

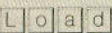
# LOGICAL

## LOADING INSTRUCTIONS

### AMIGA

To avoid the danger of computer viruses, please first turn off your Amiga and turn it on again after a few seconds. Amiga 1000 users must now insert the Kickstart disk. As soon as the screen shows the icon of the Workbench disk insert the game disk into drive DF0. The program will start automatically.

**IBM-PC** Start your computer as usual. Insert disk 1 into your disk drive and type A: or B: (depending on your disk drive) Type INSTALL and confirm with RETURN/ENTER/EINGABE. Please follow the instructions on the screen.

**C 64 Disk** Insert the game disk into your disk drive and type  Press the RETURN key. The program will start automatically. Follow the instructions on the screen.

**C 64 Tape** Rewind the tape and insert the tape into the data recorder. Press SHIFT and RUN/STOP simultaneously. Now the message 'PRESS PLAY ON TAPE' will appear on the screen. Press PLAY on your recorder. The program will start automatically. Follow the instructions on the screen.

### The game

'Logical' contains 99 levels with increasing difficulty and increasing amounts of new game elements. LOGICAL is based on a very simple idea: Coloured marbles enter the playing area on a horizontal bar graph at the upper part of the screen and fall into rotatable 4 hole receptacles. Try and collect four of one colour in each receptacle. When a receptacle is filled, it will explode and becomes empty for new marbles. When all receptacles on screen have exploded, the level is complete. You will recognize exploded receptacle because the marble slots will appear in black. There are four different colours in Logical: red, yellow, green and blue. Time for the marbles in the horizontal bar graph is of cause limited. The remaining time is indicated on the horizontal shaded bar graph is built up from right to left.

### ADDITIONAL GAME ELEMENTS

#### The marble display

You will find this display in all levels. This indicates how many marbles are actually moving in a channel system. When four marbles are in this system, you cannot shoot one of the marbles out of a receptacle before you have put one of the four marbles in a receptacle.

#### The hour-glass

This time limit is indicated by the hour-glass. If no hour-glass is displayed, there is no time limit for finishing the level.

#### The colour stoppers



These elements only permit marbles through which have the same colour as the stoppers.

### **The colour changers**

These elements change the colours of all passing marbles to the colour of the changers. Like the colour stoppers, colour changers can appear in all four colours.

### **Direction arrows**

They have two features: Firstly, they redirect marbles in the arrow direction. Secondly, they turn some channels into one-way streets, and push back marbles which want to enter the appropriate channel.

### **Lights**

A level with traffic lights means trouble for you: Only when you have filled a receptacle with four marbles of the same colour, which corresponds to the colour of the upmost traffic light, will the filled receptacles explode.

### **Colour handicap**

It only appears at later levels. It means that you will have to fill the receptacles with a combination of colours indicated in the receptacle. From time to time these combinations disappear, then you can fill the receptacles with same coloured marbles again.

### **Colour forecast**

It gives you the chance to plan your action ahead. It means that the colour of the next marble to enter the horizontal bar graph is indicated in advance.

### **Teleporters**

You will find one horizontal and vertical teleporter at a level. Both horizontal teleporters and both vertical teleporters belong together.

### **Control of 'Logical'**

**Amiga:** The best control over 'Logical' is with a mouse. Move the cursor as usual over the playing area. To rotate a receptacle, place the cursor over the field and press the right mouse button. The receptacles rotate in 90 degrees steps clockwise. To shoot a marble from a receptacle to another, move the cursor over the marble and press the left mouse button.

**IBM-PC:** Control with the numeric keypad:

Place your middle finger over the 5 key. Move the cursor with the keys 8 (up), 4 (left), 6 (right) and 2 (down). Press the 5 to rotate a receptacle in 90 degree steps. To shoot a marble, press the SHIFT key and the appropriate direction key (8,4,6,2) simultaneously.

Control with the main keyboard

Place your middle finger over the J key. Move the cursor with the keys U or I (up), H (left), K (right) and N or M (down). Press J to rotate a receptacle in 90 degree steps. To shoot a marble, press the SHIFT key and the appropriate direction key simultaneously.

**C64 control:** Use your joystick in port 2. Move the cursor over a receptacle. To turn the receptacle in 90 degree steps, press the joystick button momentarily. To shoot a marble out of the receptacle, press the joystick button and keep it pressed until you have chosen the direction the marble should go.

To pause the game, press the space bar. To continue playing, push any key.

### **Scoring**

At the end of each level you will get your score. The score depends on how long it took you to complete the level, that means how long it took to explode all receptacles. After completing the level, the computer calculates how much time is left of the original time for the appropriate level. Your score is the time left times 10. There are various opportunities to raise your score: If a receptacle explodes with four same coloured marbles, you will get no special score - that would be too easy... But, if you manage to have them explode with different coloured marbles, you will get 500 additional points. This can only happen if there is a colour handicap in the level. Without these colour handicaps you cannot gather additional points. After finishing the game you can enter the highscore list where the best ten players are listed.

### **Copy protection**



When you start Logical, a screen appears and displays five fields with different coloured receptacles. You will also see a letter and a number. Take your manual and refer to the table. Move the cursor over the appropriate receptacle and press the mouse button, joystick button or press ENTER.

### Start game

When you press a mouse button, the fire button of your joystick or a key of your keyboard, you enter the start menu of Logical. You will find various options:

**PASSWORD** - When you click on this option, the computer asks you for a password, which you have obtained at previous levels. This password refers to the level name, which is indicated before you start playing a new level. Type this name and you will enter the appropriate level. Please remember that you will not receive any points for the preceding levels before your level. You will nevertheless obtain the full amount of the three lives.

**SOUND** - Switch music on or off. If you are playing with an IBM-PC or compatible without an additional sound card you cannot use this option.

**SOUND FX** - Switches sound effects on/off.

**GRAPHICS** - Select which kind of graphics you would like to play with.

**OWN SET** - When you have already edited or saved own levels, you can click on this field to load your own levels into the computer. The computer asks you to insert the disk with your levels. Click on Start to start the game.

**START** - Click here to start game.

### Passwords

With the calculation of your score at the end of each level you get a new password.

### The Editor

When you have completed the 99 regular levels of Logical, the program gives you a password for an editor with which you can design and construct your own levels. Enter the password as a normal level password. You will enter the editor directly.

The editor consists of 2 screen parts. You can switch between these parts: A selection part where you chose your game elements, load and save levels and set a number of parameters. A level part where you can design the playing area. Switch between the two part by clicking on the right mouse button/TAB-key on your keyboard.

**'PUT'** - This option enables you to copy the actual level from the selection part into sort of a buffer. You now have the possibility to change elements in a finished level without loosing the original design.

**'GET'** - This is the opposite of the PUT option. Get a level out of the buffer. The contents of the selection part is now lost.

**'CHNG.'** - 'Change' enables you to change the contents of the selection part with the contents of the buffer.

**'CLR'** - Deletes the actual level part.

**'TEST'** - This features enables you to play test your level. The level is started and you can play as in a normal level. ESC finishes the test and puts you back to the selection part of the menu.

**'SAVE'** - Save your designed levels on disk. Use a formatted disk. Please refer to the manual of your computer for instructions how to format a disk. Now choose the SAVE option. The program now asks you to insert an empty formatted disk into the drive. Confirm and all edited levels are saved on this disk. Please note that the contents of the buffer will be lost. When you are playing with an IBM-PC, the data is saved on your hard disk.

If you want to design more than 99 levels, please use a second disk for the subsequent levels.

**'LOAD'** - Loads your level to enable modification. When you chose this option, the computer asks you to insert the disks with the level data into the drive. When you confirm this the data are loaded.

**'LEVEL'** - Choose which one of your levels you would like to work on. Change the level numbers with '+' and '-'.

**'TIME'** - Allows you to set a time limit. Please note that you can only do this if you have implemented a hour glass in the level part. You can set the values from 1 to 10. Each number means a prolongation of time of 1-5 minutes. That means if



you set the value on 10, the player has 15 time for completing the level.

'O TIME' - This setting limits the time of the marble in the horizontal bar graph. Parameters from 0 to 20 are possible.

'20' means a time of one minute, '10' around 30 seconds. When you choose '0', there will not be a time limit.

'EXIT' - Exit the editor and return to the main game.

### Colour setting option

Sets the colour of colour stoppers and changers. Click in the desired colour square.

### Level names

When you click on this field, you activate the keyboard control. You can now enter a name for your level. Confirm with

RETURN.

**R** red/ rot   **G** green/grün   **B** blue/ blau   **Y** yellow/ gelb

