SimROBOT0

for

ROBONOVA-1

Instruction Manual
(Ver 0.01)

June 25th, 2008

Hitec RCD Korea,Inc.

Please read the instruction manual before use, and keep handy for quick reference.

WARNING: SimROBOT 0 for ROBONOVA-1 – Precautions Before Usage

Some individuals may experience convulsions or blackouts when exposed to exceptionally bright lights or flashing on monitors and television screens. If you have experienced these kinds of sensations then be sure to consult a doctor before using this software. Additionally, if you begin to experience these sensations while using the software, cease use immediately and seek medical advice.

Use this software in a well lit area and as far away as possible from the television or monitor screen. Also take a 10-20 minute rest for every 1 hour of use, and avoid using when you are tired or in need of sleep.

SimROBOT 0 for ROBONOVA-1 is designed to be used on a personal computer. In instances where the software is provided on a CD, do not attempt to play in a regular CD player as it may damage speakers and headphones.

SimROBOT 0 for ROBONOVA-1 comes with a ReadMe file. Be sure to read this as it contains important information.
Use in conjunction with the instruction manuals for your PC and robot.

Except as otherwise specified in this product, unauthorised reverse engineering of SimROBOT 0 for ROBONOVA-1 is prohibited. In no event shall HitecRCD Korea,Inc. be held liable for any trouble, damage or any other issues resulting from the use of this software.

Thank you for using SimROBOT0 for ROBONOVA-1. Be sure to read this instruction manual carefully before use.

Contents

1. Preface

This instruction manual details the specifications for the application "SimROBOT 0 for ROBONOVA-1". "SimROBOT 0 for ROBONOVA-1" is motion editing software for the ROBONOVA-1 robot which is sold separately.

For precautions and safety information as well as operating instructions for the ROBONOVA-1 robot, please refer to its instruction manual.

Customers who purchased ROBONOVA-1 in kit form should perform construction, operation checks, and basic settings in accordance with its manual prior to using this software. Customers who purchased ROBONOVA-1 as a pre-assembled package should perform operation checks and basic settings in accordance with its manual before using this software.

2. Introduction to SimROBOT for ROBONOVA-1 Functions

A. SimROBOT Assistant Functions
* The Assistant is an onscreen mascot, from which you can select other functions.
* 5 step Tutorial for beginners.
* Collabo1 demonstration of synchronizing motion to video.
* Playfield mode with 2 scenes.
* Choice of 5 colors for the Robot display.
* Size and behavior of Assistant can be freely changed.

B. Robot Motion Editing Functions
* Robot is displayed in 3D, with directly editable motion.
* Time Line base upon which motion edits are set.
* Simultaneous display of multiple 3D viewpoints.
* Utilizes both SimROBOT and ROBONOVA-1 proprietary file formats.
* Transmits commands and other data to ROBONOVA-1.
* Robot location and directional information can be registered.
* Robot parts collision detection performed onscreen.
* Robot can be synchronized to music or video.
* Supports numerous convenient motion editing functions.

C. Games
* A fun game utilizing the robot is available on completion and submission of a questionnaire.
* Questionnaire to be filled out 15 days after installation.
* See company website for details.

3. Recommended Operating Environment

The following setup is recommended for use with SimROBOT0 for ROBONOVA-1.
* Windows® XP compatible
* CPU Pentium® III, 1Ghz or above (Pentium® 4, 2 Ghz or above recommended for synchronized use of robot and video)
* Memory 256 MB or more (512MB or more recommended for synchronized use of robot and video)
* 120MB or more hard disc space (200MB or above recommended)
* 2 button mouse (3 buttons or more recommended) (mouse with wheel recommended)
* Display resolution of 1024 x 768 or greater
* Graphic card with OpenGL® and DirectX® graphic acceleration (GeForce® class with 16MB or above V-RAM recommended)
* DirectSound® compatible audio output
* 1 available COM port for robot connection
* DirectX® 9.0 or above, Windows Media® Player 10 or above installed

4. Manuals

In addition to the Instruction Manual (this document), you will also find the SimROBOT 0 for ROBONOVA-1 Install Guide which details install and uninstall procedures, and the SimROBOT 0 for ROBONOVA-1 Operation Manual which details use of the software functions. SimROBOT 0 for ROBONOVA-1 Operation Manual can also be found within the application Help menu.

There are additional manuals for bonus contents such as games.

Be sure to read these manuals carefully before using the software, and store where they can be accessed for quick reference.

5. Compatible Robots

SimROBOT 0 for ROBONOVA-1 is capable of connecting to a single ROBONOVA-1 robot via the COM port, and supports firmware version 2.5 of the ROBONOVA-1 controller.

6. File Types

The following file types are used by the SimROBOT 0 for ROBONOVA-1 software.
* SimROBOT proprietary motion file (~.srm)
* SimROBOT proprietary pose file (~.srp)
* ROBONOVA-1 proprietary motion file (~.rsf) (read only)
(Compatible commands: Move, Speed, Delay, PTP, ON/OFF)
Please note that the ROBONOVA-1 Basic file type (~.bas) is not supported.

7. Keyframes

Motion editing in SimROBOT 0 for ROBONOVA-1 is performed using Keyframes of 30ms (milliseconds) each. A single motion can comprise up to 150 Keyframes.

8. AV Playback

SimROBOT 0 for ROBONOVA-1 is capable of playback of AV files. File types compatible with Windows Media® Player are supported. However, excessively heavy files may compromise performance.

AV for synchronization with the robot's motion is limited to 15 seconds.

9. Internal Memory Limits of Robot.

The SimROBOT 0 for ROBONOVA-1software utilizes the ROBONOVA-1 controller's memory allocated to switch number 32 of the remote control. If you wish to use button number 32 of the remote control, download the desired motion to the robot immediately before quitting the software.

Please note that when motion data is downloaded to the robot, the entire controller's memory will be updated. More specifically, the controller's memory will be reinitialized and then overwritten, and any pre-existing motion data will be deleted. The same process occurs during motion playback in Pose Reflect mode, and when templates are downloaded.

10. Speed of Robot Movement

The SimROBOT 0 for ROBONOVA-1 software is capable of connecting to a ROBONOVA-1 robot, downloading motion files to the robot, issuing motion instructions, and initiating the ROBONOVA-1 robot's movement.

The robot's movement can also be synchronized with the onscreen robot. However depending on the robot's motor speed dispersion and the operating environment's limitations, there may be times when movement of the robot will lag. Keep in mind that such lag tends to become more pronounced over longer motions.

11. Timing and Accuracy

Your computer's functions and operating environment may be the cause of lag and lapses in timing and accuracy.

SimROBOT 0 for ROBONOVA-1 software uses Scene 1 and Scene 2 to measure running speed. The time result will vary depending on your specific operating parameters. Different times may show up when using different computers. The specific environment can cause a variance of up to 10% between the first run and subsequent runs. Timing is based on estimates and accuracy cannot be guaranteed.

In addition, the Collision detection feature uses approximate estimates based on parallelepipeds which represent each body part, and is for reference only. When Collision detection is ON, even some sample motions will cause blue marks to appear in the Time Line during such motions as leg folding.

Similarly, the position of the Center of Gravity indicator is also calculated according to approximate estimates based on parallelepipeds which represent each body part, and is for reference only.

(Lag and lapses occur when the computer pauses to perform an urgent task, but is unable to perform basic and regular tasks due to the specific operating parameters, resulting in the software unexpectedly freezing or being paused).

12. Support

For enquiries relating to the SimROBOT 0 for ROBONOVA-1 software, please use the mail address below.

E-mail: robonova@robonova.com

13. Legal

This specifications sheet is subject to change without prior notice.

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