

# JC-350

## Version Update from V. 1.10 to V. 1.12



Version Update

**Jetter**

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# 1 Introduction

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Introduction	This chapter shows the history of OS versions for the controller JC-350.						
Operating System Update - Why?	<p>An OS update allows you to:</p> <ul style="list-style-type: none"><li>▪ add new functions to your controller</li><li>▪ fix software bugs</li><li>▪ make sure your controller is working with a definite OS version, for example, if a definite OS version has been released for a certain customer</li></ul>						
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## Operating System Update

### OS File for Updating the Operating System

For updating the OS the following file is needed:

OS File	Description
JC-350_1.12.0.00.os	OS file for JC-350 with version 1.12

### Downloading the OS File

Jetter AG make operating system files available for download from their **homepage at <http://www.jetter.de>**. OS files can be found in the support area or on the page of the JC-350 controller via quicklink.

### Operating System Update by means of JetSym

To update your OS proceed as follows:

Step	Action
1	Download the OS file from <a href="http://www.jetter.de">www.jetter.de</a>
2	Establish a connection between PC and controller
3	In JetSym: Select menu item "Build -> Update OS" or Click on the button "OS Update" in the CPU window of the hardware manager
4	Select the OS File
5	Initiate the OS update by clicking OK
6	<b>Result:</b> Following Power OFF / Power ON the new OS is launched.

### Minimum Requirements

For programming a JC-350 with version 1.12 JetSym 4.3.1 or higher is required.

## JC-350 Version Update - Overview

### V 1.04

The following table gives an overview of newly added features and fixed software bugs in OS version 1.04:

Description	New	Fixed
<b>JX2 system bus:</b>		
Register overlaying for digital inputs/outputs	✓	
Support of JX-SIO modules and third-party CANopen® devices	✓	
<b>JX3 system bus:</b>		
Register overlaying for digital inputs/outputs	✓	
System bus special registers for status and control	✓	
<b>Operating System Update:</b>		
Via FTP: On completion notification the OS has actually been stored.		✓
Updating a JX2 slave module while registers are being accessed blocks communication		✓
<b>Application program:</b>		
Task switch could fail to happen		✓
Error signal in case of invalid file "/app/start.ini"		✓
<b>Display commands:</b>		
Redirection to JX2-SER1 works only if JX2-PRN1 has been configured, too		✓

### V 1.05

The following table gives an overview of newly added features and fixed software bugs in OS version 1.05:

Description	New	Fixed
<b>JX2 system bus: V1.05.0.00</b>		
AS interface gateway BWU1821 is supported	✓	
Frequency inverter 8200 vector is supported	✓	
JetMove 1xx is not detected during boot process		✓
Automatic baud rate recognition does not work reliably for some of the baud rates and configurations of IP67 modules.		✓
Repetition counter does not work when polling I/O modules		✓
<b>AutoCopy function:</b>		
Automatic Copying of Controller Data		
<b>Application program:</b>	✓	
Pending cyclic tasks are started immediately after Taskunlock	✓	
For function pow(x,y) a floating point number can be entered as exponent	✓	
Cyclic tasks can be debugged	✓	

Description	New	Fixed
Length of project and program names > 39 characters		✓
Restart of an elapsed timer		✓
The value returned by DateTimeDecode() was always 1 day short of the actual day.		✓
DateTimeEncode and -IsValid might return the value TRUE irrespective of an invalid date		✓
<b>User registers:</b>		
The register type can be set up without having to start the application program	✓	
<b>Displays and HMI:</b>		
A floating point value can be used as default for UserInput	✓	
The default value for UserInput is not displayed correctly		✓
It is not possible to enter LED register numbers		✓

**V 1.08**

The following table gives an overview of newly added features and fixed software bugs in OS version 1.08:

Description	New	Fixed
<b>System configuration:</b>		
System rights for configuration file	✓	
<b>JX2 system bus: V1.11.0.00</b>		
Timeout after CAN-PRIM message		✓
Registers of LJX7-CSL modules		✓
Write access to analog outputs of CANopen® modules		✓
State of digital inputs when the controller is powered on		✓
Digital outputs on JX-SIO or CANopen® modules		✓
Input/output 64 on JX-SIO or CANopen® modules		✓
User-Programmable CAN Interface		✓
<b>Application program:</b>		
NetCopyList Functions	✓	
StrCopy()		✓
Crash in the case of "invalid" application program		✓
NetCopyVarFromReg()		✓
<b>JX3 system bus:</b>		
Module registers for digital I/Os	✓	
<b>Displays and HMI:</b>		
UserInput()		✓

### V 1.09

The following table gives an overview of newly added features and fixed software bugs in OS version 1.09:

Description	New	Fixed
<b>System:</b>		
System command register	✓	
<b>JX2 system bus: V1.13.0.00</b>		
Status change of inputs on JX2-ID8		✓
Status change of fast inputs		✓
<b>Application program:</b>		
FTP client	✓	
Axis instructions		✓
Taskrestart in the case of Delay()		✓
Crash in the case of missing library		✓
Floating-point number registers in data files		✓
NetCopyVarToReg with floating-point number registers		✓
<b>JX3 system bus:</b>		
Dummy Modules	✓	
<b>AutoCopy:</b>		
FTP commands	✓	
<b>Serial interface:</b>		
Initialization after booting		✓

### V 1.10

The following table gives an overview of newly added features and fixed software bugs in OS version 1.10:

Description	New	Fixed
<b>System:</b>		
LED registers		✓
SD memory card		✓
<b>JX2 system bus: V1.17.0.00</b>		
Additional modules	✓	
CAN-PRIM	✓	
<b>Application program:</b>		
Task commands with variable parameters	✓	
UserInput()		✓
NetCopyListSend()		✓
Task status register		✓



Description	New	Fixed
<b>Real-time clock:</b>		
Additional register for milliseconds	✓	
<b>User-programmable IP Interface:</b>		
More connections	✓	

**V 1.12**

The following table gives an overview of newly added features and fixed software bugs in OS version 1.12:

Description	New	Fixed
<b>System:</b>		
System command register	✓	
<b>JX2 system bus: V1.21.0.00</b>		
Initialization		✓
CAN-PRIM		✓
CANopen® sync intervall		✓
CANopen® application registers		✓
CANopen® type string		✓
Write access to CANopen® output		✓
CANopen® version number		✓
WAGO 750		✓
<b>JX3 system bus:</b>		
Register accesses		✓
<b>Application program:</b>		
Program Control	✓	✓
Assigning Structures	✓	
Sorting Data	✓	
Displaying values in JetSym		✓
<b>HTTP server:</b>		
New data type	✓	
<b>Serial interface:</b>		
Error Detection		✓

## 1 Introduction

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### V 1.14

The following table gives an overview of newly added features and fixed software bugs in OS version 1.14:

Description	New	Fixed
<b>JX2 system bus: V1.22.0.00</b>		
OS Update		✓
<b>Application program:</b>		
New instructions	✓	

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## 2 New Features

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### Introduction

This chapter describes the features which have been added or enhanced in the new software release.

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## 2.1 Various New Features and Modifications

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### Introduction

This chapter covers the new features and modifications

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## Description of System Command Registers

### Overview of Registers

The following registers are used in this manual:

Registers	Description
<b>R 202960</b>	System password register
<b>R 202961</b>	System command register
<b>R 202962</b>	System status register

### R 202960

#### System password register

To allow access to the system command register the system password 1112502132 (0x424F6F74) must be entered into this register. Once a value has been entered into the system command register, the controller sets the system password register to zero.

#### Register properties

Value	1112502132 (0x424F6F74)
-------	-------------------------

### R 202961

#### System command register

System commands are entered into this register. Commands entered into this register are processed by the controller. Once the controller has executed the command, it sets the system command register to 0.

#### Commands

<b>102</b>	<b>Restart the controller</b>
<b>104</b>	<b>Reset remanent parameters</b>
<b>122</b>	<b>Wait for communication OFF</b>
<b>123</b>	<b>Wait for communication ON</b>
<b>160</b>	<b>Task switch on I/O access OFF</b>
<b>161</b>	<b>Task switch on I/O access ON</b>

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### Commands

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<b>310</b>	<b>Load configuration files</b>
------------	---------------------------------

---

<b>311</b>	<b>Load module configuration</b>
------------	----------------------------------

---

<b>312</b>	<b>Load process data configuration for Ethernet system bus</b>
------------	--

---

<b>313</b>	<b>Stop process data communication for Ethernet system bus</b>
------------	--

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<b>330</b>	<b>Disable JetIPScan client</b>
------------	---------------------------------

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<b>331</b>	<b>Enable JetIPScan client</b>
------------	--------------------------------

---

### Register properties

Type of access	System password register contains the correct password.
----------------	---

---

## R 202962

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### System status register

The system status register lets you evaluate the system conditions.

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### Meaning of the individual bits

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#### Bit 0 Task switch on I/O access

- |     |  |
|-----|--|
| 0 = | No task switching in the application program on I/O access           |
| 1 = | Task switching is performed in the application program on I/O access |
- 

#### Bit 1 Wait for communication

- |     |  |
|-----|--|
| 0 = | The controller waits for communication requests for a short time |
| 1 = | The controller does not wait for communication requests          |
- 

#### Bit 2 JetIPScan client

- |     |                             |
|-----|-----------------------------|
| 0 = | JetIPScan client not active |
| 1 = | JetIPScan client active     |
- 

### Register properties

Type of access	Read access
----------------	-------------

---

## Description of System Commands

### System Command 102

#### Restart the controller

**Effect:**

The controller will restart. This command corresponds to power cycling the controller.

**Application:**

You can use this command, for example, if you have made changes to system registers or system files which will become active only when the controller is rebooted.

### System Command 104

#### Reset remanent parameters

**Effect:**

The controller will reset remanent parameters to their default values (factory settings).

Register Number	Meaning	Factory settings
100.002.023	JX3 system bus: I/O dummy module	65535
100.002.034	JX3 system bus: Number of retries	1
200.002.023	JX2 system bus: I/O dummy module	-1
200.002.024	JX2 system bus: Slave dummy modules	255
200.002.029	JX2 system bus: Baud rate	7
200.002.032	JX2 system bus: ON delay	60
200.002.077	Special functions	0

**Application:**

You can use this command, for example, to undo changes to remanent parameters.

### System Command 122

#### Wait for communication OFF

**Effect:**

The controller starts communication with external communication partners only when concrete requests have been received from them.

**Advantage:**

The application program can be processed faster.

**Disadvantage:**

On average, external communication partners have to wait longer for a response from the controller.

### System Command 123

#### Wait for communication ON

**Effect:**

The controller cyclically waits for 1 to 2 milliseconds to check for communication requests from external partners.

**Advantage:**

External communication partners get a faster reply from the controller.

**Disadvantage:**

Application program processing takes slightly longer.

---

### System Command 160

#### Task switch on I/O access OFF

**Effect:**

While the controller accesses modules on the JX2 or JX3 system bus, other tasks of the application program are not processed.

**Advantage:**

I/O accesses are executed as fast as possible.

**Disadvantage:**

As certain I/O accesses are significantly slower than access to internal variables, response time of other tasks may increase.

---

### System Command 161

#### Task switch on I/O access ON

**Effect:**

While the controller accesses modules on the JX2 or JX3 system bus, other tasks of the application program are processed.

**Advantage:**

The execution time of certain I/O accesses which may be relatively long does not affect the response time of other tasks.

**Disadvantage:**

The execution time of certain I/O accesses is affected by the processing time of other tasks.

---

### System Command 310

#### Load configuration files

**Effect:**

The controller will load the module configuration file (ModConfig.da) and the configuration files for process data communication on the Jetter Ethernet system bus (Publisher.pub, Subscriber.sub) from the file system. This function corresponds to a combination of commands 311 and 312.



---

	<b>Application:</b> Once the transfer of these files into the controller's file system is completed, system command 310 enables their contents.
<b>System Command 311</b>	<b>Load module configuration</b>  <b>Effect:</b> The controller loads the module configuration file (ModConfig.da) from the file system.  <b>Application:</b> Once the transfer of this file into the controller's file system is completed, system command 311 enables its contents.
<b>System Command 312</b>	<b>Load process data configuration for Ethernet system bus</b>  <b>Effect:</b> The controller will load the configuration files for process data communication on the Jetter Ethernet system bus (Publisher.pub, Subscriber.sub) from the file system.  <b>Application:</b> Once the transfer of these files into the controller's file system is completed, system command 312 enables their contents.
<b>System Command 313</b>	<b>Stop process data communication for Ethernet system bus</b>  <b>Effect:</b> Process data communication on the Jetter Ethernet system bus will be stopped.  <b>Application:</b> Transfer the configuration files for process data communication on the Jetter Ethernet system bus into the controller's file system. Then, stop process data communication by issuing system command 313. Finally, enable the contents of the new files.
<b>System Command 330</b>	<b>Disable JetIPScan client</b>  <b>Effect:</b> This command lets you disable the JetIPScan client. The server, however, remains enabled.  <b>Application:</b> For testing purposes.

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### System Command 331

#### Enable JetIPScan client

**Effect:**

This command lets you enable the JetIPScan client.

**Application:**

This command lets you enable the JetIPScan client which has been disabled for testing purposes.

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## Triggering an ARP Request

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### ARP Request

When the IP address of a network device is entered into the corresponding register, the controller triggers an ARP request. This request is used for resolution of IP address into Ethernet address.

### R 104250

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#### Executing an ARP Request

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#### Register properties

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Values	Valid IP address
--------	------------------

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### SVG Files in HTTP Server

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#### New File Format

The HTTP server now supports "Scalable Vector Graphics" files with the extension '.svg'.

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## Program Control through Registers

### Obsolete Function

Bit 0 set in registers 200001 and 210000 shows that the application program is running. If bit 0 is not set, the application program is not running. These registers are read-only registers.

Both registers have got the same function.

### New Function

This register lets you control application program execution by entering the corresponding values. As before, read access to this register returns whether the program is running or not.

Both registers have got the same function. This applies to write access, too.

### R 200001 / R 210000

#### Application Program

#### Module register properties

Values	Read access: 0: Program is not running 1: Program is running
Value after reset	Depending on whether the program is running or not

#### Commands

<b>0 / 2</b>	<b>Stop program</b> This command lets you stop the application program.
<b>1</b>	<b>Start program</b> This command lets you restart the application program.
<b>3</b>	<b>Continue program</b> This command lets you continue the application program.

### Assigning Structures

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#### Obsolete Function

Assignments between structure variables can only be programmed if both variables are located within the same memory area.

---

#### New Function

Assignments between structure variables can be programmed even if they are located in different memory areas.

---

#### JetSym STX Program

```
Type
    TEST_TYPE: Struct
        IntVar:    Int;
        FloatVar:  Float;
        StringVar: String[30];
        ArrayVar:  Array[5] Of Long;
    End_Struct;
End_Type;

Var
    TestVar:    TEST_TYPE;
    TestVarVL:  TEST_TYPE At %VL 1000800;
End_Var;

Task TestTask Autorun

    ...

    TestVar := TestVarVL;

    ...

End_Task;
```

---

---

## 2.2 Sorting Data

---

### Introduction

This chapter describes system function 50. This system function is used to trigger the sorting algorithm provided by the operating system.

### Application

To sort data within the controller, so far, it was necessary to program the sorting algorithm in the application program.

The advantage of this approach was that each source line was known. However, this approach had an adverse effect on the sorting performance.

To offer the user the greatest possible flexibility, the sorting algorithm is now separated from the data, and is provided by the operating system of the controller. The data to be sorted are indirectly addressed through a descriptor using parameter 1.

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## System Function 50: Sorting Data

### Introduction

System function 50 is used to trigger the sorting algorithm provided by the operating system.

### Function Declaration

```
System function (50, &StructInputDescriptor,
&StructFunctionResult);
```

Parameter	Description
StructInputDescriptor	Structure of the type SORT_ELEMENT
StructFunctionResult	Structure of the type FUNCTION_RESULT

### Type declaration SORT\_ELEMENT

Type

```
SORT_ELEMENT:
Struct
    Startaddress      : Int;
    NumberofDatasets  : Int;
    DataLength        : Int;
    SortingElement     : Int;
    Mode              : Int;
    DataType          : Int;
    Unassign1         : Int;
    Unassign2         : Int;
    Unassign3         : Int;
    Unassign4         : Int;
End_Struct;
End_Type;
```

### Function Parameters of the Structure SORT\_ELEMENT

Description of function parameters of the structure SORT\_ELEMENT:

Parameter	Value	Remarks
Startaddress	1.000.000 ... 1.119.999	First register containing data sets to be sorted
NumberofDatasets	2 ... 1.000	Quantity of data sets 1,000 sets max.
DataLength	2 ... 1.000	Quantity of numerical values per data set
SortingElement	0 ... 999	Element in a data set serving as sorting criterion
Mode	0 ... 1	Specifies the sorting order (ascending/descending) Bit 0 = 0: Ascending order Bit 0 = 1: Descending order
DataType	0: Integer 1: Float	Type for comparative operations



Parameter	Value	Remarks
Unassign1	not assigned	Earmarked for future features
Unassign2	not assigned	Earmarked for future features
Unassign3	not assigned	Earmarked for future features
Unassign4	not assigned	Earmarked for future features

### Type Declaration FUNCTION\_RESULT

#### Type

```

FUNCTION_RESULT:
Struct
    ErrorCode          : Int;
    ExecutionTime      : Int;
    Unassign5          : Int;
    Unassign6          : Int;
End_Struct;
End_Type;

```

### Function Parameters of the Structure FUNCTION\_RESULT

Description of function parameters of the structure FUNCTION\_RESULT:

Parameter	Value	Remarks
ErrorCode	-8 ... 0	Value returned by the function
ExecutionTime	-2.147.483.648 ... 2.147.483.647	Execution time in $\mu$ s; time required for sorting
Unassign5	not assigned	Earmarked for future features
Unassign6	not assigned	Earmarked for future features

### Return Value

The following return values are possible:

Result	Description
0	OK, no error
-1	Star register > 1119999
-2	Destination register > 1119999
-3	Quantity of data records > 1,000
-4	Data length > 1,000
-5	Sorting mode > 256
-6	Sorting element > (data length minus 1)
-7	Type for comparative operation is neither float nor integer

Result	Description
-8	Input descriptor is outside the valid register area

---

### How this Function is Used

The data package and the sorting algorithm are transferred using the Input Descriptor. As result, the sorting function returns the return value and the time required for sorting the date.

```
System function (  
    50,  
    &InputDescriptor,  
    &FunctionResult);
```

---

### Important Note

Before calling this function, the input descriptor must be initialized using values that make sense.

---

### Operating Principle

System function 50 lets you sort data sets using the function provided by the OS of the controller. A maximum of 1,000 data sets can be sorted. Each data set may comprise a maximum of 1,000 data elements. The user must specify how the data sets are to be sorted. For instance, whether the data sets are to be sorted in ascending or descending order based on the second data element. Allowed types for data elements are integer or float.

---

### Related Topics:

- **System Function 50: JetSym STX Sample Program** (see page 27)

## Sample Program

**Task** Four data sets are to be sorted in ascending order based on the second element.

**Solution** For the sorting operation system function 50 is to be used.

### JetSym STX Program

#### Type

SORT\_ELEMENT:

#### Struct

```

    Startaddress      :      Int;
    NumberofDatasets  :      Int;
    DataLength        :      Int;
    SortingElement    :      Int;
    Mode              :      Int;
    DataType          :      Int;
    Unassign1         :      Int;
    Unassign2         :      Int;
    Unassign3         :      Int;
    Unassign4         :      Int;

```

End\_Struct;

FUNCTION\_RESULT:

#### Struct

```

    ErrorCode         :      Int;
    ExecutionTime     :      Int;
    Unassign5         :      Int;
    Unassign6         :      Int;

```

End\_Struct;

DATA\_SET:

#### Struct

```

    Element1         :      Int;
    Element2         :      Int;
    Element3         :      Int;

```

End\_Struct;

End\_Type;

#### Var

```

    InputDescriptor   :      SORT_ELEMENT;
    FunctionResult    :      FUNCTION_RESULT;
    Databloc          :      Array[4] Of DATA_SET At %VL 1000000;

```

End\_Var;

Task main Autorun

// Sorting data using system function 50

```
// Entering input descriptor parameters
InputDescriptor.Startaddress      := 1000000;
InputDescriptor.NumberofDatasets := 4;
InputDescriptor.DataLength       := 3;
InputDescriptor.SortingElement   := 1;
InputDescriptor.Mode             := 0;
InputDescriptor.DataType         := 0;
InputDescriptor.Unassign1        := 0;
InputDescriptor.Unassign2        := 0;
InputDescriptor.Unassign3        := 0;
InputDescriptor.Unassign4        := 0;

// Before sorting, the data block contains the following numerals
Databloc[0].Element1 := 1;
Databloc[0].Element2 := 8;
Databloc[0].Element3 := 15;

Databloc[1].Element1 := 2;
Databloc[1].Element2 := 1;
Databloc[1].Element3 := 8;

Databloc[2].Element1 := 3;
Databloc[2].Element2 := 4;
Databloc[2].Element3 := 20;

Databloc[3].Element1 := 4;
Databloc[3].Element2 := 20;
Databloc[3].Element3 := 6;

// Sorting data using system function 50
SystemFunction(50, &InputDescriptor, &FunctionResult);

If FunctionResult.ErrorCode <> 0 Then
    // Error has occurred
End_If;

Loop
// ...
End_Loop;

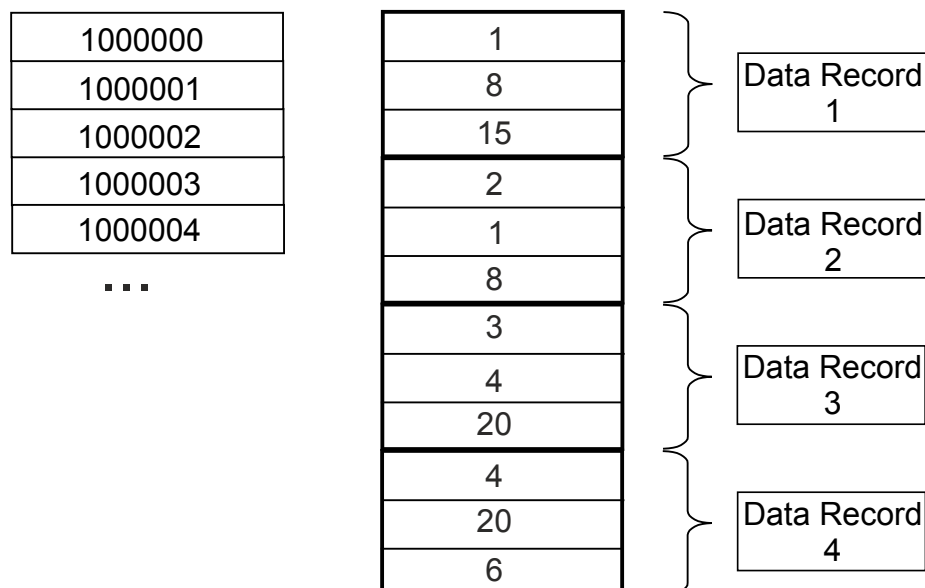
End_Task;
```

---

**Data Block Before  
Sorting Operation**

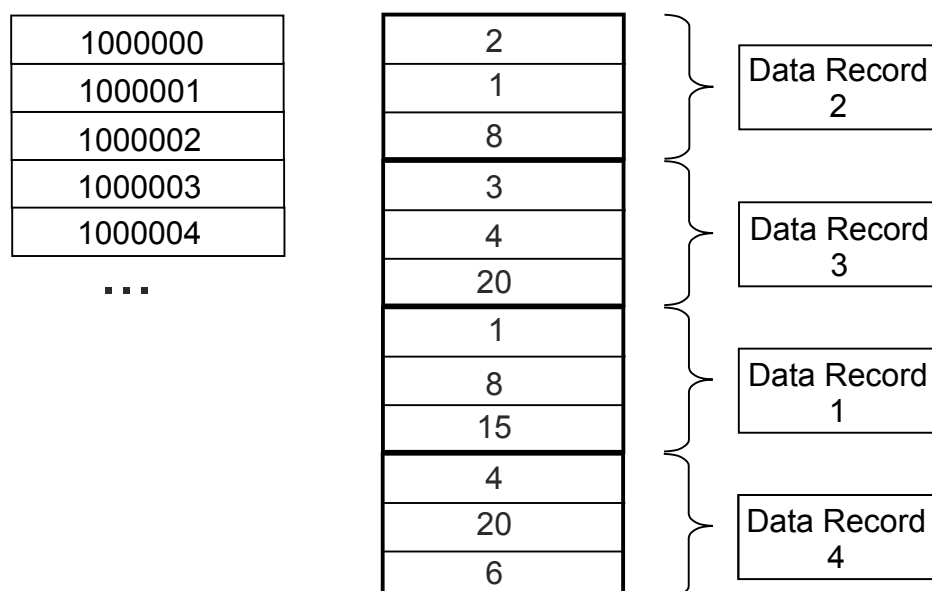
The following figure shows the contents of the data block before the sorting operation.

Memory Area:

**Data Block After Sorting  
Operation**

The following figure shows the contents of the data block after the sorting operation.

Memory Area:

**Related Topics:**

- **System Function 50: Sorting Data** (see page 24)

# 3 Fixed Software Bugs

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### Introduction

This chapter describes the software bugs which have been fixed in the new operating system release.

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## Serial Interface - No Transmission Errors

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**Appearance of the Error**

No error bits are set in register 103000 "Error status" of the serial interface irrespective of the fact that transmission errors have occurred.

**Affected Versions/Revisions**

The following versions/revisions are affected by this bug:

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OS version	< 1.12.0.0
Hardware revision	not relevant
Configuration or operating mode	not relevant

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**Remedy / Workaround**

There is no remedy for affected versions/revisions.

**Troubleshooting**

Starting from the following versions/revisions this bug has been fixed:

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OS version	1.12.0.0
Hardware revision	not relevant
Configuration or operating mode	not relevant

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### During Program Launch No Program Control Possible

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**Appearance of the Error** When the application program is launched, external control of the program is prevented.  
If, for instance, an endless loop is programmed in the constructor of an object, the program can neither be stopped, nor restarted. Even downloading a new program is prevented in this state.

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**Affected Versions/Revisions** The following versions/revisions are affected by this bug:

OS version	JC-340/JC-350	< 1.12.0.00
Hardware revision	not relevant	
Configuration or operating mode	not relevant	

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**Remedy / Workaround** Switch the controller off. Set the mode selector to position "STOP" to prevent the application program from being launched. Then, switch the controller on. Now, you are able to download a different (improved) application program.

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**Troubleshooting** Starting from the following versions/revisions this bug has been fixed:

OS version	JC-340/JC-350	1.12.0.00
Hardware revision	not relevant	
Configuration or operating mode	not relevant	

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## Wrong Variable Values after Download or Restart

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**Appearance of the Error**

If you download or relaunch the application program while JetSym setup or monitor is active, it may happen that wrong values are displayed for variables that have not been located.

**Affected Versions/Revisions**

The following versions/revisions are affected by this bug:

OS version	JC-340/JC-350	< 1.12.0.00
Hardware revision	not relevant	
Configuration or operating mode	not relevant	

**Remedy / Workaround**

Disable the setup and monitor functions. Then, re-enable them.

**Troubleshooting**

Starting from the following versions/revisions this bug has been fixed:

OS version	JC-340/JC-350	1.12.0.00
Hardware revision	not relevant	
Configuration or operating mode	not relevant	

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### No Access to Analog Registers on the JX3 System Bus

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**Appearance of the Error** When an error occurred during access to registers of an analog module, access to registers of analog modules stops working at all. However, process data are still being transferred.

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**Affected Versions/Revisions** The following versions/revisions are affected by this bug:

OS version	JC-340/JC-350	< 1.12.0.00
Hardware revision	not relevant	
Configuration or operating mode	not relevant	

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**Remedy / Workaround** There is no remedy for affected versions/revisions.

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**Troubleshooting** Starting from the following versions/revisions this bug has been fixed:

OS version	JC-340/JC-350	1.12.0.00
Hardware revision	not relevant	
Configuration or operating mode	not relevant	

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## The Counting Function of JX3-DI16 and JX3-DIO16 Modules Does Not Work Properly

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**Appearance of the Error**

A wrong value is entered into the configuration and command registers controlling the counting function on a JX3-DI16, or JX3-DIO16 module. As a result, the counting function does not work properly.

**Affected Versions/Revisions**

The following versions/revisions are affected by this bug:

OS version	JC-340/JC-350	< 1.12.0.00
Hardware revision	not relevant	
Configuration or operating mode	not relevant	

**Remedy / Workaround**

There is no remedy for affected versions/revisions.

**Troubleshooting**

Starting from the following versions/revisions this bug has been fixed:

OS version	JC-340/JC-350	1.12.0.00
Hardware revision	not relevant	
Configuration or operating mode	not relevant	

### No Entry Possible into Error Registers of JX3-MIX Modules

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**Appearance of the Error** Values cannot be entered into module registers indicating errors of digital outputs (MR 513, and MR 514) on JX3-MIX1, or JX3-MIX2 modules.

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**Affected Versions/Revisions** The following versions/revisions are affected by this bug:

OS version	JC-340/JC-350	< 1.12.0.00
Hardware revision	not relevant	
Configuration or operating mode	not relevant	

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**Remedy / Workaround** There is no remedy for affected versions/revisions.

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**Troubleshooting** Starting from the following versions/revisions this bug has been fixed:

OS version	JC-340/JC-350	1.12.0.00
Hardware revision	not relevant	
Configuration or operating mode	not relevant	

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## JX2 System Bus Doesn't Work Properly

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**Appearance of the Error**

If a great number of devices is connected to the JX2 system bus, or a large number is set in register 200002032, it may sometimes happen that the JX2 system bus fails to function properly.

**Affected Versions/Revisions**

The following versions/revisions are affected by this bug:

OS version	< 1.12.0.0
Hardware revision	not relevant
Configuration or operating mode	not relevant

**Remedy / Workaround**

There is no remedy for affected versions/revisions.

**Troubleshooting**

Starting from the following versions/revisions this bug has been fixed:

OS version	1.12.0.0
Hardware revision	not relevant
Configuration or operating mode	not relevant

## Errors on the JX2 System Bus Are Not Displayed

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**Appearance of the Error** If, due to an error on the system bus, bit 2 is set in error registers 200008 / 210004 and this error is acknowledged by the application program (by resetting the bit), it may sometimes happen that bit 2 is re-set immediately after that and no entry is made into the error registers of the JX2 system bus.

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**Affected Versions/Revisions** The following versions/revisions are affected by this bug:

OS version	< 1.12.0.0
Hardware revision	not relevant
Configuration or operating mode	not relevant

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**Remedy / Workaround** Insert a delay time of at least 5 milliseconds before resetting bit 2 if the application program recognizes that bit 2 in the error registers 200008 / 210004.

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**Troubleshooting** Starting from the following versions/revisions this bug has been fixed:

OS version	1.12.0.0
Hardware revision	not relevant
Configuration or operating mode	not relevant

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## User-Programmable CAN Interface Does Not Work

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**Appearance of the Error** The user-programmable CAN interface (CAN-PRIM) cannot be used.

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**Affected  
Versions/Revisions**

The following versions/revisions are affected by this bug:

OS version	JC-340	< 1.08.0.00 and V1.10.0.00
	JC-350	< 1.08.0.00 and V1.10.0.00
Hardware revision	not relevant	
Configuration or operating mode	not relevant	

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**Remedy / Workaround** There is no remedy/workaround for affected versions/revisions.

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**Troubleshooting**

Starting from the following versions/revisions this bug has been fixed:

OS version	JC-340	1.08.0.00, 1.09.0.00, starting from 1.12.0.00
	JC-350	1.08.0.00, 1.09.0.00, starting from 1.12.0.00
Hardware revision	not relevant	
Configuration or operating mode	not relevant	

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## No Write Access to Digital Outputs on CANopen® Modules

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**Appearance of the Error** In rare cases, digital outputs on a CANopen® module cannot reliably be activated/deactivated.

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**Affected Versions/Revisions** The following versions/revisions are affected by this bug:

OS version	JC-340/JC-350	< 1.12.0.00
Hardware revision	not relevant	
Configuration or operating mode	not relevant	

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**Remedy / Workaround** Cyclically toggle an unused output on the CANopen® module.

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**Troubleshooting** Starting from the following versions/revisions this bug has been fixed:

OS version	JC-340/JC-350	1.12.0.00
Hardware revision	not relevant	
Configuration or operating mode	not relevant	

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## Timeouts with the Wago 750 System

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**Appearance of the Error** Timeouts may occur when initializing a Wago 750 system consisting of several analog input modules.

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**Affected Versions/Revisions**

The following versions/revisions are affected by this bug:

OS version	JC-340/JC-350	< 1.12.0.00
Hardware revision	not relevant	
Configuration or operating mode	not relevant	

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**Remedy / Workaround**

There is no remedy/workaround for affected versions/revisions.

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**Troubleshooting**

Starting from the following versions/revisions this bug has been fixed:

OS version	JC-340/JC-350	1.12.0.00
Hardware revision	not relevant	
Configuration or operating mode	not relevant	

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## CANopen® Type "String" Causes Crash

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**Appearance of the Error** Read access to an object of the type "string" in CANopen® application registers (200.007.x65 through 200.007.x85) may cause the controller to crash.

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**Affected Versions/Revisions** The following versions/revisions are affected by this bug:

OS version	JC-340/JC-350	< 1.12.0.00
Hardware revision	not relevant	
Configuration or operating mode	not relevant	

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**Remedy / Workaround** Do not read objects of the type "string".

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**Troubleshooting** Starting from the following versions/revisions this bug has been fixed:

OS version	JC-340/JC-350	1.12.0.00
Hardware revision	not relevant	
Configuration or operating mode	not relevant	

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## Configuration May Exceed Maximum Number of CANopen® Application Registers

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**Appearance of the Error**

The generic IO module to DS401 lets you configure CANopen® application registers 200.007.x70 through 200.007.x85, although they must not be used for this purpose.

**Affected Versions/Revisions**

The following versions/revisions are affected by this bug:

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OS version	JC-340/JC-350	< 1.12.0.00
Hardware revision	not relevant	
Configuration or operating mode	not relevant	

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**Remedy / Workaround**

Only use registers 200.007.x65 through 200.007.x69 for modules to DS401.

**Troubleshooting**

Starting from the following versions/revisions this bug has been fixed:

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OS version	JC-340/JC-350	1.12.0.00
Hardware revision	not relevant	
Configuration or operating mode	not relevant	

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## Timeout with Registers 200.007.x90 through 200.007.x93

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**Appearance of the Error** A timeout occurs when accessing a register with a number between 200.007.x90 through 200.007.x93.

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**Affected Versions/Revisions** The following versions/revisions are affected by this bug:

OS version	JC-340/JC-350	< 1.12.0.00
Hardware revision	not relevant	
Configuration or operating mode	not relevant	

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**Remedy / Workaround** Read out CANopen® objects 0x1001, 0x1002, and 0x1003 which are mapped to registers 200.007.x90 through 200.007.x93.

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**Troubleshooting** Starting from the following versions/revisions this bug has been fixed:

OS version	JC-340/JC-350	1.12.0.00
Hardware revision	not relevant	
Configuration or operating mode	not relevant	

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## Wrong Software Version is Displayed for CANopen® Modules

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**Appearance of the Error** Register 200.007.x99 displays the wrong software version number for CANopen® modules.

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**Affected Versions/Revisions**

The following versions/revisions are affected by this bug:

OS version	JC-340/JC-350	< 1.12.0.00
Hardware revision	not relevant	
Configuration or operating mode	not relevant	

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**Remedy / Workaround**

There is no remedy/workaround for affected versions/revisions.

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**Troubleshooting**

Starting from the following versions/revisions this bug has been fixed:

OS version	JC-340/JC-350	1.12.0.00
Hardware revision	not relevant	
Configuration or operating mode	not relevant	

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## The CANopen® Sync Interval is Exceeded

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**Appearance of the Error** The interval for sending the CANopen® sync message set in register 200002074 is sometimes exceeded.

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**Affected Versions/Revisions** The following versions/revisions are affected by this bug:

OS version	JC-340/JC-350	< 1.12.0.00
Hardware revision	not relevant	
Configuration or operating mode	not relevant	

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**Remedy / Workaround** There is no remedy/workaround for affected versions/revisions.

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**Troubleshooting** Starting from the following versions/revisions this bug has been fixed:

OS version	JC-340/JC-350	1.12.0.00
Hardware revision	not relevant	
Configuration or operating mode	not relevant	

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