YASKAWA Cockpit
Robot Data Change Point Notification

INSTRUCTIONS

Upon receipt of the product and prior to initial operation, read these instructions thoroughly, and retain for future reference.

Please have the following information available when contacting Yaskawa Customer Support:
- System
- Primary Application
- Software Version *(Located on Programming Pendant by selecting: {Main Menu} - {System Info} - {Version})*
- Robot Serial Number *(Located on robot data plate)*
- Robot Sales Order Number *(Located on controller data plate)*

Part Number: 189463-1CD
Revision: 0

MANUAL NO. HW1486268
**DANGER**

- This manual describes details on the functions of YASKAWA Cockpit add-on application software including settings for the controller to use YASKAWA Cockpit add-on application software. Read this manual carefully and be sure to understand its contents before handling the controller. Any matter, including operation, usage, measures, and an item to use, not described in this manual must be regarded as “prohibited” or “improper”.

- General information related to safety are described in “Chapter 1. Safety” of the YRC1000micro/YRC1000/DX200/DX100/RM100 INSTRUCTIONS. To ensure correct and safe operation, carefully read “Chapter 1. Safety” of the YRC1000micro/YRC1000/DX200/DX100/RM100 INSTRUCTIONS.

**CAUTION**

- In some drawings in this manual, protective covers or shields are removed to show details. Make sure that all the covers or shields are installed in place before operating this product.

- YASKAWA is not responsible for incidents arising from unauthorized modification of its products. Unauthorized modification voids the product warranty.

- Software described in this manual is supplied against licensee only, with permission to use or copy under the conditions stated in the license. No part of this manual may be copied or reproduced in any form without written consent of YASKAWA.

**NOTICE**

- The drawings and photos in this manual are representative examples and differences may exist between them and the delivered product.

- YASKAWA may modify this model without notice when necessary due to product improvements, modifications, or changes in specifications. If such modification is made, the manual number will also be revised.

- If your copy of the manual is damaged or lost, contact a YASKAWA representative to order a new copy. The representatives are listed on the back cover. Be sure to tell the representative the manual number listed on the front cover.
Notes for Safe Operation

Read this manual carefully before using the software.

In this manual, the Notes for Safe Operation are classified as “DANGER”, “WARNING”, “CAUTION”, or “NOTICE”.

**DANGER**
Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. Safety Signs identified by the signal word DANGER should be used sparingly and only for those situations presenting the most serious hazards.

**WARNING**
Indicates a potentially hazardous situation which, if not avoided, will result in death or serious injury. Hazards identified by the signal word WARNING present a lesser degree of risk of injury or death than those identified by the signal word DANGER.

**CAUTION**
Indicates a hazardous situation, which if not avoided, could result in minor or moderate injury. It may also be used without the safety alert symbol as an alternative to “NOTICE”.

**NOTICE**
NOTICE is the preferred signal word to address practices not related to personal injury. The safety alert symbol should not be used with this signal word. As an alternative to “NOTICE”, the word “CAUTION” without the safety alert symbol may be used to indicate a message not related to personal injury.

Even items described as “CAUTION” may result in a serious accident in some situations. At any rate, be sure to follow these important items.

To ensure safe and efficient operation at all times, be sure to follow all instructions, even if not designated as “DANGER”, “WARNING” and “CAUTION”.
Registered Trademark

In this manual, names of companies, corporations, or products are trademarks, registered trademarks, or brand names for each company or corporation. The indications of (R) and TM are omitted.
Contents

1 Introduction ..................................................................................................................................... 1-1
  1.1 Robot Data Change Point Notification ........................................................................ 1-1
  1.2 Related Manuals ........................................................................................................ 1-1
  1.3 Terms ............................................................................................................................... 1-1
  1.4 System Configuration ..................................................................................................... 1-2
  1.5 Provided Data ................................................................................................................ 1-2
  1.6 Operating Environment .................................................................................................. 1-2
  1.7 Issuing and Setting the License ..................................................................................... 1-3
  1.8 Precautions .................................................................................................................... 1-3
    1.8.1 Number of Robot Controller Connections ............................................................. 1-3
    1.8.2 Backup Data Collection Settings .......................................................................... 1-3

2 How to Use the Robot Data Change Point Notification ............................................................ 2-1
  2.1 Overview ....................................................................................................................... 2-1
  2.2 Items to Check before Setup .......................................................................................... 2-1
  2.3 Installing the DA Application Software ...................................................................... 2-2
  2.4 Installing the DW Application Software ...................................................................... 2-2

3 Software Configuration ............................................................................................................. 3-1

4 Backup Data Collection by RMS .......................................................................................... 4-1
  4.1 Backup Settings ............................................................................................................. 4-1
  4.2 Collecting and Executing the Backup Data ................................................................. 4-1

5 DA Application Software (DA App) ...................................................................................... 5-1
  5.1 Executing the DA Application Software .................................................................... 5-1
  5.2 Processing the DA Application Software ................................................................... 5-2
  5.3 Exiting the DA Application Software ........................................................................... 5-2

6 DW Application Software (DW App) .................................................................................... 6-1
  6.1 Setting the DW Application Software ....................................................................... 6-1
  6.2 Viewing the Data Analysis Results .......................................................................... 6-3
  6.3 Exiting the DW Application Software ........................................................................... 6-3

7 Troubleshooting .................................................................................................................. 7-1
1 Introduction

1.1 Robot Data Change Point Notification

In the production site introduced the robot, the setting modification of the robot is performed for improving the cycle time of the robot or reviewing the operation of the robot. Since the production line may stop due to the setting modification, if the setting information is not shared with all maintenance staff each other, a certain of time would be required to recover the line.

For solving the above problem, this application can make the change point of the robot controller (the change point of the JOB) visualize, and if some change occurs, notifies it to the manager of its production line by e-mail. Therefore, this add-on application enables to shorten time to recover the line.

1.2 Related Manuals

Manuals related to this manual are given next. Refer to these manuals when reading this manual.

<table>
<thead>
<tr>
<th>Manual Name</th>
<th>Manual No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>YASKAWA Cockpit</td>
<td>HW1485838</td>
<td>Describes in detail how to install and operate YASKAWA Cockpit.</td>
</tr>
</tbody>
</table>

1.3 Terms

The terms associated with this manual are given next.

<table>
<thead>
<tr>
<th>Term</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>RMS</td>
<td>The standard data collection function in YASKAWA Cockpit. RMS collects the data from the robot controller and stores in the YASKAWA Cockpit database. The stored data is used by DA App and DW App.</td>
</tr>
<tr>
<td>DA Application Software</td>
<td>DA App analyzes and processes the collected data and stores the analyzed results in the YASKAWA Cockpit database. The stored data is used by DW App. DA is an abbreviation for data analysis.</td>
</tr>
<tr>
<td>DW Application Software</td>
<td>DW App displays the analyzed results stored by DA App in the web browser. DW is an abbreviation for data window.</td>
</tr>
</tbody>
</table>
1.4 System Configuration

1) For the specifications of the Ethernet cable, refer to chapter 2.4 “Connecting the Controller and the Personal Computer for YCP” in “YASKAWA Cockpit INSTRUCTIONS (HW1485838)”.

1.5 Provided Data

The provided DVD contains the following data.

- DA App execution file
- DW App file (DW App zip file)
- Instruction manual PDF file (this document)

1.6 Operating Environment

The following environment is required to use the Robot Data Change Point Notification.

<table>
<thead>
<tr>
<th>Item</th>
<th>Operating Conditions</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>YASKAWA Cockpit</td>
<td>Version 1.2.0 or higher.</td>
<td>You can find the version number at the top left of the window when YASKAWA Cockpit starts.</td>
</tr>
<tr>
<td>Computer</td>
<td>• YASKAWA Cockpit is installed on the computer. • YASKAWA Cockpit can run in the operating environment.</td>
<td>For the YASKAWA Cockpit operating environment, refer to chapter 1.2 System Requirements to Use YASKAWA Cockpit in “YASKAWA Cockpit INSTRUCTIONS (HW1485838)”.</td>
</tr>
<tr>
<td>Web browser</td>
<td>A web browser that is compatible with YASKAWA Cockpit.</td>
<td>For web browsers that are compatible with YASKAWA Cockpit, refer to chapter 1.3 “Supported Web Browsers” in “YASKAWA Cockpit INSTRUCTIONS (HW1485838)”.</td>
</tr>
</tbody>
</table>
1.7 Issuing and Setting the License

To use the Robot Data Change Point Notification, a license must be issued, and the setting is required on the YASKAWA Cockpit side.

Refer to the following sections in "YASKAWA Cockpit INSTRUCTIONS (HW1485838)".

- Issuing the license: Chapter 9 "License Request Tool"
- Setting the license: Chapter 4.2 "License Manager"

1.8 Precautions

1.8.1 Number of Robot Controller Connections

There may be limits on the number of robot controller connections due to the number of other device connections and the operation of different add-on apps.

Contact your YASKAWA representative for more information.

1.8.2 Backup Data Collection Settings

The Robot Data Change Point Notification visualizes the change point of the robot controller (the change point of the JOB) using the backup data from the robot controller.

Perform the backup of All File by referring to chapter 4.3.3 "Backup" in "YASKAWA Cockpit INSTRUCTIONS (HW1485838)".
2 How to Use the Robot Data Change Point Notification

2.1 Overview

Use the Robot Data Change Point Notification with the following procedure.

For more information, refer to the relevant sections.

2.2 Items to Check before Setup

- Log in to the computer using an administrator account.
- Confirm that YASKAWA Cockpit is installed on the computer.

For how to install YASKAWA Cockpit, refer to chapter 2.1 "Installation of the YCP Software" in "YASKAWA Cockpit INSTRUCTIONS (HW1485838)".

For details on the installation procedure, refer to chapter 2.1 "Installation of the YCP Software" in "YASKAWA Cockpit INSTRUCTIONS (HW1485838)".

After Setup, start from Operation.
2.3 Installing the DA Application Software

1. Exit all applications.
2. Insert the installation CD into the CD drive on the computer.
3. Copy all folders of “¥RobotDataChangePointNotification¥DA” to “C:\Program Files\YASKAWA\YASKAWA Cockpit\Addon”.

2.4 Installing the DW Application Software

1. Log in to YASKAWA Cockpit.
2. Click Settings - Initial Settings ( ) - Add On ( ). The Add On page will be displayed.
3. Click "Add".

<table>
<thead>
<tr>
<th>UI Name</th>
<th>Description</th>
<th>Title</th>
<th>Version</th>
<th>Version</th>
<th>Date</th>
<th>Expire Date</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>ChangePoint</td>
<td>ChangePoint</td>
<td>RobotDataCh...</td>
<td>1.0.0.0</td>
<td>YASKAWA Electr...</td>
<td>2019/01/01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DB/never</td>
<td>DB/never</td>
<td>DB/never</td>
<td>1.1.0.0</td>
<td>YASKAWA ELECTR...</td>
<td>2019/01/01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OperatingPlate</td>
<td>OperatingPlate</td>
<td>OperatingPlate</td>
<td>1.0.0.0</td>
<td>YASKAWA ELECTR...</td>
<td>2019/01/01</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The setting window will be displayed.

4. Set the following items.
   • UI Name and Description\(^1\)(①): Enter "ChangePoint"
   • Zip File/Bin File (②): On the installation DVD, in the RobotDataChangePointNotification folder and DW folder, select CPDWAPP.zip.
   • Register UI to (③): Select the line to which the Robot Data Change Point Notification will be applied.

1) UI Name and Description can be set to any desired name, but there are restrictions on the length and characters that can be used.
For more information, refer to chapter 4.1.9 "'Add On' Settings" in "YASKAWA Cockpit INSTRUCTIONS (HW1485838)".

5. Click "Add" (④).
3 Software Configuration

This function is configured of the RMS, the DA App, and the DW App of the YASKAWA Cockpit. The following chapters provide information about each application.

• RMS
  The RMS periodically collects the backup data of the controller from the robot controller. The backup data collected from the robot controller is stored in the YASKAWA Cockpit database, and used by the DA App and the DW App.

• DA App
  The DA App analyzes the JOB data stored in the YASKAWA Cockpit database and stores the change point data in the YASKAWA Cockpit database. The stored data is used by the DW App. If some change point occurs, it is notified by e-mail.

• DW App
  The DW App shows the change point data of the JOB in the Web browser and makes it accessible.
4 Backup Data Collection by RMS

4.1 Backup Settings

Set the backup data (All File) and time in the robot controller by referring to chapter 4.3.3 "Backup" in "YASKAWA Cockpit INSTRUCTIONS (HW1485838)".

4.2 Collecting and Executing the Backup Data

Start collecting the data from the robot controller with the RMS application by referring to chapter 4.4 "YCP Server and Robot Controller Connection Settings" in "YASKAWA Cockpit INSTRUCTIONS (HW1485838)".

Backup data will be collected at the time set in chapter 4.1 “Backup Settings”.
5 DA Application Software (DA App)

5.1 Executing the DA Application Software

The DA App analyzes and processes the backup data collected by the RMS application and creates the data to be shown by the DW App. While the RMS App collects the data, be sure to start also the DA App. The DA app confirms the backup data, and analyzes and processes it.

5.1 Executing the DA Application Software

1. Double-click “C:\Program Files\YASKAWA\YASKAWA Cockpit\Addon\RobotDataChangePointNotification\RobotDataChangePointNotification.exe” of the PC which the DA App has been installed, and execute the application.

2. The application is started. Click the “WEB SETTING” tab, input the factory name set in the YASKAWA Cockpit, and then click the “Connection Test”.

   – The “Status” will be OK.

3. Click the “Save” button.

4. Click the “E-MAIL SETTING” tab. If some change occurs in the JOB, it is notified by e-mail. The E-mail Subject, the E-mail Header, and the E-mail Footer can be set. After setting, click the “Save” button.
5.2 Processing the DA Application Software

When it is time set in chapter 4.1 “Backup Settings”, compare the previous data collected with the latest. If some change occurs, the name of the controller where the change occurs is notified by e-mail.

5.3 Exiting the DA Application Software

To exit the DA App of this function, click the “×” button at the upper right of the DA App window and close the window. When starting the DW App again, perform chapter 5.1 “Executing the DA Application Software”. 
6 DW Application Software (DW App)

The DW App shows the change point data of the JOB in the Web browser and makes it accessible.

6.1 Setting the DW Application Software

Log in the YASKAWA Cockpit, move to the window of the line applied to the DW App, and then click [ChangePoint].

1. The DW App window will be displayed. Click the “Settings”.

2. When clicking the “Settings”, the “Select Notification Target User” will be displayed. For all “Controller”s under the “Cell”, if some change in the JOB occurs, check the checkbox of the “User” to send e-mail, and then click the “Save”.

3. Click the “Save” button.
3. When clicking the “Controller”, the “Select Notification Target User” will be displayed. For the target “Controller”, if some change in the JOB occurs, check the checkbox of the “User” to send e-mail, and then click the “Save”.

![Diagram of the interface showing the selection of notification targets for a job change.](image)
6.2 Viewing the Data Analysis Results

1. Log in the YASKAWA Cockpit, move to the window of the line applied to the DW App, and then click [ChangePoint].

2. The DW App window will be displayed. If some change point occurs, the date when the change occurred will be displayed on the Status.

3. When clicking the “Controller”, the date list when some change occurred will be displayed.

4. When clicking the date, the JOB in which some change occurred will be displayed.

5. When clicking the JOB, the JOB in which some change occurred will be displayed. The items that some change occurred will be hatched.

6.3 Exiting the DW Application Software

To exit DW App, exit YASKAWA Cockpit or close the web browser.

* DW App will be exited automatically if another page is displayed in YASKAWA Cockpit.
# 7 Troubleshooting

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Possible Cause</th>
<th>Corrective Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>DW App</td>
<td>Content is not updated.</td>
<td>The backup data has not been retrieved.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Start collecting the data from the robot controller with the RMS application by referring to chapter 4.4 &quot;YCP Server and Robot Controller connection Settings&quot; in &quot;YASKAWA Cockpit INSTRUCTIONS (HW1485838)&quot;. Backup data will be collected at the time set in chapter 4.1 &quot;Backup Settings&quot;.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The DA App is not running.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The DA App analyzes and processes the backup data collected by the RMS application and creates the data to be shown by the DW App. While the RMS App collects the data, be sure to start also the DA App. The DA app confirms the backup data, and analyzes and processes it.</td>
</tr>
<tr>
<td>DA App</td>
<td>The “Connection Test” does not become “OK”.</td>
<td>The Factory Name is wrong.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Input the factory name registered in the YASKAWA Cockpit.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>YASKAWA Cockpit is not running.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Check if YASKAWA Cockpit is running.</td>
</tr>
</tbody>
</table>
YASKAWA Cockpit
Robot Data Change Point Notification

INSTRUCTIONS

For inquiries or after-sales service on this product, contact your local YASKAWA representative as shown below.

YASKAWA ELECTRIC CORPORATION
2-1 Kurosakishiroishi, Yahatanishi-ku, Kitakyushu, 806-0004, Japan
Phone: +81-93-645-7703  Fax: +81-93-645-7802
http://www.yaskawa.co.jp

YASKAWA AMERICA, INC. (MOTOMAN ROBOTICS DIVISION)
100 Automation Way, Miamisburg, OH 45342, U.S.A.
Phone: +1-937-847-6200  Fax: +1-937-847-6277
http://www.motoman.com

YASKAWA EUROPE GmbH (ROBOTICS DIVISION)
Yaskawastrasse 1, 85391, Allershausen, Germany
Phone: +49-8166-90-100  Fax: +49-8166-90-103
http://www.yaskawa.eu.com

YASKAWA NORDIC AB
Verkstadsgatan 2, Box 504, SE-385 25 Torsas, Sweden
Phone: +46-480-417-800  Fax: +46-486-414-10
http://www.yaskawa.se

YASKAWA ELECTRIC (CHINA) CO., LTD.
22F, One Corporate Avenue, No.222 Hubin Road, Huangpu District, Shanghai 200021, China
Phone: +86-21-5385-2200  Fax: +86-21-5385-3299
http://www.yaskawa.com.cn

YASKAWA SHOUGANG ROBOT CO., LTD.
No.7 Yongchang North Road, Beijing E&T Development Area, Beijing 100076, China
Phone: +86-10-6788-2878  Fax: +86-10-6788-2878
http://www.ysr-motoman.cn

YASKAWA ELECTRIC KOREA CORPORATION
35F, Three IFC, 10 Gukjegeumyung-ro, Yeongdeungpo-gu, Seoul 07326, Korea
Phone: +82-2-894-7844  Fax: +82-2-862-8495
http://www.yaskawa.co.kr

YASKAWA ELECTRIC TAIWAN CORPORATION
12F, No.207, Sec. 3, Beishin Rd., Shihlin District, New Taipei City 23143, Taiwan
Phone: +886-2-8913-1333  Fax: +886-2-8913-1513
http://www.yaskawa.com.tw

YASKAWA ASIA PACIFIC PTE. LTD.
30A Kallang Place, #06-01, 339213, Singapore
Phone: +65-6282-3003  Fax: +65-6289-3003
http://www.yaskawa.com.sg

YASKAWA ELECTRIC (THAILAND) CO., LTD.
59, 1st-5th Floor, Flourish Building, Soi Rachadapisek 18, Rachadapisek Road, Huaykwang, Bangkok 10310, Thailand
Phone: +66-2-017-0099  Fax: +66-2-017-0199
http://www.yaskawa.co.th

PT. YASKAWA ELECTRIC INDONESIA
Secure Building-Gedung B Lantai Dasar & Lantai 1 Jl. Raya Protokol Halim Perdanakusuma, Jakarta 13610, Indonesia
Phone: +62-21-2982-6470  Fax: +62-21-2982-6471
http://www.yaskawa.co.id

YASKAWA INDIA PRIVATE LIMITED (ROBOTICS DIVISION)
#428, Udyog Vihar Phase-IV, Gurgaon, Haryana 122016, India
Phone: +91-124-475-8500  Fax: +91-124-475-8542
http://www.yaskawaindia.in

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