, you have to specify the control features, which are dependent on the object to be controlled.

For a switch, you can specify the following:
  1.a Switch straight
  1.b Switch to curve
  1.c Switch reverse
  2. Start control with an initial time delay of...
  3. Identifier for control

For a Power Source, you can specify the following:
  1.a Switch ON at the predetermined value
  1.b Switch OFF

1.c Switch reverse (ON > OFF or OFF > ON)
2.a Default power value
2.b Power value set as defined
3. Start control with an initial time delay of...
4. Identifier for control

For a detachment device, you can specify the following:
1.a Detachment ON
1.b Detachment OFF
1.c Switch reverse (OFF > ON or ON > OFF)
2. Start control with an initial time delay of...
3. Identifier for control

For a signal, you can specify the following:
1.a Switch to FREE (also controls power source attached to the relevant section)
1.b Switch to STOP (also controls power source attached to the relevant section)
1.c Switch device (FREE > STOP or STOP > FREE)
2. Start control with an initial time delay of...
3. Identifier for control

For a crossing gate, you can specify the following:
1.a Close gate
1.b Open gate
2. Start control with an initial time delay of...
3. Identifier for control

Controls are put into operation by the crossing of an engine; wagons passing through do not trigger any control.

The modification or deletion of the controls already set can be done in the same way as when a new control is placed on a particular track. The program will ask whether you wish to place a new control or edit an existing one. If you choose Edit it is possible to modify the given characteristics or delete the selected control by clicking Delete.

7. Place Isolation ( )

Use this function to isolate connected tracks from each other electronically, and create sections with independent power supplies. Once the isolation is placed, it is marked on the rails by a red line.
This function cannot be chosen in the case of digital control.

8. Place Signal ( )

Click this icon to place a signal. While the pointer is floating above the tracks, a red arrow will appear marking where the signal is to be placed: click to pick your choice out of the two possible

locations. While placing, it is required to name the signal, and whether or not you wish it to be displayed on the Control Board.

9. Place Detachment ()

Click this icon to place a detachment. While the pointer is floating above the tracks, a red arrow will appear to mark the location of the device. While placing, it is required to name the individual detachment, and whether or not it is to de displayed on the Control Board. When the wagons move over the location, they will detach from each other, or from the engine.

3.2 The Edit Terrain Window

1. Texture Edge ()

Click this icon to choose whether a texture that is applied to the terrain will have a clear edge or will be blurred with the current texture of the region.

2. Transparency

Click this icon to make the terrain transparent: railroad sections running in tunnels will be visible and thus easy to edit.

3. Darken

Click this icon to darken the hue of the terrain. Having selected this function, hold the left mouse button pressed, and move the pointer over the area to be darkened as if using a brush.

4. Brighten

Click this icon to brighten the hue of the terrain. Having selected this function, hold the left mouse button pressed, and move the pointer over the area to be brightened as if using a brush.

5. Choosing colour component

These buttons will show which colour component (red/green/blue) should be effected by the Darken or Brighten functions described above. If all three components are selected, the result is a simple darkening or brightening effect. If the components are selected separately, painting is possible.

6. Edit Relief

With this function, you can create hills and lakes. Having selected this function, hold the left mouse button pressed, and move the pointer to create them. The actual shape of the hill or lake is affected by the Relief Effect slider.

7. Relief Effect

Use this slider to determine the shape of the hill or lake to be created. If the slider is on the left end of the scale, the hill will be peaked; if on the right: rounded.This slider also specifies the brush size when texturing the surface; or the size of the surface to be worked on when creating a plateau.

8. Plateau

With the help of this function, you can create a plateau. Having selected this function, hold the left mouse button pressed, and move the pointer over the area as if using a brush. The points of the relief will have the same height as that of the one over which the left mouse button was pressed.

9. Choose Terrain Texture
Use this scrollable list to choose a texture to paint the terrain with. To apply a texture: first, choose from the window, then move the pointer over the area to be re-textured, hold the left mouse button pressed and move the mouse as if using a brush.
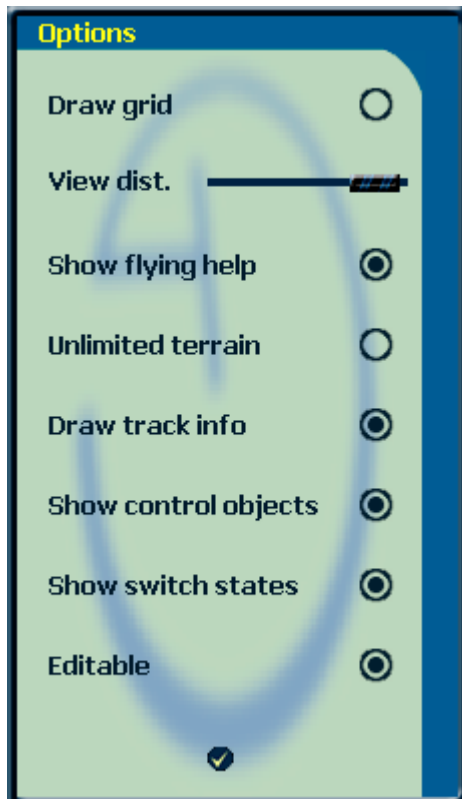

10. Used resources (Used res.:   0.00 %)

This is information data which shows the amount of resources used in choosing a terrain texture. If more texture is blended together, then more resources are necessary. The percentage can go above 100% but in the case of higher percentages, the speed of the drawing of terrain can become slower depending on the system the game is being run on.

11. Resize terrain
With this function it is possible to resize the terrian under construction. After having been resized there can be some mistakes in the texture which must be corrected by repainting.

3.3 The 'Options' window

The 'Options' window provides the following possibilities:

1. Display grid
    Using 'aid lines' helps to construct rows of trees or houses.

2. Setting distance of vision
   If the distance of vision is set lower, the smaller objects will not be drawn, which will rise the speed of play.

3. Display Help
   If the pointer is placed above the icons of the Main Menu, a short text help will appear about that particular function.

4. Unlimited terrain
   If this function is chosen, the size of terrain is unlimited no matter what the original size of the plotting table is. However, construction can only be on the original size of the plotting table.

5. Display Track information
   If chosen, the names of switches, power supplies, signals and gates will be displayed.

6. Display controls
   If chosen, the controls, isolations and power supplies already placed will be displayed. When an engine travels through a control, the activation of this control will be shown and a red line will appear for a short time in the direction of the object being controlled.

7. Display the state of switches
   If chosen, a visible sign will show the state of switches on the plotting table.

8. Plotting table construction
   If this is not chosen, all construction tools are banned (cannot be used).

4. Basic Functions Available Outside Menu

4.1 Panning Table

Besides the type of camera movement available in the Menu there are also two others: push the pointer to the edge of the screen to scroll the view automatically; or keep the right mouse button pressed to move the viewing angle faster up to the desired location.
To zoom the view use the mouse wheel.

4.2 Selecting Objects

1. Click-to-select
Objects on the table can be selected by one simple click. A half-transparent sphere will appear around the selected object or, in case of tracks, red marking. For multiple object selection, keep CTRL pressed, or use the marquee.
Please note: the object will NOT be selected, if its type is excluded in the Object Selection window.

2. Marquee Selection
Use the marquee for multiple selection. Click on a spot on the plotting table where nothing has been placed. Keep the left mouse button pressed to activate the marquee. Objects within its scope will be selected, except for the ones whose type has been excluded in the Object Selection window.

3. Railroad Selection
It is possible to select connected tracks quite simply. To do this, double-click on a track, and the whole railroad connected to this track will be selected.
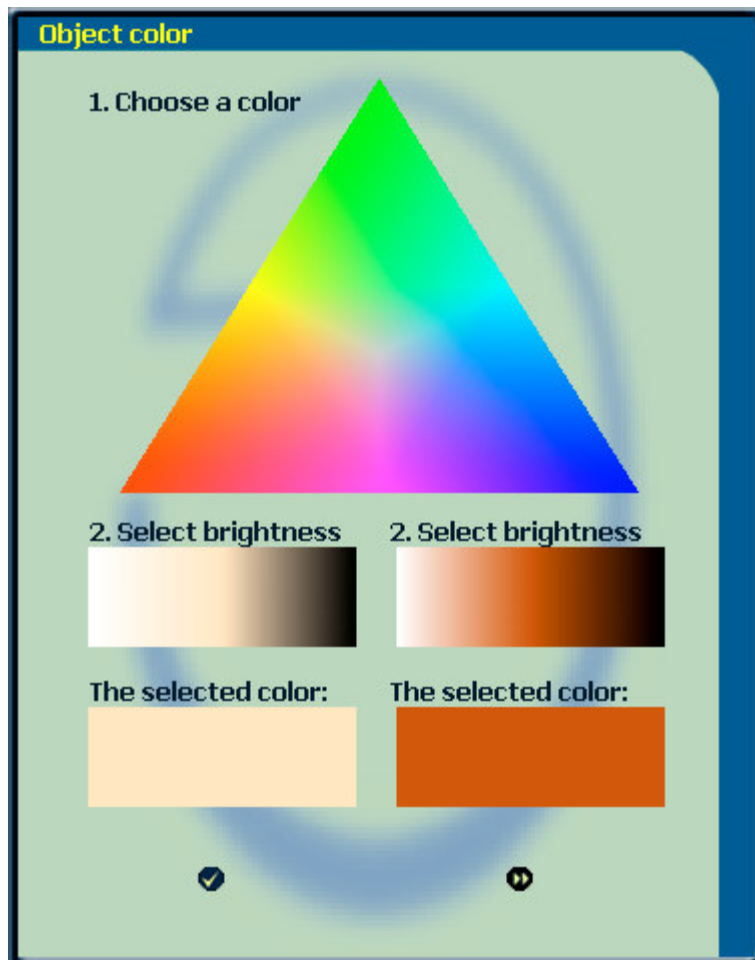
4.3 Moving Objects

Selected objects are easy to move or rotate. To move an object, simply click on the desired object and hold the left mouse button pressed to relocate it. To rotate, press and hold the right mouse button as well (while still holding the left one pressed) and move the mouse to rotate the object according to the desired degree.

4.4 Moving trains manually.

Left-click engines and wagons already placed on tracks to select them, and keep the mouse button pressed to push them along the track system. This function is particularly useful in assembling trains or in testing installed control switches. WARNING: pushing a train manually on a switch set in the wrong direction will derail it, and you must delete the derailed, sparkling and smoking engine or wagon for correct functioning.

4.5 Repainting Objects

The majority of the objects can be repainted. To do this, right-click on the given object. If its colour can be changed, a window will pop up with a triangular palette in it.

Click the palette to choose a colour. Its different hues will be displayed in the box below (or boxes, provided that the lower and the upper sections of the object can be repainted independently of each other). Click the box to pick your final colour. The colour will be displayed and applied to the object after you have clicked the OK button in the window.

4.6 Changing the attributes of the switches

Right clicking on the switches enables you to change the attributes. The name of the switch can be changed and whether or not it will be shown on the Control Board.
Please note: if the track selection is banned in "Selection Options", the attributes cannot be modified.

4.7 Editing the properties of the controls

Right clicking on the controls enables you to change the properties without opening the 'Edit tracks' window.

5. The Control Board

At the bottom of the screen you can find the Control Board, which is displayed only if controllable units have already been placed on the table (power source, switch, detachment device or signal). The corresponding controls will appear on the control board one after the other, and devices can be controlled from here with the use of the mouse.

- Click the switch icon to reverse its position
- Click the power source slider and hold the left mouse button pressed to set the value of power directly (analogue control only). The power value also directly controls the state of signals located along the tracks powered by the given power supply.
- Click the detachment device icon to switch it ON or OFF.
- Click the signal icon to switch it FREE or STOP. In the case of analogue operation the signal control automatically sets the power supply of the given track section.

Elements on the Control Board can be controlled with no restrictions, even if they are influenced by switches placed on the rails.

Click the close icon on the left-hand side to hide the board, and click the replacement icon to activate it again.

5.1 Editing the control board

If you would like to change the order of the controls on the control board, right-click the one you want to select and keep the button pressed while you drag it into its desired location.

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