

**089172f8-0**

**COLLABORATORS**

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|               | <i>TITLE :</i><br>089172f8-0 |                |                  |
| <i>ACTION</i> | <i>NAME</i>                  | <i>DATE</i>    | <i>SIGNATURE</i> |
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| <i>NUMBER</i> | <i>DATE</i> | <i>DESCRIPTION</i> | <i>NAME</i> |
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# Chapter 1

## 089172f8-0

### 1.1 Robotics Developer Pack

ROBOTICS DEVELOPER PACK  
Version 1.0

Copyright © 2000 Janne Peräaho. All rights reserved.

Copyright  
About legal issues.

License  
What you have to agree on.

Introduction  
What RDP is used for?

Features  
minissc.library features.

Requirements  
What hardware/software do you need?

Installation  
How to install RDP on your computer.

Bugs/limitations  
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Future of RDP  
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Different versions of this package.

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Support  
Have you got a problem?

Acknowledgements  
Who did what?

Author  
Contacts.

## 1.2 Copyright

COPYRIGHT

Robotics Developer Pack  
Copyright © 2000 Janne Peräaho. All rights reserved.

minissc.library  
Copyright © 2000 Janne Peräaho. All rights reserved.

ssc.pdf  
Copyright © Scott Edwards Electronics, Inc.

ssc2\_mnl.pdf  
Copyright © Scott Edwards Electronics, Inc.

ssc\_FAQ  
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Installer script (Install-DeveloperPack)  
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Installer script (Install-UserPack)  
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Include files & documentation  
Copyright © 2000 Janne Peräaho. All rights reserved.

Example programs  
Copyright © 2000 Janne Peräaho.

## 1.3 License

GRANT OF LICENSE

This is a license between you, the end user, and the author (Janne Peräaho) of the Robotics Developer Pack. The author grants you a license to copy, spread, and use minissc library, example programs, source codes, installer script, and documentation enclosed in 'RoboticsDP.lha' archive freely with the following exceptions:

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You may:

- a. do whatever you will to any of the example programs (whether it is in binary or source code form) enclosed in 'RoboticsDP.lha' archive.

You may not:

- a. modify, reverse engineer, decompile, or disassemble minissc library, installer script, or accompanying documentation or;
- b. remove any proprietary notices, labels, or marks on the minissc library, installer script, and documentation.

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The author of "Robotics Developer Pack" does NOT warrant that the function contained in the minissc library, installer script, or in the example programs will meet your requirements, or that the operation of the library, installer script, or example programs will be uninterrupted or error free.

#### GENERAL

You may terminate this license at any time by destroying all your copies of the Robotics Developer Pack. The author may terminate this license if you fail to comply with the terms and conditions of this License Agreement. Upon such termination, you agree to destroy all your copies of the Robotics Developer Package.

## 1.4 Introduction

#### INTRODUCTION

Robotics Developer Pack (RDP) brings robotics, automation, and animatronics into the Amiga world. RDP provides minissc library, a full library documentation, necessary C/C++ include files, 3 example programs (C source codes and executable binary files included), RDP developer manual, and Mini SSC II controller documentation & presentation.

Minissc library is designed for controlling standard R/C servos through the popular Mini SSC II serial servo controller. There are tens of robot kits (arms, wheeled robots, legged robots, wheeled robots with arms...) and animatronics available which are based on Mini SSC II controller. Just plug

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the controller's cable into the Amiga serial port and the robot is under your control!

The Robotics Developer Pack is a freeware [AMITY] product.

## 1.5 Features

### FEATURES

- minissc library supports all Mini SSC II features: low & high communication rates, narrow & wide motion ranges, and controller chaining
- extra features: servo positioning based on AUs or degrees and individual motion ranges for servos
- detailed library and coding documentation
- example programs with C source codes
- comprehensive Mini SSC II documentation + controller pictures
- suggestive Mini SSC II distributor list with full contact informations

## 1.6 Requirements

### REQUIREMENTS

#### Hardware

Amiga  
and

Mini SSC II  
and

Connector cable  
and

Servo

#### Amiga

- OS version 1.x or later
- at least 68000 CPU

#### Mini SSC II

Manufacturer  
Distributors

#### Connector cable

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Cable between Amiga's serial port and Mini SSC II controller.  
See `ssc2_mnl.pdf`, manufacturer's web pages, or one of the distributor's web pages for more information.

## Servo

"Hobby" servo with standard three-conductor socket connector (e.g. Futaba-J connector). See one of the distributor's web pages.

## Software

Installer  
Version 44.10 or later.

Apdf  
Version 1.3 or later.

### Installer 44.10

Version 44.10 is included in AmigaOS 3.5 CD-ROM and in Developer CD V2.1.

### Apdf 4.12

25.02.2000 Aminet (Sweden)  
[http://ftp.sunet.se/~aminet/dirs/gfx\\_show.html/](http://ftp.sunet.se/~aminet/dirs/gfx_show.html/)  
Apdf020.lha  
Apdf040.lha  
Apdf060.lha  
Apdfppc.lha

## 1.7 Installation

### INSTALLATION

#### Requirements

- about 7-800 kB of free disk space
- 

Installer version 44.10  
How to install Robotics Developer Pack on hard disk?

Just double-click the 'Install' icon and follow the given instructions.

The cover picture, installer script, readme files, and other notes are not essential, and that is why they are not installed by the script. If you would like to have them on your hard disk, you have to copy them manually.

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How to test minissc.library without installing it?

Just double-click 'Preview' icon. Script will make a temporary assign to the local library directory where minissc.library is located. Then it shows information about how Mini SSC II controller should be configured and waits until you have done the required modifications, executes LowRateScan example program in order to demonstrate servo control, and finally it removes temporary assign made at the beginning.

No required installer!?

If you cannot use Installer version 44.10, for one reason or another, you have to make the installation manually.

Create somewhere on your hard disk a directory 'RoboticsDP' and copy there all RoboticsDP directories and files except 'Include' and 'Libs' directories. Locate your C/C++ compiler's 'Include' directory and copy there all directories and files from the RoboticsDP's 'Include' directory. Finally copy minissc.library from the 'Libs' directory to the system's 'LIBS:'.

## 1.8 Bugs and Limitations

BUGS/LIMITATIONS

Bug reports

If you think the minissc library doesn't work as it's supposed to, please send me mail describing the problem so that I can make RoboticsDP into a better product.

Limitations

- Due to Mini SSC II hardware limitations, minissc library can never know for sure the actual settings of Mini SSC II controller or actual servo positions.
- Servos modified for continuous rotation are not currently supported.

HINT

IF SOMEONE SENDS ME A MODIFIED SERVO, I WILL ADD SUPPORT FOR THOSE SERVOS IN MINISSC LIBRARY.

## 1.9 Future of Robotics Developer Pack

FUTURE

The future of Robotics Developer Pack depends on you. Without your feedback there won't be new releases or new features.

Let me know how you like it so far and what you would like to see in future

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releases.

## 1.10 History

### HISTORY

15.01.2000

1.0  
First release.

15012000 minissc.library

#### DATE

15.01.2000

#### AUTHOR

Janne Peräaho

#### VERSION

1

#### REVISION

0

#### NEW

-

#### CHANGES

-

#### REMOVED

-

#### BUGS

-

#### COMPILER

StormC Version 3.0 AmigaOS

#### COMMENT

First version.

## 1.11 Support

### SUPPORT

Robotics Developer Pack  
Janne Peräaho

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minissc library  
Janne Peräaho  
Mini SSC II                      Scott Edwards Electronics, Inc.

## 1.12 Acknowledgements

### ACKNOWLEDGEMENTS

Thanks to:

- Haage & Partner for free and excellent C compiler - StormC 3.0
- Steffen Häuser for explaining how shared libraries should be done with StormC
- Emmanuel Lesueur for Apdf (pdf docs wouldn't make sense without your Apdf)

Betatesters:

BETATESTERS NEEDED! Send me mail.

## 1.13 Author

### AUTHOR

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