



PROBLEM DETERMINATION GUIDE

AMU 2.4.0

AML
MANAGEMENT
UNIT

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1 Before using this Manual

1.1 Symbol and information explanation

The following symbols and displays draw your attention to important information.






These symbols are explained in the Section "Warning information".



Information

Information necessary to improve understanding of this Manual.

<KEY>	Key on the AMU computer keyboard
<1> + <2>	Press keys simultaneously
"ABCD"	Heading, e.g. Section 3 "For your safety" Technical term, e.g. "Manage Users" File name, e.g. "AMUINST.EXE"
ABCD	Term appearing on all AMU user interfaces
ABCD	Command line appearing in the OS/2 input window, e.g. [C:\]cd amu
	Cross-reference <ul style="list-style-type: none">- to a description somewhere else in this Manual ( Page 1 - 1)- to a description in a different Manual: MM (Maintenance Manual), OM (Operator Manual), SM (Start-up Manual) ( MM 4.5.5 "CP/MEM")

1.2 Assistance



If you cannot solve a problem with the aid of this document or if you are interested in a recommendation regarding training, please contact your contract Partner or the ADIC/GRAU Technical Assistance Center (ATAC).

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1.3 Concerning this Manual

This Manual contains information and instructions necessary for the reliable operation of the AMU. Significant additional explanations are highlighted where applicable.

Only AML/E

You can control various kinematics with the AMU with the appropriate configuration:

- AML/2
- AML/E
- AML/J

Information only applicable to certain configurations is marked in the left margin (e.g. Only AML/E).

You have received detailed training from ADIC/GRAU Storage Systems and can use the AML system without endangering yourself or others.



WARNING!

Dangerous situations can arise when untrained persons use the AML system.

This can lead to fatal injuries caused by moving parts or parts carrying current.

This is why the practical training by ADIC/GRAU Storage Systems is absolutely mandatory for all persons working with the AML system!

Always refer to the Operator Manual whenever you have any operating problems.

If you cannot clear the problem yourself:

- ask a qualified technician to help
- ask your maintenance partner or ADIC/GRAU Storage Systems for further information.

However, please remember:



WARNING!

You may only perform certain work or adjustments yourself when you are qualified to do so through the appropriate training!

And, most important of all:

Be certain to read the Section "For your safety" (☞ MM Section 3 or ☞ SM Section 3) before starting your work!

1.4 Copyright

This document is copyright protected and may not be copied in whole or part, reproduced, translated or converted to any electronic medium or into machine-readable form without prior permission in writing from ADIC/GRAU Storage Systems.

The AML system (mechanics, hardware and software) described in this document is delivered on the basis of a general license contract or a single license (under obligation not to pass it on). The software must only be implemented and copied as specified in the contractual agreement. This also applies without restriction to the complete AML system documentation. Anyone copying or transferring the software (AMU, Robots) to cartridge, disk or any other storage medium without permission is liable to prosecution.

ADIC/GRAU Storage Systems retains the right to modify or adapt the functions described, as well as this Manual, without notice.

AML/2	Registered trademark of ADIC/GRAU Storage Systems - Germany
AML/E	Registered trademark of ADIC/GRAU Storage Systems - Germany
AML/J	Registered trademark of ADIC/GRAU Storage Systems - Germany
CM/2	Registered trademark of IBM
DB 2/2	Registered trademark of IBM
IBM	Registered trademark of IBM
OS/2	Registered trademark of IBM

2 AMU Functions

2.1 AML Management Unit (AMU)

The AMU is

- the control computer software from ADIC/GRAU Storage Systems
- central interface for AML-Systems without an operator.

The AMU manages an Archive catalog based on the IBM DB/2 compatible database system for OS/2. This means that a slot allocation or Volser position can be determined at any time.

The AMU can control various kinematics with the appropriate configuration:

- AML/2
- AML/E
- AML/J

2.1.1 AMU tasks

- Host communication
 - interprets commands coming from the host computer
 - checks whether these commands can be executed
- Managing the Archive catalog
 - stores the logical coordinates of the slots
 - assigns the media to these slots
 - records the status of the slots and drives
- Converting the logical coordinates into physical coordinates
- Communication with
 - the robot controller
 - controlling the storage towers
 - the I/O unit/A
- User interface for
 - start-up
 - service
 - operator
- Error messages (LOG and Trace)
- Configuration (describes the individual layout of the Archive)



Information

The AMU does not register the data contents of the media.

2.1.2 Host connections

Normal operation

A host computer controls the system in normal operation ("AUTO" = operation without operator).

AMU as Server

The AMU runs as Server in an environment with several host computers.

It takes over the overall coordination because several host computers can work with an AML system in parallel.

The respective host software components then communicate with the AMU using differing connections.

2.2 AMU in a system environment

2.2.1 AML/2

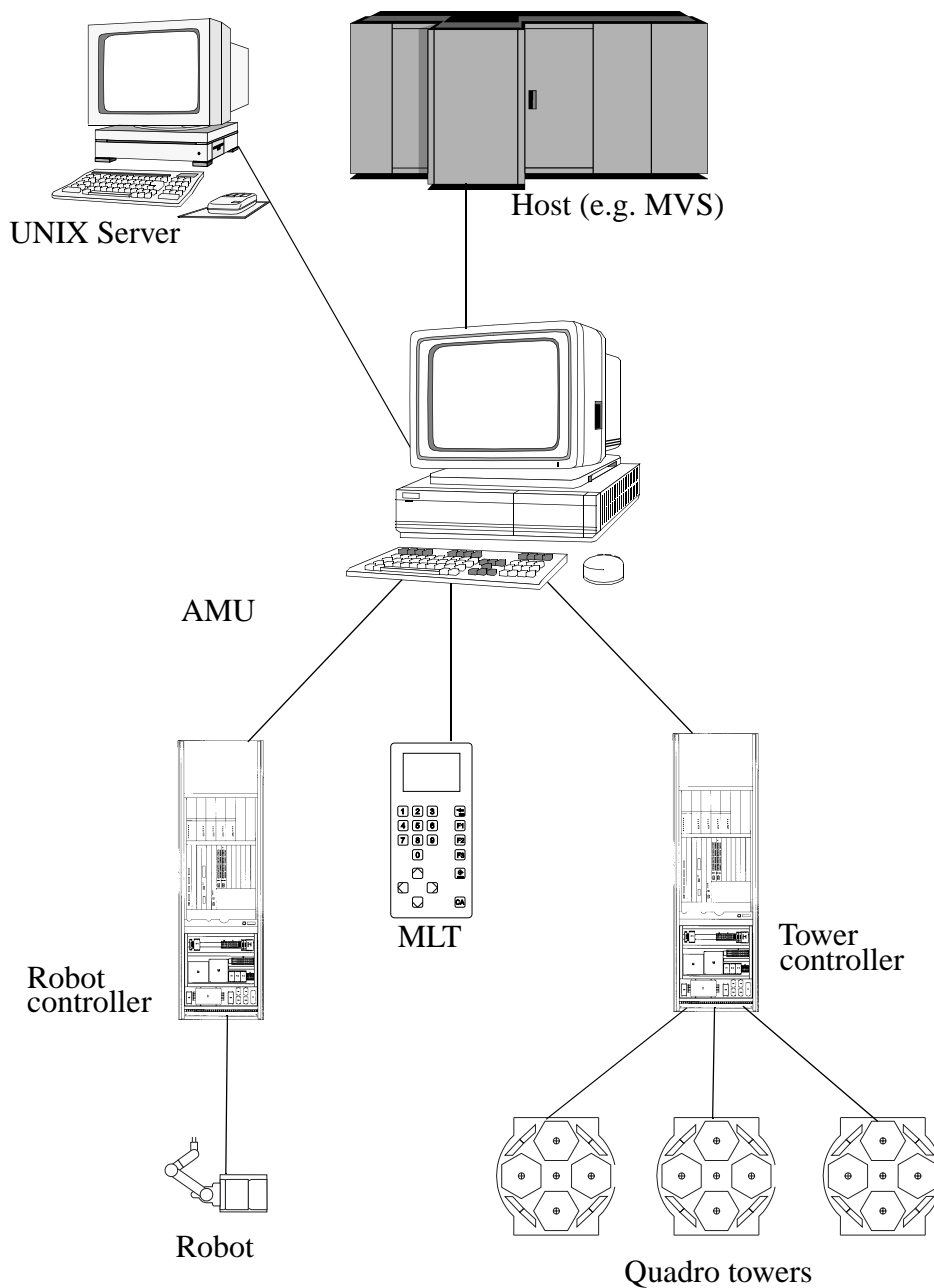


Fig. 2-1: System environment AMU with AML/2

2.2.2 AML/E

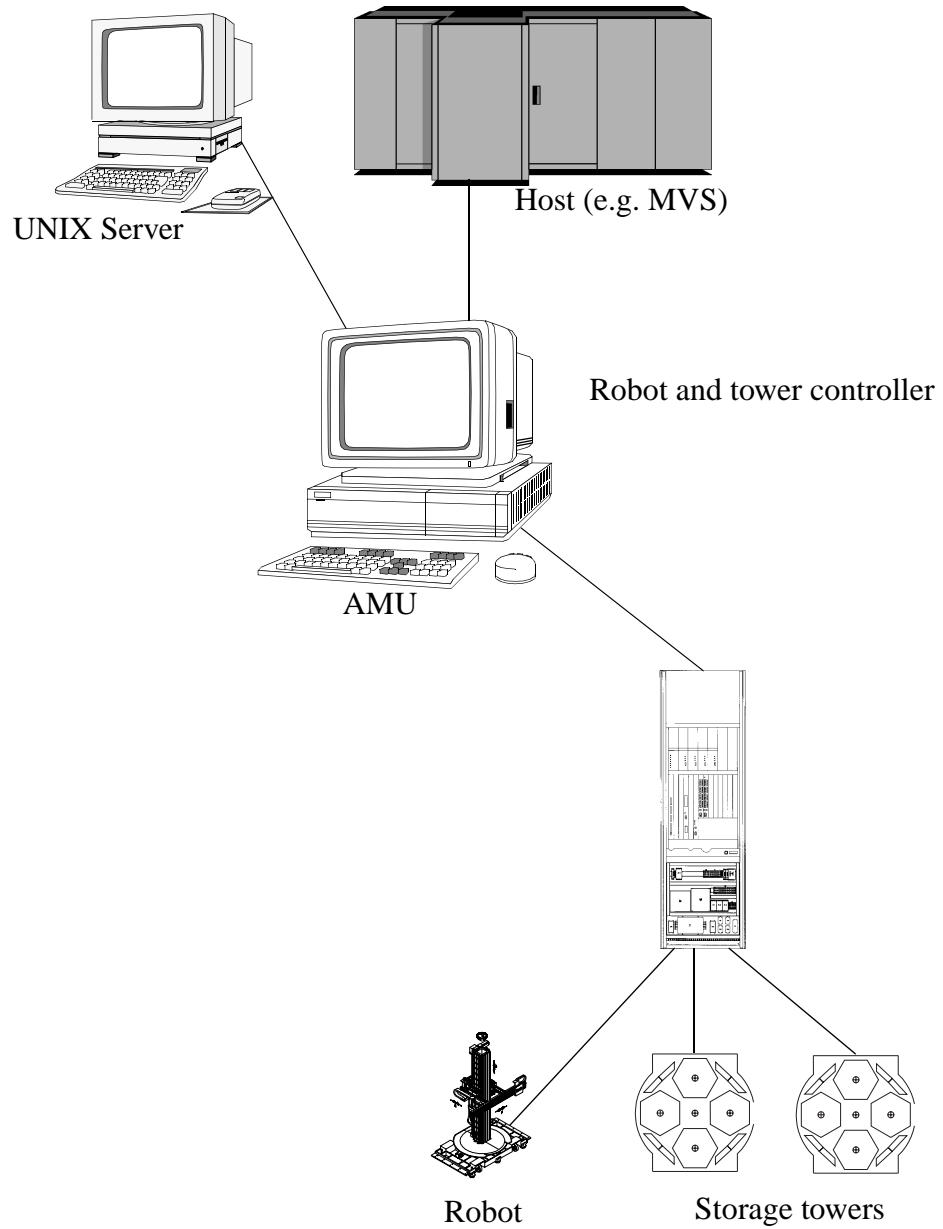


Fig. 2-2: System environment AMU with AML/E

2.2.3 AML/J

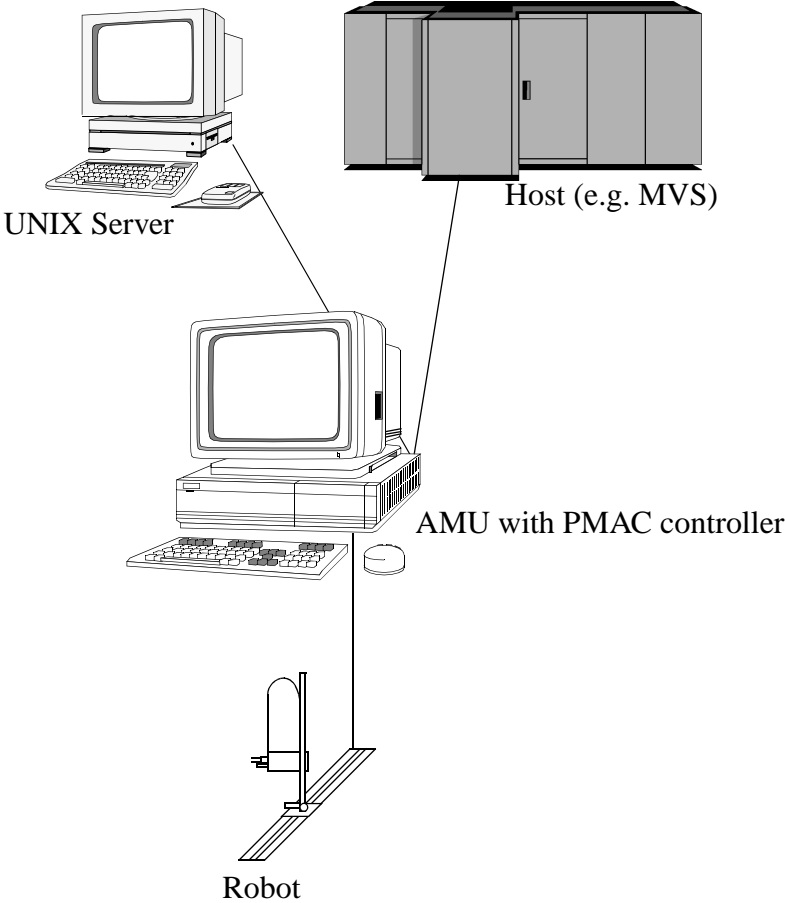


Fig. 2-3: System environment AMU with AML/J

3 Diagnostic Analysis

Use the following, various diagnostic tools

- depending on the error situation and
- the hardware used:

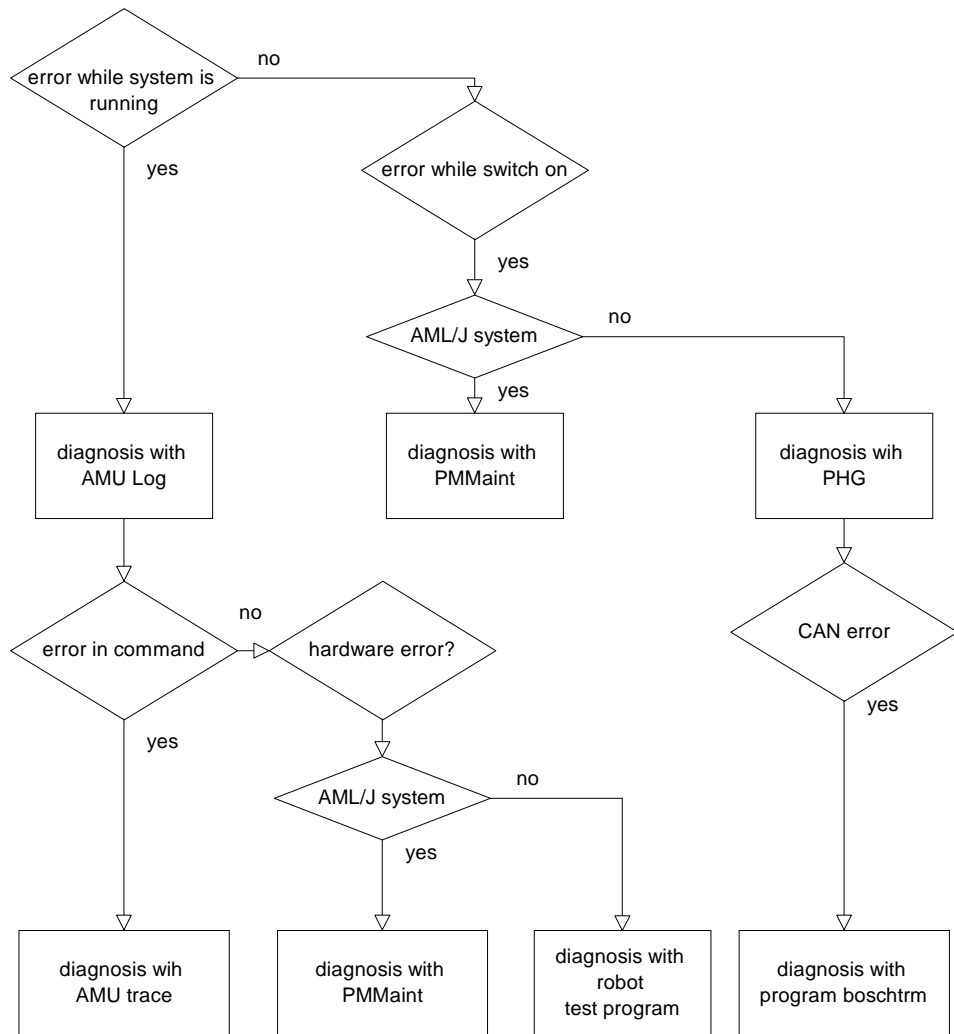


Fig. 3-1: Diagnostic procedure and diagnostic tools

Tool	Explanation
AMU Log	Display all commands, error messages and status messages
AMU Trace	Display internal AMU procedure flows and the communication to other components
PMMaint	Independent program on the AMU PC to diagnose the PMAC board (AML/J control)
Robot test program/ operating system rho	Program on the AML/J and AML/E control for diagnostics with the manual programming device (PHG)
Boschtrm	Terminal program for diagnostic analysis of drive amplifiers (you need the start-up cable)
CM Trace	CM/2 software trace function to analyse a communication problem in LU2, LU6.2 or EXCP communication
DB/2 Query Manager	SQL database editor that can be used when a problem arises in the database
PE	PMAC Editor, diagnostic tool for the PMAC board (AML/J)
ACUSETUP	Terminal program to configure the AML/J Scanner

3.1 Software Diagnostic Tools

3.1.1 AMU Archive Catalog Management

Retrieving information in various display windows.

Command	Field	Explanation
Archive...		Control and modify Archive catalog entries for the slots. The corresponding Archive catalog entry is displayed after an input has been made (e.g. Volser).

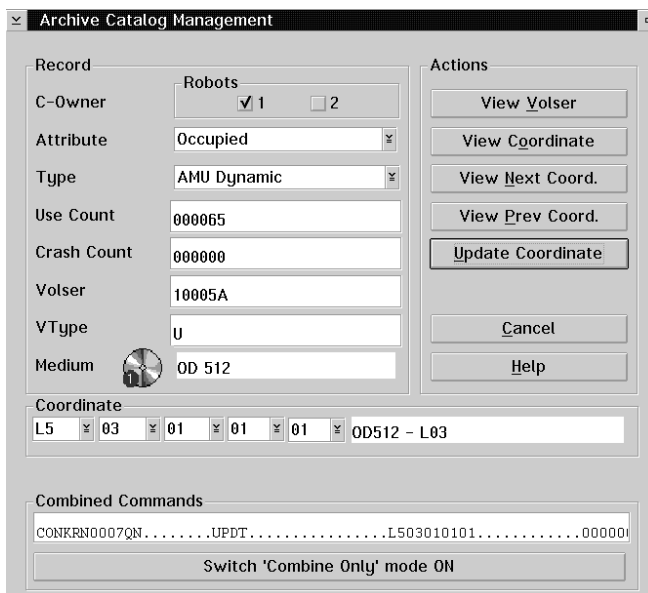


Fig. 3-2: Archive Catalog Management window

Command	Field	Explanation
Archive... (cont.)	C-Owner	Medium owner: the robot or robots that can access this medium
	Attribute	Medium status
	Type	Slot type in Archive
	Use Count	Number of accesses to the slot
	Crash Count (in preparation)	Number of erroneous accesses to the slot. Incremented every time the crash sensor on the gripper is triggered
	Volser	Medium number
	Medium	Medium type
	View Volser	Display the Archive catalog entry for the specified Volser
	View Next Coord.	Display the Archive catalog entry for the next coordinate of the component. Scrolling is not possible after the last coordinate
	View Prev. Coord.	Display the Archive catalog entry for the previous coordinate of the component. Scrolling is not possible before the first coordinate
	View Coordinate	Display the Archive catalog entry for the logical Archive coordinate entered
Update Coordinate	Update the AMU Archive catalog to Archive coordinate	



ATTENTION!

The current entry is only overwritten in the AMU Archive catalog. Erroneous entries can lead to discrepancies in the Archive.

Command	Field	Explanation
Archive... (cont.)	Coordinate	<p>Logical coordinates of the medium in the Archive</p> <p>The single positions of the coordinates have the following contents:</p> <p>The diagram shows five pairs of boxes representing fields: TT, NN, SS, RR, and PP. Lines connect these fields to labels on the right: TT to Device type, NN to Device No., SS to Segment, RR to Row, and PP to Slot.</p>
	Combined Commands	Create a "Continuous Send" command
	Switch 'Combine Only' mode ON/OFF	<p>Display the active mode Click to switch the mode.</p> <ul style="list-style-type: none"> • mode ON: The command string is created and executed • mode OFF: The command string is created but not executed

3.1.2 AMU Trace

Command	Field	Explanation
Trace...		Online or offline protocol on the internal procedure flows in the AMU software. You can select the protocolled transactions according to areas (AMU processes). A list of the trace levels can be found at the end of this Section. (☞ Page 3 - 8).

Select the trace levels with <SPACE> or with the mouse.



ATTENTION!

The active trace only has limited storage so store the trace as fast as possible when errors occur.

Trace:
 Online
 ON

Writes the active trace in working storage (1 MB is reserved) and displays the data on the screen. The oldest entry is overwritten when the storage area is full.

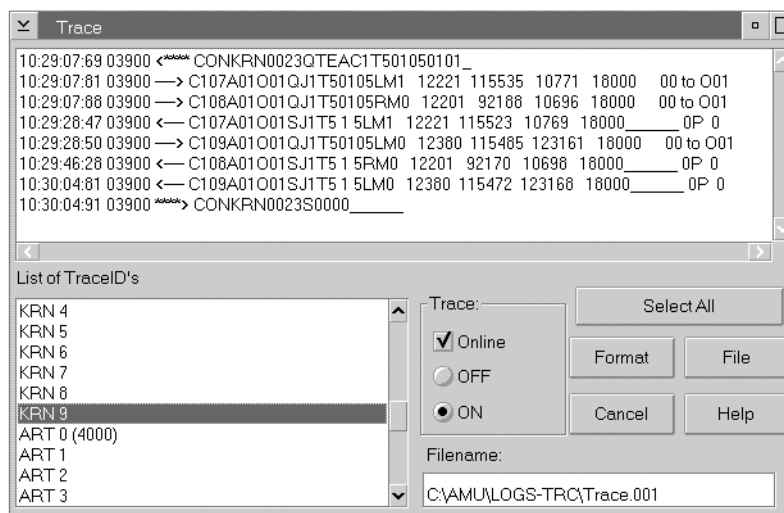


Fig. 3-3: Online Trace window

Trace:
 ON

Writes the active trace in a file in main storage (offline trace)

Command	Field	Explanation
---------	-------	-------------

Trace...
(cont.)

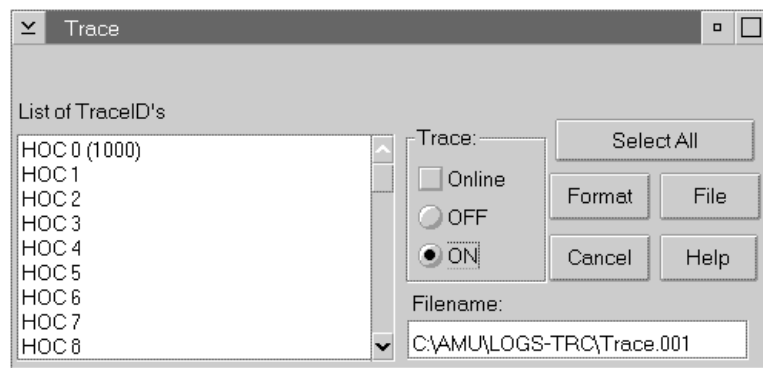


Fig. 3-4: Offline Trace window

File Stores the protocolled trace in a file

This file must first be formatted (↔ **Format**) before it can be printed with the OS/2 Print command

Format Transforms a file stored with the **File** command into a printable format.

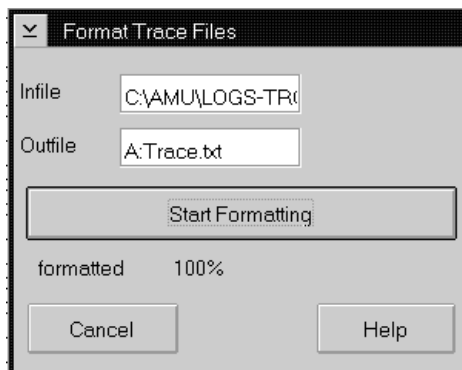


Fig. 3-5: Format Trace File window

Infile: Source file name with path

Outfile: Target file name with path
(e. g. **a:\name** or **c:\amu\logs-trc\name**)

Start Formatting starts the formatting. The text "**formatted 100%**" is output to confirm execution.

3.1.3 Trace levels

HOC trace (communication)

Trace level	Allocation
HOC0	HOC process (module)
HOC1	Event control
HOC2	TCP/IP communication
HOC3	Siemens 3964R communication with control
HOC4	APPC communication
HOC5	rho 3 protocol 4 robots communication (not used by AML/E)
HOC6	AML2 communication, Siemens Host, Backup-AMU
HOC7	rho 3 protocol 4 tower communication (not used by AML/E)
HOC8	RS422 communication for AML/1 tower communication (only by AML/1)
HOC9	EHLL communication (HACC 3174/3274 terminal emulation)

CON trace (operator interface)

Trace level	Allocation
CON0	Load dialogs
CON1	Not used
CON2	Communication with kernel
CON3	Communication with kernel (telegram traffic)
CON4	Log procedural flows
CON5	Multi-purpose
CON6	Server 1 configuration
CON7	Server 2 configuration
CON8	Server 3 configuration
CON9	Partner events entering the CON module

KRN trace (central logic)

Trace level	Allocation
KRN0	Modules: lowest kernel function level, kernel events send/receive
KRN1	Kernel inputs/outputs (host communication)
KRN2	Internal error situation
KRN3	Communication between KRN and CON
KRN4	AMU/L command wait queue
KRN5	AMU wait queue and robot selection
KRN6	AMU/P1 (AML/1) internal procedure flows
KRN7	AMU/P1 (AML/2) procedure flows
KRN8	Physical coordination for Teach processes
KRN9	AMU/P2 procedure flows (AML, commands to robots, towers, E/A unit)

ART trace (log and trace functions)

Trace level	Allocation
ART0	Not used
ART1	Event control
ART2	Not used
ART3	Not used
ART4	Not used
ART5	Not used
ART6	Not used
ART7	Not used
ART8	Not used
ART9	Not used

ARC trace (Archive catalog management)

Trace level	Allocation
ARC0	Event control
ARC1	Database inquiries
ARC2	Database updates
ARC3	Database creation
ARC4	I/O unit changes
ARC5	Editing the Volser ranges
ARC6	Not used
ARC7	Backup
ARC8	Journaling
ARC9	Restore

BUD trace (data transfer to backup AMU)

Trace level	Allocation
BUD0	Initialization, abort
BUD1	Events received and associated data
BUD2	Events sent and associated data
BUD3	Wait queue (reading, writing, deleting)
BUD4	File transfer (starting, stopping)
BUD5	Database accesses (reading, updating)
BUD6	Synchronization with communication partners (PING, ACT ON/OFF)
BUD7	Clock generator accesses (starting, stopping, wait queue)
BUD8	Checking the data received
BUD9	Not used

3.1.4 AMU Log Control Center

Command	Field	Explanation
Log...		<p>The LOG Control Center protocols all messages (even when the LOG Control Center is not open).</p> <p>Examples:</p> <ul style="list-style-type: none"> • Host computer commands • Command execution • Messages to the host computer • Operator interventions • Error messages <p>Log files start daily at 00.00. The oldest Log file is deleted when the available storage on the hard disk sinks below 30 MB.</p>



Information

**Log files cannot cover several days!
There is only one file Log file for each day.**

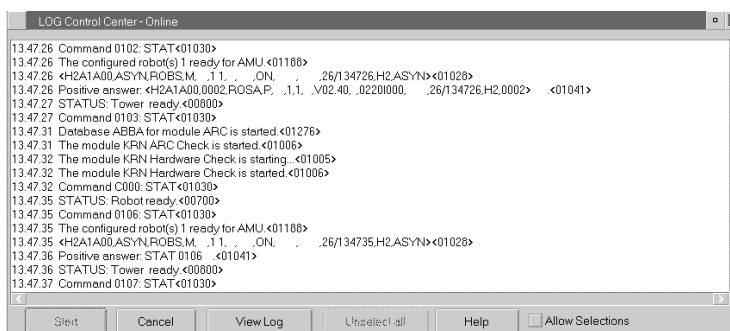



Fig. 3-6: LOG Control Center - Online window

Information on the individual LOG messages

Start Updates the LOG Control Center with the new settings.

Unselect all Clears all selections in the list box.

Command	Field	Explanation
	✓ Allow selections	Button to select a part of the Log string for output on the printer or for storage in a file. Select the area required (only one area allowed).
	ViewLog	Display Scrolling and searching in actual and stored Logs  <p><i>LogView.exe window</i></p>
LogView	View	Opens the Log file with the standard OS/2 Editor
	Exit	Closes the LogView.exe window

3.1.5 Showini program

Display the AMU configuration files AMUCONF.INI and AMUCONST.INI

Syntax

```
showini [-c] [-f] [-a]
```

Option	Significance
<code>showini</code>	Display all configuration areas with a short description
<code>showini RANGE</code>	Display all parameters of the selected configuration area
<code>showini RANGE ITEM</code>	Display all parameters for a particular entry
<code>showini -a</code>	Display all parameters
<code>showini -m STRING</code>	Display all parameters with a word (case sensitive)
<code>showini -c</code>	Display all parameters in the AMUCONST.INI file
<code>showini -c RANGE</code>	Display all parameters of the selected configuration area
<code>showini -c RANGE ITEM</code>	Display all parameters for a particular entry
<code>showini -c -a</code>	Display all parameters
<code>showini -c -m STRING</code>	Display all parameters with a word (case sensitive)
<code>showini -f INIFILENAME</code>	Display all parameters in the specified file

3.1.6 PMMaint program

Barcode test

Command	Field	Explanation
Barcode test	Test the scanner function. Configuration of the barcode types to be read	

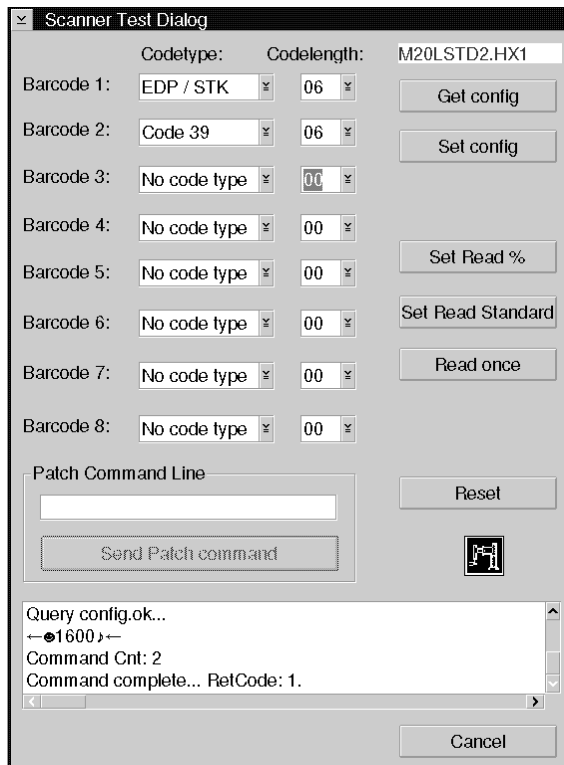




Fig. 3-7: Scanner Test Dialog window

Barcode 1..8: Register for the configured barcode types. You can configure a maximum of 5 different barcode settings. (5-8 available with the new scanner software)

Codetype: Barcode type. Select the types shown in the display:

- Straight 2 of 5
- Interleaf 2 of 5
- EDP/STK (Code 39 modified)
- Code 39
- Code 128
- No code type (register not configured)

Command	Field	Explanation
Barcode test (cont.)	Codelength:	<p>Number of characters in your Volsers:</p> <p> Information Fixed code lengths are recommended. This minimises the error source "Wrong barcode".</p> <ul style="list-style-type: none"> • 00 = any number of characters • 01..16 = according to Volser length
	Get config	Load the scanner configuration in the Scanner Test Dialog window
	Set config	Send the parameters set in the Scanner Test Dialog window to the scanner. Store the parameters in the scanner EEPROM
	Set Read %	Enable the quality diagnostics for barcode reading. The scanner then returns the Volser and the read quality in % for each subsequent Read (☞ Log window).
		<p> Information Only select this option to optimize reading.</p>
	Set Read Standard	Disable the quality diagnostics immediately after the Read optimization (= standard for production)
	Read once	Read an actual robot position. Result display (☞ Log window)
	Reset	Prepare the user interface of the window for a new command. Reset the scanner communication
	Patch Command Line	Command line to input CRT commands (☞ AML/J component documentation)
	Send Patch command	Send the commands entered in the Patch Command Line to the scanner

3.1.7 Service menu

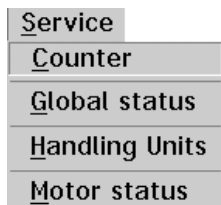


Fig. 3-8: Service menu

Counter

Command	Field	Explanation																																	
Counter	Unit performance counter (Determines the hardware exchange interval).																																		
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3">PMAC Service Counter Dialog</th> </tr> </thead> <tbody> <tr> <td style="width: 20%; text-align: right;">25520</td> <td style="width: 30%;"></td> <td>= Low level commands.</td> </tr> <tr> <td style="text-align: right;">6643.13605</td> <td></td> <td>= Driving axis (meters).</td> </tr> <tr> <td style="text-align: right;">7279.69646</td> <td></td> <td>= Lifting axis (meters).</td> </tr> <tr> <td style="text-align: right;">1403.5278778</td> <td></td> <td>= Turn axis (deg).</td> </tr> <tr> <td style="text-align: right;">766.5</td> <td></td> <td>= Rotation axis (deg).</td> </tr> <tr> <td style="text-align: right;">425</td> <td></td> <td>= Rotation axis ref.</td> </tr> <tr> <td style="text-align: right;">6618</td> <td></td> <td>= Gripp. axis close act.</td> </tr> <tr> <td style="text-align: right;">652</td> <td></td> <td>= Gripping axis ref.</td> </tr> <tr> <td style="text-align: right;">441</td> <td></td> <td>= Break actions</td> </tr> <tr> <td colspan="3" style="text-align: center;"> <input type="button" value="Save"/> <input type="button" value="Cancel"/> </td> </tr> </tbody> </table>		PMAC Service Counter Dialog			25520		= Low level commands.	6643.13605		= Driving axis (meters).	7279.69646		= Lifting axis (meters).	1403.5278778		= Turn axis (deg).	766.5		= Rotation axis (deg).	425		= Rotation axis ref.	6618		= Gripp. axis close act.	652		= Gripping axis ref.	441		= Break actions	<input type="button" value="Save"/> <input type="button" value="Cancel"/>		
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652		= Gripping axis ref.																																	
441		= Break actions																																	
<input type="button" value="Save"/> <input type="button" value="Cancel"/>																																			

Fig. 3-9: PMAC Service Counter Dialog window

Low level commands	Number of all single commands (each AMU command comprises several single commands)
Driving axis (meters).	Distance covered on the Y axis [in meters]
Lifting axis (meters)	Distance covered on the Z axis [in meters]
Turn axis (deg).	Distance covered on the A axis [in °]

Command	Field	Explanation
Counter (cont.)	Rotation axis (deg).	Distance covered on the C axis [in °]
	Rotation axis ref.	Number of reference movements on the C axis
	Gripp. axis close act.	Distance covered on the B axis [in °]
	Gripping axis ref.	Number of reference movements on the B axis
	Break actions	Number of brake status changes on the Z axis
	Save	Store the counter values in a file in the directory C:\AMU

Global status

Command	Field	Explanation
Global status	Display the global status bits. To diagnose errors.	

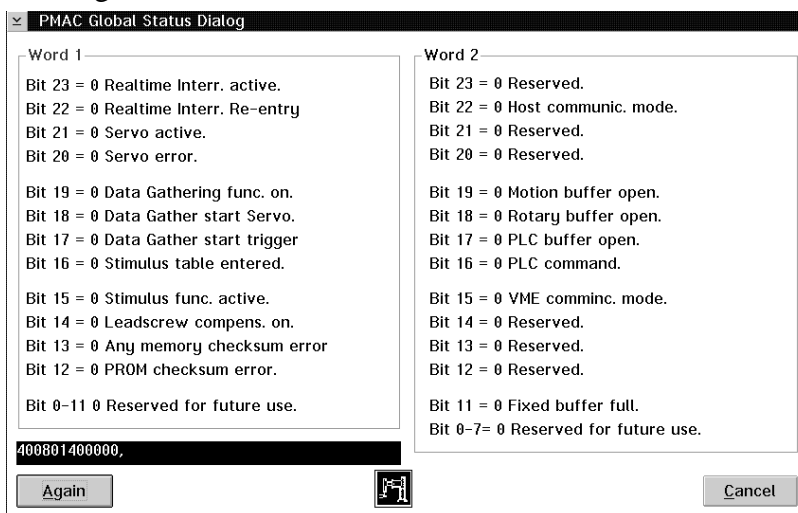


Fig. 3-10: PMAC Global Status Dialog window

Realtime Interr. active	For internal use (on the PMAC board). This bit is 0 during communication.
	PMAC executes a program in the real-time interruption level (PLC 0 or movement planning)
Realtime Interr. Re-entry	Program in the real-time interruption level needed more time (I8+1 Servo cycles). The succeeding real-time interrupt was already triggered
Servo active.	For internal use (on the PMAC board). This bit is 0 during communication.
	PMAC executes a program with Servo update
Servo error.	PMAC could not completely execute Servo routines
Data Gathering func. on.	Data gathering function in PMAC is active
Data Gather start servo	Data gathering function will be activated with the next Servo cycle

Command	Field	Explanation
Global status (cont.)	Data Gather start trigger	Data gathering function will be activated with the start of machine input 2
	Stimulus table entered.	Stimulus table has been loaded on the PMAC board
	Stimulus func. active.	Stimulus table in the PMAC board is active
	Leadscrew compens. on.	Leadscrew compensation is active on the PMAC board
	Any memory checksum error	Checksum error has occurred in the PMAC Firmware memory or in the user program memory
	PROM checksum error.	Checksum error has occurred in the PROM memory of the PMAC Firmware
	Host communic. mode.	Alphanumeric character has been received via the host port. The board is now ready for host communication (PC bus or STD bus). The bit is set to 0 with <CTRL> <Z> over the serial interface (AML only uses the PC bus)
	Motion buffer open.	Movement program buffer is open (PROG or ROT) for inputs
	Rotary buffer open.	Rotation movement program buffer is open (ROT) for inputs
	PLC buffer open	PLC program buffer is open for inputs
PLC command.	PLC command currently being executed. (Bit for internal use)	
VME comminc. mode.	Alphanumeric character has been received via the mailbox port. The board is now ready for VME bus communication. The bit is set to 0 with <CTRL> <Z> over the serial interface (AML only uses the PC bus)	

Command	Field	Explanation
Global status (cont.)	Fixed buffer full.	<ul style="list-style-type: none">• there is either no fixed movement program open• or the PLC buffer is open• or the open buffer has less storage space available than specified in variable I18
	Again	Refresh the screen display

Handling units

Command	Field	Explanation
Handling units	Display of the status bits in the handling unit.	

Word 1

- Bit 23 = 1 Z Axis Feedrate calc.
- Bit 22 = 0 Z Axis Increment mode.
- Bit 21 = 1 Y Axis Feedrate calc.
- Bit 20 = 0 Y Axis Increment mode.
- Bit 19 = 1 X Axis Feedrate calc.
- Bit 18 = 0 X Axis Increment mode.
- Bit 17 = 0 W Axis Feedrate calc.
- Bit 16 = 0 W Axis Increment mode.
- Bit 15 = 0 V Axis Feedrate calc.
- Bit 14 = 0 V Axis Increment mode.
- Bit 13 = 0 U Axis Feedrate calc.
- Bit 12 = 0 U Axis Increment mode.
- Bit 11 = 0 C Axis Feedrate calc.
- Bit 10 = 0 C Axis Increment mode.
- Bit 09 = 0 B Axis Feedrate calc.
- Bit 08 = 0 B Axis Increment mode.
- Bit 07 = 1 A Axis Feedrate calc.
- Bit 06 = 0 A Axis Increment mode.
- Bit 05 = 1 Radius Vect. incr. mode.
- Bit 04 = 1 Continuous motion req.
- Bit 03 = 0 Move spec. by time mode.
- Bit 02 = 0 Continuous motion mode.
- Bit 01 = 0 Singel step mode.
- Bit 00 = 1 Running program.

Word 2

- Bit 23 = 0 Prog. trace activ.
- Bit 22 = 0 Runtime error.
- Bit 21 = 0 Circle radius error.
- Bit 20 = 0 Amplifiere fault error.
- Bit 19 = 0 Fatal folowing error.
- Bit 18 = 0 Warning folowing error.
- Bit 17 = 0 In position.
- Bit 16 = 0 Rotary buffer full.
- Bit 11 = 0 Reserved Bit 11.
- Bit 10 = 0 Cutter move stop req.
- Bit 09 = 0 Cutter move buffered.
- Bit 08 = 0 Pre jog move flag.
- Bit 07 = 0 Segm. move in progress.
- Bit 06 = 0 Segm. move acceleration.
- Bit 05 = 0 Segm. move stop req.
- Bit 04 = 0 PVT/SLPINE move mode.
- Bit 03 = 0 Cutter compens. left.
- Bit 02 = 0 Cutter compens. on.
- Bit 01 = 0 CCW Circle mode.
- Bit 00 = 0 Circle spline move mode.

A800B1000000.

Again [Refresh Icon] Cancel

Fig. 3-11: PMAC Unit Status Dialog window

Z-Axis Feedrate calc.	Axis performs the vector based feedrate for F-based movements in the coordinate system
Z Axis Increment mode	Axis performs a shift movement from the last programmed point (INC command)
Y Axis Feedrate calc.	Axis performs the vector based feedrate for F-based movements in the coordinate system
Y Axis Increment mode	Axis performs a shift movement from the last programmed point (INC command)
X Axis Feedrate calc.	Axis performs the vector based feedrate for F-based movements in the coordinate system

Command	Field	Explanation
Handling units (cont.)	X Axis Increment mode	Axis performs a shift movement from the last programmed point (INC command)
	W Axis Feedrate calc.	Axis performs the vector based feedrate for F-based movements in the coordinate system
	W Axis Increment mode	Axis performs a shift movement from the last programmed point (INC command)
	V Axis Feedrate calc.	Axis performs the vector based feedrate for F-based movements in the coordinate system
	V Axis Increment mode	Axis performs a shift movement from the last programmed point (INC command)
	C Axis Feedrate calc.	Axis performs the vector based feedrate for F-based movements in the coordinate system
	C Axis Increment mode	Axis performs a shift movement from the last programmed point (INC command))
	B Axis Feedrate calc.	Axis performs the vector based feedrate for F-based movements in the coordinate system
	B Axis Increment mode	Axis performs a shift movement from the last programmed point (INC command)
	A Axis Feedrate calc.	Axis performs the vector based feedrate for F-based movements in the coordinate system
A Axis Increment mode	Axis performs a shift movement from the last programmed point (INC command))	
	Radius Vect. incr. mode.	Coordinate system performs a shift movement for a radial movement
	Continuous motion req.	A command with several movements has been started for the coordinate system (e.g. R command)
Handling units (cont.)	Move spec. by time mode.	The actual movement is based on a time value (TM or TA)

Command	Field	Explanation
	Continuous motion mode.	Coordinate system performs a sequence of movements without intermediate stop
	Single step mode.	<ul style="list-style-type: none"> • Movement program performs single steps (single movements or blocks of movements) • or a Q command (Quit) has been sent
	Running program.	Coordinate program runs a movement program
	Prog. trace activ.	Movement program trace is active (TRACE command). Stop with ENDTRACE
	Runtime error.	Coordinate system has stopped the movement program due to an error (e.g. branch to a label not found in the program or wrong calculation time)
	Circle radius error.	Command for radial movement with path more than twice the circle radius
	Amplifier fault error.	A coordinate system motor received an amplifier error
	Fatal following error.	A coordinate system motor can no longer follow the movement specifications (Ix11)
	Warning following error.	A coordinate system motor has an increased difference between actual and nominal location values (Ix12)
	In position.	<p>All coordinate system axes are in the nominal position</p> <ul style="list-style-type: none"> • nominal speed is 0 • no movement command with time (DWELL) active • axes within the sequence error limits (Ix28)
	Rotary buffer full.	Rotary buffer is active for the coordinate system but more command lines than specified in variable I16 are in the buffer
Handling units (cont.)	Cutter move stop req.	A movement with cutter compensation will be stopped

Command	Field	Explanation
	Cutter move buffered.	A new movement will be calculated and stored during a movement with cutter compensation
	Pre jog mode flag.	A coordinate system axis performs a jog movement (J command)
	Segm. move in progress.	Bit for internal use. Coordinate system performs movements in segmentation mode (I13 > 0)
	Segm. move acceleration.	Bit for internal use. Coordinate system performs a movement in segmentation mode (I13 > 0) and accelerates out of the idle position
	Segm. move stop req.	Bit for internal use. Coordinate system performs a movement in segmentation mode (I13 > 0) and brakes back to the idle position
	PUT/SLPINE move mode.	Coordinate system performs a movement in PVT/SPLINE mode
	Cutter compens. left.	Cutter compensation is active. The compensation is on the left side in movement direction
	Cutter compens. on.	Cutter compensation is active in the coordinate system
	CCW Circle mode.	The coordinate system is in CIRCLE2 move mode (command counterclockwise arc)
	Circle spline move mode.	The coordinate system is in CIRCLE/SPLINE move mode (bit 4 specifies SPLINE or CIRCLE mode)
	Again	Refresh the screen display

Motor status

Command	Field	Explanation
Motor status	Display of the status bits for the DC motors.	

The screenshot shows the 'PMAC Motor Status Dialog' window. It is divided into two main sections: 'Word 1' and 'Word 2'. Each section lists 24 bits with their corresponding status descriptions. For example, in Word 1, Bit 23 is '1 Motor activated', Bit 22 is '0 Neg end limit', and Bit 0-7 are '0 Reserved'. In Word 2, Bit 23 is '1 Assigned to Coord. sys.', Bit 22 is '0 Assigned bit 22 MSB', and Bit 00 is '0 In position'. At the bottom of the dialog, there are four buttons labeled 'Motor 1', 'Motor 2', 'Motor 3', and 'Motor 4', followed by a motor icon and a 'Cancel' button. A status bar at the bottom right displays the address '82A000804400'.

Fig. 3-12: PMAC Motor Status Dialog window

Motor activated.	<p>Motor active (variable Ix00)</p> <ul style="list-style-type: none"> • Servo calculations every 30 µsec/cycle • No unconditional motor release
Neg. end limit.	<p>Actual position value is below the value of the negative software end switch (Ix14)</p> <ul style="list-style-type: none"> • Motor movements and movement program are aborted • Motors are braked according to Ix15
Pos. end limit set.	<p>Actual position value is above the value of the positive software end switch (Ix13)</p> <ul style="list-style-type: none"> • Motor movements and movement program are aborted • Motors are braked according to Ix15

Command	Field	Explanation
Motor status (cont.)	Handwheel enabled.	Sequence mode is active (Ix06)
	Phased motor.	PMAC board activates the motor controller (commutation) (Ix01) <ul style="list-style-type: none"> • Phasing calculation every 3 μsec/cycle • Two analog outputs for the motor
	Open loop mode.	Closed loop position control is open (bit for amplifier release)
	Run definite time move.	Motor performs a movement with a predefined end point and a predefined end time point.
	Integration mode.	Servo loop integration is only active when the nominal speed is 0 and Ix34 is 1
	Dwell in progress.	Motor coordinate system executing the DWELL command (dwell time between two movements)
	Data Block error.	Movement interrupted because the values for the next movement cycle were not received in time
	Desired velocity zero.	Motor control circuit is closed and the nominal speed is 0 (actual position is held)
	Abort declaration.	Motor being braked <ul style="list-style-type: none"> • Due to an abort command • or because the software end switch has been reached
	Block request.	Motor has reached the new movement section (for internal use)
Home search in progress.	Motor searches for the reference point signal (Signal will be reset as soon as the trigger signal is received)	
Assigned to Coord. sys.	Motor is assigned to an axis in the coordinate system	

Command	Field	Explanation
Motor status (cont.)	Assigned bit 22 MSB	
	Assigned bit 21	Binary-coded value for the motor address (Number in the coordinate system - 1)
	Assigned bit 20 LSB	
	Amplifier enabled	Drive amplifier outputs enabled: <ul style="list-style-type: none"> • either in open loop operating mode • or in closed loop operating mode
	Stopped on pos limit.	Motor has been stopped at the software end switch. The bit remains set even when the condition for the stop no longer exists
	Home complete	Reference point movement completed successfully (axis has regular coordinate system)
	Amplifier fault	Amplifier switched off due to a fault (amplifier fault signal)
	Fatal following error.	Motor switched off after exceeding the fatal following error limits (Ix11)
	Warning following error.	Motor exceeded the warning following error value
	In position	<ul style="list-style-type: none"> • Desired speed bit = 1 (no movement command active and closed loop position control closed) • All program timers are switched off (DWELL and DELAY commands) • Location deviation value less than variable Ix28
	Motor 1	Screen display of X motor status. Select this field when problems with the X axis arise
	Motor 2	Screen display of Y motor status. Select this field when problems with the Y axis arise
	Motor 3	Screen display of Z motor status. Select this field when problems with the Z axis arise
	Motor 4	Screen display of A motor status. Select this field when problems with the A axis arise

3.1.8 Boschtrm program

- a) Switch the main switch on
- b) Connect the start-up cable to the AMU COM1 or COM2 interface (remove other cable when necessary)
- c) Connect the start-up cable to the drive amplifier X6 socket
- d) Open an OS/2 window
- e) Swap to the "C:\MOOG" directory (`cd moog`)
- f) Start the "BOSCHTRM" communication program (`boschtrm`)
- g) Enter <C> to configure
- h) Set the configuration
 - Communication mode RS 232 <1>
 - Communication port COM1 <1>
COM2 <2>
 - Interface type IQ140/RHO3 CAN<2>
 - Help file IQ140/RHO3 <2>
- i) Press <ENTER> until the following message appears:

Enter first	Call diagnostics
letter of a	
command>	Input: <?>

- j) Enter:
 - <F> Error
 - <V> Angular velocity of the motor shaft [1/min]
 - <L> Current limit value [A]
 - Final level temperature [°C]
 - <M> Motor temperature [°C]

... Occured	Protocolled error that occurred
... Present	Active error
	Next error: <ENTER>
	The following appears after the last error:

Enter first	
letter of a	
command >	Input: <ESC>

- k) Disconnect the start-up cable (replace previous cable as necessary) from the
 - AMU interface
 - Drive amplifier X6 socket
- l) Leave the OS/2 window (`exit`)

3.1.9 Robot test program

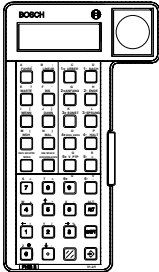


Fig. 3-13: PHG for diagnostics on AML/2 and AML/E

(☞ Maintenance Manual AML/2 and AML/E)

3.1.10 CM/2 Software trace

(☞ Documentation IBM CM/2 for OS/2)

3.1.11 ACUSETUP program

(☞ Documentation ACCU-SORT)

3.1.12 Test program BDE for I/O unit/A

(☞ Maintenance Manual AML/2)

3.2 Diagnostic Analysis - Auxiliary Equipment

Only AML/E and
AML/2

Start-up cable (Order No. 327 000 365)

PHG (Order No. 15a 200 006)

4 ABBA/1 Format error messages

The following error messages can appear on host systems using the ABBA/1 format such as:

- HACC/MVS
- HACC/VM/VSE
- ROBAR (BS2000)
- HACC/Guardian
- HACC/Open VMS

4.1 Host computer error messages

Error number	Error message
N001	Syntax error
N002	Unexpected message from robot, serious error
N003	Serious error in the Archive PC Set-up file
N004	Serious error in the Archive mirror
N005	Robot not ready
N006	Robot error (see preceding warning)
N007	Non-executable command
N008	Robot emergency switch-off
N009	Robot switched to set-up operating mode
N010	Unknown robot command
N011	Coordinates specified for wrong robot
N012	Command suspended by manual intervention
N014	Command suspended by program
N015	Tower has not turned into position
N016	Robot error (EXCP-AUS 5001)

Host computer error messages

Error number	Error message
N017	Non-executable command
N100	Robot crash
N101	Robot crash during medium removal/insertion
N102	Timeout (robot error)
N103	Timeout PC-IC communication
N104	Medium lost
N105	Medium stuck in gripper
N110	Crash during medium removal from a box
N111	Crash during medium insertion into a box
N112	Crash during medium removal from a unit
N113	Crash during medium insertion into a unit
N201	Unknown unit
N202	Unit still in use (recognized by the AMU)
N203	Unit is empty (recognized by the AMU)
N204	Unit in use (recognized by the robot)
N205	Unit is empty (recognized by the robot)
N206	Medium cannot be removed from the unit
N207	Flap on the drive cannot be closed
N208	Medium cannot be removed from the chute (3490)
N209	Medium wrong for the command
N301	Unknown Volser
N302	Volser not in Archive
N304	Barcode label not readable
N305	No medium found in the specified row
N306	Wrong medium at the specified coordinate

Host computer error messages

Error number	Error message
N401	Coordinate not defined
N402	No medium found at the specified coordinate
N403	Position in use
N408	Gripper error - medium may be lost
N501	Door on the I/O unit not closed
N502	Non-compatible I/O unit definition
N503	Ejection slot full
N504	Medium moved to the Problem box
N505	Medium moved to the Problem box, Problem box is full
N506	Wrong Volser - medium moved to the Problem box

5 Messages

5.1 AML/2 and AML/E Operating System Messages

5.1.1 Message 0001

Runtime error in a rho controller

Host error number in ABBA/1 format

N006 Robot error (see preceding warning)

Message in the AMU LOG Control Center

%1 Controller %2 %3 runtime error [0001 - 0255]. <00001>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Unexpected error in the robot controller

Recovery measures

The controller involved was switched-off because it is no longer able to react

AML/2 and AML/E Operating System Messages

- Determine the error with the PHG
- Restart the controller
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.2 Message 0002

Transformation error in an IRD program

Host error number in ABBA/1 format

N006 Robot error (see preceding warning)

Message in the AMU LOG Control Center

%1 Controller %2 %3 runtime error (transformation error [0007]). <00002>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

The robot controller program should convert a point defined in area coordinates into machine coordinates (or vice-versa) but the point cannot be transferred.

- The point was calculated incorrectly.

Recovery measures

The controller involved was switched-off because it is no longer able to react.

- Determine the error with the PHG
- Restart the controller
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.3 Message 0003

An IRD or PKT file is missing in a rho controller

Host error number in ABBA/1 format

N006 Robot error (see preceding warning)

Message in the AMU LOG Control Center

*%1 Controller %2 %3 runtime error (IRD- or PKT-file is missing [0008]).
<00003>*

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

An IRD or PKT file is missing or cannot be read.

Recovery measures

- List the memory contents of the controller involved
- Transfer missing data to the controller
- Restart the controller

5.1.4 Message 0004

Negative wait time in a rho controller

Host error number in ABBA/1 format

N006 Robot error (see preceding warning)

Message in the AMU LOG Control Center

%1 Controller %2 %3 runtime error (negative wait time entry [0009]). <00004>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

- A negative dwell time was programmed
- The relative variable was calculated incorrectly

Recovery measures

The controller involved was switched-off because it is no longer able to react.

- Determine the error with the PHG
- Restart the controller
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.5 Message 0005

Extension level in a rho controller not active

Host error number in ABBA/1 format

N006 Robot error (see preceding warning)

Message in the AMU LOG Control Center

*%1 Controller %2 %3 runtime error (AUSBAUSTUFE is not active [0017]).
<00005>*

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

The controller contains erroneous rho3 machine parameters with an inactive extension level.

Recovery measures

- Restore the backup copy of the machine parameters to the controller involved
- Restart the controller

5.1.6 Message 0006

Invalid data format in a DAT file

Host error number in ABBA/1 format

N006 Robot error (see preceding warning)

Message in the AMU LOG Control Center

%1 Controller %2 %3 runtime error (wrong format in DAT file [0028]). <00006>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

The date type in a DAT file of the variable to be read does not match the expected format.

Recovery measures

- Check all DAT files and correct wrong parameters
- Restore the backup copy of the DAT-files to the controller involved
- Restart the controller

5.1.7 Message 0007

Protocol error during writing

Host error number in ABBA/1 format

N006 Robot error (see preceding warning)

Message in the AMU LOG Control Center

*%1 Controller %2 %3 runtime error (error in transmission layer [0032]).
<00007>*

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

A value to be written by the controller is larger than the allowable format because of

- either a transfer error
- or a program error

Recovery measures

- Check the connection cable
- Restart the controller
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.8 Message 0008

Protocol error during reading

Host error number in ABBA/1 format

N006 Robot error (see preceding warning)

Message in the AMU LOG Control Center

*%1 Controller %2 %3 runtime error (error in transmission layer [0033]).
<00008>*

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

The format read does not match the nominal format because of

- either a transfer error
- or a program error.

Recovery measures

- Check the connection cable
- Restart the controller
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.9 Message 0009

User process error

Host error number in ABBA/1 format

N006 Robot error (see preceding warning)

Message in the AMU LOG Control Center

%1 Controller %2 %3 runtime error (process hung up [0040 or 0050]). <00009>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Error in the robot controller program.

Recovery measures

- Determine the error with the PHG
- Restart the controller
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

Note

Error numbers 0040 to 0050 of the robot controller will only be used up to Version TO04 of the controller operating system.

5.1.10 Message 0010

User buffer of a rho controller is full

Host error number in ABBA/1 format

N006 Robot error (see preceding warning)

Message in the AMU LOG Control Center

%1 Controller %2 %3 runtime error (memory error [0054]). <00010>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

No space available in the user buffer.

Recovery measures

- Delete all data that are no longer required in the buffer
- Restart the controller

5.1.11 Message 0011

File end reached during read access in a rho controller

Host error number in ABBA/1 format

N006 Robot error (see preceding warning)

Message in the AMU LOG Control Center

%1 Controller %2 %3 runtime error (end of file error [0059]). <00011>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

- A program attempted to read too much data out of a DAT file
- A DAT file is no longer complete

Recovery measures

- Restore the backup copy of the DAT-files to the controller involved
- Restart the controller

5.1.12 Message 0012

DAT file missing

Host error number in ABBA/1 format

N006 Robot error (see preceding warning)

Message in the AMU LOG Control Center

%1 Controller %2 %3 runtime error (missing file error [0061]). <00012>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

A DAT file is cannot be found for a read or write access.

- The DAT file is not present on the controller
- The DAT file name is wrong

Recovery measures

- List the memory contents of the controller involved
- Transfer missing files to the controller.
- Restart the controller

5.1.13 Message 0013

Data format error

Host error number in ABBA/1 format

N006 Robot error (see preceding warning)

Message in the AMU LOG Control Center

%1 Controller %2 %3 runtime error (data format error [0070]). <00013>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

The data format of an entry in a DAT file does not match the expected data format.

Recovery measures

- Check all DAT files and correct wrong parameters
- Restore the backup copy of the DAT files to the controller involved
- Restart the controller

Note

Error number 0070 of the robot controller will only be used up to Version TO04 of the controller operating system.

5.1.14 Message 0014

Time monitor for interpolator stop has triggered

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

*%1 Controller %2 %3 runtime error (timecontrol interpolator-stop [0072]).
<00014>*

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

- The axis has moved to a stop

Recovery measures

- Check whether the robot has had a crash
- Check machine parameter P125
- Restart the controller

Note

Error number 0072 of the robot controller will only be used up to Version TO04 of the controller operating system.

5.1.15 Message 0015

Error in idle monitoring

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 runtime error (positioncontroll error [0073]). <00015>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Axis does not move into position.

Recovery measures

- Check machine parameters P126 and 127
- Restart the controller

Note

Error number 0073 of the robot controller will only be used up to Version TO04 of the controller operating system.

5.1.16 Message 0016

Kinematic counts from program and controller do not match

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

*%1 Controller %2 %3 runtime error (wrong number of kinematics [0010]).
<00016>*

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

The number of kinematics in the machine parameter does not match the value defined in the KONFIG.DAT (AML/2) file or the TKONFIG8.DAT (AML/E) file.

Recovery measures

- Check whether the value in machine parameter P001 is the same as the value entered in the KONFIG.DAT file or TKONFIG8.DAT file
- Correct this value when required
- Restart the controller

AML/2 and AML/E Operating System Messages

5.1.17 Message 0017

Reserved

5.1.18 Message 0018

Reserved

5.1.19 Message 0019

Runtime error in a rho controller

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 runtime error ([0001 - 0255]). <00019>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Unexpected error in the robot controller.

Recovery measures

- Determine the error with the PHG
- Restart the controller
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.20 Message 0020

Axis 1 intermediate circuit voltage > 400 V

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 CAN error (intermediate circuit axis 1 voltage higher 400 V [0272]). <00020>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

The power transistors were switched off because of one of the following conditions:

- Temperature > 110 °C
- Intermediate circuit voltage > 400 V
- Phase loss for 100 ms

This can be caused by switching on and off too fast.

Recovery measures

- Switch the main switch off and then on again after approx. 2 minutes
- Check the F1 fuse in power unit 160
- Check the loading resistor
- Replace power unit 160

5.1.21 Message 0021

Axis 2 intermediate circuit voltage > 400 V

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 CAN error (intermediate circuit axis 2 voltage higher 400 V [0273]). <00021>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

The power transistors were switched off because of one of the following conditions:

- Temperature > 110 °C
- Intermediate circuit voltage > 400 V
- Phase loss for 100 ms

This can be caused by switching on and off too fast.

Recovery measures

- Switch the main switch off and then on again after approx. 2 minutes
- Check the F1 fuse in power unit 160
- Check the loading resistor
- Replace power unit 160

5.1.22 Message 0022

Axis 3 intermediate circuit voltage > 400 V

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 CAN error (intermediate circuit axis 3 voltage higher 400 V [0274]). <00022>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

The power transistors were switched off because of one of the following conditions:

- Temperature > 110 °C
- Intermediate circuit voltage > 400 V
- Phase loss for 100 ms

This can be caused by switching on and off too fast.

Recovery measures

- Switch the main switch off and then on again after approx. 2 minutes
- Check the F1 fuse in power unit 160
- Check the loading resistor
- Replace power unit 160

5.1.23 Message 0023

Axis 4 intermediate circuit voltage > 400 V

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 CAN error (intermediate circuit axis 4 voltage higher 400 V [0275]). <00023>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

The power transistors were switched off because of one of the following conditions:

- Temperature > 110 °C
- Intermediate circuit voltage > 400 V
- Phase loss for 100 ms

This can be caused by switching on and off too fast.

Recovery measures

- Switch the main switch off and then on again after approx. 2 minutes
- Check the F1 fuse in power unit 160
- Check the loading resistor
- Replace power unit 160

5.1.24 Message 0024

Axis 5 intermediate circuit voltage > 400 V

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 CAN error (intermediate circuit axis 5 voltage higher 400 V [0276]). <00024>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

The power transistors were switched off because of one of the following conditions:

- Temperature > 110 °C
- Intermediate circuit voltage > 400 V
- Phase loss for 100 ms

This can be caused by switching on and off too fast.

Recovery measures

- Switch the main switch off and then on again after approx. 2 minutes
- Check the F1 fuse in power unit 160
- Check the loading resistor
- Replace power unit 160

5.1.25 Message 0025

Axis 6 intermediate circuit voltage > 400 V

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 CAN error (intermediate circuit axis 6 voltage higher 400 V [0277]). <00025>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

The power transistors were switched off because of one of the following conditions:

- Temperature > 110 °C
- Intermediate circuit voltage > 400 V
- Phase loss for 100 ms
- This can be caused by switching on and off too fast.

Recovery measures

- Switch the main switch off and then on again after approx. 2 minutes
- Check the F1 fuse in power unit 160
- Check the loading resistor
- Replace power unit 160

5.1.26 Message 0026

Axis 1 transistor temperature too high

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

*%1 Controller %2 %3 CAN error (transistor temperature axis 1 too high [0288]).
<00026>*

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier on axis 1 of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

The dissipator temperature of the power transistor is checked once a second. A bridge temperature error is triggered and the drive disabled when this temperature exceeds 85°C.

Recovery measures

- Check the controller cabinet ventilator
- Start the unit with the main switch OFF/ON
- Check the room temperature
- Replace the drive amplifier on axis 1

5.1.27 Message 0027

Axis 2 transistor temperature too high

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

*%1 Controller %2 %3 CAN error (transistor temperature axis 2 too high [0289]).
<00027>*

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier on axis 2 of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

The dissipator temperature of the power transistor is checked once a second. A bridge temperature error is triggered and the drive disabled when this temperature exceeds 85°C.

Recovery measures

- Check the controller cabinet ventilator
- Start the unit with the main switch OFF/ON
- Check the room temperature
- Replace the drive amplifier on axis 2

5.1.28 Message 0028

Axis 3 transistor temperature too high

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

*%1 Controller %2 %3 CAN error (transistor temperature axis 3 too high [0290]).
<00028>*

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier on axis 3 of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

The dissipator temperature of the power transistor is checked once a second. A bridge temperature error is triggered and the drive disabled when this temperature exceeds 85°C.

Recovery measures

- Check the controller cabinet ventilator
- Start the unit with the main switch OFF/ON
- Check the room temperature
- Replace the drive amplifier on axis 3

5.1.29 Message 0029

Axis 4 transistor temperature too high

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

*%1 Controller %2 %3 CAN error (transistor temperature axis 4 too high [0291]).
<00029>*

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier on axis 4 of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

The dissipator temperature of the power transistor is checked once a second. A bridge temperature error is triggered and the drive disabled when this temperature exceeds 85°C.

Recovery measures

- Check the controller cabinet ventilator
- Start the unit with the main switch OFF/ON
- Check the room temperature
- Replace the drive amplifier on axis 4

5.1.30 Message 0030

Axis 5 transistor temperature too high

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

*%1 Controller %2 %3 CAN error (transistor temperature axis 5 too high [0292]).
<00030>*

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier on axis 5 of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

The dissipator temperature of the power transistor is checked once a second. A bridge temperature error is triggered and the drive disabled when this temperature exceeds 85°C.

Recovery measures

- Check the controller cabinet ventilator
- Start the unit with the main switch OFF/ON
- Check the room temperature
- Replace the drive amplifier on axis 5

5.1.31 Message 0031

Axis 6 transistor temperature too high

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

*%1 Controller %2 %3 CAN error (transistor temperature axis 6 too high [0293]).
<00031>*

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier on axis 6 of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

The dissipator temperature of the power transistor is checked once a second. A bridge temperature error is triggered and the drive disabled when this temperature exceeds 85°C.

Recovery measures

- Check the controller cabinet ventilator
- Start the unit with the main switch OFF/ON
- Check the room temperature
- Replace the drive amplifier on axis 6

5.1.32 Message 0032

Axis 1 motor temperature too high

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

*Controller %2 %3 CAN error (motor temperature axis 1 too high [0304]).
<00032>*

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Motor on axis 1 overheated (temperature > 155 °C for at least 0.75 seconds) due to

- mechanical overload caused by stiffness,
- erroneous drive amplifier parameters,
- or defective motor.

Recovery measures

- Check the mechanical smooth running of the axis
- Check the drive amplifier parameters for axis 1
- Start the unit with the main switch OFF/ON

5.1.33 Message 0033

Axis 2 motor temperature too high

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

*Controller %2 %3 CAN error (motor temperature axis 2 too high [0305]).
<00033>*

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Motor on axis 2 overheated (temperature > 155 °C for at least 0.75 seconds) due to

- mechanical overload caused by stiffness,
- erroneous drive amplifier parameters,
- or defective motor.

Recovery measures

- Check the mechanical smooth running of the axis
- Check the drive amplifier parameters for axis 2
- Start the unit with the main switch OFF/ON

5.1.34 Message 0034

Axis 3 motor temperature too high

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

*Controller %2 %3 CAN error (motor temperature axis 3 too high [0306]).
<00034>*

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Motor on axis 3 overheated (temperature > 155 °C for at least 0.75 seconds) due to

- mechanical overload caused by stiffness,
- erroneous drive amplifier parameters,
- or defective motor.

Recovery measures

- Check the mechanical smooth running of the axis
- Check the drive amplifier parameters for axis 3
- Start the unit with the main switch OFF/ON

5.1.35 Message 0035

Axis 4 motor temperature too high

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

*Controller %2 %3 CAN error (motor temperature axis 4 too high [0307]).
<00035>*

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Motor on axis 4 overheated (temperature > 155 °C for at least 0.75 seconds) due to

- mechanical overload caused by stiffness,
- erroneous drive amplifier parameters,
- or defective motor.

Recovery measures

- Check the mechanical smooth running of the axis
- Check the drive amplifier parameters for axis 4
- Start the unit with the main switch OFF/ON

5.1.36 Message 0036

Axis 5 motor temperature too high

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

*Controller %2 %3 CAN error (motor temperature axis 5 too high [0308]).
<00036>*

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Motor on axis 5 overheated (temperature > 155 °C for at least 0.75 seconds) due to

- mechanical overload caused by stiffness,
- erroneous drive amplifier parameters,
- or defective motor.

Recovery measures

- Check the mechanical smooth running of the axis
- Check the drive amplifier parameters for axis 5
- Start the unit with the main switch OFF/ON

5.1.37 Message 0037

Axis 6 motor temperature too high

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

*Controller %2 %3 CAN error (motor temperature axis 6 too high [0309]).
<00037>*

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Motor on axis 6 overheated (temperature > 155 °C for at least 0.75 seconds) due to

- mechanical overload caused by stiffness,
- erroneous drive amplifier parameters,
- or defective motor.

Recovery measures

- Check the mechanical smooth running of the axis
- Check the drive amplifier parameters for axis 6
- Start the unit with the main switch OFF/ON

5.1.38 Message 0038

Reserved

5.1.39 Message 0039

Drive module logic voltage incorrect

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 CAN error (CAN Logicpower 5V / 15V missing [0256 - 0267]). <00039>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

The logic voltage for axes 1-12 is not being maintained correctly.

Recovery measures

- Check power unit 160 and replace it when necessary

5.1.40 Message 0040

Reserved

5.1.41 Message 0041

Intermediate circuit voltage for axes 7 to 12 > 400 V

Host error number in ABBA/1 format

N016 Robot error (EXCP-AUS 5001)

Message in the AMU LOG Control Center

%1 Controller %2 %3 CAN error (intermediate circuit voltage higher 400 V [0272 - 0283]). <00041>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

The power transistors were switched off because of one of the following conditions:

- Temperature > 110 °C
- Intermediate circuit voltage > 400 V
- Phase loss for 100 ms

This can be caused by switching on and off too fast.

Recovery measures

- Switch the main switch off and then on again after approx. 2 minutes
- Check the F1 fuse in power unit 160
- Check the loading resistor
- Replace power unit 160

5.1.42 Message 0042

Axes 7 to 12 transistor temperature too high

Host error number in ABBA/1 format

N016 Robot error (EXCP-AUS 5001)

Message in the AMU LOG Control Center

*%1 Controller %2 %3 CAN error (transistor temperature too high [0288 - 0299]).
<00042>*

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier on axes 7 to 12 of a drive controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

The dissipator temperature of the power transistor is checked once a second. A bridge temperature error is triggered and the drive disabled when this temperature exceeds 85°C.

Recovery measures

- Determine the defective axis with the PHG
- Check the mechanical smooth running of the axis
- Check the drive amplifier parameters for the defective axis
- Start the unit with the main switch OFF/ON

5.1.43 Message 0043

Axes 7 to 12 motor temperature too high

Host error number in ABBA/1 format

N016 Robot error (EXCP-AUS 5001)

Message in the AMU LOG Control Center

*%1 Controller %2 %3 CAN error (motor temperature too high [0304 - 0315]).
<00043>*

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Motor on one of the axes 7 to 12 overheated (temperature > 155 °C for at least 0.75 seconds) due to

- mechanical overload caused by stiffness,
- erroneous drive amplifier parameters,
- or defective motor.

Recovery measures

- Determine the defective axis with the PHG
- Check the mechanical smooth running of the axis
- Check the drive amplifier parameters for the defective axis
- Start the unit with the main switch OFF/ON

5.1.44 Message 0044

Reserved

5.1.45 Message 0045

Reserved

5.1.46 Message 0046

Reserved

5.1.47 Message 0047

Reserved

5.1.48 Message 0048

Reserved

5.1.49 Message 0049

Reserved

5.1.50 Message 0050

Reserved

5.1.51 Message 0051

Axis 1 Resolver error

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 CAN error (resolvererror axis 1 [0320]). <00051>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

The module for the Resolver cosine and sine signals (location measuring system) are checked during each communication cycle and an error triggered when it drops below half of the correct value.

A difference can be caused by

- a faulty connection between the drive amplifier and the location measuring system (Resolver) of axis 1 or
- a defective Resolver measuring system on the motor.

Recovery measures

- Check the Resolver cable on the motor on axis 1
- Replace the drive amplifier
- Replace the motor

5.1.52 Message 0052

Axis 2 Resolver error

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 CAN error (resolvererror axis 2 [0321]). <00052>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

The module for the Resolver cosine and sine signals (location measuring system) are checked during each communication cycle and an error triggered when it drops below half of the correct value.

A difference can be caused by

- a faulty connection between the drive amplifier and the location measuring system (Resolver) of axis 2 or
- a defective Resolver measuring system on the motor.

Recovery measures

- Check the Resolver cable on the motor on axis 2
- Replace the drive amplifier
- Replace the motor

5.1.53 Message 0053

Axis 3 Resolver error

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 CAN error (resolvererror axis 3 [0322]). <00053>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

The module for the Resolver cosine and sine signals (location measuring system) are checked during each communication cycle and an error triggered when it drops below half of the correct value.

A difference can be caused by

- a faulty connection between the drive amplifier and the location measuring system (Resolver) of axis 3 or
- a defective Resolver measuring system on the motor.

Recovery measures

- Check the Resolver cable on the motor on axis 3
- Replace the drive amplifier
- Replace the motor

5.1.54 Message 0054

Axis 4 Resolver error

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 CAN error (resolvererror axis 4 [0323]). <00054>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

The module for the Resolver cosine and sine signals (location measuring system) are checked during each communication cycle and an error triggered when it drops below half of the correct value.

A difference can be caused by

- a faulty connection between the drive amplifier and the location measuring system (Resolver) of axis 4 or
- a defective Resolver measuring system on the motor.

Recovery measures

- Check the Resolver cable on the motor on axis 4
- Replace the drive amplifier
- Replace the motor

5.1.55 Message 0055

Axis 5 Resolver error

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 CAN error (resolvererror axis 5 [0324]). <00055>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

The module for the Resolver cosine and sine signals (location measuring system) are checked during each communication cycle and an error triggered when it drops below half of the correct value.

A difference can be caused by

- a faulty connection between the drive amplifier and the location measuring system (Resolver) of axis 5 or
- a defective Resolver measuring system on the motor.

Recovery measures

- Check the Resolver cable on the motor on axis 5
- Replace the drive amplifier
- Replace the motor

5.1.56 Message 0056

Axis 6 Resolver error

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 CAN error (resolvererror axis 6 [0325]). <00056>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

The module for the Resolver cosine and sine signals (location measuring system) are checked during each communication cycle and an error triggered when it drops below half of the correct value.

A difference can be caused by

- a faulty connection between the drive amplifier and the location measuring system (Resolver) of axis 6 or
- a defective Resolver measuring system on the motor.

Recovery measures

- Check the Resolver cable on the motor on axis 6
- Replace the drive amplifier
- Replace the motor

5.1.57 Message 0057

Axes 7 to 12 Resolver error

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 CAN error (resolvererror [0320 - 0331]). <00057>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

The module for the Resolver cosine and sine signals (location measuring system) are checked during each communication cycle and an error triggered when it drops below half of the correct value.

A difference can be caused by

- a faulty connection between the drive amplifier and the location measuring system (Resolver) of axes 7 to 12 or
- a defective Resolver measuring system on the motor.

Recovery measures

- Determine the defective axis with the PHG
- Check the Resolver cable on the motor on this axis
- Replace the drive amplifier
- Replace the motor

5.1.58 Message 0058

Axis 1 CAN parameter error

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 CAN error (CAN parametererror axis 1 [0336]). <00058>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

A checksum is calculated across all parameters every 64 communication cycles. The drive no longer has valid parameters or valid software as soon as a parameter error is detected.

The cause is

- an initialization error or
- the RAM is defective

in the drive amplifier for axis 1.

Recovery measures

- Restart the controller
- Replace the drive amplifier
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.59 Message 0059

Axis 2 CAN parameter error

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 CAN error (CAN parametererror axis 2 [0337]). <00059>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

A checksum is calculated across all parameters every 64 communication cycles. The drive no longer has valid parameters or valid software as soon as a parameter error is detected.

The cause is

- an initialization error or
- the RAM is defective

in the drive amplifier for axis 2.

Recovery measures

- Restart the controller
- Replace the drive amplifier
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.60 Message 0060

Axis 3 CAN parameter error

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 CAN error (CAN parametererror axis 3 [0338]). <00060>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

A checksum is calculated across all parameters every 64 communication cycles. The drive no longer has valid parameters or valid software as soon as a parameter error is detected.

The cause is

- an initialization error or
- the RAM is defective

in the drive amplifier for axis 3.

Recovery measures

- Restart the controller
- Replace the drive amplifier
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.61 Message 0061

Axis 4 CAN parameter error

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 CAN error (CAN parametererror axis 4 [0339]). <00061>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

A checksum is calculated across all parameters every 64 communication cycles. The drive no longer has valid parameters or valid software as soon as a parameter error is detected.

The cause is

- an initialization error or
- the RAM is defective

in the drive amplifier for axis 4.

Recovery measures

- Restart the controller
- Replace the drive amplifier
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.62 Message 0062

Axis 5 CAN parameter error

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 CAN error (CAN parametererror axis 5 [0340]). <00062>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

A checksum is calculated across all parameters every 64 communication cycles. The drive no longer has valid parameters or valid software as soon as a parameter error is detected.

The cause is

- an initialization error or
- the RAM is defective

in the drive amplifier for axis 5.

Recovery measures

- Restart the controller
- Replace the drive amplifier
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.63 Message 0063

Axis 6 CAN parameter error

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 CAN error (CAN parametererror axis 6 [0341]) <00063>.

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

A checksum is calculated across all parameters every 64 communication cycles. The drive no longer has valid parameters or valid software as soon as a parameter error is detected.

The cause is

- an initialization error or
- the RAM is defective

in the drive amplifier for axis 6.

Recovery measures

- Restart the controller
- Replace the drive amplifier
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.64 Message 0064

Axes 7 to 12 CAN parameter error

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 CAN error (CAN parametererror [0336 - 0347]). <00064>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

A checksum is calculated across all parameters every 64 communication cycles. The drive no longer has valid parameters or valid software as soon as a parameter error is detected.

The cause is

- an initialization error or
- the RAM is defective

in the drive amplifier for axes 7 or 8.

Recovery measures

- Determine the defective axis with the PHG
- Restart the controller
- Replace the drive amplifier
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.65 Message 0065

Axis 1 temperature warning

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 CAN error (temperature warning axis 1 [0352]) <00065>.

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

- The motor temperature on axis 1 exceeded 130 ° for at least 0.75 seconds
- The dissipator temperature of the power transistors exceeded 70 °

Recovery measures

- Check the controller cabinet ventilator
- Check the filter mats
- Check the room temperature
- Restart the controller

Note

This error number will only be used up to Version TO04 of the controller operating system.

5.1.66 Message 0066

Axis 2 temperature warning

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 CAN error (temperature warning axis 2 [0353]). <00066>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

- The motor temperature on axis 2 exceeded 130 ° for at least 0.75 seconds
- The dissipator temperature of the power transistors exceeded 70 °

Recovery measures

- Check the controller cabinet ventilator
- Check the filter mats
- Check the room temperature
- Restart the controller

Note

This error number will only be used up to Version TO04 of the controller operating system.

5.1.67 Message 0067

Axis 3 temperature warning

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 CAN error (temperature warning axis 3 [0354]) <00067>.

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

- The motor temperature on axis 3 exceeded 130 ° for at least 0.75 seconds
- The dissipator temperature of the power transistors exceeded 70 °

Recovery measures

- Check the controller cabinet ventilator
- Check the filter mats
- Check the room temperature
- Restart the controller

Note

This error number will only be used up to Version TO04 of the controller operating system.

5.1.68 Message 0068

Axis 4 temperature warning

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 CAN error (temperature warning axis 4 [0355]). <00068>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

- The motor temperature on axis 4 exceeded 130 ° for at least 0.75 seconds
- The dissipator temperature of the power transistors exceeded 70 °

Recovery measures

- Check the controller cabinet ventilator
- Check the filter mats
- Check the room temperature
- Restart the controller

Note

This error number will only be used up to Version TO04 of the controller operating system.

5.1.69 Message 0069

Axis 5 temperature warning

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 CAN error (temperature warning axis 5 [0356]) <00069>.

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

- The motor temperature on axis 5 exceeded 130 ° for at least 0.75 seconds
- The dissipator temperature of the power transistors exceeded 70 °

Recovery measures

- Check the controller cabinet ventilator
- Check the filter mats
- Check the room temperature
- Restart the controller

Note

This error number will only be used up to Version TO04 of the controller operating system.

5.1.70 Message 0070

Axis 6 temperature warning

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 CAN error (temperature warning axis 6 [0357]). <00070>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

- The motor temperature on axis 6 exceeded 130 ° for at least 0.75 seconds
- The dissipator temperature of the power transistors exceeded 70 °

Recovery measures

- Check the controller cabinet ventilator
- Check the filter mats
- Check the room temperature
- Restart the controller

Note

This error number will only be used up to Version TO04 of the controller operating system.

5.1.71 Message 0071

Axes 7 to 12 temperature warning

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 CAN error (temperature warning [0352 - 0363]). <00071>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

- The motor temperature on the axis exceeded 130 ° for at least 0.75 seconds
- The dissipator temperature of the power transistors exceeded 70 °

Recovery measures

- Determine the defective axis with the PHG
- Check the controller cabinet ventilator
- Check the filter mats
- Check the room temperature
- Restart the controller

Note

This error number will only be used up to Version TO04 of the controller operating system.

5.1.72 Message 0072

Axes 1 to 12 CAN short-circuit error

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 CAN error (CAN short circuit [0368 - 0379]). <00072>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

The power transistors are switched off and an error triggered when a short-circuit lasts longer than 5 microseconds. The short-circuit can be caused by

- a defective motor or
- a defective connection to a motor or
- an MCO module connected wrongly or
- a defective drive amplifier.

Recovery measures

- Determine the defective axis with the PHG
- Check the connection cable
- Check the MCO module
- Replace the drive amplifier
- Replace the power unit 160
- Replace the motor

5.1.73 Message 0073

No synchronization byte for axes 1 to 12

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 CAN error (no sync. byte [0384 - 0395]). <00073>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

The power transistors are switched off and an error triggered when a short-circuit lasts longer than 5 microseconds. The short-circuit can be caused by

- a defective motor or
- a defective connection to a motor or
- an MCO module connected wrongly or
- a defective drive amplifier.

Recovery measures

- Determine the defective axis with the PHG
- Check the connection cable
- Check the MCO module
- Replace the drive amplifier
- Replace the power unit 160
- Replace the motor

5.1.74 Message 0074

Axis 1 interpolator stop

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 CAN error (Interpolator-Stop axis 1 [0400]). <00074>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Axis 1 of the controller involved

- is not running smoothly mechanically,
- has had a crash,
- or has problems with the motor activation.

Recovery measures

- Check axis 1 for mechanical smooth running
- Check the drive amplifier parameters for axis 1
- Check the axis 1 motor cable
- Replace the drive amplifier
- Replace the motor

Note

This error number will only be used up to Version T004 of the controller operating system.

5.1.75 Message 0075

Axis 2 interpolator stop

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 CAN error (Interpolator-Stop axis 2 [0401]). <00075>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Axis 2 of the controller involved

- is not running smoothly mechanically,
- has had a crash,
- or has problems with the motor activation.

Recovery measures

- Check axis 2 for mechanical smooth running
- Check the drive amplifier parameters for axis 2
- Check the axis 2 motor cable
- Replace the drive amplifier
- Replace the motor

Note

This error number will only be used up to Version TO04 of the controller operating system.

5.1.76 Message 0076

Axis 3 interpolator stop

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 CAN error (Interpolator-Stop axis 3 [0402]). <00076>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Axis 3 of the controller involved

- is not running smoothly mechanically,
- has had a crash,
- or has problems with the motor activation.

Recovery measures

- Check axis 3 for mechanical smooth running
- Check the drive amplifier parameters for axis 3
- Check the axis 3 motor cable
- Replace the drive amplifier
- Replace the motor

Note

This error number will only be used up to Version T004 of the controller operating system.

5.1.77 Message 0077

Axis 4 interpolator stop

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 CAN error (Interpolator-Stop axis 4 [0403]). <00077>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Axis 4 of the controller involved

- is not running smoothly mechanically,
- has had a crash,
- or has problems with the motor activation.

Recovery measures

- Check axis 4 for mechanical smooth running
- Check the drive amplifier parameters for axis 4
- Check the axis 4 motor cable
- Replace the drive amplifier
- Replace the motor

Note

This error number will only be used up to Version TO04 of the controller operating system.

5.1.78 Message 0078

Axis 5 interpolator stop

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 CAN error (Interpolator-Stop axis 5 [0404]). <00078>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Axis 5 of the controller involved

- is not running smoothly mechanically,
- has had a crash,
- or has problems with the motor activation.

Recovery measures

- Check axis 5 for mechanical smooth running
- Check the drive amplifier parameters for axis 5
- Check the axis 5 motor cable
- Replace the drive amplifier
- Replace the motor

Note

This error number will only be used up to Version T004 of the controller operating system.

5.1.79 Message 0079

Axis 6 interpolator stop

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 CAN error (Interpolator-Stop axis 6 [0405]). <00079>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Axis 6 of the controller involved

- is not running smoothly mechanically,
- has had a crash,
- or has problems with the motor activation.

Recovery measures

- Check axis 6 for mechanical smooth running
- Check the drive amplifier parameters for axis 6
- Check the axis 6 motor cable
- Replace the drive amplifier
- Replace the motor

Note

This error number will only be used up to Version TO04 of the controller operating system.

5.1.80 Message 0080

Axes 7 to 12 interpolator stop

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 CAN error (Interpolator-Stop [0400 - 0411]). <00080>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

One of the axes 7 to 12

- is not running smoothly mechanically,
- has had a crash,
- or has problems with the motor activation.

Recovery measures

- Determine the defective axis with the PHG
- Check the axis for mechanical smooth running
- Check the drive amplifier parameters for the axis
- Check the axis motor cable
- Replace the drive amplifier
- Replace the motor

5.1.81 Message 0081

Drive amplifier axis 1 to 12 has no nominal value

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 CAN error (no must value [0416 - 0427]). <00081>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

A nominal value telegram was not received within 2 ms after a synchronization process.

- There is a communication error between the controller and the drive amplifier
- The runtimes in the rho3 are too high (a CP board with a 30 MHz processor must be used when more than 6 axes are installed)

Recovery measures

- Determine the defective axis with the PHG
- Check the CAN bus cable between the NC-SPS/IO board and the drive amplifier rack
- Check the drive amplifier parameters of the axis
- Check the machine parameters on the CP/MEM board
- Replace the drive amplifier
- Replace the CP/MEM board
- Replace the power unit 160

5.1.82 Message 0082

Drive amplifier axis 1 to 12 has no actual value

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 CAN error (no is value [0432 - 0443]). <00082>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

The actual value telegram cannot be sent by the drive.

- There is a communication error between the controller and the drive amplifier
- The drive amplifier is defective

Recovery measures

- Determine the defective axis with the PHG
- Check the drive amplifier parameters of the axis
- Replace the drive amplifier
- Replace the power unit 160

5.1.83 Message 0083

Axis 1 movement limit

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 CAN error (motion limit axis 1 [0448]). <00083>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Axis 1 has reached the value set in the drive amplifier parameters.

Recovery measures

- Check the parameters for the axis 1 drive amplifier
- Check the software version (EPROM) in the drive amplifier

Note

This error number will only be used up to Version TO04 of the controller operating system.

5.1.84 Message 0084

Axis 2 movement limit

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 CAN error (motion limit axis 2 [0449]). <00084>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Axis 2 has reached the value set in the drive amplifier parameters.

Recovery measures

- Check the parameters for the axis 2 drive amplifier
- Check the software version (EPROM) in the drive amplifier

Note

This error number will only be used up to Version TO04 of the controller operating system.

5.1.85 Message 0085

Axis 3 movement limit

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 CAN error (motion limit axis 3 [0450]). <00085>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Axis 3 has reached the value set in the drive amplifier parameters.

Recovery measures

- Check the parameters for the axis 3 drive amplifier
- Check the software version (EPROM) in the drive amplifier

Note

This error number will only be used up to Version TO04 of the controller operating system.

5.1.86 Message 0086

Axis 4 movement limit

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 CAN error (motion limit axis 4 [0451]). <00086>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Axis 4 has reached the value set in the drive amplifier parameters.

Recovery measures

- Check the parameters for the axis 4 drive amplifier
- Check the software version (EPROM) in the drive amplifier

Note

This error number will only be used up to Version TO04 of the controller operating system.

5.1.87 Message 0087

Axis 5 movement limit

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 CAN error (motion limit axis 5 [0452]). <00087>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Axis 5 has reached the value set in the drive amplifier parameters.

Recovery measures

- Check the parameters for the axis 5 drive amplifier
- Check the software version (EPROM) in the drive amplifier

Note

This error number will only be used up to Version TO04 of the controller operating system.

5.1.88 Message 0088

Axis 6 movement limit

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 CAN error (motion limit axis 6 [0453]). <00088>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Axis 6 has reached the value set in the drive amplifier parameters.

Recovery measures

- Check the parameters for the axis 6 drive amplifier
- Check the software version (EPROM) in the drive amplifier

Note

This error number will only be used up to Version TO04 of the controller operating system.

5.1.89 Message 0089

Axes 7 to 12 movement limit

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 CAN error (motion limit [0448 - 0459]). <00089>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

One of the axes 7 to 12 has reached the value set in the drive amplifier parameters.

Recovery measures

- Determine the defective axis with the PHG
- Check the parameters for the axis drive amplifier
- Check the software version (EPROM) in the drive amplifier

Note

This error number will only be used up to Version TO04 of the controller operating system.

5.1.90 Message 0090

Axis 1 CAN tracking error

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 CAN error (motion offset axis 1 [0464]). <00090>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

The dynamic tracking monitoring of the drive has triggered. Axis 1 did not reach the target position

- because axis 1 is not running smoothly or
- because of a crash or problems with the drive activation on axis 1.

Recovery measures

- Check the axis for mechanical smooth running
- Check the drive amplifier parameters for the axis
- Check the machine parameters on the CP/MEM board
- Replace the drive amplifier
- Replace the motor

5.1.91 Message 0091

Axis 2 CAN tracking error

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 CAN error (motion offset axis 2 [0465]). <00091>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

The dynamic tracking monitoring of the drive has triggered. Axis 2 did not reach the target position

- because axis 2 is not running smoothly or
- because of a crash or problems with the drive activation on axis 2.

Recovery measures

- Check the axis for mechanical smooth running
- Check the drive amplifier parameters for the axis
- Check the machine parameters on the CP/MEM board
- Replace the drive amplifier
- Replace the motor

5.1.92 Message 0092

Axis 3 CAN tracking error

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 CAN error (motion offset axis 3 [0466]). <00092>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

The dynamic tracking monitoring of the drive has triggered. Axis 3 did not reach the target position

- because axis 3 is not running smoothly or
- because of a crash or problems with the drive activation on axis 3.

Recovery measures

- Check the axis for mechanical smooth running
- Check the drive amplifier parameters for the axis
- Check the machine parameters on the CP/MEM board
- Replace the drive amplifier
- Replace the motor

5.1.93 Message 0093

Axis 4 CAN tracking error

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 CAN error (motion offset axis 4 [0467]). <00093>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

The dynamic tracking monitoring of the drive has triggered. Axis 4 did not reach the target position

- because axis 4 is not running smoothly or
- because of a crash or problems with the drive activation on axis 4.

Recovery measures

- Check the axis for mechanical smooth running
- Check the drive amplifier parameters for the axis
- Check the machine parameters on the CP/MEM board
- Replace the drive amplifier
- Replace the motor

5.1.94 Message 0094

Axis 5 CAN tracking error

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 CAN error (motion offset axis 5 [0468]). <00094>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

The dynamic tracking monitoring of the drive has triggered. Axis 5 did not reach the target position

- because axis 5 is not running smoothly or
- because of a crash or problems with the drive activation on axis 5.

Recovery measures

- Check the axis for mechanical smooth running
- Check the drive amplifier parameters for the axis
- Check the machine parameters on the CP/MEM board
- Replace the drive amplifier
- Replace the motor

5.1.95 Message 0095

Axis 6 CAN tracking error

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 CAN error (motion offset axis 6 [0469]). <00095>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

The dynamic tracking monitoring of the drive has triggered. Axis 6 did not reach the target position

- because axis 6 is not running smoothly or
- because of a crash or problems with the drive activation on axis 6.

Recovery measures

- Check the axis for mechanical smooth running
- Check the drive amplifier parameters for the axis
- Check the machine parameters on the CP/MEM board
- Replace the drive amplifier
- Replace the motor

5.1.96 Message 0096

Axes 7 to 12 CAN tracking error

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 CAN error (motion offset [0464 - 0475]). <00096>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

The dynamic tracking monitoring of the drive has triggered. One of the axes 7 to 12 did not reach the target position

- because the axis is not running smoothly or
- because of a crash or problems with the drive activation on the axis.

Recovery measures

- Determine the defective axis with the PHG
- Check the axis for mechanical smooth running
- Check the drive amplifier parameters for the axis
- Check the machine parameters on the CP/MEM board
- Replace the drive amplifier
- Replace the motor

5.1.97 Message 0097

Global CAN error axes 1 to 12

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 CAN error (global CAN error [0496 - 0507]). <00097>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

The logic module of the drive amplifier has Recognized a status that hinders drive release. Further messages detail this status.

Recovery measures

- Search the AMU Log file for further CAN error messages
- Determine the defective axis with the PHG

5.1.98 Message 0098

Reserved for AML/J

5.1.99 Message 0099

General collective number for malfunctions in the drive amplifiers

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 CAN error [0256 - 0511]. <00099>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

This error message serves as collective error number for errors that seldom occur in the drive amplifiers. The causes can differ.

Recovery measures

- Determine the error cause with the PHG
- Restart the controller
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently
- More detailed help ([↔](#) Documentation "Rho3 signal description and error messages")

5.1.100 Message 0100

Collective error number for measuring system errors

Host error number in ABBA/1 format

N016 Robot error (EXCP-AUS 5001)

Message in the AMU LOG Control Center

%1 Controller %2 %3 measuring system error ([0512 - 0767]). <00100>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

This error message serves as collective error number for errors that seldom occur in the measuring system. The causes can differ.

Recovery measures

- Determine the error cause with the PHG
- Restart the controller
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently
- More detailed help (↔ Documentation "Rho3 signal description and error messages")

5.1.101 Message 0101

Reserved

5.1.102 Message 0102

Emergency Stop input not set

Host error number in ABBA/1 format

N016 Robot error (EXCP-AUS 5001)

Message in the AMU LOG Control Center

%1 Controller %2 %3 emergency stop [0528]). <00102>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Signal E0.5 is not set in the rho controller because

- the Emergency Stop circuit has been interrupted,
- the power unit 160 does not trigger a release signal,
- <Control OFF> was pressed or
- the input board is defective.

Recovery measures

- Check the Emergency Stop circuit
- Switch the controller on
- Control the release signal from power unit 160
- Replace the input board

5.1.103 Message 0103

Axis 1 CAN alarm

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

*%1 Controller %2 %3 measuring system error (CAN alarm axis 1 [0512]).
<00103>*

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Communication error between controller and drive amplifier because

- the CAN bus connection is interrupted,
- the controller and drive amplifier clock times do not match or
- the drive amplifier is defective.

Recovery measures

- Check the drive amplifier parameters for axis 1
- Check the machine parameters on the CP/MEM board
- Check the CAN bus cable between the NC-SPS/IO board and the drive amplifier rack
- Replace the drive amplifier

5.1.104 Message 0104

Axis 2 CAN alarm

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

*%1 Controller %2 %3 measuring system error (CAN alarm axis 2 [0513]).
<00104>*

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Communication error between controller and drive amplifier because

- the CAN bus connection is interrupted,
- the controller and drive amplifier clock times do not match or
- the drive amplifier is defective.

Recovery measures

- Check the drive amplifier parameters for axis 2
- Check the machine parameters on the CP/MEM board
- Check the CAN bus cable between the NC-SPS/IO board and the drive amplifier rack
- Replace the drive amplifier

5.1.105 Message 0105

Axis 3 CAN alarm

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

*%1 Controller %2 %3 measuring system error (CAN alarm axis 3 [0514]).
<00105>*

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Communication error between controller and drive amplifier because

- the CAN bus connection is interrupted,
- the controller and drive amplifier clock times do not match or
- the drive amplifier is defective.

Recovery measures

- Check the drive amplifier parameters for axis 3
- Check the machine parameters on the CP/MEM board
- Check the CAN bus cable between the NC-SPS/IO board and the drive amplifier rack
- Replace the drive amplifier

5.1.106 Message 0106

Axis 4 CAN alarm

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

*%1 Controller %2 %3 measuring system error (CAN alarm axis 4 [0515]).
<00106>*

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Communication error between controller and drive amplifier because

- the CAN bus connection is interrupted,
- the controller and drive amplifier clock times do not match or
- the drive amplifier is defective.

Recovery measures

- Check the drive amplifier parameters for axis 4
- Check the machine parameters on the CP/MEM board
- Check the CAN bus cable between the NC-SPS/IO board and the drive amplifier rack
- Replace the drive amplifier

5.1.107 Message 0107

Axis 5 CAN alarm

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

*%1 Controller %2 %3 measuring system error (CAN alarm axis 5 [0516]).
<00107>*

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Communication error between controller and drive amplifier because

- the CAN bus connection is interrupted,
- the controller and drive amplifier clock times do not match or
- the drive amplifier is defective.

Recovery measures

- Check the drive amplifier parameters for axis 5
- Check the machine parameters on the CP/MEM board
- Check the CAN bus cable between the NC-SPS/IO board and the drive amplifier rack
- Replace the drive amplifier

5.1.108 Message 0108

Axis 6 CAN alarm

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

*%1 Controller %2 %3 measuring system error (CAN alarm axis 6 [0517]).
<00108>*

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Communication error between controller and drive amplifier because

- the CAN bus connection is interrupted,
- the controller and drive amplifier clock times do not match or
- the drive amplifier is defective.

Recovery measures

- Check the drive amplifier parameters for axis 6
- Check the machine parameters on the CP/MEM board
- Check the CAN bus cable between the NC-SPS/IO board and the drive amplifier rack
- Replace the drive amplifier

5.1.109 Message 0109

Axes 7 to 12 CAN alarm

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

*%1 Controller %2 %3 measuring system error (CAN alarm [0512 - 0523]).
<00109>*

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Malfunction in the drive amplifier of a robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Communication error between controller and drive amplifier because

- the CAN bus connection is interrupted,
- the controller and drive amplifier clock times do not match or
- the drive amplifier is defective.

Recovery measures

- Determine the defective axis with the PHG and the BOSCHTRM.EXE program
- Check the drive amplifier parameters for the axis
- Check the machine parameters on the CP/MEM board
- Check the CAN bus cable between the NC-SPS/IO board and the drive amplifier rack
- Replace the drive amplifier

AML/2 and AML/E Operating System Messages

5.1.110 Message 0110

Reserved

5.1.111 Message 0111

Reserved

5.1.112 Message 0112

Reserved

5.1.113 Message 0113

Collective error number for processor or measuring system malfunctions

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 measuring system error ([0512 - 0767]). <00113>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

This error message serves as collective error number for malfunctions that seldom occur in the processor or measuring system (rho controller errors 512 to 599). The causes can differ:

- Defective CP/MEM board
- Defective NC/SPS-IO board
- Error in operating system
- Error in user program
- Incorrect machine parameters

Recovery measures

- Determine the error cause with the PHG
- More detailed help (↔ Documentation "Rho3 signal description and error messages")
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.114 Message 0114

Axis 1 maximum axis speed exceeded

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 measuring error (speed overrun axis 1 [0600]). <00114>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

The axis 1 speed threshold (machine parameter P103) was exceeded due to an error in the controller.

Recovery measures

- Check machine parameter P103
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.115 Message 0115

Axis 2 maximum axis speed exceeded

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 measuring error (speed overrun axis 2 [0601]). <00115>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

The axis 2 speed threshold (machine parameter P103) was exceeded due to an error in the controller.

Recovery measures

- Check machine parameter P103
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.116 Message 0116

Axis 3 maximum axis speed exceeded

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 measuring error (speed overrun axis 3 [0602]). <00116>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

The axis 3 speed threshold (machine parameter P103) was exceeded due to an error in the controller.

Recovery measures

- Check machine parameter P103
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.117 Message 0117

Axis 4 maximum axis speed exceeded

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 measuring error (speed overrun axis 4 [0603]). <00117>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

The axis 4 speed threshold (machine parameter P103) was exceeded due to an error in the controller.

Recovery measures

- Check machine parameter P103
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.118 Message 0118

Axis 5 maximum axis speed exceeded

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 measuring error (speed overrun axis 5 [0604]). <00118>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

The axis 5 speed threshold (machine parameter P103) was exceeded due to an error in the controller.

Recovery measures

- Check machine parameter P103
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.119 Message 0119

Axis 6 maximum axis speed exceeded

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 measuring error (speed overrun axis 6 [0605]). <00119>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

The axis 6 speed threshold (machine parameter P103) was exceeded due to an error in the controller.

Recovery measures

- Check machine parameter P103
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.120 Message 0120

Reserved

5.1.121 Message 0121

Reserved

5.1.122 Message 0122

Axes 7 to 12 maximum axis speed exceeded

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 measuring error (speed overrun [0600 - 0619]). <00122>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

The speed threshold (machine parameter P103) was exceeded for one of the axes 7 to 12 due to an error in the controller.

Recovery measures

- Determine the defective axis with the PHG
- Check machine parameter P103
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.123 Message 0123

Axis 1 software limit switch reached

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 measuring system error (driving range overrun axis 1 [0624]). <00123>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Axis 1 has reached the software limit switch defined in the machine parameters P204 and P205 because

- of an error in the machine parameters or
- an error in the robot program.

Recovery measures

- Check the machine parameters P204, P205 and P401
- Check the Teach values in the Teachpoint file, the graphical configuration
- Control the parameters in the KONFIG.DAT (handling offsets and limit values)
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.124 Message 0124

Axis 2 software limit switch reached

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 measuring system error (driving range overrun axis 2 [0625]). <00124>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Axis 21 has reached the software limit switch defined in the machine parameters P204 and P205 because

- of an error in the machine parameters or
- an error in the robot program.

Recovery measures

- Check the machine parameters P204, P205 and P401
- Check the Teach values in the Teachpoint file, the graphical configuration
- Control the parameters in the KONFIG.DAT (handling offsets and limit values)
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.125 Message 0125

Axis 3 software limit switch reached

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 measuring system error (driving range overrun axis 3 [0626]). <00125>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Axis 3 has reached the software limit switch defined in the machine parameters P204 and P205 because

- of an error in the machine parameters or
- an error in the robot program.

Recovery measures

- Check the machine parameters P204, P205 and P401
- Check the Teach values in the Teachpoint file, the graphical configuration
- Control the parameters in the KONFIG.DAT (handling offsets and limit values)
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.126 Message 0126

Axis 4 software limit switch reached

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 measuring system error (driving range overrun axis 4 [0627]). <00126>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Axis 4 has reached the software limit switch defined in the machine parameters P204 and P205 because

- of an error in the machine parameters or
- an error in the robot program.

Recovery measures

- Check the machine parameters P204, P205 and P401
- Check the Teach values in the Teachpoint file, the graphical configuration
- Control the parameters in the KONFIG.DAT (handling offsets and limit values)
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.127 Message 0127

Axis 5 software limit switch reached

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 measuring system error (driving range overrun axis 5 [0628]). <00127>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Axis 5 has reached the software limit switch defined in the machine parameters P204 and P205 because

- of an error in the machine parameters or
- an error in the robot program.

Recovery measures

- Check the machine parameters P204, P205 and P401
- Check the Teach values in the Teachpoint file, the graphical configuration
- Control the parameters in the KONFIG.DAT (handling offsets and limit values)
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.128 Message 0128

Axis 6 software limit switch reached

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 measuring system error (driving range overrun axis 6 [0629]). <00128>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Axis 6 has reached the software limit switch defined in the machine parameters P204 and P205 because

- of an error in the machine parameters or
- an error in the robot program.

Recovery measures

- Check the machine parameters P204, P205 and P401
- Check the Teach values in the Teachpoint file, the graphical configuration
- Control the parameters in the KONFIG.DAT (handling offsets and limit values)
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.129 Message 0129

Axes 7 to 12 software limit switch reached

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 measuring system error (driving range overrun [0624 - 0643]). <00129>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

One of the axes 7 to 12 has reached the software limit switch defined in the machine parameters P204 and P205 because

- of an error in the machine parameters or
- an error in the robot program.

Recovery measures

- Determine the defective axis with the PHG
- Check the machine parameters P204, P205 and P401
- Check the Teach values in the Teachpoint file, the graphical configuration
- Control the parameters in the KONFIG.DAT (handling offsets and limit values)
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

AML/2 and AML/E Operating System Messages

5.1.130 Message 0130

Reserved

5.1.131 Message 0131

Reserved

5.1.132 Message 0132

Axis 1 machine limit switch reached

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 measuring system error (endswitch axis 1 [0648]).

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Axis 1 has passed the software limit switch defined in machine parameters P204 and P205 by more than the limit switch tolerance (P206) because

- of an error in the machine parameters or
- an error in the robot program.

Recovery measures

- Check the machine parameters P204, P205 and P401
- Check the Teach values in the Teachpoint file, the graphical configuration
- Control the parameters in the KONFIG.DAT (handling offsets and limit values)
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.133 Message 0133

Axis 2 machine limit switch reached

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

*%1 Controller %2 %3 measuring system error (endswitch axis 2 [0649]).
<00133>*

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Axis 2 has passed the software limit switch defined in machine parameters P204 and P205 by more than the limit switch tolerance (P206) because

- of an error in the machine parameters or
- an error in the robot program.

Recovery measures

- Check the machine parameters P204, P205 and P401
- Check the Teach values in the Teachpoint file, the graphical configuration
- Control the parameters in the KONFIG.DAT (handling offsets and limit values)
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.134 Message 0134

Axis 3 machine limit switch reached

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

*%1 Controller %2 %3 measuring system error (endswitch axis 3 [0650]).
<00134>*

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Axis 3 has passed the software limit switch defined in machine parameters P204 and P205 by more than the limit switch tolerance (P206) because

- of an error in the machine parameters or
- an error in the robot program.

Recovery measures

- Check the machine parameters P204, P205 and P401
- Check the Teach values in the Teachpoint file, the graphical configuration
- Control the parameters in the KONFIG.DAT (handling offsets and limit values)
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.135 Message 0135

Axis 4 machine limit switch reached

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

*%1 Controller %2 %3 measuring system error (endswitch axis 4 [0651]).
<00135>*

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Axis 4 has passed the software limit switch defined in machine parameters P204 and P205 by more than the limit switch tolerance (P206) because

- of an error in the machine parameters or
- an error in the robot program.

Recovery measures

- Check the machine parameters P204, P205 and P401
- Check the Teach values in the Teachpoint file, the graphical configuration
- Control the parameters in the KONFIG.DAT (handling offsets and limit values)
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.136 Message 0136

Axis 5 machine limit switch reached

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

*%1 Controller %2 %3 measuring system error (endswitch axis 5 [0652]).
<00136>*

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Axis 5 has passed the software limit switch defined in machine parameters P204 and P205 by more than the limit switch tolerance (P206) because

- of an error in the machine parameters or
- an error in the robot program.

Recovery measures

- Check the machine parameters P204, P205 and P401
- Check the Teach values in the Teachpoint file, the graphical configuration
- Control the parameters in the KONFIG.DAT (handling offsets and limit values)
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.137 Message 0137

Axis 6 machine limit switch reached

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

*%1 Controller %2 %3 measuring system error (endswitch axis 6 [0653]).
<00137>*

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Axis 6 has passed the software limit switch defined in machine parameters P204 and P205 by more than the limit switch tolerance (P206) because

- of an error in the machine parameters or
- an error in the robot program.

Recovery measures

- Check the machine parameters P204, P205 and P401
- Check the Teach values in the Teachpoint file, the graphical configuration
- Control the parameters in the KONFIG.DAT (handling offsets and limit values)
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.138 Message 0138

Axes 7 to 12 machine limit switch reached

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

*%1 Controller %2 %3 measuring system error (endswitch [0648 - 0667]).
<00138>*

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

One of the axes 7 to 12 has passed the software limit switch defined in machine parameters P204 and P205 by more than the limit switch tolerance (P206) because

- of an error in the machine parameters or
- an error in the robot program.

Recovery measures

- Determine the defective axis with the PHG
- Check the machine parameters P204, P205 and P401
- Check the Teach values in the Teachpoint file, the graphical configuration
- Control the parameters in the KONFIG.DAT (handling offsets and limit values)
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.139 Message 0139

Collective error number for processor or measuring system malfunctions

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 measuring system error ([0512 - 0767]). <00139>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

This error message serves as collective error number for malfunctions that seldom occur in the processor or measuring system (rho controller errors 668 to 719). The causes can differ:

- Defective CP/MEM board
- Defective NC/SPS-IO board
- Error in operating system
- Error in user program
- Incorrect machine parameters

Recovery measures

- Determine the error cause with the PHG
- More detailed help (➔ Documentation "Rho3 signal description and error messages")
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.140 Message 0140

Axis 1 measuring system alarm

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 measuring system error (measuring system alert axis 1 [0720]). <00140>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

None (☞ Note)

Note

This measuring system is not used in AML units at the present time.

5.1.141 Message 0141

Reserved

5.1.142 Message 0142

Reserved

5.1.143 Message 0143

Reserved

5.1.144 Message 0144

Reserved

5.1.145 Message 0145

Reserved

5.1.146 Message 0146

Reserved

5.1.147 Message 0147

Collective error number for processor or measuring system malfunctions

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 measuring system error ([0512 - 0767]). <00147>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

This error message serves as collective error number for malfunctions that seldom occur in the processor or measuring system (rho controller errors 739 to 767). The causes can differ:

- Defective CP/MEM board
- Defective NC/SPS-IO board
- Error in operating system
- Error in user program
- Incorrect machine parameters

Recovery measures

- Determine the error cause with the PHG
- More detailed help (➔ Documentation "Rho3 signal description and error messages")
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.148 Message 0148

Axis processor stopped (Servo board 1)

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 servo / inpos error (axisprocessor stopped servocard 1 [0768]). <00148>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

None (☞ Note)

Note

This type of axis board is not used by AML units at the present time.

5.1.149 Message 0149

Axis processor stopped (Servo board 2)

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 servo / inpos error (axisprocessor stopped servocard 2 [0769]). <00149>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

None (☞ Note)

Note

This type of axis board is not used by AML units at the present time.

AML/2 and AML/E Operating System Messages

5.1.150 Message 0150

Reserved

5.1.151 Message 0151

Reserved

5.1.152 Message 0152

Axis 1 Servo error

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 servo / inpos error (servo error axis 1 [0776]). <00152>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Axis 1 cannot follow the nominal location value specified by the controller and the nominal tracking is exceeded by 30% because axis 1

- is not running smoothly,
- has had a crash or
- has problems with the motor activation.

Recovery measures

- Check the axis for mechanical smooth running
- Control the axis 1 motor cable
- Replace the drive amplifier
- Replace the motor
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.153 Message 0153

Axis 2 Servo error

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 servo / inpos error (servo error axis 2 [0777]). <00153>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Axis 2 cannot follow the nominal location value specified by the controller and the nominal tracking is exceeded by 30% because axis 2

- is not running smoothly,
- has had a crash or
- has problems with the motor activation.

Recovery measures

- Check the axis for mechanical smooth running
- Control the axis 2 motor cable
- Replace the drive amplifier
- Replace the motor
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.154 Message 0154

Axis 3 Servo error

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 servo / inpos error (servo error axis 3 [0778]). <00154>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Axis 3 cannot follow the nominal location value specified by the controller and the nominal tracking is exceeded by 30% because axis 3

- is not running smoothly,
- has had a crash or
- has problems with the motor activation.

Recovery measures

- Check the axis for mechanical smooth running
- Control the axis 3 motor cable
- Replace the drive amplifier
- Replace the motor
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.155 Message 0155

Axis 4 Servo error

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 servo / inpos error (servo error axis 4 [0779]). <00155>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Axis 4 cannot follow the nominal location value specified by the controller and the nominal tracking is exceeded by 30% because axis 4

- is not running smoothly,
- has had a crash or
- has problems with the motor activation.

Recovery measures

- Check the axis for mechanical smooth running
- Control the axis 4 motor cable
- Replace the drive amplifier
- Replace the motor
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.156 Message 0156

Axis 5 Servo error

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 servo / inpos error (servo error axis 5 [0780]). <00156>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Axis 5 cannot follow the nominal location value specified by the controller and the nominal tracking is exceeded by 30% because axis 5

- is not running smoothly,
- has had a crash or
- has problems with the motor activation.

Recovery measures

- Check the axis for mechanical smooth running
- Control the axis 5 motor cable
- Replace the drive amplifier
- Replace the motor
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.157 Message 0157

Axis 6 Servo error

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 servo / inpos error (servo error axis 6 [0781]). <00157>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Axis 6 cannot follow the nominal location value specified by the controller and the nominal tracking is exceeded by 30% because axis 6

- is not running smoothly,
- has had a crash or
- has problems with the motor activation.

Recovery measures

- Check the axis for mechanical smooth running
- Control the axis 6 motor cable
- Replace the drive amplifier
- Replace the motor
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.158 Message 0158

Axes 7 to 12 Servo error

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 servo / inpos error (servo error [0776 - 0795]). <00158>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

One of the axes 7 to 12 cannot follow the nominal location value specified by the controller and the nominal tracking is exceeded by 30% because the axis

- is not running smoothly,
- has had a crash or
- has problems with the motor activation.

Recovery measures

- Determine the defective axis with the PHG
- Check the axis for mechanical smooth running
- Control the axis motor cable
- Replace the drive amplifier
- Replace the motor
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.159 Message 0159

Axis 1 time monitor for interpolator stop triggered

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 servo / inpos error (Interpolator-Stop error axis 1 [0800]) <00159>.

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Axis 1 cannot follow the nominal location value specified by the controller and the nominal tracking is exceeded by 13% because axis 1

- is not running smoothly,
- has had a crash or
- has problems with the motor activation.

Recovery measures

- Check the axis for mechanical smooth running
- Control the axis 1 motor cable
- Replace the drive amplifier
- Replace the motor
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.160 Message 0160

Axis 2 time monitor for interpolator stop triggered

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

*%1 Controller %2 %3 servo / inpos error (Interpolator-Stop error axis 2 [0801]).
<0016>*

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Axis 2 cannot follow the nominal location value specified by the controller and the nominal tracking is exceeded by 13% because axis 2

- is not running smoothly,
- has had a crash or
- has problems with the motor activation.

Recovery measures

- Check the axis for mechanical smooth running
- Control the axis 2 motor cable
- Replace the drive amplifier
- Replace the motor
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.161 Message 0161

Axis 3 time monitor for interpolator stop triggered

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

*%1 Controller %2 %3 servo / inpos error (Interpolator-Stop error axis 3 [0802]).
<00161>*

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Axis 3 cannot follow the nominal location value specified by the controller and the nominal tracking is exceeded by 13% because axis 3

- is not running smoothly,
- has had a crash or
- has problems with the motor activation.

Recovery measures

- Check the axis for mechanical smooth running
- Control the axis 3 motor cable
- Replace the drive amplifier
- Replace the motor
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.162 Message 0162

Axis 4 time monitor for interpolator stop triggered

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

*%1 Controller %2 %3 servo / inpos error (Interpolator-Stop error axis 4 [0803]).
<00162>*

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Axis 4 cannot follow the nominal location value specified by the controller and the nominal tracking is exceeded by 13% because axis 4

- is not running smoothly,
- has had a crash or
- has problems with the motor activation.

Recovery measures

- Check the axis for mechanical smooth running
- Control the axis 4 motor cable
- Replace the drive amplifier
- Replace the motor
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.163 Message 0163

Axis 5 time monitor for interpolator stop triggered

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

*%1 Controller %2 %3 servo / inpos error (Interpolator-Stop error axis 5 [0804]).
<00163>*

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Axis 5 cannot follow the nominal location value specified by the controller and the nominal tracking is exceeded by 13% because axis 5

- is not running smoothly,
- has had a crash or
- has problems with the motor activation.

Recovery measures

- Check the axis for mechanical smooth running
- Control the axis 5 motor cable
- Replace the drive amplifier
- Replace the motor
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.164 Message 0164

Axis 6 time monitor for interpolator stop triggered

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

*%1 Controller %2 %3 servo / inpos error (Interpolator-Stop error axis 6 [0805]).
<00164>*

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Axis 6 cannot follow the nominal location value specified by the controller and the nominal tracking is exceeded by 13% because axis 6

- is not running smoothly,
- has had a crash or
- has problems with the motor activation.

Recovery measures

- Check the axis for mechanical smooth running
- Control the axis 6 motor cable
- Replace the drive amplifier
- Replace the motor
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.165 Message 0165

Axes 7 to 12 time monitor for interpolator stop triggered

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 servo / inpos error (Interpolator-Stop error [0800 - 0819]) <00165>.

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

One of the axes 7 to 12 cannot follow the nominal location value specified by the controller and the nominal tracking is exceeded by 13% because the axis

- is not running smoothly,
- has had a crash or
- has problems with the motor activation.

Recovery measures

- Determine the defective axis with the PHG
- Check the axis for mechanical smooth running
- Control the axis motor cable
- Replace the drive amplifier
- Replace the motor
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.166 Message 0166

Axis 1 idle monitor error

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

*%1 Controller %2 %3 servo / inpos error (not inpos error axis 1 [0824]).
<00166>*

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Axis 1 did not reach the "in position" area within the specified time after a movement process because

- the axis is not running smoothly,
- the axis had a crash or
- the machine parameter P126 or P127 has been changed.

Recovery measures

- Check the axis for mechanical smooth running
- Check the machine parameter P126 or 127
- Restart the controller
- Replace the CP/MEM board
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.167 Message 0167

Axis 2 idle monitor error

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

*%1 Controller %2 %3 servo / inpos error (not inpos error axis 2 [0825]).
<00167>*

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Axis 2 did not reach the "in position" area within the specified time after a movement process because

- the axis is not running smoothly,
- the axis had a crash or
- the machine parameter P126 or P127 has been changed.

Recovery measures

- Check the axis for mechanical smooth running
- Check the machine parameter P126 or 127
- Restart the controller
- Replace the CP/MEM board
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.168 Message 0168

Axis 3 idle monitor error

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

*%1 Controller %2 %3 servo / inpos error (not inpos error axis 3 [0826]).
<00168>*

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Axis 3 did not reach the "in position" area within the specified time after a movement process because

- the axis is not running smoothly,
- the axis had a crash or
- the machine parameter P126 or P127 has been changed.

Recovery measures

- Check the axis for mechanical smooth running
- Check the machine parameter P126 or 127
- Restart the controller
- Replace the CP/MEM board
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.169 Message 0169

Axis 4 idle monitor error

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

*%1 Controller %2 %3 servo / inpos error (not inpos error axis 4 [0827]).
<00169>*

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Axis 4 did not reach the "in position" area within the specified time after a movement process because

- the axis is not running smoothly,
- the axis had a crash or
- the machine parameter P126 or P127 has been changed.

Recovery measures

- Check the axis for mechanical smooth running
- Check the machine parameter P126 or 127
- Restart the controller
- Replace the CP/MEM board
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.170 Message 0170

Axis 5 idle monitor error

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

*%1 Controller %2 %3 servo / inpos error (not inpos error axis 5 [0828]).
<00170>*

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Axis 5 did not reach the "in position" area within the specified time after a movement process because

- the axis is not running smoothly,
- the axis had a crash or
- the machine parameter P126 or P127 has been changed.

Recovery measures

- Check the axis for mechanical smooth running
- Check the machine parameter P126 or 127
- Restart the controller
- Replace the CP/MEM board
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.171 Message 0171

Axis 6 idle monitor error

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

*%1 Controller %2 %3 servo / inpos error (not inpos error axis 6 [0829]).
<00171>*

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Axis 6 did not reach the "in position" area within the specified time after a movement process because

- the axis is not running smoothly,
- the axis had a crash or
- the machine parameter P126 or P127 has been changed.

Recovery measures

- Check the axis for mechanical smooth running
- Check the machine parameter P126 or 127
- Restart the controller
- Replace the CP/MEM board
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.172 Message 0172

Axes 7 to 12 idle monitor error

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

*%1 Controller %2 %3 servo / inpos error (not inpos error [0824 - 0843]).
<00172>*

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

One of the axes 7 to 12 did not reach the "in position" area within the specified time after a movement process because

- the axis is not running smoothly,
- the axis had a crash or
- the machine parameter P126 or P127 has been changed.

Recovery measures

- Determine the defective axis with the PHG
- Check the axis for mechanical smooth running
- Check the machine parameter P126 or 127
- Restart the controller
- Replace the CP/MEM board
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.173 Message 0173

Drive ON release missing

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 servo / inpos error (power on release is missing [0848 - 0867]). <00173>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Software error in the robot controller. The "Drive ON" signal for one of the axes 1 to 20 or "Drive OFF" for all the axes is missing. Movement was planned for an axis for which "Drive ON" was switched off and the actual axis position was not set to the nominal value.

Recovery measures

- Restart the controller
- More detailed help (→ Documentation "rho3 Signal descriptions and error messages, Section Switchable Axes")
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.174 Message 0174

Feed ON release missing for axes 1 to 20

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 servo / inpos error (movement release is missing [0872 - 0891]). <00174>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Software error in the robot controller.

Recovery measures

- Restart the controller
- More detailed help (☞ Documentation "rho3 Documentation Signal descriptions and error messages")
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

Note

This error number will only be used up to Version TO04 of the controller operating system.

5.1.175 Message 0175

Drive ON not allowed for axes 1 to 20

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

*%1 Controller %2 %3 servo / inpos error (power on not allowed [0896 - 0919]).
<00175>*

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Software error in the robot controller. An attempt was made to send a "Drive ON" signal to a moving kinematic.

Recovery measures

- Restart the controller
- More detailed help ([↗ Documentation "rho3 Signal descriptions and error messages, Section Switchable Axes"](#))
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.176 Message 0176

Servo board voltage missing

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

*%1 Controller %2 %3 servo / inpos error (power sevocard failure [0920]).
<00176>*

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

None (☞ Note)

Note

This type of axis board is not used by AML units at the present time.

5.1.177 Message 0177

Collective error number for

- Servo boards
- Drive controls

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 servo / inpos error ([0768 - 1023]) <00177>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

This error message serves as collective error number for malfunctions that seldom occur in the processor or measuring system (rho controller errors 739 to 767). The causes can differ:

- Defective CP/MEM board
- Defective NC/SPS-IO board
- Error in operating system
- Error in user program
- Incorrect machine parameters

Recovery measures

- Determine the error cause with the PHG
- More detailed help (➔ Documentation "Rho3 signal description and error messages")
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.178 Message 0178

External voltage supply missing on the NC-SPS-I/O board

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 general error (missing power for input/output cards [1024]). <00178>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

The voltage supply for the I/O board(s) is interrupted.

Recovery measures

Check the 24 V collective error message connection on the NC-SPS-I/O board.

5.1.179 Message 0179

Reserved

5.1.180 Message 0180

Reserved

5.1.181 Message 0181

Reserved

5.1.182 Message 0182

Reserved

5.1.183 Message 0183

Reserved

5.1.184 Message 0184

Collective error message for other errors in the robot controller

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 general error ([1024 - 1279]).

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

This error message serves as collective error number for malfunctions that seldom occur in the processor or measuring system (rho controller errors 739 to 767). The causes can differ:

- Defective CP/MEM board
- Defective NC/SPS-IO board
- Error in operating system
- Error in user program
- Incorrect machine parameters

Recovery measures

- Determine the error cause with the PHG
- More detailed help (→ Documentation "Rho3 signal description and error messages")
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.185 Message 0185

Axis 1 interpolator stop warning

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

*%1 Controller %2 %3 general warning (interpolator stop warning axis 1 [1280]).
<00185>*

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

The axis 1 tracking overruns the interpolator stop area (113% of the nominal tracking) because the axis

- is not running smoothly,
- has had a crash or
- has problems with the motor activation.

Recovery measures

- Check the axis for mechanical smooth running
- Control the axis 1 motor cable
- Replace the drive amplifier
- Replace the motor
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.186 Message 0186

Axis 2 interpolator stop warning

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

*%1 Controller %2 %3 general warning (interpolator stop warning axis 2 [1281]).
<00186>*

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

The axis 2 tracking overruns the interpolator stop area (113% of the nominal tracking) because the axis

- is not running smoothly,
- has had a crash or
- has problems with the motor activation.

Recovery measures

- Check the axis for mechanical smooth running
- Control the axis 2 motor cable
- Replace the drive amplifier
- Replace the motor
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.187 Message 0187

Axis 3 interpolator stop warning

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

*%1 Controller %2 %3 general warning (interpolator stop warning axis 3 [1282]).
<00187>*

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

The axis 3 tracking overruns the interpolator stop area (113% of the nominal tracking) because the axis

- is not running smoothly,
- has had a crash or
- has problems with the motor activation.

Recovery measures

- Check the axis for mechanical smooth running
- Control the axis 3 motor cable
- Replace the drive amplifier
- Replace the motor
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.188 Message 0188

Axis 4 interpolator stop warning

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

*%1 Controller %2 %3 general warning (interpolator stop warning axis 4 [1283]).
<00188>*

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

The axis 4 tracking overruns the interpolator stop area (113% of the nominal tracking) because the axis

- is not running smoothly,
- has had a crash or
- has problems with the motor activation.

Recovery measures

- Check the axis for mechanical smooth running
- Control the axis 4 motor cable
- Replace the drive amplifier
- Replace the motor
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.189 Message 0189

Axis 5 interpolator stop warning

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

*%1 Controller %2 %3 general warning (interpolator stop warning axis 5 [1284]).
<00189>*

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

The axis 5 tracking overruns the interpolator stop area (113% of the nominal tracking) because the axis

- is not running smoothly,
- has had a crash or
- has problems with the motor activation.

Recovery measures

- Check the axis for mechanical smooth running
- Control the axis 5 motor cable
- Replace the drive amplifier
- Replace the motor
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.190 Message 0190

Axis 6 interpolator stop warning

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

*%1 Controller %2 %3 general warning (interpolator stop warning axis 6 [1285]).
<00190>*

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

The axis 6 tracking overruns the interpolator stop area (113% of the nominal tracking) because the axis

- is not running smoothly,
- has had a crash or
- has problems with the motor activation.

Recovery measures

- Check the axis for mechanical smooth running
- Control the axis 6 motor cable
- Replace the drive amplifier
- Replace the motor
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.191 Message 0191

Axes 7 to 12 interpolator stop warning

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

*%1 Controller %2 %3 general warning (interpolator stop warning [1280 - 1299]).
<00191>*

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

The tracking of one of the axes 7 to 12 overruns the interpolator stop area (113% of the nominal tracking) because the axis

- is not running smoothly,
- has had a crash or
- has problems with the motor activation.

Recovery measures

- Determine the defective axis with the PHG
- Check the axis for mechanical smooth running
- Control the axis motor cable
- Replace the drive amplifier
- Replace the motor
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.192 Message 0192

Reserved

5.1.193 Message 0193

Reserved

5.1.194 Message 0194

Reserved

5.1.195 Message 0195

Collective message for controller warnings

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 general warning ([1280 - 1535]).

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

This error message serves as collective error number for malfunctions that seldom occur in the controller (rho controller errors 1280 to 1535). The causes can differ:

- Defective CP/MEM board
- Defective NC/SPS-IO board
- Error in operating system
- Error in user program
- Incorrect machine parameters

Recovery measures

- Determine the error cause with the PHG
- More detailed help (➔ Documentation "Rho3 signal description and error messages")
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.196 Message 0196

Reserved

5.1.197 Message 0197

Reserved

5.1.198 Message 0198

Reserved

5.1.199 Message 0991

Reserved

5.1.200 Message 0200

Reserved

5.1.201 Message 0201

Reserved

5.1.202 Message 0202

Collective error message for drive parameter errors

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 error group 6 - 12 ([1536 - 3327]). <00202>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

This error message serves as collective error number for malfunctions that seldom occur in the drive parameters (rho controller errors 1536 to 3327). The causes can differ:

- Defective CP/MEM board
- Defective NC/SPS-IO board
- Error in operating system
- Error in user program
- Incorrect machine parameters
- Defective drive amplifier

Recovery measures

- Determine the error cause with the PHG
- More detailed help (☞ Documentation "Rho3 signal description and error messages")
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.203 Message 0203

Reserved

5.1.204 Message 0204

Reserved

5.1.205 Message 0205

Reserved

5.1.206 Message 0206

Reserved

5.1.207 Message 0207

Reserved

5.1.208 Message 0208

Reserved

5.1.209 Message 0209

Reserved

5.1.210 Message 0210

Reserved

5.1.211 Message 0211

Reserved

5.1.212 Message 0212

Collective error message for rho 3.2 controller system errors

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 runtime error ([3328 - 3583]). <00212>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by


Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

This error number serves as a collective error number for system errors in the rho controller 3.2 (rho controller errors 3328 to 3583). Causes can be:

- Defective CP/MEM board
- Defective NC/SPS-IO board
- Error in operating system

Recovery measures

- Determine the error cause with the PHG
- More detailed help ( Documentation "Rho3 signal description and error messages")
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.213 Message 0213 - Message 0289

Reserved

5.1.214 Message 0290

Collective error message for rho controller system errors

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 system error ([3584 - 3839]). <00290>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by


Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

This error number serves as a collective error number for system errors in the rho controller (rho controller errors 3584 to 3839). Causes can be:

- Defective CP/MEM board
- Defective NC/SPS-IO board
- Error in operating system

Recovery measures

- Determine the error cause with the PHG
- More detailed help ( Documentation "Rho3 signal description and error messages")
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.215 Message 0291 - Message 0297

Reserved

5.1.216 Message 0298

Collective error message for rho controller system errors

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 another system error ([3840 - 4095]). <00298>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

This error number serves as a collective error number for system errors in the rho controller (rho controller errors 3840 to 4095). Causes can be:

- Defective CP/MEM board
- Defective NC/SPS-IO board
- Error in operating system

Recovery measures

- Determine the error cause with the PHG
- More detailed help (👉 Documentation "Rho3 signal description and error messages")
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

Note

These error numbers are not used by the TO 03 and TO 05L operating systems.

5.1.217 Message 0299

Unknown error number from the rho 3 controller

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3 undefined RHO error ([0001 - 4095]). <00299>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved


Recognized by

Robot or tower controller (refer to parameter 2 (%2) in the message in the AMU LOG Control Center).

Possible causes

Unknown

Recovery measures

- Determine the error cause with the PHG
- More detailed help ( Documentation "Rho3 signal description and error messages")
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

5.1.218 Message 0300

Reserved

5.2 AML/J Controller messages

5.2.1 Message 0098 (AML/J)

AML/J mains switch switched off

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Controller %2 %3). <00098>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

PMAC (GLOBAL.PMC)

Possible causes

- Mains switch for AML/J switched off
- Current lost

Recovery measures

- Switch the mains switch on again
- Check the voltage supply

5.2.2 Message 0102

EMERGENCY STOP input not set for PMAC

Host error number in ABBA/1 format

N016 Robot error (EXCP-AUS 5001)

Message in the AMU LOG Control Center

%1 Controller %2 %3 emergency stop [0528]). <00102>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)
- %3 Sequence number involved

Recognized by

PMAC (GLOBAL.PMC)

Possible causes

The EMERGENCY STOP signal is not set because

- the door of a module has been opened or
- the EMERGENCY STOP circuit is interrupted or
- the PMAC controller program has a malfunction.

Recovery measures

- Check the EMERGENCY STOP circuit
- Close all doors
- Switch the S3 switch off and then on again

6 AML/2 Messages

6.1 Logical errors in the application program

6.1.1 Message 0301

Syntax error in an AMU command to the controller

Host error number in ABBA/1 format

N001 Syntax error

Message in the AMU LOG Control Center

%1 Syntax-Error %2 in command string from AMU.<00301>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)

Recognized by

AML/2 with camera gripper	AML/2 with scanner gripper
INIT.IRD	INIT.IRD

Possible causes

- Differing addresses for the controller (T_ADR_RHO) or AMU (T_ADR_AMU) in KONFIG.DAT and the graphical configuration
- Drive types not yet known to the controller software have been defined
- Error in AMU command telegram (module KRN/P) to the controller
- AMU and controller software versions not compatible
- Communication error
- Controller software error

Recovery measures

- Repeat the command
- Check
 - the KONFIG.DAT and the graphical configuration
 - the drive types configured
 - the command string with Trace KRN9
 - the software versions
- Restart the controller
- Restart the AMU

6.1.2 Message 0303

Timeout during command execution

Host error number in ABBA/1 format

N102 Timeout robot

Message in the AMU LOG Control Center

%1 Timeout-Error %2. Tower- or E/I/F access is denied.<00303>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)

Recognized by

AML/2 with camera gripper	AML/2 with scanner gripper
INIT.IRD	INIT.IRD

Possible causes

- I/O unit not closed or closed too late after operation
(time > D_Time2 in KONFIG.DAT)
- I/O unit relay defective
- Malfunction in the signal cable between the I/O unit and the robot controller
- Quadro tower not ready due to a previous error
(wait-time > D_Time1 in KONFIG.DAT)

Recovery measures

- Check
 - whether the I/O unit is closed
 - the I/O unit input signals
 - the cable connections to the I/O unit
- Restart the controller
- During start-up: check the whether program modules for the I/O unit are installed

6.1.3 Message 0304

Physical coordinates in the command beyond the software limit switch

Host error number in ABBA/1 format

N011 Invalid allocation (e.g. robot - Volser)

Message in the AMU LOG Control Center

%1 Coordinate sent by AMU is out of range %2. <00304>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)

Recognized by

AML/2 with camera gripper	AML/2 with scanner gripper
INIT.IRD	INIT.IRD

Possible causes

- Invalid Teach points in the KRNREFPT.R01 or KRNREFPT.R02 file (depending on which robot is involved)
- Incorrect parameters for the software limit switch (G_Z_MAXLIMIT, G_Z_MINLIMIT) in KONFIG.DAT
- Wrong coordinates in the graphical configuration file (AMUCONF.INI)
- Error in the constants file AMUCONST.INI
- Wrong version of the constants file AMUCONST.INI
- Error in the robot controller program or in the AMU module KRN/P

Recovery measures

- Teach the components involved again
- Check the software limit switch in the KONFIG.DAT file

6.1.4 Message 0305

Timeout during command execution

Host error number in ABBA/1 format

N006 Robot error (see preceding warning)

Message in the AMU LOG Control Center

%1 Command from AMU has been canceled from %2. <00305>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)

Recognized by

AML/2 with camera gripper	AML/2 with scanner gripper
INIT.IRD	INIT.IRD

Possible causes

- Command not completed because of an error in the I/O unit or storage tower activation
- I/O unit relay defective
- Malfunction in signal cable between the I/O unit and controller

Recovery measures

- Check
 - whether the Log contains preceding error messages for the components
 - the I/O unit input signals (the shutter signal may be missing)
- Restart the controller
- During start-up: check whether the program modules for the I/O unit are installed

6.2 Handling errors

6.2.1 Message 0401

Unexpected mechanical resistance on the gripper

Host error number in ABBA/1 format

N101 Robot crash during medium removal/insertion

Message in the AMU LOG Control Center

%1 Crash sensor %2. Unexpected crash.<00401>

%1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)

%2 Robot or controller name
(Description from the graphical configuration)

Recognized by

AML/2 with camera gripper	AML/2 with scanner gripper
NEWGRIP.IRD	SNEWGRIP.IRD

Possible causes

- Medium not gripped properly during a **GET**:
 - drive defect (medium no longer ejected far enough)
 - defective gripper sensor or other mechanical damage on gripper
 - handling for **GET** not set correctly
 - invalid Teach point file or incorrect actual reference point values (P207 in the rho controller)
- Alignment point not present or not configured

Recovery measures

- Check
 - the handling for **PUT** and **GET** (correct the offset values in the KONFIG.DAT when necessary)
 - the gripper with the gripper test program (replace the gripper when necessary)
 - the reference points (markings on the robot)
 - the Teach points (teach again with Trace KRN 8)
- Configure the alignment station

6.2.2 Message 0402

Medium not gripped by the gripper

Host error number in ABBA/1 format

N104 Medium lost

Message in the AMU LOG Control Center

%1 Tape not in gripper %2. <00402>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)

Recognized by

AML/2 with camera gripper	AML/2 with scanner gripper
NEWGRIP.IRD	SNEWGRIP.IRD
LW3490.IRD	SLW3480a.IRD
	SLW3490.IRD

Possible causes

- Subprogram started due to differences between the expected and actual sensor signals
- "Bow forward" sensor triggered during drive handling or repeated access:
 - sensor defective
 - medium cannot be gripped due to a drive defect or errors in the drive handling settings
- Medium lost:
 - medium defective
 - gripper defective (motor or mechanism)

Recovery measures

- Check
 - the gripper with the gripper test program (replace the gripper when necessary)
 - whether a medium that fell out is damaged and use the I/O unit to return it to the Archive
 - the drive
 - the drive handling

6.2.3 Message 0403 (Warning)

Irregularities in gripper handling

Host error number in ABBA/1 format

N206 Medium cannot be removed from the unit

Message in the AMU LOG Control Center

%1Tape control activated, please check the medium handling for %2. <00403>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)

Recognized by

AML/2 with camera gripper	AML/2 with scanner gripper
INIT.IRD	INIT.IRD

Possible causes

- Subprogram started due to differences between the expected and actual sensor signals
- "Bow forward" sensor defective
- Handling not set correctly

Recovery measures

- Check
 - the command
 - the gripper with the gripper test program (replace the gripper when necessary)
 - the Teach points (teach again with Trace KRN 8)
 - the handling for **PUT** and **GET** (correct the offset values in the KONFIG.DAT when necessary)

6.2.4 Message 0404

Command for an undefined drive

Host error number in ABBA/1 format

N011 Invalid allocation (e.g. robot - Volser)

Message in the AMU LOG Control Center

%1 Handling not configured. %2. <00404>

%1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)

%2 Robot or controller name
(Description from the graphical configuration)

Recognized by

AML/2 with camera gripper	AML/2 with scanner gripper
INIT.IRD	INIT.IRD
RACK.IRD	SRACK.IRD
LW3480.IRD	SLW3480.IRD
LW3490.IRD	SLW3480a.IRD
LW5180.IRD	SLW3490.IRD
LW5190.IRD	SLW5180.IRD
LW7480.IRD	SLW5190.IRD
LW7490.IRD	SLW7480.IRD
LWPHIL.IRD	SLW7490.IRD
LWSTK80.IRD	SLWD2.IRD

Handling errors

AML/2 with camera gripper	AML/2 with scanner gripper
	SLWD2.IRD
	SLWDLT.IRD
	SLWNTP.IRD
	SLWOD11.IRD
	SLWODHP.IRD
	SLWODJU.IRD
	SLWODR.IRD
	SLWPHIL.IRD
	SLWSTK80.IRD
	SLWSTK90.IRD
	SLWVHS.IRD

Possible causes

- Drive type not configured in the KONFIG.DAT in the controller
- Wrong drive types configured in the graphical configuration
- Invalid command (with an undefined command code) sent from the AMU to the controller

Recovery measures

- Check
 - the drives in the graphical configuration
(restart the AMU after changes)
 - the drive types configured in the KONFIG.DAT file
 - the command string with Trace KRN9

6.2.5 Message 0405

Error when removing a cartridge from a drive with a flap

Host error number in ABBA/1 format

N206 Medium cannot be removed from the unit

Message in the AMU LOG Control Center

%1 Flap of requested mediumdevice for %2 is closed.<00405>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)

Recognized by

AML/2 with camera gripper	AML/2 with scanner gripper
LW3480.IRD	SLW3480.IRD

Possible causes

- Drive has not received an Unload command
- Drive is defective
- "Bow forward" gripper sensor is defective

Recovery measures

- Send an Unload command to the drive via the host
- Check
 - the drive
 - the gripper with the gripper test program (replace the gripper when necessary)

6.2.6 Message 0406

Error when inserting a cartridge on a drive with a flap

Host error number in ABBA/1 format

N207 Flap on the drive cannot be closed

Message in the AMU LOG Control Center

%1Flap of requested device for %2 is open.<00406>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)

Recognized by

AML/2 with camera gripper	AML/2 with scanner gripper
LW3480.IRD	SLWSTK90.IRD
	SLW3480.IRD

Possible causes

- The drive flap could not be closed after cartridge insertion
 - handling not set correctly
 - mixed-media gripper installed (not designed for drives with flaps)
 - drive defective
 - gripper mechanism defective
 - Unload command or button activated during the mount process

Recovery measures

- Check
 - the drive handling (when necessary, correct the offset values in the KONFIG.DAT file or the flap closing values in the LW3480.DAT or LWSTK90.DAT files)
 - the gripper with the gripper test program (replace the gripper when necessary)
 - the drive (mechanism, correct commands)

6.2.7 Message 0407

A medium is still in the gripper

Host error number in ABBA/1 format

N105 Medium stuck in gripper

Message in the AMU LOG Control Center

%1Tape in gripper %2. <00407>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)

Recognized by

AML/2 with camera gripper	AML/2 with scanner gripper
INIT.IRD	INIT.IRD
RACK.IRD	SRACK.IRD
LW3480.IRD	SLW3480.IRD
	SLWSTK90.IRD

Possible causes

- Unit switched off (power failure) with a medium in the gripper
- Handling not set correctly
- Wrong command for actual status (e.g. close flap even though a medium is still in the gripper)

Recovery measures

- Move the medium to the Problem box
- Insert the medium with the I/O unit
- Check
 - the command
 - the gripper with the gripper test program (replace the gripper when necessary)
 - the handling for **PUT** and **GET** (correct the offset values in the KONFIG.DAT file when necessary)

6.2.8 Message 0408

Gripper error even though the medium is aligned

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 from gripper during handling %2. <00408>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)

Recognized by

AML/2 with camera gripper	AML/2 with scanner gripper
RACK.IRD	SRACK.IRD

Possible causes

- Handling not adjusted correctly
- Medium defective
- Gripper (sensor or mechanism) defective

Recovery measures

- Check
 - the medium
 - handling for **PUT** and **GET**
(correct the offset values in the KONFIG.DAT file when necessary)
 - the gripper with the gripper test program (replace the gripper when necessary)

6.2.9 Message 0409 (Warning)

Problems during Unload button handling

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Common warning %2.<00409>

%1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)

%2 Robot or controller name
(Description from the graphical configuration)

Handling errors

Recognized by

AML/2 with camera gripper	AML/2 with scanner gripper
LW3480.IRD	SLW3480.IRD
LW3490.IRD	SLW3480a.IRD
LW5180.IRD	SLW3490.IRD
LW5190.IRD	SLW5180.IRD
LW7480.IRD	SLW5190.IRD
LW7490.IRD	SLW7480.IRD
LWPHIL.IRD	SLW7490.IRD
LWSTK80.IRD	SLW8mm.IRD
	SLWD2.IRD
	SLWOD11.IRD
	SLWODHP.IRD
	SLWODHP.IRD
	SLWODR.IRD
	SLWPHIL.IRD
	SLWSTK80.IRD
	SLWSTK90.IRD
	SLWVHS.IRD

Possible causes

- Handling for operating the Unload button not set or not set correctly
- "Bow forward" gripper sensor defective
- Unload button defective

Recovery measures

- Check
 - the **Unload** gripper handling (correct the LW*.DAT or SLW*.DAT file when necessary)
 - the gripper with the gripper test program (replace the gripper when necessary)
 - the Unload button on the drive

6.2.10 Message 0410 (only AML/2 with camera gripper)

"Gripper horizontal" signal not present

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Gripper not in horizontal position %2. <00410>

%1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)

%2 Robot name
(Description from the graphical configuration)

Recognized by

AML/2 with camera gripper
INIT.IRD
LW3480.IRD
LW3490.IRD
LW5180.IRD
LW5190.IRD
LW7480.IRD
LW7490.IRD
LWPHIL.IRD
LWSTK80.IRD

Possible causes

- Gripper does not reach the horizontal position (compressed air supply interrupted)
- Gripper reaches the horizontal position too late (pressure in compressed air system too low)
- "Gripper horizontal" sensor defective

Recovery measures

- Check
 - the gripper with the gripper test program (replace the gripper when necessary)
 - the compressed air system
 - is the pressure high enough?
 - are there any losses due to leaks?
 - are compressed air hoses bent or pinched?
- Replace any defective components

6.2.11 Message 0411

"Gripper vertical" signal not present

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Gripper not in vertical position %2. <00411>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot name
(Description from the graphical configuration)

Recognized by

AML/2 with camera gripper
INIT.IRD
RACK.IRD

Possible causes

- Gripper does not reach the vertical position (compressed air supply interrupted)
- Gripper reaches the vertical position too late (pressure in compressed air system too low)
- "Gripper vertical" sensor defective

Recovery measures

- Check
 - the gripper with the gripper test program (replace the gripper when necessary)
 - the compressed air system
 - is the pressure high enough?
 - are there any losses due to leaks?
 - are compressed air hoses bent or pinched?
- Replace any defective components

6.2.12 Message 0412

Gripper cannot be opened

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1Gripper not open %2. <000412>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot name
(Description from the graphical configuration)

Recognized by

AML/2 with camera gripper	AML/2 with scanner gripper
INIT.IRD	INIT.IRD
RACK.IRD	SRACK.IRD
NEWGRIP.IRD	SNEWGRIP.IRD
LW3480.IRD	SLW3480.IRD
LW3490.IRD	SLW3480a.IRD
LW5180.IRD	SLW3490.IRD
LW5190.IRD	SLW5180.IRD
LW7480.IRD	SLW5190.IRD
LW7490.IRD	SLW7480.IRD
LWPHIL.IRD	SLW7490.IRD
LWSTK80.IRD	SLW8mm.IRD

AML/2 with camera gripper	AML/2 with scanner gripper
	SLWD2.IRD
	SLWDLT.IRD
	SLWNTP.IRD
	SLWOD11.IRD
	SLWODHP.IRD
	SLWODJU.IRD
	SLWODR.IRD
	SLWPHIL.IRD
	SLWSTK80.IRD
	SLWSTK90.IRD
	SLWVHS.IRD

Possible causes

- Gripper opening mechanism stuck
- "Gripper open" sensor defective
- Compressed air supply defective (e.g. hose bent or pinched)

Recovery measures

- Check
 - the gripper sensors (gripper test program)
 - the gripper mechanism
(move the gripper jaws manually)
 - the air pressure at the gripper
- Replace the gripper

6.2.13 Message 0413

Gripper cannot be closed

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Gripper not closed %2. <000413>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
%2 Robot name
(Description from the graphical configuration)

Recognized by

AML/2 with camera gripper	AML/2 with scanner gripper
INIT.IRD	INIT.IRD
RACK.IRD	SRACK.IRD
NEWGRIP.IRD	SNEWGRIP.IRD
LW3480.IRD	SLW3480.IRD
LW3490.IRD	SLW3480a.IRD
LW5180.IRD	SLW3490.IRD
LW5190.IRD	SLW5180.IRD
LW7480.IRD	SLW5190.IRD
LW7490.IRD	SLW7480.IRD
LWPHIL.IRD	SLW7490.IRD
LWSTK80.IRD	SLW8mm.IRD

AML/2 with camera gripper	AML/2 with scanner gripper
	SLWD2.IRD
	SLWDLT.IRD
	SLWNTP.IRD
	SLWOD11.IRD
	SLWODHP.IRD
	SLWODJU.IRD
	SLWODR.IRD
	SLWPHIL.IRD
	SLWSTK80.IRD
	SLWSTK90.IRD
	SLWVHS.IRD

Possible causes

- Gripper opening mechanism stuck
- "Gripper closed" sensor defective
- Compressed air supply defective

Recovery measures

- Check
 - the gripper sensors (gripper test program)
 - the gripper mechanism
(move the gripper jaws manually)
 - the air pressure at the gripper
- Replace the gripper

6.2.14 Message 0414 (only AML/2 with camera gripper)

"Gripper 0 °" signal not present

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Gripper not tilt to 0° %2. <00414>

%1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)

%2 Robot name
(Description from the graphical configuration)

Recognized by

AML/2 with camera gripper
INIT.IRD
RACK.IRD
LW3480.IRD
LW5180.IRD
LW5190.IRD
LW7480.IRD
LW7490.IRD
LWPHIL.IRD
LWSTK80.IRD

Possible causes

- Gripper does not reach the 0° position (compressed air supply interrupted)
- Gripper reaches the 0° position too late (pressure in compressed air system too low)
- "Gripper 0°" sensor defective

Recovery measures

- Check
 - the gripper with the gripper test program (replace the gripper when necessary)
 - the compressed air system
 - is the pressure high enough?
 - are there any losses due to leaks?
 - are compressed air hoses bent or pinched?
- Replace any defective components

6.2.15 Message 0415 (only AML/2 with camera gripper)

"Gripper 7 °" signal not present

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Gripper not tilt to 7 ° %2. <00415>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot name
(Description from the graphical configuration)

Recognized by

AML/2 with camera gripper
INIT.IRD
LW3480.IRD
LW3490.IRD
LWSTK80.IRD

Possible causes

- Gripper does not reach the 7° position (compressed air supply interrupted)
- Gripper reaches the 7° position too late (pressure in compressed air system too low)
- "Gripper 7°" sensor defective

Recovery measures

- Check
 - the gripper with the gripper test program (replace the gripper when necessary)
 - the compressed air system
 - is the pressure high enough?
 - are there any losses due to leaks?
 - are compressed air hoses bent or pinched?
- Replace any defective components

6.2.16 Message 0416

The "Bow back" gripper sensor not active

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Bow not in back position %2. <000416>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)

Recognized by

AML/2 with camera gripper	AML/2 with scanner gripper
INIT.IRD	INIT.IRD
RACK.IRD	SRACK.IRD
NEWGRIP.IRD	SNEWGRIP.IRD
LW3490.IRD	SLW3480a.IRD
	SLW3490.IRD

Possible causes

- Medium not gripped correctly:
 - drive defective
 - handling not adjusted correctly
- Gripper mechanism defective
- "Bow back" sensor defective

Recovery measures

- Check
 - the gripper with the gripper test program (replace the gripper when necessary)
 - the Teach points (teach again with Trace KRN 8)
 - the handling for **PUT** and **GET**

Handling errors

- (correct the offset values in the KONFIG.DAT file when necessary)
- the drive

6.2.17 Message 0417

The "Bow forward" gripper sensor not active

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Bow not in front position %2. <000417>

%1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)

%2 Robot or controller name
(Description from the graphical configuration)

Handling errors

Recognized by

AML/2 with camera gripper	AML/2 with scanner gripper
INIT.IRD	INIT.IRD
BARCODE.IRD	SBARCODE.IRD
TEACH.IRD	STEACH.IRD
LW7480.IRD	SLW5190.IRD
LWSTK80.IRD	SLW7480.IRD
	SLWD2.IRD
	SLWDLT.IRD
	SLWOD11.IRD
	SLWODJU.IRD
	SLWODR.IRD
	SLWPHIL.IRD
	SLWSTK80.IRD
	SLWSTK90.IRD
	SLWVHS.IRD

Possible causes

- The sensor signal is not activated for any following actions when the "Bow forward" sensor is checked
- Gripper mechanism defective
- "Bow forward" sensor defective

Recovery measures

- Check the gripper with the gripper test program (replace the gripper when necessary)

Handling errors

6.2.18 Message 0418

Medium has fallen out of the gripper

Host error number in ABBA/1 format

N104 Medium lost

Message in the AMU LOG Control Center

%1 Tape lost. <00418>

%1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)

Recognized by

AML/2 with camera gripper	AML/2 with scanner gripper
INIT.IRD	INIT.IRD
RACK.IRD	HEAD.IRD
LW3480.IRD	SRACK.IRD
LW3490.IRD	SLW3480.IRD
LW5180.IRD	SLW3480A.IRD
LW5190.IRD	SLW3490.IRD
LW7480.IRD	SLW5180.IRD
LW7490.IRD	SLW5190.IRD
LWPHIL.IRD	SLW7480.IRD
LWSTK80.IRD	SLW7490.IRD

Handling errors

AML/2 with camera gripper	AML/2 with scanner gripper
	SLW8MM.IRD
	SLWD2.IRD
	SLWDLT.IRD
	SLWNTP.IRD
	SLWOD11.IRD
	SLWODHP.IRD
	SLWODJU.IRD
	SLWODR.IRD
	SLWPHIL.IRD
	SLWSTK80.IRD
	SLWSTK90.IRD
	SLWVHS.IRD

Possible causes

- "Bow forward" sensor triggered by the drive handling or repeated access:
 - sensor defective
 - medium cannot be gripped due to a drive defect or errors in the drive handling settings
- Medium lost:
 - medium defective
 - gripper defective (pneumatics or mechanism)

Recovery measures

- Check a medium that fell out for damage
- Use the I/O unit to insert the medium
 - the drive
 - the handling for **PUT** and **GET**
(correct the offset values in the KONFIG.DAT file when necessary)
 - the gripper with the gripper test program (replace the gripper when necessary)

6.2.19 Message 0420

No medium found in drive

Host error number in ABBA/1 format

N206 Medium cannot be removed from the unit

Message in the AMU LOG Control Center

%1 Tape not ejected from mediumdevice for %2. <00420>

%1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)

%2 Robot or controller name
(Description from the graphical configuration)

Recognized by

AML/2 with camera gripper	AML/2 with scanner gripper
BARCODE.IRD	SBARCODE.IRD
RACK.IRD	SRACK.IRD
LW3480.IRD	SLW3480.IRD
LW3490.IRD	SLW3480a.IRD
LW5180.IRD	SLW3490.IRD
LW7480.IRD	SLW5180.IRD
LW7490.IRD	SLW5190.IRD
LWPHIL.IRD	SLW7480.IRD
LWSTK80.IRD	SLW7490.IRD

Handling errors

AML/2 with camera gripper	AML/2 with scanner gripper
	SLW8mm.IRD
	SLWD2.IRD
	SLWDLT.IRD
	SLWNTP.IRD
	SLWOD11.IRD
	SLWODHP.IRD
	SLWODJU.IRD
	SLWODR.IRD
	SLWPHIL.IRD
	SLWSTK80.IRD
	SLWSTK90.IRD
	SLWVHS.IRD

Possible causes

- Medium needs more time to unload
- **Unload** command not sent
- Unload function in drive defective
- Drive empty but marked as occupied in the AMU database (drive manually unloaded beforehand)
- Gripper sensors defective
- Drive handling not set correctly

Recovery measures

- Increase the **Keep** delay time in the host software or the D_WARTE_KEEP parameter in the KONFIG.DAT file
- Execute the **Unload** command, whereby you may have to configure the automatic **Unload** in the KONFIG.DAT file
- Check
 - the drive Unload function
 - the drive status (correct the database when necessary)
 - the gripper sensors (gripper test program)
 - the drive handling
- Teach the drive
- Change the offset values in the KONFIG.DAT file

6.2.20 Message 0422

High mechanical resistance when gripping the medium on the drive

Host error number in ABBA/1 format

N112 Crash during medium removal from a unit

Message in the AMU LOG Control Center

%1 Crashsensor %2 during GET from mediumdevice. <00422>

%1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)

%2 Robot or controller name
(Description from the graphical configuration)

Recognized by

AML/2 with camera gripper	AML/2 with scanner gripper
LW3480.IRD	SLW3480.IRD
LW3490.IRD	SLW3480a.IRD
LW5180.IRD	SLW3490.IRD
LW5190.IRD	SLW5180.IRD
LW7480.IRD	SLW5190.IRD
LW7490.IRD	SLW7480.IRD
LWPHIL.IRD	SLW7490.IRD
LWSTK80.IRD	SLW8mm.IRD

Handling errors

AML/2 with camera gripper	AML/2 with scanner gripper
	SLWD2.IRD
	SLWDLT.IRD
	SLWNTP.IRD
	SLWOD11.IRD
	SLWODHP.IRD
	SLWODJU.IRD
	SLWODR.IRD
	SLWPHIL.IRD
	SLWSTK80.IRD
	SLWSTK90.IRD
	SLWVHS.IRD

Possible causes

- Drive defective (medium not in right position for **Keep**)
- Defective gripper sensor or other mechanical damage to gripper
- Handling for **GET** not adjusted correctly
- Invalid Teach point file or incorrect actual reference point values (P207 in the rho controller)
- Several media in the drive due to a preceding database/operating error

Recovery measures

- Check
 - the drive
 - the handling for **PUT** and **GET**
(correct the offset values in the KONFIG.DAT when necessary)
 - the gripper with the gripper test program (replace the gripper when necessary)
 - the reference points (markings on the robot)
 - the Teach points (teach again with Trace KRN 8)

6.2.21 Message 0423

High mechanical resistance when inserting a medium on the drive

Host error number in ABBA/1 format

N113 Crash during medium insertion to a unit

Message in the AMU LOG Control Center

%1 Crashsensor %2 during PUT to mediumdevice. <00423>

%1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)

%2 Robot or controller name
(Description from the graphical configuration)

Recognized by

AML/2 with camera gripper	AML/2 with scanner gripper
LW3480.IRD	SLW3480.IRD
LW3490.IRD	SLW3480a.IRD
LW5180.IRD	SLW3490.IRD
LW5190.IRD	SLW5180.IRD
LW7480.IRD	SLW5190.IRD
LW7490.IRD	SLW7480.IRD
LWPHIL.IRD	SLW7490.IRD
LWSTK80.IRD	SLW8mm.IRD

Handling errors

AML/2 with camera gripper	AML/2 with scanner gripper
	SLWD2.IRD
	SLWDLT.IRD
	SLWNTP.IRD
	SLWOD11.IRD
	SLWODHP.IRD
	SLWODJU.IRD
	SLWODR.IRD
	SLWPHIL.IRD
	SLWSTK80.IRD
	SLWSTK90.IRD
	SLWVHS.IRD

Possible causes

- Medium not positioned in the drive correctly during a **PUT**:
 - drive defective (medium blocks during insertion)
 - defective gripper sensor or other mechanical damage to gripper
 - handling for **PUT** not adjusted correctly
 - several media in the drive due to a preceding database/operating error

Recovery measures

- Check
 - the handling for **PUT** and **GET**
(correct the offset values in the KONFIG.DAT when necessary)
 - the gripper with the gripper test program (replace the gripper when necessary)
 - the Teach points (teach again with Trace KRN 8)
- Remove superfluous (wrong) media from the drive

6.2.22 Message 0430 (only AML/2 with scanner gripper)

Sensor on query pin "Medium in gripper" on gripper does not trigger

Host error number in ABBA/1 format

N208 Medium cannot be removed from the chute (3490)

Message in the AMU LOG Control Center

%1 Tape present sensor is defect for %2. <00430>

%1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)

%2 Robot or controller name
(Description from the graphical configuration)

Recognized by

AML/2 with scanner gripper
SLW3480a.IRD
SLW3490.IRD
SLW5180.IRD
SLW5190.IRD
SLW7480.IRD
SLW7490.IRD
SLW8mm.IRD
SLWD2.IRD
SLWDLT.IRD
SLWNTP.IRD
SLWOD11.IRD
SLWODHP.IRD
SLWODJU.IRD
SLWODR.IRD
SLWPHIL.IRD
SLWSTK90.IRD

Handling errors

Possible causes

- Sensor defective
- Query pin bent

Recovery measures

- Check the gripper with the gripper test program (replace the gripper when necessary)

6.2.23 Message 0440

No medium found at rack position

Host error number in ABBA/1 format

N402 No medium found at specified coordinate

Message in the AMU LOG Control Center

%1 Rackposition is empty for %2. <00440>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)

Recognized by

AML/2 with camera gripper	AML/2 with scanner gripper
BARCODE.IRD	SBARCODE.IRD
RACK.IRD	SRACK.IRD

Possible causes

- Command issued for an empty rack position
- Medium entry in the database incorrect
- Medium removed by operator
- Gripper defective
- Handling not configured correctly

Recovery measures

- Check the command (correct coordinate specified?)
- Compare the Archive with the database (return the medium to its home position or adjust the database when the positions differ)



ATTENTION!

Differences to the Archive catalog of the host computer can occur. Execute an upload to the host Archive catalog after any changes to the Archive catalog or after an AMU command (☞ Host software documentation).

- Re-insert the removed media
- Check
 - the Teach points (teach again with Trace KRN 8)
 - the handling for **PUT** and **GET**
(correct the offset values in the KONFIG.DAT when necessary)

6.2.24 Message 0442

High mechanical resistance when gripping the medium

Host error number in ABBA/1 format

N110 Crash during medium removal from a box

Message in the AMU LOG Control Center

%1 Crashsensor %2 during GET from rack. <00442>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)

Recognized by

AML/2 with camera gripper	AML/2 with scanner gripper
RACK.IRD	SRACK.IRD
	SBARCODE.IRD

Possible causes

- Medium not gripped properly during a **GET**:
 - drive defect (medium no longer ejected far enough)
 - handling for **GET** not set correctly
 - several media in the drive
- Invalid Teach point file or incorrect actual reference point values (P207)
- Handling for **PUT** not set correctly
- Gripper defective

Recovery measures

- Check
 - the handling for **PUT** and **GET**
(correct the offset values in the KONFIG.DAT when necessary)
 - the Teach points (teach again with Trace KRN 8)
 - the gripper with the gripper test program (replace the gripper when necessary)

6.2.25 Message 0443

High mechanical resistance during medium insertion

Host error number in ABBA/1 format

N111 Crash during medium insertion in a box

Message in the AMU LOG Control Center

%1 Crashsensor %2 during PUT to rack. <00443>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)

Recognized by

AML/2 with camera gripper	AML/2 with scanner gripper
RACK.IRD	SRACK.IRD

Possible causes

- Medium not gripped properly during a **GET**:
 - drive defect (medium no longer ejected far enough)
 - gripper defective
 - handling for **GET** not set correctly
 - invalid Teach point file or incorrect actual reference point values (P207)
- Different medium already in the rack position
- Handling not adjusted correctly
- Gripper defective

Recovery measures

- Check
 - the handling for **PUT** and **GET**
(correct the offset values in the KONFIG.DAT when necessary)
 - the Teach points (teach again with Trace KRN 8)
 - the gripper with the gripper test program (replace the gripper when necessary)

6.3 Barcode and Teach errors

6.3.1 Message 0501

Robot cannot find a Teach label

Host error number in ABBA/1 format

N016 Robot error (EXCP-AUS 5001)

Message in the AMU LOG Control Center

%1 Teachlabel not recognized %2. <00501>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
%2 Robot or controller name
(Description from the graphical configuration)

Recognized by

AML/2 with camera gripper	AML/2 with scanner gripper
TEACH.IRD	STEACH.IRD

Possible causes

- Teach sensor defective
- Teach label not present or dirty
- Base coordinates for Teach point wrong

Recovery measures

- Clean the Teach label
- Use the PHG to determine the Teach coordinate again
- Check the Teach sensor (replace the gripper when necessary)

6.3.2 Message 0502

Vision system or scanner cannot find a barcode on the medium

Host error number in ABBA/1 format

N304 Barcode label not readable

Message in the AMU LOG Control Center

%1 Barcode not recognized %2. <00502>

%1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)

%2 Robot name
(Description from the graphical configuration)

Recognized by

AML/2 with camera gripper	AML/2 with scanner gripper
BARCODE.IRD	SBARCODE.IRD

Possible causes

- No or defective barcode label on the medium
- Medium positioned around the wrong way in the rack position
- Barcode reading not set correctly
- Barcode type or code length not configured
- Vision system or scanner defective

Recovery measures

- Check
 - the medium (barcode label, position)
 - the barcode reading setting (offsets in KONFIG.DAT)
- Set the barcode type and code length (robot test program)
- Check the vision system or the scanner (replace components when necessary)

6.3.3 Message 0503 (only AML/2 with camera gripper)

Illegal parameter value sent to the vision system

Host error number in ABBA/1 format

N304 Barcode label not readable

Message in the AMU LOG Control Center

%1 Illegal parameter to Vision system %2. <00503>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot name
(Description from the graphical configuration)

Recognized by

AML/2 with camera gripper
BARCODE.IRD
TEACH.IRD

Possible causes

- Communication error between vision system and robot controller
- Incompatible software versions on the vision system and the robot controller

Recovery measures

- Check
 - the connection between the robot controller and the vision system
 - the parameters for the vision system (KONFIG.DAT)
- Repeat the command
- Install the new vision software
- Replace the defective vision system

6.3.4 Message 0504 (only AML/2 with camera gripper)

Illegal data format sent to the vision system

Host error number in ABBA/1 format

N304 Barcode label not readable

Message in the AMU LOG Control Center

%1 Wrong record selected %2. <00504>

%1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)

%2 Robot name
(Description from the graphical configuration)

Recognized by

AML/2 with camera gripper
BARCODE.IRD
TEACH.IRD

Possible causes

- Communication error between vision system and robot controller
- Incompatible software versions on the vision system and the robot controller

Recovery measures

- Check
 - the connection between the robot controller and the vision system
 - the parameters for the vision system (KONFIG.DAT)
- Repeat the command
- Install the new vision software
- Replace the defective vision system

6.3.5 Message 0505

Vision system or scanner Recognized a barcode not matching the one specified

Host error number in ABBA/1 format

N306 Wrong medium at specified coordinate

Message in the AMU LOG Control Center

%1 Illegal barcode %2. <00505>

%1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)

%2 Robot name
(Description from the graphical configuration)

Recognized by

AML/2 with camera gripper	AML/2 with scanner gripper
INIT.IRD	INIT.IRD
BARCODE.IRD	SBARCODE.IRD

Possible causes

- A different medium (Volser) is in the rack position as the one specified in the database:
 - medium repositioned/inserted manually
 - preceding database handling error
 - vision system or scanner defective
- Read position not set correctly (neighbouring barcode read)

Recovery measures

- Check
 - the rack position (Volser)
 - the entry in the database
(position the media correctly when differences occur)
 - the barcode reading process
 - the vision system or the scanner (replace components when necessary)

6.3.6 Message 0506

Physical coordinates for **Teach** command beyond the software limit switch

Host error number in ABBA/1 format

N016 Robot error (EXCP-AUS 5001)

Message in the AMU LOG Control Center

%1 Illegal range %2 during teaching. <00506>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)

Recognized by

AML/2 with camera gripper	AML/2 with scanner gripper
TEACH.IRD	STEACH.IRD

Possible causes

- Distance to Teach label is too large, "Bow forward" sensor will not be triggered
- Gripper crash sensor active
- Base Teach coordinate is incorrect
- Teach rule is not inserted in the drive

Recovery measures

- Check the Teach process
- Position the Teach rule in the drive
- Re-calculate the base Teach point
- Check the "Bow forward" sensor (replace gripper when necessary)
- Check the vision system (when present)

6.3.7 Message 0507 (only AML/2 with camera gripper)

Illegal variable sent to the vision system

Host error number in ABBA/1 format

N304 Barcode label not readable

Message in the AMU LOG Control Center

%1 Illegal input variables %2. <00507>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot name
(Description from the graphical configuration)

Recognized by

AML/2 with camera gripper
BARCODE.IRD
TEACH.IRD

Possible causes

- Communication error between vision system and robot controller
- Incompatible software versions on the vision system and the robot controller

Recovery measures

- Check
 - the connection between the robot controller and the vision system
 - the parameters for the vision system (KONFIG.DAT)
- Repeat the command
- Install the new vision software
- Replace the defective vision system

6.3.8 Message 0508 (Warning, only AML/2 with camera gripper)

Vision system first recognizes the barcode after several attempts

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 retry reading barcode for %2. <00508>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Robot name
(Description from the graphical configuration)

Recognized by

AML/2 with camera gripper
BARCODE.IRD

Possible causes

- Barcode damaged
- Read position not configured correctly
- Vision system defective

Recovery measures

- Check
 - the medium (barcode label)
 - the barcode reading settings (offsets in KONFIG.DAT)
 - the vision system (replace the vision system when necessary)

6.3.9 Message 0509 (Warning)

Vision system or scanner Recognized a different barcode

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Different volser read during action for %2. <00509>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Robot name
(Description from the graphical configuration)

Recognized by

AML/2 with camera gripper	AML/2 with scanner gripper
BARCODE.IRD	SBARCODE.IRD

Possible causes

- Barcode label severely damaged
- Reading position not set correctly (neighbouring rack position read)
- Communication error
- Vision system or scanner defective

Recovery measures

- Check
 - the medium (barcode label, position)
 - the barcode reading settings (offsets in KONFIG.DAT)
 - the vision system or scanner (replace components when necessary)

6.3.10 Message 0510

No communication between controller and vision system (aborted after 3 attempts)

Host error number in ABBA/1 format

N304 Barcode label not readable

Message in the AMU LOG Control Center

%1 No Communication between RHO %2 and barcodereadingsystem. <00510>

%1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)

%2 Robot name
(Description from the graphical configuration)

Recognized by

AML/2 with camera gripper
BARCODE.IRD
TEACH.IRD

Possible causes

- Controller interface parameters invalid
- No voltage supply for the vision system
- Vision system defective
- Cable malfunction between the controller and the vision system
- Control interface defective

Recovery measures

- Check
 - the controller interface parameters with the PHG
 - the voltage supply to the vision system
 - the connection cable and the controller interface
- Replace the vision system when defective



Information

You can use the host command BOFF (handling without barcode reading) to

Barcode and Teach errors

work temporarily without barcodes when necessary.

6.3.11 Message 0511 (Warning)

Vision system or scanner does not recognize a Volser or recognizes an invalid Volser during the second read attempt

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Different volser read during insert for %2. <00511>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Robot name
(Description from the graphical configuration)

Recognized by

AML/2 with camera gripper	AML/2 with scanner gripper
BARCODE.IRD	SBARCODE.IRD

Possible causes

- Barcode label severely damaged
- Reading position not set correctly (neighbouring rack position read)
- Communication error
- Vision system or scanner defective

Recovery measures

- Check
 - the medium (barcode label, position)
 - the barcode reading settings (offsets in KONFIG.DAT)
 - the vision system or scanner (replace components when necessary)

6.3.12 Message 0512 (Warning, only AML/2 with camera gripper)

Vision system was reset and initialized again

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Vision interface initialized for %2. <00512>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot name
(Description from the graphical configuration)

Recognized by

AML/2 with camera gripper
BARCODE.IRD
TEACH.IRD

Possible causes

- The unit was restarted
- The voltage supply to the vision system was interrupted for a short time

Recovery measures

- Wait until the vision system has started
- Check the voltage supply for the vision system when the reset occurred unexpectedly (not during a unit restart)

6.3.13 Message 0513 (only AML/2 with scanner gripper)

Communication problems between controller and scanner

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Communication retry between Rho and barcode scanner for %2. <00513>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Robot name
(Description from the graphical configuration)

Recognized by

AML/2 with scanner gripper
SBARCODE.IRD

Possible causes

- Controller interface parameters incorrect
- Interface converter not configured correctly (jumper)
- Voltage supply for the scanner or interface converter not stable
- Scanner defective
- Cable malfunction between the controller and the scanner
- Control interface defective
- Scanner not earthed

Recovery measures

- Check
 - the controller interface parameters with the PHG
 - the interface converter (jumper, voltage, cable)
 - the voltage supply to the scanner
 - the cable and the controller interface
- Replace the scanner or the interface converter when defective
- Check the scanner earth

6.4 Controller and barcode reader system hardware errors

6.4.1 Message 0602 (only AML/2 with camera gripper)

No connection to the vision system camera during initialization

Host error number in ABBA/1 format

N016 Robot error (EXCP-AUS 5001)

Message in the AMU LOG Control Center

*%1 Barcodereadingsystem malfunction%2, recognized during initialization.
<00602>*

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot name
(Description from the graphical configuration)

Recognized by

AML/2 with camera gripper
INIT.IRD

Possible causes

- No signal on input E3.0 of the controller during controller initialization:
 - connection between the vision system and input E3.0 is interrupted
 - vision system camera not sending video signals
 - vision system camera defective
 - voltage supply to the vision system or camera missing
 - vision system not switched on
 - vision system defective

Recovery measures

- Check
 - the cable between the vision system and the controller input E3.0
 - the voltage supply for the vision system
- Ensure that the camera in the gripper is not blinded by a bright light
- Replace the gripper when the camera is defective
- Replace the vision system when defective



Information

You can use the host command BOFF (handling without barcode reading) to work temporarily without barcodes when necessary. To do this, you must apply a 24 V signal to input E3.0 during controller initialization.

6.4.2 Message 0603 (only AML/2 with camera gripper)

Communication between controller and vision system not possible

Host error number in ABBA/1 format

N016 Robot error (EXCP-AUS 5001)

Message in the AMU LOG Control Center

%1 Vision-system malfunction %2, recognized during initialization. <00603>

%1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)

%2 Robot name
(Description from the graphical configuration)

Recognized by

AML/2 with camera gripper
INIT.IRD

Possible causes

- No signal on input E3.1 of the controller during controller initialization:
 - connection between the vision system and input E3.1 is interrupted
 - voltage supply to the vision system missing
 - vision system not switched on
 - vision system defective

Recovery measures

- Check
 - the cable between the vision system and the controller input E3.1
 - the voltage supply for the vision system
- Replace the vision system when defective



Information

You can use the host command BOFF (handling without barcode reading) to work temporarily without barcodes when necessary. To do this, you must apply a 24 V signal to input E3.0 during controller initialization.

6.4.3 Message 0604

RAM buffer battery in the controller is empty

Host error number in ABBA/1 format

N016 Robot error (EXCP-AUS 5001)

Message in the AMU LOG Control Center

%1 Battery of controller is empty %2, recognized during initialization. <00604>

%1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)

%2 Robot or controller name
(Description from the graphical configuration)

Recognized by

AML/2 with camera gripper	AML/2 with scanner gripper
INIT.IRD	INIT.IRD

Possible causes

Buffer battery on CP/MEM board empty or not connected

Recovery measures

- Replace the buffer battery

6.4.4 Message 0605

Malfunction in controller voltage supply

Host error number in ABBA/1 format

N016 Robot error (EXCP-AUS 5001)

Message in the AMU LOG Control Center

%1 I/O powersupply malfunction %2, recognized during initialization. <00605>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)

Recognized by

AML/2 with camera gripper	AML/2 with scanner gripper
INIT.IRD	INIT.IRD

Possible causes

- Voltage supply for the I/O boards or the NC-SPS-I/O board missing
- NC-SPS-I/O board or I/O board defective

Recovery measures

- Check
 - the voltage supply to the I/O boards
 - the voltage supply to the NC-SPS-I/O board
- Replace defective boards

6.5 Robot controller status messages

6.5.1 Message 701

Robot arm not in straight position

Host error number in ABBA/1 format

N005 Robot not ready

Message in the AMU LOG Control Center

%1 Arm not in straight position %2. <00701>

%1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
%2 Robot name
(Description from the graphical configuration)

Recognized by

AML/2 with camera gripper	AML/2 with scanner gripper
INIT.IRD	INIT.IRD

Possible causes

Reflex light barrier for straight arm position does not send a signal to the rho controller during initialization (input E1.6):

- Robot arm is not straight
- Sensor for straight arm position defective
- Connection to sensor interrupted

Recovery measures

- Position the arm straight
- Check the connection between the sensor and input E1.6
- Check the sensor and replace when defective

6.5.2 Message 0702

Checksum error in the controller KONFIG.DAT file

Host error number in ABBA/1 format

N003 Serious error in the Archive PC Set-up file

Message in the AMU LOG Control Center

*%1 Wrong checksum, error in KONFIG.DAT %2, recognized during initialization.
<00702>*

- %1 Message category
 (INFORMATION:, WARNING:, STATUS:, ERROR:)
%2 Robot name
 (Description from the graphical configuration)

Recognized by

AML/2 with camera gripper	AML/2 with scanner gripper
INIT.IRD	INIT.IRD

Possible causes

- Incorrect checksum in KONFIG.DAT
- Wrong KONFIG.DAT version
- Line error in the KONFIG.DAT file

Recovery measures

- Check the KONFIG.DAT in the robot controller
- Restart the controller

6.5.3 Message 0703

Software module with wrong version number in the controller

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Different software versions in one or more modules for %2 <00703>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Robot name
(Description from the graphical configuration)

Recognized by

AML/2 with camera gripper	AML/2 with scanner gripper
INIT.IRD	INIT.IRD

Possible causes

- VERSION.DAT file has incorrect entries
- Software modules from different versions active in the controller

Recovery measures

- Set the PHG Echo to 1 so that the incorrect modules are displayed
- Copy software modules from only one version to the robot controller
- Copy the correct VERSION.DAT to the controller

6.5.4 Message 0799

Robot starting initialization

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1%2 is being initialized.<0799>

- %1 Message category
(INFORMATION:, WARNING:, STATUS: or ERROR:)
- %2 Robot name
(Description from the graphical configuration)

Recognized by

AML/2 with camera gripper	AML/2 with scanner gripper
INIT.IRD	INIT.IRD

Possible causes

Status message during the robot reference movement

Recovery measures

- Wait for the AMU message <00700> (Robot ready)

6.6 Storage tower controller error messages

6.6.1 Message 0801

Command wait-queue in the storage tower controller full

Host error number in ABBA/1 format

N015 Tower has not turned into position

Message in the AMU LOG Control Center

%1Command-queue overflow %2.<0801>

%1 Message category

(INFORMATION:, WARNING:, STATUS:, ERROR:)

%2 Storage tower or controller name (Description from the graphical configuration)

Recognized by

- INIT.IRD

Possible causes

- Storage tower does not execute the command sent:
 - storage tower doors not open
 - storage tower doors closed
 - storage tower has not completed referencing
 - no voltage applied to the storage tower
 - release signals from robots not received

Recovery measures

- Check the AMU Log for preceding messages to the storage tower:
 - other error message to storage tower?
 - did the storage tower send a "Ready" message?
- Reset the storage tower controller
- Wait for the storage tower "Ready" message before entering new commands

6.6.2 Message 0802

The storage tower controller received an illegal command

Host error number in ABBA/1 format

N011 Coordinates specification for wrong robot

Message in the AMU LOG Control Center

%Illegal toweraddress %2.<0802>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Storage tower or controller name (Description from the graphical configuration)

Recognized by

- INIT.IRD

Possible causes

- Storage tower not configured correctly in the KONFIG.DAT file in the storage tower controller
- Storage tower not configured correctly in the AMU graphical configuration
- Syntax error in the command for the storage tower

Recovery measures

- Check:
 - the KONFIG.DAT file in the storage tower controller
 - the storage tower names in the graphical configuration
 - the command using Trace 9

6.6.3 Message 0803

The storage tower controller received an unknown AMU address in the command

Host error number in ABBA/1 format

N011 Coordinates specification for wrong robot

Message in the AMU LOG Control Center

%Illegal sendaddress %2.<0803>

- %1 Message category
 (INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Storage tower or controller name (Description from the graphical configuration)

Recognized by

- INIT.IRD

Possible causes

- Storage tower not configured correctly in the KONFIG.DAT file in the storage tower controller
- Storage tower not configured correctly in the AMU graphical configuration
- Syntax error in the command for the storage tower

Recovery measures

- Check:
 - the KONFIG.DAT file in the storage tower controller
 - the storage tower names in the graphical configuration
 - the command with Trace

6.6.4 Message 0804

The storage tower controller received an unknown command

Host error number in ABBA/1 format

N010 Unknown robot command

Message in the AMU LOG Control Center

%1Illegal command %2.<0804>

- %1 Message category
 (INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Storage tower or controller name (Description from the graphical configuration)

Recognized by

- INIT.IRD
- QTURM*.IRD

Possible causes

- Storage tower not configured correctly in the KONFIG.DAT file in the storage tower controller
- Storage tower not configured correctly in the AMU graphical configuration
- Syntax error in the command for the storage tower
- Communication error between AMU and storage tower controller

Recovery measures

- Check
 - the KONFIG.DAT file in the storage tower controller
 - the storage tower names in the graphical configuration
 - the command with Trace

6.6.5 Message 0805

The storage tower controller received an invalid segment number

Host error number in ABBA/1 format

N011 Coordinates specification for wrong robot

Message in the AMU LOG Control Center

%1Illegal segmentnumber %2.<0805>

- %1 Message category
 (INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Storage tower or controller name (Description from the graphical configuration)

Recognized by

- INIT.IRD

Possible causes

- Storage tower defined in the AMU with the wrong segment number
- Communication error
- Error in control program

Recovery measures

- Repeat the command
- Check the AMUCONST.INI file in the AMU for the correct segment count for the storage tower
- Check the command with Trace

6.6.6 Message 0807

The storage tower controller received a command with an invalid telegram type

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1Wrong telegramtype %2<0807>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Storage tower or controller name (Description from the graphical configuration)

Recognized by

- INIT.IRD

Possible causes

- Communication error
- Error in control program

Recovery measures

- Repeat the command
- Check the command with Trace
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems

6.6.7 Message 0810

The 220V power supply for the motors is switched off

Host error number in ABBA/1 format

N005 Robot not ready

Message in the AMU LOG Control Center

%1No power for turning %2.<0810>

%1 Message category

(INFORMATION:, WARNING:, STATUS:, ERROR:)

%2 Storage tower or controller name (Description from the graphical configuration)

Recognized by

- QTURM*.IRD

Possible causes

- Storage tower in manual operation
- Storage tower doors open
- EMERGENCY-STOP signal not present
- Error in control program

Recovery measures

- Check
 - the setting of the operating mode selection switch
 - the signals from the switches on the tower doors
 - EMERGENCY-STOP circuit

6.6.8 Message 0811

Tower control program timeout expired

Host error number in ABBA/1 format

N102 Timeout (robot error)

Message in the AMU LOG Control Center

%1%2 allocated from robot 1.<0811>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Storage tower or controller name (Description from the graphical configuration)

Recognized by

- QTURM*.IRD

Possible causes

- Storage tower was requested by a robot but not released again:
 - speed set too low with the PHG
 - robot program has errors
 - defect in the I/O board or in the robot-storage tower controller connection

Recovery measures

- Reset the controller
- Select a higher speed
- Check the handshake signals

6.6.9 Message 0812

Storage tower control program timeout expired

Host error number in ABBA/1 format

N102 Timeout (robot error)

Message in the AMU LOG Control Center

%1%2 allocated from robot 1.<0811>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Storage tower or controller name (Description from the graphical configuration)

Recognized by

- QTURM*.IRD

Possible causes

- Storage tower was requested by a robot but not released again:
 - speed set too low with the PHG
 - robot program has errors
 - defect in the I/O board or in the robot-storage tower controller connection

Recovery measures

- Reset the controller
- Select a higher speed
- Check the handshake signals

6.6.10 Message 0813

Storage tower control program timeout expired

Host error number in ABBA/1 format

N102 Timeout (robot error)

Message in the AMU LOG Control Center

%1%2 not accessed from robot 1.<0813>

%1 Message category

(INFORMATION:, WARNING:, STATUS:, ERROR:)

%2 Storage tower or controller name (Description from the graphical configuration)

Recognized by

- QTURM*.IRD

Possible causes

- Storage tower was requested by a robot but no handshake signal received by the storage tower control program:
 - software error in the robot controller
 - robot program aborted

Recovery measures

- Check the LOG file for preceding errors
- Check whether the robot controller is ready
- Reset the robot controller for robot 1

6.6.11 Message 0814

Storage tower control program timeout expired

Host error number in ABBA/1 format

N102 Timeout (robot error)

Message in the AMU LOG Control Center

%1%2 not accessed from robot 2.<0814>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Storage tower or controller name (Description from the graphical configuration)

Recognized by

- QTURM*.IRD

Possible causes

- Storage tower was requested by a robot but no handshake signal received by the storage tower control program:
 - software error in the robot controller
 - robot program aborted

Recovery measures

- Check the LOG file for preceding errors
- Reset the robot controller for robot 2

6.6.12 Message 0815

Tower control program timeout expired

Host error number in ABBA/1 format

N102 Timeout (robot error)

Message in the AMU LOG Control Center

%1%2 not released from robot 1.<0815>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Storage tower or controller name (Description from the graphical configuration)

Recognized by

- QTURM*.IRD

Possible causes

- Storage tower was requested by robot 2 but did not set the release handshake signal after the command:
 - speed set too low with the PHG
 - robot program has errors
 - defect in the I/O board or in the robot-storage tower controller connection

Recovery measures

- Reset the controller
- Select a higher speed
- Check the handshake signal

6.6.13 Message 0816

Storage tower control program timeout expired

Host error number in ABBA/1 format

N102 Timeout (robot error)

Message in the AMU LOG Control Center

%1%2 not released from robot 2.<0816>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Storage tower or controller name (Description from the graphical configuration)

Recognized by

- QTURM*.IRD

Possible causes

- Storage tower was requested by a robot 2 but did not set the release handshake signal after the command:
 - speed set too low with the PHG
 - robot program has errors
 - defect in the I/O board or in the robot -storage tower controller connection

Recovery measures

- Reset the controller
- Select a higher speed
- Check the handshake signal

6.6.14 Message 0817

Doors not open for robot access

Host error number in ABBA/1 format

N015 Tower has not turned into position

Message in the AMU LOG Control Center

%1%2 door closed at robot 1.<0817>

%1 Message category

(INFORMATION:, WARNING:, STATUS:, ERROR:)

%2 Storage tower or controller name (Description from the graphical configuration)

Recognized by

- QTURM*.IRD

Possible causes

- "Tower door on robot 1 side open" signal not Recognized:
 - tower door not completely open
 - signal circuit, switch or I/O board defective
 - wiring error

Recovery measures

- Check whether the door is actually wide open
- Check the signals on the I/O board
- Check the roller switch on the door
- Replace the defective door switch or the defective I/O board

6.6.15 Message 0818

Doors not open for robot access

Host error number in ABBA/1 format

N015 Tower has not turned into position

Message in the AMU LOG Control Center

%1%2 door closed at robot 2.<0818>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Storage tower or controller name (Description from the graphical configuration)

Recognized by

- QTURM*.IRD

Possible causes

- "Tower door on robot 2 side open" signal not Recognized:
 - tower door not completely open
 - signal circuit, switch or I/O board defective
 - wiring error

Recovery measures

- Check whether the door is actually wide open
- Check the signals on the I/O board
- Check the roller switch on the door
- Replace the defective door switch or the defective I/O board

6.6.16 Message 0820

Quadro tower did not reference correctly

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 %2 has no reference done.<0820>

%1 Message category

(INFORMATION:, WARNING:, STATUS:, ERROR:)

%2 Storage tower or controller name (Description from the graphical configuration)

Recognized by

- QTURM*.IRD

Possible causes

- Problems with the drive amplifier
- Reference point sensor defective
- Storage tower control program faulty

Recovery measures

- Check the reference point sensor signals to the quadro tower
- Restart the controller
- Check the drive amplifier parameters

6.6.17 Message 0821

Wrong version number for software module in the controller

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 Different software versions in one or more modules for %2. <00821>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Robot name
(Description from the graphical configuration)

Recognized by

- INIT.IRD

Possible causes

- The VERSION.DAT file contains wrong entries
- Software modules with differing versions active in the controller

Recovery measures

- Set the PHG Echo to 1 so that the invalid modules are displayed
- Copy software modules from only one version to the robot controller
- Copy the correct VERSION.DAT to the controller

6.6.18 Message 0897

Problem during reference movement

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1Initialization %2 failed.<0845>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Storage tower or controller name (Description from the graphical configuration)

Recognized by

- QTURM*.IRD

Possible causes

- Problems with the drive amplifier
- Reference point sensor defective
- Storage tower control program faulty
- Speed reduced too much with the PHG

Recovery measures

- Check the reference point sensor signals to the quadro tower
- Restart the controller
- Check the drive amplifier parameters

6.7 I/O unit error messages

6.7.1 Message 0902

Error during opening/closing the I/O unit/A door

Host error number in ABBA/1 format

N501 Door on the I/O unit not closed

Message in the AMU LOG Control Center

%1Error opening or closing EIF-door.<0902>

%1 Message category

(INFORMATION:, WARNING:, STATUS:, ERROR:)

%2 I/O unit or controller name (Description from the graphical configuration)

Recognized by

- MLT

Possible causes

- I/O unit/A door does not operate correctly:
 - sensor for "Door open" or "Door closed" defective
 - door lock defective
- Signal interruption for the robot controller input "I/O unit door closed"

Recovery measures

- Close the I/O unit door
- Check the lock
- Replace the switch when defective
- Check the signal for "Door closed"

6.7.2 Message 0903

I/O unit door not closed properly

Host error number in ABBA/1 format

N501 Door on the I/O unit not closed

Message in the AMU LOG Control Center

%1Door not closed at initialization %2.<0903>

%1 Message category

(INFORMATION:, WARNING:, STATUS:, ERROR:)

%2 I/O unit or controller name (Description from the graphical configuration)

Recognized by

- EA*.IRD
- MLT

Possible causes

- I/O unit door not closed properly by operator after last action
- I/O unit door opened again:
 - door mechanically deformed
 - mechanical lock not set properly
 - door lock defective
- Signal interrupt for the robot controller input
"I/O unit door closed"

Recovery measures

- Close the I/O unit door
- Check the lock function
- Replace the switch when defective
- Check the signal for "Door closed"

6.7.3 Message 0904

Error during turning (position not reached)

Host error number in ABBA/1 format

N015 Tower has not turned into position

Message in the AMU LOG Control Center

%1Position not reached %2.<0904>

%1 Message category

(INFORMATION:, WARNING:, STATUS:, ERROR:)

%2 I/O unit or controller name (Description from the graphical configuration)

Recognized by

- MLT

Possible causes

- I/O unit/A rotation unit not working correctly:
 - sensor for positions defective
 - motor or frequency converter defective
- Communication problem AMU - I/O unit/A
- Problem with power supply I/O unit/A

Recovery measures

- Check the signals and the rotation function (MLT test program)
- Check the power supply
- Replace the sensors when defective
- Reset the MLT

6.7.4 Message 0905

Problem box not in position

Host error number in ABBA/1 format

N015 Tower has not turned into Position

Message in the AMU LOG Control Center

%1Problembox not in correct position %2.<0905>

%1 Message category

(INFORMATION:, WARNING:, STATUS:, ERROR:)

%2 I/O unit or controller name (Description from the graphical configuration)

Recognized by

- MLT

Possible causes

- Problem box position recognition not working correctly:
 - Problem box sensor defective
 - Problem box lock defective
- Problem box not turned into position by the operator

Recovery measures

- Check the Problem box position
- Check the Problem box lock
- Replace the sensors when defective
- Check the Problem box signal (MLT test program)

6.7.5 Message 0906

Problem box not in position at program start

Host error number in ABBA/1 format

N015 Tower has not turned into position

Message in the AMU LOG Control Center

%1Problembox not in correct position at initialization %2.<0906>

%1 Message category

(INFORMATION:, WARNING:, STATUS:, ERROR:)

%2 I/O unit or controller name (Description from the graphical configuration)

Recognized by

- MLT

Possible causes

- Problem box position recognition not working correctly:
 - Problem box sensor defective
 - Problem box lock defective
- Problem box not turned into position by the operator

Recovery measures

- Check the Problem box position
- Check the Problem box lock
- Replace the sensors when defective
- Check the Problem box signal (MLT test program)

6.7.6 Message 0907

Error during I/O unit/A turning at program start

Host error number in ABBA/1 format

N015 Tower has not turned into position

Message in the AMU LOG Control Center

%1Position not reached at initialization %2.<0907>

%1 Message category

(INFORMATION:, WARNING:, STATUS:, ERROR:)

%2 I/O unit or controller name (Description from the graphical configuration)

Recognized by

- MLT

Possible causes

- I/O unit/A rotation unit not working correctly:
 - sensor for positions defective
 - motor or frequency converter defective
- Communication problem AMU - I/O unit/A
- Problem with power supply I/O unit/A

Recovery measures

- Check the signals and the rotation function (MLT test program)
- Check the power supply
- Replace the sensors when defective
- Reset the MLT

6.7.7 Message 0908

Error whilst waiting for release from quadro tower

Host error number in ABBA/1 format

N102 Timeout (robot error)

Message in the AMU LOG Control Center

%1Timeout-error while waiting for tower release %2.<0908>

%1 Message category

(INFORMATION:, WARNING:, STATUS:, ERROR:)

%2 I/O unit or controller name (Description from the graphical configuration)

Recognized by

- MLT

Possible causes

MLT program error

Recovery measures

- Reset the MLT
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

6.7.8 Message 0909

I/O unit/A data loss

Host error number in ABBA/1 format

N015 Tower has not turned into position

Message in the AMU LOG Control Center

%1Data lost %2.<0909>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 I/O unit or controller name (Description from the graphical configuration)

Recognized by

- MLT

Possible causes

- Communication I/O unit/A - AMU not working correctly:
 - communication cable damaged
 - parameters for RS232C with 3964R protocol on the AMU not set correctly
 - defect in the operating element I/O unit/A

Recovery measures

- Check the communication parameters in the AMU
- Check the connection cable
- Reset the operating element I/O unit/A
- Replace the defective operating element I/O unit/A

6.7.9 Message 0910

I/O unit/A protocol error

Host error number in ABBA/1 format

N015 Tower has not turned into position

Message in the AMU LOG Control Center

%1Error in 3964 communication %2.<0910>

%1 Message category

(INFORMATION:, WARNING:, STATUS:, ERROR:)

%2 I/O unit or controller name (Description from the graphical configuration)

Recognized by

- MLT

Possible causes

- Communication I/O unit/A - AMU not working correctly:
 - communication cable damaged
 - parameters for RS232C with 3964R protocol on the AMU not set correctly
 - defect in the operating element I/O unit/A

Recovery measures

- Check the communication parameters in the AMU
- Check the connection cable
- Reset the operating element I/O unit/A
- Replace the defective operating element I/O unit/As

6.7.10 Message 0911

Error in data record during communication with I/O unit/A

Host error number in ABBA/1 format

N015 Tower has not turned into position

Message in the AMU LOG Control Center

%1Error in AMU datastring %2.<0911>

%1 Message category

(INFORMATION:, WARNING:, STATUS:, ERROR:)

%2 I/O unit or controller name (Description from the graphical configuration)

Recognized by

- MLT

Possible causes

- Communication I/O unit/A - AMU not working correctly:
 - communication cable damaged
 - parameters for RS232C with 3964R protocol on the AMU not set correctly
 - defect in the operating element I/O unit/A

Recovery measures

- Check the communication parameters in the AMU
- Check the connection cable
- Reset the operating element I/O unit/A
- Replace the defective operating element I/O unit/A

6.7.11 Message 0912

Timeout during robot access to the I/O unit/A

Host error number in ABBA/1 format

N102 Timeout (robot error)

Message in the AMU LOG Control Center

%1Timeout-error during robot access %2.<0912>

%1 Message category

(INFORMATION:, WARNING:, STATUS:, ERROR:)

%2 I/O unit or controller name (Description from the graphical configuration)

Recognized by

- MLT

Possible causes

- Operator has not terminated operating the I/O unit
- Handshake signal from robot controller not Recognized:
 - signal circuit defective or wiring error
 - robot controller I/O board defective
 - malfunction in the robot controller program
 - speed on robot controller reduced too much with the PHG
 - malfunction in operating element I/O unit/A

Recovery measures

- Check whether the handling box has been inserted and the I/O unit/A door closed
- Check the handshake signals (MLT test program)
- Reset the robot controller and the MLT
- Replace defective components (robot controller I/O board, operating unit I/O unit/A)

6.7.12 Message 0913

Timeout during release after robot access

Host error number in ABBA/1 format

N102 Timeout (robot error)

Message in the AMU LOG Control Center

%1Timeout-error while waiting for release after robot access %2.<0913>

%1 Message category

(INFORMATION:, WARNING:, STATUS:, ERROR:)

%2 I/O unit or controller name (Description from the graphical configuration)

Recognized by

- MLT

Possible causes

- Handshake signal from robot controller not Recognized:
 - signal circuit defective or wiring error
 - robot controller I/O board defective
 - malfunction in the robot controller program
 - speed on robot controller reduced too much with the PHG
 - malfunction in operating element I/O unit/A

Recovery measures

- Check the handshake signals (MLT test program)
- Reset the robot controller and the MLT
- Replace defective components (robot controller I/O board, operating unit I/O unit/A)

6.7.13 Message 0914

Timeout whilst waiting for Problem box release

Host error number in ABBA/1 format

N102 Timeout (robot error)

Message in the AMU LOG Control Center

%1Timeout-error while waiting for problembox release %2.<0914>

%1 Message category

(INFORMATION:, WARNING:, STATUS:, ERROR:)

%2 I/O unit or controller name (Description from the graphical configuration)

Recognized by

- MLT

Possible causes

- I/O unit/A door does not operate correctly:
 - sensor for "Door open" or "Door closed" defective
 - door lock defective
- Signal interruption for the robot controller input
"I/O unit door closed"

Recovery measures

- Close the I/O unit door
- Check the lock
- Replace the switch when defective
- Check the signal for "Door closed"

6.7.14 Message 0916 (Warning)

Problem box was requested but not turned

Host error number in ABBA/1 format

No message

Message in the AMU LOG Control Center

%1%2 not turned by operator.<0916>

%1 Message category

(INFORMATION:, WARNING:, STATUS:, ERROR:)

%2 I/O unit or controller name (Description from the graphical configuration)

Recognized by

- MLT

Possible causes

- The <F1> button on operating element I/O unit/A was activated but the Problem box not turned by 180°
- Problem box sensor not working correctly

Recovery measures

- Turn the Problem box to complete the operator action
- Check the Problem box sensor signals
- Reset the MLT

6.7.15 Message 0917

I/O unit door not opened during operation by operator

Host error number in ABBA/1 format

No message

Message in the AMU LOG Control Center

%1%2 was turned by operator, action was not completed.<0917>

%1 Message category

(INFORMATION:, WARNING:, STATUS:, ERROR:)

%2 I/O unit or controller name (Description from the graphical configuration)

Recognized by

- MLT

Possible causes

- The <F1> button on operating element I/O unit/A was activated but the Problem box not turned by 180°
- Problem box sensor not working correctly

Recovery measures

- Turn the Problem box to complete the operator action
- Check the Problem box sensor signals
- Reset the MLT

6.7.16 Message 0923 (Warning)

Problem box not emptied during I/O unit operation

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1%2 not empty.<0823>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Storage tower or controller name (Description from the graphical configuration)

Recognized by

- EA.*.IRD

Possible causes

- Operator forgot to empty the I/O unit during operation
- Problem box light barrier defective

Recovery measures

- Empty the Problem box
- Check the light barrier and the signal circuit

6.7.17 Message 0924 (Warning)

I/O unit requested by the operator but not serviced

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1%2 requested by operator, nothing changed.<0924>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Storage tower or controller name (Description from the graphical configuration)

Recognized by

- EA*.IRD

Possible causes

- No handling box removed from the I/O unit for filling/emptying
- Roller switch or signal circuit for "Handling box positioned in I/O unit" signal defective

Recovery measures

- Remove the handling box from the I/O unit for servicing
- Check the switch and signal circuits

6.7.18 Message 0926

Problems with the I/O unit shutters

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1Shutter %2 needs too much time for closing.<0926>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Storage tower or controller name (Description from the graphical configuration)

Recognized by

- EA*.IRD

Possible causes

- Shutter stuck
- Circuit breaker F1 in the I/O unit dropped out
- Shutter motor overheated
- Shutter motor defective
- Internal shutter limit switch modified
- "Shutter down" limit switch or its signal circuit defective

Recovery measures

- Check the signal and the "Shutter down" limit switch
- Check the circuit breaker in the I/O unit
- Check the shutter (motor, mechanism, internal limit switch)
- Replace the complete shutter when any defects found

6.7.19 Message 0927

Handling box missing in the I/O unit

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

AML message: <0927>

Recognized by

- INIT.IRD

Possible causes

- Operator forgot to return one or more handling boxes to the I/O unit
- Roller signal or signal circuit for the "Handling box positioned in I/O unit" signal defective

Recovery measures

- Return all the handling boxes to the I/O unit
- Check the switch and signal circuits

6.8 ADS Messages

6.8.1 Message 0980

ADS has the connection to the controller in automatic mode of the switch

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

ADS is switched to this AMU.(Automatic Mode)<0980>

Recognized by

- ADS

Possible causes

- ADS received command to switchover:
 - **Status** command with Option **R1** on the AMU
 - host software ROSA command

Recovery measures

- Check whether the hosts are connected to the correct AMU

6.8.2 Message 0981

ADS has no connection to the controller in automatic mode of the switch

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

ADS is switched to other AMU.(Automatic Mode)<0981>

Recognized by

- ADS

Possible causes

- ADS received command to switchover from another AMU:
 - **Status** command with Option **R1** on the AMU
 - host software ROSA command

Recovery measures

- Check whether the hosts are connected to the correct AMU

6.8.3 Message 0982

ADS was switched manually and has a connection to the controller

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

ADS is switched to this AMU.(Manual Mode)<0982>

Recognized by

- ADS

Possible causes

- Operator activated the ADS switch

Recovery measures

- Switch the ADS to AUTO to run the Dual-AMU
- Check whether the hosts are connected to the correct AMU

6.8.4 Message 0983

ADS was switched manually and has no connection to the controller

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

ADS is switched to other AMU.(Manual Mode)<0983>

Recognized by

- ADS

Possible causes

- Operator activated the ADS switch

Recovery measures

- Switch the ADS to AUTO to run the Dual-AMU
- Check whether the hosts are connected to the correct AMU

6.8.5 Message 0984

ADS command syntax error

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

Syntax-Error in command string from AMU to ADS.<0984>

Recognized by

- ADS

Possible causes

- Communication error
- AMU configuration error
- AMU software error
- ADS software error

Recovery measures

- Repeat the command
- Check the ADS communication parameters in the graphical configuration
 - **Type:** I1 -RS232(3964R)
 - **Databits** 8
 - **Stopbits** 1
 - **Parity** Even
 - **Baudrate:** 9600

6.8.6 Message 0985

ADS communication protocol error

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

3964R communication error (ADS). <0984>

Recognized by

- ADS

Possible causes

- Communication error
- AMU configuration error
- AMU software error
- ADS software error

Recovery measures

- Repeat the command
- Check the ADS communication parameters in the graphical configuration
 - **Type:** I1 -RS232(3964R)
 - **Databits** 8
 - **Stopbits** 1
 - **Parity** Even
 - **Baudrate:** 9600
- Reset the ADS (voltage off/on)

6.8.7 Message 0986

ADS storage error

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

ADS hardware error:<0986>

Recognized by

- ADS

Possible causes

- 3V lithium battery in ADS empty
- ADS defective
- Communication error

Recovery measures

- Repeat the command
- Check the ADS communication parameters in the graphical configuration
 - **Type:** I1 -RS232(3964R)
 - **Databits** 8
 - **Stopbits** 1
 - **Parity** Even
 - **Baudrate:** 9600
- Reset the ADS (voltage off/on)
- Replace the ADS battery
- Replace the ADS

7 AML/E Messages

7.1 Logical errors in the application program

7.1.1 Message 0301

Syntax error in an AMU command to the controller

Host error number in ABBA/1 format

N001 Syntax error

Message in the AMU LOG Control Center

%1Syntax-Error %2 in command string from AMU.<301>

%1 Message category

(INFORMATION:, WARNING:, STATUS:, ERROR:)

%2 Robot or controller name (Description from the graphical configuration)

Recognized by

- INIT.IRD

Possible causes

- Differing addresses for the controller (T_ADR_RHO) or AMU (T_ADR_AMU) in KONFIG.DAT and the graphical configuration
- Drive types not yet known to the controller software have been defined
- Error in the AMU command telegram (module KRN/P) to the controller
- AMU and controller software versions not compatible
- Communication error
- Controller software function error

Recovery measures

- Repeat the command
- Check
 - the KONFIG.DAT in the graphical configuration
 - the drive types configured
 - the command string in Trace KRN9
 - the software versions
- Restart the controller
- Restart the AMU

7.1.2 Message 0302

Command buffer overflow in the robot controller

Host error number in ABBA/1 format

N005 Robot not ready

Message in the AMU LOG Control Center

%1 Buffer overflow %2. Too many messages from AMU to controller.

%1 Message category

(INFORMATION:, WARNING:, STATUS:, ERROR:)

%2 Robot or controller name (Description from the graphical configuration)

Recognized by

- INIT.IRD

Possible causes

- Command sent to a controller that was not ready
- Too many consecutive commands sent to the controller
- Communication error
- Controller software function error

Recovery measures

- Restart the controller
- After a new start, always wait for the reference movement and the message STATUS:%2 ready<700>
- Repeat the commands one after another

7.1.3 Message 0303

Timeout during command execution

Host error number in ABBA/1 format

N102 Timeout (robot error)

Message in the AMU LOG Control Center

%1Timeout-Error %2. Tower- or E/I/F access is denied.<303>

%1 Message category

(INFORMATION:, WARNING:, STATUS:, ERROR:)

%2 Robot or controller name (Description from the graphical configuration)

Recognized by

- INIT.IRD

Possible causes

- I/O unit not closed or closed too late after operation
(Time > D_Time2 in KONFIG.DAT)
- I/O unit relay defective
- Malfunction in the signal cable between the I/O unit and the robot controller
- Quadro tower or hexa tower not ready due to a previous error
(wait time > D_Time1)

Recovery measures

- Check
 - whether the I/O unit is closed
 - the I/O unit input signals
 - the cable connections to the I/O unit
- Restart the controller
- During start-up: check whether the correct program modules for the I/O unit are installed

7.1.4 Message 0304

Physical coordinates in command beyond the software limit switch

Host error number in ABBA/1 format

N011 Coordinates specified for wrong robot

Message in the AMU LOG Control Center

%1Coordinate sent by AMU is out of range %2.<0304>

%1 Message category

(INFORMATION:, WARNING:, STATUS:, ERROR:)

%2 Robot or controller name (Description from the graphical configuration)

Recognized by

- INIT.IRD

Possible causes

- Invalid Teach points in the KRNREFPT.R01 file
- Incorrect parameters for the software limit switch (G_Z_MAXLIMIT, G_Z_MINLIMIT) in KONFIG.DAT
- Wrong coordinates in the graphical configuration (AMUCONF.INI)
- Erroneous version of the constants file AMUCONST.INI
- Wrong version of the constants file AMUCONST.INI
- Error in the robot controller program or the AMU module KRN/P

Recovery measures

- Teach the components involved again
- Check the software limit switch in the KONFIG.DAT file

7.1.5 Message 0305

Timeout during command execution

Host error number in ABBA/1 format

N006 Robot error (see preceding warning)

Message in the AMU LOG Control Center

%1 Command from AMU has been canceled from %2.<305>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)

Recognized by

- INIT.IRD

Possible causes

- Command not completely executed due to an error in the control of the I/O unit or the storage towers
- I/O unit relay defective
- Malfunction in the signal cable between the I/O unit and the controller

Recovery measures

- Check
 - whether the Log contains preceding error messages for the components
 - the I/O unit input signals (the shutter signal may be missing)
- Restart the controller
- During start-up: check whether the correct program modules for the I/O unit are installed

7.2 Handling errors

7.2.1 Message 0401

Unexpected mechanical resistance on the gripper

Host error number in ABBA/1 format

N101 Robot crash during medium removal/ejection

Message in the AMU LOG Control Center

%1Crash sensor %2. Unexpected crash.<0401>

%1 Message category

(INFORMATION:, WARNING:, STATUS:, ERROR:)

%2 Robot or controller name (Description from the graphical configuration)

Recognized by

- ELWSTK90.IRD
- ENEWGRIP.IRD
- PERMAN.IRD

Possible causes

- Medium not gripped correctly during a **GET**:
 - drive defect (medium no longer ejected far enough)
 - gripper sensor defective or other mechanical damage on the gripper
 - handling for **GET** not set correctly
 - invalid Teach point file or incorrect actual reference point values (P207 in the rho controller)
- Alignment point not present or not configured

Recovery measures

- Check
 - the **PUT** and **GET** handling (adjust offset values in KONFIG.DAT when necessary)
 - the gripper with the gripper test program (replace gripper when necessary)
 - the reference points (markings on the robot)
 - the Teach points (teach again with Trace KRN 8)
- Configure the alignment station

7.2.2 Message 0402

Medium not gripped by the gripper

Host error number in ABBA/1 format

N104 Medium lost

Message in the AMU LOG Control Center

%1Tape not in gripper %2<0402>

- %1 Message category
 (INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Robot or controller name
 (Description from the graphical configuration)

Recognized by

- INIT.IRD
- ELW3480A.IRD
- ELW3490.IRD
- ENEWGRIP.IRD

Possible causes

- Subprogram started due to differences between the expected and actual sensor signals
- "Bow forward" sensor triggered during drive handling or repeated access:
 - sensor defective
 - medium cannot be gripped due to a drive defect or errors in the drive handling settings
- Medium lost:
 - medium defective
 - gripper defective (motor or mechanism)

Recovery measures

- Check
 - the gripper with the gripper test program (replace the gripper when necessary)
 - whether a medium that fell out is defective and return it to the Archive with

Handling errors

- the I/O unit
- the drive
- the drive handling

7.2.3 Message 0403 (Warning)

Irregularities in gripper handling

Host error number in ABBA/1 format

N206 Medium cannot be removed from the unit

Message in the AMU LOG Control Center

%1Tape control activated, please check the medium handling for %2<0403>

- %1 Message category
 (INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Robot or controller name (Description from the graphical configuration)

Recognized by

- INIT.IRD

Possible causes

- Subprogram started due to differences between the expected and actual sensor signals
- "Bow forward" sensor defective
- Handling not set correctly

Recovery measures

- Check
 - the command
 - the gripper with the gripper test program (replace the gripper when necessary)
 - the Teach points (teach again with Trace KRN 8)
 - the handling for **PUT** and **GET** (correct the offset values in KONFIG.DAT when necessary)

7.2.4 Message 0404

Command for an undefined drive

Host error number in ABBA/1 format

N011 Coordinates specified for wrong robot

Message in the AMU LOG Control Center

%1Handling not configured.%2.<0404>

%1 Message category

(INFORMATION:, WARNING:, STATUS:, ERROR:)

%2 Robot or controller name (Description from the graphical configuration)

Recognized by

ELW3480.IRD	ELW3480A.IRD	ELW_PHIL.IRD
ELW3490.IRD	ELW4MM.IRD	ELWSTK90.IRD
ELW5180.IRD	ELW5190.IRD	ERACK.IRD
ELW7480.IRD	ELW7490.IRD	ELWOD_RE.IRD
ELW8MM.IRD	ELWD2.IRD	ELWSTK80.IRD
ELWDLT.IRD	ELWNTP.IRD	ELW_VHS.IRD
ELWOD512.IRD	ELWOD_JU.IRD	INIT.IRD

Possible causes

- Drive type not configured in the KONFIG.DAT file in the controller
- Wrong drive types configured in the graphical configuration
- Invalid command (with an undefined command code) sent from the AMU to the controller

Recovery measures

- Check
 - the drive in the graphical configuration (restart the AMU after changes)
 - the drive types configured in the KONFIG.DAT file
 - the command string with Trace KRN9

7.2.5 Message 0405

Error when removing a cartridge from a drive with a flap

Host error number in ABBA/1 format

N206 Medium cannot be removed from the unit

Message in the AMU LOG Control Center

%1 Flap of requested mediumdevice for %2 is closed.<405>

- %1 Message category
 (INFORMATION:, WARNING:, STATUS:, ERROR:)
%2 Robot or controller name (Description from the graphical configuration)

Recognized by

- ELW3480.IRD

Possible causes

- Drive has not received an Upload command
- Drive is defective
- "Bow forward" gripper sensor is defective

Recovery measures

- Send an Upload command for the drive from the host
- Check
 - the drive
 - the gripper with the gripper test program (replace the gripper when necessary)

7.2.6 Message 0406

Error when inserting a cartridge on a drive with a flap

Host error number in ABBA/1 format

N207 Flap on the drive cannot be closed

Message in the AMU LOG Control Center

%1Flap of requested device for %2 is open.<0406>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)

Recognized by

- ELW3480.IRD
- ELWSTK90.IRD

Possible causes

- The drive flap could not be closed after cartridge insertion
 - handling not set correctly
 - mixed-media gripper installed (not designed for drives with flaps)
 - drive defective
 - gripper mechanism defective
 - Unload command or button activated during the mount process

Recovery measures

- Check
 - the drive handling (correct the offset values in KONFIG.DAT or for closing the flap in ELW3480.DAT and/or ELWSTK90.DAT when necessary)
 - the gripper with the gripper test program (replace the gripper when necessary)
 - the drive (mechanism, correct commands)

7.2.7 Message 0407

A medium is still in the gripper

Host error number in ABBA/1 format

N105 Medium stuck in gripper

Message in the AMU LOG Control Center

%1Tape in gripper %2.<0407>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Controller name
(Description from the graphical configuration)

Recognized by

- ELWSTK90.IRD
- ELW3480.IRD
- ERACK.IRD
- INIT.IRD

Possible causes

- Unit switched off (power failure) with a medium in the gripper
- Handling not set correctly
- Wrong command for actual status (e.g. close flap even though a medium is still in the gripper)

Recovery measures

- Move the medium to the Problem box
- Use the I/O unit to insert the medium
- Check
 - the command
 - the gripper with the gripper test program (replace the gripper when necessary)
 - handling for **PUT** and **GET**
(correct the offset values in KONFIG.DAT when necessary)

7.2.8 Message 0408

Gripper error even though the medium is aligned

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 from gripper during handling %2.<408>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Robot or controller name
- %3 (Description from the graphical configuration)

Recognized by

- RACK.IRD

Possible causes

- Handling not set correctly
- Medium defective
- Gripper (sensor or mechanism) defective

Recovery measures

- Check
 - the medium
 - handling for **PUT** and **GET**
(correct the offset values in KONFIG.DAT when necessary)
 - the gripper with the gripper test program (replace the gripper when necessary)

7.2.9 Message 0409 (Warning)

Problems during Unload button handling

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1Common warning %2.<409>

%1 Message category

(INFORMATION:, WARNING:, STATUS:, ERROR:)

%2 Robot or controller name (Description from the graphical configuration)

Recognized by

ELW3480A	ELW5190	ELWDLT
ELW3490	ELW7480	ELWOD512
ELW5180	ELW7490	ELWODJU
ELWSTK80	ELW_PHIL	ELWOD_RE
ELWSTK90		

Possible causes

- Handling for operating the Unload button not set or not set correctly
- "Bow forward" gripper sensor defective
- Unload button defective

Recovery measures

- Check
 - the gripper handling for **Unload** (correct the ELW*.DAT when necessary)
 - the gripper with the gripper test program (replace the gripper when necessary)
 - the Unload button on the drive

7.2.10 Message 0412

Gripper cannot be opened

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1Gripper not open %2.<0412>

%1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)

%2 Robot name
(Description from the graphical configuration)

Recognized by

ELW3480.IRD	ELW3480A.IRD	ELW_PHIL.IRD
ELW3490.IRD	ELW4MM.IRD	ELWSTK90.IRD
ELW5180.IRD	ELW5190.IRD	ERACK.IRD
ELW7480.IRD	ELW7490.IRD	ELWOD_RE.IRD
ELW8MM.IRD	ELWD2.IRD	ELWSTK80.IRD
ELWDLT.IRD	ELWNTP.IRD	ELW_VHS.IRD
ELWOD512.IRD	ELWOD_JU.IRD	INIT.IRD
ENEWGRIP.IRD		

Possible causes

- Gripper opening mechanism stuck
- "Gripper open" sensor defective
- Compressed air supply defective (e.g. hose caught up somewhere)

Recovery measures

- Check
 - the gripper sensors (gripper test program)
 - the gripper mechanism
(move the gripper jaws manually)
 - the air pressure at the gripper
- Replace the gripper

7.2.11 Message 0413

Gripper cannot be closed

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1%IGripper not closed %2.<0413>

%1 Message category

(INFORMATION:, WARNING:, STATUS:, ERROR:)

%2 Robot name (Description from the graphical configuration)

Recognized by

ELW3480.IRD	ELW3480A.IRD	ELW_PHIL.IRD
ELW3490.IRD	ELW4MM.IRD	ELWSTK90.IRD
ELW5180.IRD	ELW5190.IRD	ERACK.IRD
ELW7480.IRD	ELW7490.IRD	ELWOD_RE.IRD
ELW8MM.IRD	ELWD2.IRD	ELWSTK80.IRD
ELWDLT.IRD	ELWNTP.IRD	ELW_VHS.IRD
ELWOD512.IRD	ELWOD_JU.IRD	INIT.IRD

Possible causes

- Gripper opening mechanism stuck
- "Gripper closed" sensor defective
- Compressed air supply defective (e.g. hose caught up somewhere)

Recovery measures

- Check
 - the gripper sensors (gripper test program)
 - the gripper mechanism (move the gripper jaws manually)
 - the air pressure at the gripper
- Replace the gripper

7.2.12 Message 0416

The "Bow back" gripper sensor not active

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1Bow not in back position %2.<0416>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Robot or controller name
(Description from the graphical configuration)

Recognized by

- ELW3480A.IRD
- ELW3490.IRD
- ELWSTK80.IRD
- ELWSTK90.IRD
- ERACK.IRD
- INIT.IRD

Possible causes

- Medium not gripped correctly:
 - drive defective
 - handling not set correctly
- Gripper mechanism defective
- "Bow back" sensor defective

Recovery measures

- Check
 - the gripper with the gripper test program (replace the gripper when necessary)
 - the Teach points (teach again with Trace KRN 8)
 - handling for **PUT** and **GET**
(correct the offset values in KONFIG.DAT when necessary)
 - the drive

7.2.13 Message 0417

The "Bow forward" gripper sensor is not active

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1Bow not in front position %2<0417>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Robot or controller name (Description from the graphical configuration)

Recognized by

- EBARCODE.IRD
- ELW4MM.IRD
- ELW8MM.IRD
- ELWDLT.IRD
- ELWOD512.IRD
- ELWOD_JU.IRD
- ELWOD_RE.IRD
- ELW_VHS.IRD
- ETEACH.IRD
- INIT.IRD

Possible causes

- The sensor signal is not received when checking the "Bow forward" sensor for the next action
- Gripper mechanism defective
- "Bow forward" sensor defective

Recovery measures

- Check the gripper with the gripper test program (replace the gripper when necessary)

7.2.14 Message 0418

Medium has fallen out of the gripper

Host error number in ABBA/1 format

N104 Medium lost

Message in the AMU LOG Control Center

%1Tape lost.<0418>

%1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)

Recognized by

ELW3480.IRD	ELW3480A.IRD	ELW_PHIL.IRD
ELW3490.IRD	ELW4MM.IRD	ELWSTK90.IRD
ELW5180.IRD	ELW5190.IRD	ERACK.IRD
ELW7480.IRD	ELW7490.IRD	ELWOD_RE.IRD
ELW8MM.IRD	ELWD2.IRD	ELWSTK80.IRD
ELWDLT.IRD	ELWNTP.IRD	ELW_VHS.IRD
ELWOD512.IRD	ELWOD_JU.IRD	INIT.IRD

Possible causes

- "Bow forward" sensor triggered during drive handling or repeated access:
 - sensor defective
 - medium cannot be gripped due to a drive defect or errors in the drive handling settings
- Medium lost:
 - medium defective
 - gripper defective (pneumatics or mechanism)

Recovery measures

- Check whether a medium that fell out is defective
- Use the I/O unit to insert the medium
- Check
 - the drive
 - the handling for **PUT** and **GET**
(correct the offset values in KONFIG.DAT when necessary)
 - the gripper with the gripper test program (replace the gripper when necessary)

7.2.15 Message 0419

Operating pressure for the gripper is too low at the compressor

Host error number in ABBA/1 format

N016 Robot error (EXCP_AUS 5001)

Message in the AMU LOG Control Center

%1Pressure too low%2.<0420>

%1 Message category

(INFORMATION:, WARNING:, STATUS:, ERROR:)

%2 Robot name (Description from the graphical configuration)

Recognized by

- INIT.QLL

Possible causes

- F1 circuit breaker in the I/O unit triggered
- Compressor switched off
- Compressor defective
- Pressure sensor (on older compressors) not set correctly

Recovery measures

- Check the compressor:
 - power supply
 - pressure sensor
 - no leaks
- Replace the complete compressor when any defects occur

7.2.16 Message 0420

No medium found in drive

Host error number in ABBA/1 format

N206 Medium cannot be removed from the unit

Message in the AMU LOG Control Center

%1Tape not ejected from mediumdevice for %2.<0420>

%1 Message category

(INFORMATION:, WARNING:, STATUS:, ERROR:)

%2 Robot name (Description from the graphical configuration)

Recognized by

ELW3480.IRD	ELW3480A.IRD	ELW_PHIL.IRD
ELW3490.IRD	ELW4MM.IRD	ELWSTK90.IRD
ELW5180.IRD	ELW5190.IRD	INIT.IRD
ELW7480.IRD	ELW7490.IRD	ELWOD_RE.IRD
ELW8MM.IRD	ELWD2.IRD	ELWSTK80.IRD
ELWDLT.IRD	ELWNTP.IRD	ELW_VHS.IRD
ELWOD512.IRD	ELWOD_JU.IRD	

Possible causes

- Medium needs more time to unload
- **Unload** command not sent
- Unload function in drive defective
- Drive empty but marked as occupied in the AMU database (medium previously unloaded manually)
- Gripper sensors defective
- Drive handling not set correctly

Recovery measures

- Increase the **KEEP** delay time in the host software or parameter D_WARTE_KEEP in KONFIG.DAT
- Execute the **UNLOAD** command, configure an automatic **Unload** in the AMU-CONST.INI when necessary
- Check:
 - the drive Unload function
 - the drive status (it may be necessary to modify the database)
 - the gripper sensors (gripper test program)
 - the drive handling
- Teach the drive
- Change the offset values in the KONFIG.DAT file

7.2.17 Message 0422

High mechanical resistance when gripping the medium on the drive

Host error number in ABBA/1 format

N110 Crash during medium removal from a unit

Message in the AMU LOG Control Center

%1Crashsensor %2 during GET from mediumdevice.<0422>

%1 Message category

(INFORMATION:, WARNING:, STATUS:, ERROR:)

%2 Robot name (Description from the graphical configuration)

Recognized by

ELW3480.IRD	ELW3480A.IRD	ELW_PHIL.IRD
ELW3490.IRD	ELW4MM.IRD	ELWSTK90.IRD
ELW5180.IRD	ELW5190.IRD	INIT.IRD
ELW7480.IRD	ELW7490.IRD	ELWOD_RE.IRD
ELW8MM.IRD	ELWD2.IRD	ELWSTK80.IRD
ELWDLT.IRD	ELWNTP.IRD	ELW_VHS.IRD
ELWOD512.IRD	ELWOD_JU.IRD	

Possible causes

- Drive defective (medium not in "Keep position")
- Gripper sensor defective or other mechanical damage on the gripper
- Handling for **GET** not set correctly
- Invalid Teach point file or incorrect actual reference point values (P207 in the rho controller)
- Several media in the drive due to a preceding database/operating error

Recovery measures

- Check
 - the drive
 - the handling for **GET** and **PUT** (correct the offset values in KONFIG.DAT when necessary)
 - the gripper with the gripper test program (replace gripper when necessary)
 - the reference points (markings on the robot)
 - the Teach points (teach again with Trace KRN 8)

7.2.18 Message 0423

High mechanical resistance when inserting the medium on the drive

Host error number in ABBA/1 format

N113 Crash during medium insertion into a unit

Message in the AMU LOG Control Center

%1Crashsensor %2 during PUT to mediumdevice.<0423>

%1 Message category

(INFORMATION:, WARNING:, STATUS:, ERROR:)

%2 Robot or controller name (Description from the graphical configuration)

Recognized by

ELW3480.IRD	ELW3480A.IRD	ELW_PHIL.IRD
ELW3490.IRD	ELW4MM.IRD	ELWSTK90.IRD
ELW5180.IRD	ELW5190.IRD	INIT.IRD
ELW7480.IRD	ELW7490.IRD	ELWOD_RE.IRD
ELW8MM.IRD	ELWD2.IRD	ELWSTK80.IRD
ELWDLT.IRD	ELWNTP.IRD	ELW_VHS.IRD
ELWOD512.IRD	ELWOD_JU.IRD	

Possible causes

- Medium not inserted correctly during a **PUT**:
 - drive defect (medium blocks during insertion)
 - gripper defect (defective gripper sensor or other mechanical damage on the gripper)
 - handling for **PUT** not set correctly
 - more than one medium in the drive

Recovery measures

- Check
 - the handling for **PUT** and **GET** (correct the offset values in KONFIG.DAT when necessary)
 - the gripper with the gripper test program (replace gripper when necessary)
 - the Teach points (teach again with Trace KRN 8)
- Remove the superfluous (wrong) media from the drive

7.2.19 Message 0424

Operating pressure back to normal value after a pressure loss

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

.%1Pressure ok for %2.<0423>

%1 Message category

(INFORMATION:, WARNING:, STATUS:, ERROR:)

%2 Robot or controller name (Description from the graphical configuration)

Recognized by

- INIT.IRD

Possible causes

- Compressor has regained the operating pressure

Recovery measures

- None

7.2.20 Message 0430

Sensor on query pin "Medium in gripper" on the gripper does not trigger

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1Tape present sensor is defect for %2.<0430>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Robot or controller name (Description from the graphical configuration)

Recognized by

ELW3480A.IRD	ELW3490.IRD	ELW4MM.IRD
ELW5180.IRD	ELW5190.IRD	ELW7480.IRD
ELW7490.IRD	ELW8MM.IRD	ELWD2.IRD
ELWDLT.IRD	ELWNTPIRD	ELWOD512.IRD
ELWOD_JU.IRD	ELWOD_RE.IRD	ELW_PHIL.IRD
ELWSTK80.IRD	ELWSTK90.IRD	

Possible causes

- Sensor defective
- Query pin bent

Recovery measures

- Check den the gripper with the gripper test program (replace the gripper when necessary)

7.2.21 Message 0440

No medium found at position

Host error number in ABBA/1 format

N402 No medium found at the specified coordinate

Message in the AMU LOG Control Center

%1The position is empty.<0440>

%1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)

Recognized by

- EBARCODE.IRD

Possible causes

- Command issued for an empty rack position
- Medium entry in the database incorrect
- Medium removed by the operator
- Gripper defective
- Handling not configured correctly

Recovery measures

- Check the command (correct coordinate specified?)
- Compare the Archive to the database (return the medium to its home position or adjust the database when differences are found)



ATTENTION!

Differences to the Archive catalog of the host computer can occur. Execute an upload to the host Archive catalog after any changes to the Archive catalog or after an AMU command (☞ Host software documentation)

- Re-insert removed media
- Check
 - the Teach points (teach again with Trace KRN 8)
 - handling for **PUT** and **GET**
(correct the offset values in KONFIG.DAT when necessary)

7.2.22 Message 0442

High mechanical resistance when gripping the medium

Host error number in ABBA/1 format

N110 Crash during medium removal from a unit

Message in the AMU LOG Control Center

%1Crashsensor %2 during GET from rack.<0442>

%1 Message category

(INFORMATION:, WARNING:, STATUS:, ERROR:)

%2 Robot or controller name (Description from the graphical configuration)

Recognized by

- ERACK.IRD

Possible causes

Possible causes

- Medium not gripped correctly during a **GET**:
 - drive defect (medium no longer ejected far enough)
 - handling for **GET** not set correctly
 - more than one medium in the drive
- Invalid Teach point file or incorrect actual reference point values (P207)
- Handling for **PUT** not set correctly
- Gripper defective

Recovery measures

- Check
 - the handling for **PUT** and **GET**
(correct the offset values in KONFIG.DAT when necessary)
 - the Teach points (teach again with Trace KRN 8)
 - the gripper with the gripper test program (replace gripper when necessary)

7.2.23 Message 0443

High mechanical resistance when inserting the medium

Host error number in ABBA/1 format

N110 Crash during medium insertion into a unit

Message in the AMU LOG Control Center

%1Crashsensor %2 during PUT to rack.<0443>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Robot or controller name (Description from the graphical configuration)

Recognized by

- ERACK.IRD

Possible causes

- Medium not gripped correctly during a **GET**:
 - drive defect (medium no longer ejected far enough)
 - handling for **GET** not set correctly
 - invalid Teach point file or incorrect actual reference point values (P207)
- Position already occupied by another medium
- Handling not set correctly
- Gripper defective

Recovery measures

- Check
 - the handling for **PUT** and **GET**
(correct the offset values in KONFIG.DAT when necessary)
 - the Teach points (teach again with Trace KRN 8)
 - the gripper with the gripper test program (replace gripper when necessary)

7.3 Barcode and Teach errors

7.3.1 Message 0501

Robot cannot find a Teach label

Host error number in ABBA/1 format

N016 Robot error (EXCP-AUS 5001)

Message in the AMU LOG Control Center

%1Teachlabel not recognized %2.<0501>

%1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
%2 Robot name (Description from the graphical configuration)

Recognized by

- ETEACH.IRD

Possible causes

- Teach sensor defective
- Teach label not present or dirty
- Base coordinates for Teach point wrong

Recovery measures

- Clean the Teach label
- Determine the base coordinates again with the PHG
- Check the Teach sensor (replace the gripper when necessary)

7.3.2 Message 0502

Scanner cannot find a barcode on the medium

Host error number in ABBA/1 format

N304 Barcode label not readable

Message in the AMU LOG Control Center

%1Barcode not recognized %2.<0502>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
%2 Robot name (Description from the graphical configuration)

Recognized by

- EBARCODE.IRD

Possible causes

- No or defective barcode label on the medium
- Medium positioned around the wrong way in the rack position
- Barcode reading not set correctly
- Barcode type or code length not configured
- Scanner defective

Recovery measures

- Check
 - the medium (barcode label, position)
 - the barcode reading settings (offsets in KONFIG.DAT)
- Define the barcode type and code length (robot test program)
- Check the scanner (replace components when necessary)

7.3.3 Message 0505

Scanner Recognizes a different barcode

Host error number in ABBA/1 format

N306 Wrong medium at the specified coordinate

Message in the AMU LOG Control Center

%1Illegal barcode %2.<0505>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Robot name (Description from the graphical configuration)

Recognized by

- EBARCODE.IRD
- INIT.IRD

Possible causes

- The position has a different medium (Volser) to the one specified in the database:
 - media reorganized/inserted manually
 - preceding database handling error
 - scanner defective
- Read position not set correctly (neighbouring barcode read)

Recovery measures

- Check
 - the rack position (Volser)
 - the entry in the database
(position the media correctly when differences are found)
 - the barcode reading process
 - the scanner (replace components when necessary)

7.3.4 Message 0506

Physical coordinates for the Teach command beyond the software limit switch

Host error number in ABBA/1 format

N016 Robot error (EXCP-AUS 5001)

Message in the AMU LOG Control Center

%1Illegal range %2 during teaching.<0506>

%1 Message category

(INFORMATION:, WARNING:, STATUS:, ERROR:)

%2 Robot or controller name (Description from the graphical configuration)

Recognized by

- ETEACH.IRD
- ETEST.IRD

Possible causes

- Distance to the Teach label is too large ("Bow forward" sensor will not be triggered)
- Gripper crash sensor is active
- Base Teach coordinate incorrect
- Teach rule is positioned in the drive

Recovery measures

- Check the Teach process
- Position the Teach rule in the drive
- Recalculate the base coordinates
- Check the "Bow forward" sensor (replace the gripper when necessary)

7.3.5 Message 0508 (Warning)

Scanner first Recognizes the barcode after several attempts

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1retry reading barcode for %2.<0508>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Robot name (Description from the graphical configuration)

Recognized by

- EBARCODE.IRD

Possible causes

- Barcode damaged
- Read position not configured correctly
- Scanner defective

Recovery measures

- Check
 - the medium (barcode label)
 - the barcode reading settings (offsets in KONFIG.DAT)
 - the scanner (replace the scanner when necessary)

7.3.6 Message 0509 (Warning)

Scanner Recognizes a different barcode

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1Different volser read during action for %2.<0509>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Robot name (Description from the graphical configuration)

Recognized by

- EBARCODE.IRD

Possible causes

- Barcode label severely damaged
- Read position not set correctly (neighbouring rack position read)
- Communication error
- Scanner defective

Recovery measures

- Check
 - the medium (barcode label, position)
 - the barcode reading settings (offsets in KONFIG.DAT)
 - the scanner (replace components when necessary)

7.3.7 Message 0510

No communication between controller and scanner (aborted after 3 attempts)

Host error number in ABBA/1 format

N304 Barcode label not readable

Message in the AMU LOG Control Center

%1No Communication between RHO %2 and barcodereadingsystem.<0510>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Robot name (Description from the graphical configuration)

Recognized by

- EBARCODE.IRD
- INIT.IRD

Possible causes

- Controller interface parameters incorrect
- Interface converter not configured correctly (jumper)
- Voltage supply missing for scanner or interface converter
- Scanner defective
- Cable interrupt between controller and scanner
- Controller interface defective

Recovery measures

- Check
 - the controller interface parameters with the PHG
 - the interface converter (jumper, voltage, cable)
 - the voltage supply to the scanner
 - the controller cable and interface
- Replace the scanner or interface converter when defective



Information

You can use the host command BOFF (handling without barcode reading) to work temporarily without barcodes when necessary.

7.3.8 Message 0511

Scanner does not Recognize a Volser or Recognizes an incorrect Volser during the second attempt

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1Different volser read during insert for %2.<0511>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Robot name (Description from the graphical configuration)

Recognized by

- EBARCODE.IRD

Possible causes

- Barcode label severely damaged
- Read position not set correctly (neighbouring rack position read)
- Communication error
- Scanner defective

Recovery measures

- Check
 - the medium (barcode label, position)
 - the barcode reading settings (change the offsets in KONFIG.DAT when necessary)
- Replace the scanner when defective

7.3.9 Message 0513

Communication problems between controller and scanner

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1Communication retry between Rho and barcode scanner for %2.<0513>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
%2 Robot name (Description from the graphical configuration)

Recognized by

- EBARCODE.IRD

Possible causes

- Controller interface parameters incorrect
- Interface converter not configured correctly (jumper)
- Voltage supply for scanner or interface converter not stable
- Scanner defective
- Cable interrupt between controller and scanner
- Controller interface defective
- Scanner not earthed

Recovery measures

- Check
 - the controller interface parameters with the PHG
 - the interface converter (jumper, voltage, cable)
 - the voltage supply to the scanner
 - the controller cable and interface
- Replace the scanner or interface converter when defective
- Check the scanner earth

7.4 Controller and barcode reading system hardware errors

7.4.1 Message 0603

Communication between controller and scanner not possible

Host error number in ABBA/1 format

N016 Robot error (EXCP-AUS 5001)

Message in the AMU LOG Control Center

%1Vision-system malfunction %2, recognized during initialization.<0603>

%1 Message category

(INFORMATION:, WARNING:, STATUS:, ERROR:)

%2 Robot name (Description from the graphical configuration)

Recognized by

- EBARCODE.IRD

Possible causes

- Controller interface parameters incorrect
- Interface converter not configured correctly (jumper)
- Voltage supply missing for scanner or interface converter
- Scanner defective
- Cable interrupt between controller and scanner
- Controller interface defective

Recovery measures

- Check the controller interface parameters with the PHG
- Check the interface converter (jumper, voltage, cable)
- Check the voltage supply to the scanner
- Check the controller cable and interface
- Replace the scanner or interface converter when defective



Information

You can use the host command BOFF (handling without barcode reading) to work temporarily without barcodes when necessary. To do this, apply a 24 V signal to the controller input E3.0 during the initialization.

7.4.2 Message 0604

RAM buffer battery in the controller empty

Host error number in ABBA/1 format

N016 Robot error (EXCP-AUS 5001)

Message in the AMU LOG Control Center

%1Battery of controller is empty %2, recognized during initialization.<0604>

%1 Message category

(INFORMATION:, WARNING:, STATUS:, ERROR:)

%2 Robot name (Description from the graphical configuration)

Recognized by

- INIT.IRD

Possible causes

- Buffer battery on the CP/MEM board empty or not connected

Recovery measures

- Replace the buffer battery

7.4.3 Message 0605

Malfunction in controller voltage supply

Host error number in ABBA/1 format

N016 Robot error (EXCP-AUS 5001)

Message in the AMU LOG Control Center

%I/O powersupply malfunction %2, recognized during initialization.<0605>

%1 Message category

(INFORMATION:, WARNING:, STATUS:, ERROR:)

%2 Robot name (Description from the graphical configuration)

Recognized by

- INIT.IRD

Possible causes

- Voltage supply cable to the I/O boards or NC-SPS-I/O boards defective
- NC-SPS-I/O board and/or I/O board defective

Recovery measures

- Check the voltage supply to the I/O boards and NC-SPS-I/O boards
- Replace defective boards

7.5 Robot controller status messages

7.5.1 Message 0702

Checksum error in the controller KONFIG.DAT file

Host error number in ABBA/1 format

N003 Serious error in the Archive PC set-up file

Message in the AMU LOG Control Center

%1Wrong checksum, error in KONFIG.DAT %2, recognized during initialization.<0702>

%1 Message category

(INFORMATION:, WARNING:, STATUS:, ERROR:)

%2 Robot name (Description from the graphical configuration)

Recognized by

- INIT.IRD

Possible causes

- Incorrect checksum in KONFIG.DAT
- Wrong KONFIG.DAT version
- Line error in the KONFIG.DAT file

Recovery measures

- Check the KONFIG.DAT file in the robot controller
- Restart the controller

7.5.2 Message 0703

Software module with wrong version number in the controller

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1Different software versions in one or more modules for %2.<0605>

%1 Message category

(INFORMATION:, WARNING:, STATUS:, ERROR:)

%2 Robot name (Description from the graphical configuration)

Recognized by

- INIT.IRD

Possible causes

- VERSION.DAT file has incorrect entries
- Software modules from different versions active in the controller

Recovery measures

- Set the PHG Echo to 1 so that the incorrect modules are displayed
- Copy the modules from only one version to the robot controller
- Copy the correct VERSION.DAT to the controller

7.5.3 Message 0710

Test program started with the PHG

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1Setup- / Testprogram for %2 entered by operator.<710>

%1 Message category

(INFORMATION:, WARNING:, STATUS:, ERROR:)

%2 Robot name (Description from the graphical configuration)

Recognized by

- INIT.IRD

Possible causes

- Key combination <Shift><Alt><Deadman> pressed on the PHG

Recovery measures

- Exit the robot test program

7.5.4 Message 0798

Error in one of the controller configuration files

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1Error while reading 'Konfig.dat' at position %4 for %2.<0798>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Robot name (Description from the graphical configuration)
- %3 Not used
- %4 Erroneous line in the KONFIG.DAT file

Recognized by

- EPERMAN.IRD

Possible causes

- Wrong KONFIG.DAT version
- Incorrect number of lines in the KONFIG.DAT file
- Incorrect parameter or invalid parameter format in a line in the KONFIG.DAT file

Recovery measures

- Check the robot controller KONFIG.DAT file
- Restart the controller

7.5.5 Message 0799

Robot starting initialization

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1%2 is being initialized.<0799>

%1 Message category

(INFORMATION:, WARNING:, STATUS:, ERROR:)

%2 Robot name (Description from the graphical configuration)

Recognized by

- INIT.IRD

Possible causes

Status message during the robot reference movement

Recovery measures

- Wait for the AMU message <00700> (Robot ready)

7.5.6 Message 0802

Robot controller received an illegal command

Host error number in ABBA/1 format

N011 Coordinates specified for wrong robot

Message in the AMU LOG Control Center

%Illegal toweraddress %2.<0802>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Storage tower or controller name (Description from the graphical configuration)

Recognized by

- INIT.IRD

Possible causes

- Storage tower not configured correctly in the robot controller TKONFIG8.DAT file
- Storage tower not configured correctly in the AMU graphical configuration
- Syntax error in the command for the storage tower

Recovery measures

- Check:
 - the storage tower controller KONFIG.DAT file
 - the storage tower names in the graphical configuration
 - the command using Trace 9

7.5.7 Message 0805

Robot controller received a command with an illegal segment number

Host error number in ABBA/1 format

N011 Coordinates specified for wrong robot

Message in the AMU LOG Control Center

%1Illegal segmentnumber %2.<0805>

%1 Message category

(INFORMATION:, WARNING:, STATUS:, ERROR:)

%2 Storage tower or controller name (Description from the graphical configuration)

Recognized by

- INIT.IRD

Possible causes

- Storage tower defined in the AMU with the wrong number of segments
- Communication error
- Error in control program

Recovery measures

- Repeat the command
- Check the AMU AMUCONST.INI file for the correct segment count for the storage tower
- Check the command using Trace

7.5.8 Message 0811

Tower control program timeout expired

Host error number in ABBA/1 format

N102 Timeout (robot error)

Message in the AMU LOG Control Center

%1%2 allocated from robot 1.<0811>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Storage tower or controller name (Description from the graphical configuration)

Recognized by

- HTURM.IRD
- QTURM1.IRD
- QTURM2.IRD

Possible causes

- Storage tower was requested by a robot but not released again:
 - speed set too low with the PHG
 - robot program has errors

Recovery measures

- Reset the controller
- Select a higher speed

7.5.9 Message 0813

Tower control program timeout expired

Host error number in ABBA/1 format

N102 Timeout (robot error)

Message in the AMU LOG Control Center

%1%2 not accessed from robot 1.<0813>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Storage tower or controller name (Description from the graphical configuration)

Recognized by

- HTURM.IRD
- QTURM1.IRD
- QTURM2.IRD

Possible causes

- Storage tower was requested by the robot but no handshake signal was received by the storage tower control program:
 - software error in the robot controller
 - robot program aborted

Recovery measures

- Reset the controller

7.5.10 Message 0820

Quadro tower did not reference correctly

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 %2 has no reference done.<0820>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Storage tower or controller name (Description from the graphical configuration)

Recognized by

- QTURM1.IRD
- QTURM2.IRD

Possible causes

- Problems with the drive amplifiers
- Reference point sensors defective
- Storage tower control program faulty

Recovery measures

- Check the reference point sensor signals to the quadro tower
- Restart the controller
- Check the drive amplifier parameters

7.5.11 Message 0841

Hexa tower did not reference correctly

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 %2 did no reference.<0841>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Storage tower or controller name (Description from the graphical configuration)

Recognized by

- HTURM.IRD

Possible causes

- Problems with the parameters in the frequency converter
- Reference point sensors defective
- Storage tower control program faulty

Recovery measures

- Check the reference point sensors
- Reset the controller
- Check the frequency converter parameters

7.5.12 Message 0841

Hexa tower did not reference correctly

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1 %2 did no reference.<0841>

%1 Message category

(INFORMATION:, WARNING:, STATUS:, ERROR:)

%2 Storage tower or controller name (Description from the graphical configuration)

Recognized by

- HTURM.IRD

Possible causes

- Problems with the parameters in the frequency converter
- Reference point sensors defective
- Storage tower control program faulty

Recovery measures

- Check the reference point sensors
- Reset the controller
- Check the frequency converter parameters

7.5.13 Message 0842

Hexa tower does not Recognize the INPOS sensor

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1inpos-sensor not detected at %2<0842>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Storage tower or controller name (Description from the graphical configuration)

Recognized by

- HTURM.IRD

Possible causes

- Problems with the parameters in the frequency converter
- INPOS sensor defective
- Storage tower program faulty
- Motor protection defective
- On older units: relays K4, K5 defective

Recovery measures

- Check the INPOS sensors
- Reset the controller
- Check the frequency converter parameters
- Check the motor protection and relays (when present)

7.5.14 Message 0843

Hexa tower does not Recognize the CHECK sensor

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1Problem with check-sensor or frequency converter at %2.<0843>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Storage tower or controller name (Description from the graphical configuration)

Recognized by

- HTURM.IRD

Possible causes

- Problems with the parameters in the frequency converter
- CHECK sensor defective
- Storage tower program faulty
- Motor protection defective
- On older units: relays K4, K5 defective

Recovery measures

- Check the CHECK sensors
- Reset the controller
- Check the frequency converter parameters
- Check the motor protection and relays (when present)

7.5.15 Message 0844

Hexa tower does not Recognize the segment positioning

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1%2 did not reach it's position.<0844>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Storage tower or controller name (Description from the graphical configuration)

Recognized by

- HTURM.IRD

Possible causes

- Problems with the parameters in the frequency converter
- Position sensor defective
- Storage tower program faulty
- Motor protection defective
- On older units: relays K4, K5 defective

Recovery measures

- Check the position sensors
- Reset the controller
- Check the frequency converter parameters
- Check the motor protection and relays (when present)

7.5.16 Message 0845

Frequency converter does not react to input signals

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1Problem with the frequency converter at %2.<0845>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Storage tower or controller name (Description from the graphical configuration)

Recognized by

- HTURM.IRD

Possible causes

- Problems with the parameters in the frequency converter
- Frequency converter defective
- Hexa tower motors defective

Recovery measures

- Check the frequency converter (error register P930)
- Reset the controller
- Check the frequency converter parameters

7.5.17 Message 0846

Robot timeout because tower access not possible

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1Robot did not finish the action at %2.<0846>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Storage tower or controller name (Description from the graphical configuration)

Recognized by

- HTURM.IRD

Possible causes

- Problems with the parameters in the frequency converter
- Position sensors defective
- Storage tower program faulty
- Motor protection defective
- On older units: relays K4, K5 defective

Recovery measures

- Check the position sensors
- Reset the controller
- Check the frequency converter parameters
- Check the motor protection and relays (when present)

7.6 I/O unit error messages

7.6.1 Message 0903

I/O unit door not closed properly

Host error number in ABBA/1 format

N501 Door on the I/O unit not closed

Message in the AMU LOG Control Center

%1Door not closed at initialization %2.<0903>

%1 Message category

(INFORMATION:, WARNING:, STATUS:, ERROR:)

%2 I/O unit or controller name (Description from the graphical configuration)

Recognized by

- INIT.IRD

Possible causes

- I/O unit door not closed properly by user after last action
- I/O unit door opened again:
 - door mechanically deformed
 - mechanical lock not set correctly
 - door lock defective
- Signal interrupt for robot controller input
"I/O unit door closed"

Recovery measures

- Close the I/O unit door
- Check the lock function
- Replace the switch when defective
- Check the signal for "Door closed"

7.6.2 Message 0923 (Warning)

Problem box not emptied during I/O unit operation

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1%2 not empty.<0823>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Storage tower or controller name (Description from the graphical configuration)

Recognized by

- INIT.IRD

Possible causes

- Operator forgot to empty the I/O unit during operating
- Problem box light barrier defective

Recovery measures

- Empty the Problem box
- Check the light barrier and the signal circuit

7.6.3 Message 0924 (Warning)

I/O unit requested by the operator but not serviced

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1%2 requested by operator, nothing changed.<0924>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Storage tower or controller name (Description from the graphical configuration)

Recognized by

- INIT.IRD

Possible causes

- No handling box removed from the I/O unit for filling/emptying
- Roller switch or signal circuits for the "Handling box positioned in I/O unit" signal defective

Recovery measures

- Remove the handling box from the I/O unit for servicing
- Check the switch and signal circuits

7.6.4 Message 0926

Problem with the I/O unit shutters

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1Shutter %2 needs too much time for closing.<0926>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Storage tower or controller name (Description from the graphical configuration)

Recognized by

- INIT.IRD

Possible causes

- Shutter stuck
- Circuit breaker F1 in the I/O unit dropped out
- Shutter motor overheated
- Shutter motor defective
- Internal shutter limit switch set incorrectly
- "Shutter down" limit switch or its signal circuit defective

Recovery measures

- Check the signal and the "Shutter down" limit switch
- Check the circuit breaker in the I/O unit
- Check the shutter (motor, mechanism, internal limit switch)
- Replace the complete shutter when any defects are found

7.6.5 Message 0927

Handling box missing in the I/O unit

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

AML message:<0927>

Recognized by

- INIT.IRD

Possible causes

- Operator forgot to return one or more handling boxes to the I/O unit
- Roller switch or signal circuits for the "Handling box positioned in I/O unit" signal defective

Recovery measures

- Return all the handling boxes to the I/O unit
- Check the switch and signal circuits

7.7 ADS Messages

7.7.1 Message 0980

ADS has the connection to the controller in automatic mode of the switch

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

ADS is switched to this AMU.(Automatic Mode)<0980>

Recognized by

- ADS

Possible causes

- ADS received command to switchover:
 - **Status** command with Option **R1** on the AMU
 - ROSA command from the host software

Recovery measures

- Check whether the hosts are connected to the correct AMU

7.7.2 Message 0981

ADS has no connection to the controller in automatic mode of the switch

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

ADS is switched to other AMU.(Automatic Mode)<0981>

Recognized by

- ADS

Possible causes

- ADS received command to switchover from another AMU:
 - **Status** command with Option **R1** on the AMU
 - ROSA command from the host software

Recovery measures

- Check whether the hosts are connected to the correct AMU

7.7.3 Message 0982

ADS was switched manually and has a connection to the controller

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

ADS is switched to this AMU.(Manual Mode)<0982>

Recognized by

- ADS

Possible causes

- Operator activated the ADS switch

Recovery measures

- Switch the ADS to AUTO to run the Dual-AMU
- Check whether the hosts are connected to the correct AMU

7.7.4 Message 0983

ADS was switched manually and has no connection to the controller

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

ADS is switched to other AMU.(Manual Mode)<0983>

Recognized by

- ADS

Possible causes

- Operator activated the ADS switch

Recovery measures

- Switch the ADS to AUTO to run the Dual-AMU
- Check whether the hosts are connected to the correct AMU

7.7.5 Message 0984

ADS command syntax error

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

Syntax-Error in command string from AMU to ADS.<0984>

Recognized by

- ADS

Possible causes

- Communication error
- AMU configuration error
- AMU software error
- ADS software error

Recovery measures

- Repeat the command
- Check the ADS communication parameters in the graphical configuration
 - **Type:** I1 -RS232(3964R)
 - **Databits** 8
 - **Stopbits** 1
 - **Parity** Even
 - **Baudrate:** 9600

7.7.6 Message 0985

ADS communication protocol error

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

3964R communication error (ADS). <0984>

Recognized by

- ADS

Possible causes

- Communication error
- AMU configuration error
- AMU software error
- ADS software error

Recovery measures

- Repeat the command
- Check the ADS communication parameters in the graphical configuration
 - **Type:** I1 -RS232(3964R)
 - **Databits** 8
 - **Stopbits** 1
 - **Parity** Even
 - **Baudrate:** 9600
- Reset the ADS (voltage off/on)

7.7.7 Message 0986

ADS storage error

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

ADS hardware error:<0986>

Recognized by

- ADS

Possible causes

- 3V lithium battery in ADS empty
- ADS defective
- Communication error

Recovery measures

- Repeat the command
- Check the ADS communication parameters in the graphical configuration
 - **Type:** I1 -RS232(3964R)
 - **Databits** 8
 - **Stopbits** 1
 - **Parity** Even
 - **Baudrate:** 9600
- Reset the ADS (voltage off/on)
- Replace the ADS battery
- Replace the ADS

8 AML/J Controller messages

8.1 Logical errors in the application program

8.1.1 Message 0301

Syntax error in the AMU command to the controller

Host error number in ABBA/1 format

N001 Syntax error

Message in the AMU LOG Control Center

%1Syntax-Error %2 in command string from AMU.<301>

%1 Message category

(INFORMATION:, WARNING:, STATUS:, ERROR:)

%2 Controller name (Description from the graphical configuration)

Recognized by

- ROBO.PMC

Possible causes

- Error in the AMU command telegram (module KRN/P) to the controller (variable P2 < 0 or > 6 or P4 ≠ 1)
- AMU and controller software versions not compatible
- Communication error
- Controller software function error

Recovery measures

- Repeat command
- Reset the controller, restart the AMU
- Check the command string with Trace
- Check the software versions

8.1.2 Message 0303

Timeout error during command execution

Host error number in ABBA/1 format

N102 Timeout (Robot error)

Message in the AMU LOG Control Center

%1Timeout-Error %2. Tower- or E/I/F access is denied.<303>

%1 Message category
 (INFORMATION:, WARNING:, STATUS:, ERROR:)
%2 Controller name (Description from the graphical configuration)

Recognized by

- ROBO.PMC (F_SYNTAX)

Possible causes

- I/O unit not closed or closed too late after operation
- I/O unit relay defective
- Malfunction in the signal cable between the I/O unit and the PMAC board

Recovery measures

- Check whether the I/O unit is closed
- Check the I/O unit input signals
- During start-up: check whether the correct program modules for the I/O unit are installed
- Check the module boards and cable connections

8.1.3 Message 0304

Physical coordinates in command beyond the software limit switch

Host error number in ABBA/1 format

N011 Coordinates specified for wrong robot

Message in the AMU LOG Control Center

%1Coordinate sent by AMU is out of range %2.<0304>

%1 Message category

(INFORMATION:, WARNING:, STATUS:, ERROR:)

%2 Controller name (Description from the graphical configuration)

Recognized by

- ROBO.PMC (F_COORDINATE)

Possible causes

- Invalid Teach points in the KRNREFPT.R00 file
- Incorrect parameters for the software limit switch or the gear factor
- Wrong coordinates in the graphical configuration (AMUCONF.INI)
- Erroneous or wrong version of the constants file AMUCONST.INI
- Error in the robot controller program or AMU KRN/P

Recovery measures

- Teach the components involved again
- Recalculate the **Motor Limits** (PMMaint)
- Check the parameters for the gear factors

8.2 Handling error

8.2.1 Message 0401

Unexpected mechanical resistance on the gripper

Host error number in ABBA/1 format

N101 Robot crash during medium removal/ejection

Message in the AMU LOG Control Center

%1Coordinate sent by AMU is out of range %2.<0304>

%1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
%2 Controller name (Description from the graphical configuration)

Recognized by

- NEWGRIP.PMC (F_CRASH)

Possible causes

- Medium not gripped correctly during a **GET**:
 - drive defect (medium no longer ejected far enough)
 - gripper defect (defective gripper sensor, loose toothed drive belts or other mechanical damage on the gripper)
 - handling for **GET** not set correctly
 - invalid Teach point file or incorrect home offset values
- Alignment point not present or not configured

Recovery measures

- Check
 - the handling with PMMaint (adjust corrective values with **Patch** when necessary)
 - the gripper with the gripper test program (replace gripper when necessary)
 - the home offset with **Motor Limits**
 - the Teach points (teach again with Trace KRN 8)
- Configure the alignment station

8.2.2 Message 0402

Medium not gripped by the gripper

Host error number in ABBA/1 format

N104 Medium lost

Message in the AMU LOG Control Center

%1Tape not in gripper %2<0402>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Controller name (Description from the graphical configuration)

Recognized by

- ROBO.PMC (F_NOTAPE)
- NEWGRIP.PMC
- GRIPPER.PMC

Possible causes

- Front query pin sensor "Medium present" (bow) triggered during drive handling or repeated access:
 - sensor defective
 - medium cannot be gripped due to a drive defect or errors in the drive handling settings
- Medium lost:
 - medium defective
 - gripper defective (motor or mechanism)

Recovery measures

- Check:
 - the gripper with PMMaint
 - whether a medium that fell out is damaged (insertion with the I/O unit)
 - the drive
 - the handling with PMMaint (adjust corrective values with **Patch** when necessary)
- Repeat the step motor installation (**Gripper Init**)

8.2.3 Message 0403 (Warning)

Irregularities in gripper handling

Host error number in ABBA/1 format

N206 Medium cannot be removed from the unit

Message in the AMU LOG Control Center

%1Tape control activated, please check the medium handling for %2<0402>

- %1 Message category
 (INFORMATION:, WARNING:, STATUS:, ERROR:)
%2 Controller name (Description from the graphical configuration)

Recognized by

- ROBO.PMC (F_CASSCHECK)

Possible causes

- Wrong command for the situation (**PUT** without medium, **GET** with medium)
- Front query pin sensor "Medium present" defective
- Handling not set correctly

Recovery measures

- Check
 - the command
 - the gripper with the gripper test program (replace the gripper when necessary)
 - the Teach points (teach again with Trace KRN 8)
 - the handling with PMMaint (adjust corrective values with **Patch** when necessary)

8.2.4 Message 0404

Command for an undefined drive

Host error number in ABBA/1 format

N011 Coordinates specified for wrong robot

Message in the AMU LOG Control Center

%1Handling not configured.%2.<0402>

- %1 Message category
 (INFORMATION:, WARNING:, STATUS:, ERROR:)
%2 Controller name (Description from the graphical configuration)

Recognized by

ROBO.PMC (F_ARGUMENT)

Possible causes

- Variable P6 (DEV TYP) in the AMU command to PMAC for drive operation is not defined in the variables P500 - P699

Recovery measures

- Check:
 - the specified drive in the **Graphical Configuration** (restart the AMU after changes)
 - the drive definitions in the parameters P500 - P699
- Compare the configured values to the PMACVALUE value in the AMU-CONST.INI
- Check the command with Trace KRN 9 (Variable P6)

8.2.5 Message 0407

A medium is still in the gripper

Host error number in ABBA/1 format

N105 Medium stuck in gripper

Message in the AMU LOG Control Center

%1Tape in gripper %2.<0407>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
%2 Controller name (Description from the graphical configuration)

Recognized by

- ROBO.PMC (F_TAPE)
- BOX.PMC
- GRIPPER.PMC

Possible causes

- Unit switched off (power failure) with a medium in the gripper
- Error in the handlings settings on the linear shelf

Recovery measures

- Use a **PUT** to move the medium to the Problem box (reinsert using the I/O unit)
- Check
 - the Teach points (teach again with Trace KRN 8)
 - the handling with PMMaint (adjust corrective values with **Patch** when necessary)
 - the gripper with the gripper test program (replace the gripper when necessary)

8.2.6 Message 0412

Gripper cannot be opened

Host error number in ABBA/1 format

N016 Robot error (EXCP-AUS 5001)

Message in the AMU LOG Control Center

%1Gripper not open %2.<0412>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Robot name (Description from the graphical configuration)

Recognized by

- NEWGRIP.PMC (F_NOTOPEN)
- UNIT.PMC
- RACK.PMC
- BOX.PMC

Possible causes

- Gripper opening mechanism stuck
- "Gripper open" sensor defective
- Malfunction in the step motor controller
- Step motor for gripper open/close has lost step cycles (movement command was not executed correctly)

Recovery measures

- Check
 - the gripper with the gripper test program (replace the gripper when necessary)
 - initialize the step motors again (**Gripper Init**)
 - the handling with PMMaint (adjust corrective values with **Patch** when necessary)

8.2.7 Message 0413

Gripper cannot be closed

Host error number in ABBA/1 format

N016 Robot error (EXCP-AUS 5001)

Message in the AMU LOG Control Center

%1%IGripper not closed %2.<0413>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
%2 Robot name (Description from the graphical configuration)

Recognized by

- NEWGRIP.PMC (F_NOTCLOSED)
- UNIT.PMC
- RACK.PMC
- BOX.PMC

Possible causes

- Gripper opening mechanism stuck
- "Gripper open" sensor defective
- Malfunction in the step motor controller
- Step motor for gripper open/close has lost step cycles (movement command was not executed correctly)

Recovery measures

- Check
 - the gripper with the gripper test program (replace the gripper when necessary)
 - the handling with PMMaint (adjust corrective values with **Patch** when necessary)
- Initialize the step motors again (**Gripper Init**)

8.2.8 Message 0416

Rear query pin sensor "Medium present" in the gripper (bow) is not active

Host error number in ABBA/1 format

N016 Robot error (EXCP-AUS 5001)

Message in the AMU LOG Control Center

%1Bow not in back position %2.<0416>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Controller name (Description from the graphical configuration)

Recognized by

- UNIT.PMC (F_NOTBUEGEL_H)
- RACK.PMC
- BOX.PMC
- GRIPPER.PMC

Possible causes

- Medium not gripped correctly:
 - drive defective
 - handling not set correctly
- Gripper mechanism defective (query pin bent)
- Rear query pin sensor "Medium present" defective

Recovery measures

- Check
 - the handling with PMMaint (adjust corrective values with **Patch** when necessary)
 - the gripper with the gripper test program (replace the gripper when necessary)
 - the home offset with **Motor Limits**
 - the teach points (teach again with Trace KRN 8)
 - the drive

8.2.9 Message 0417

Front query pin sensor "Medium present" is not active

Host error number in ABBA/1 format

N016 Robot error (EXCP-AUS 5001)

Message in the AMU LOG Control Center

%1Bow not in front position %2<0417>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
%2 Controller name (Description from the graphical configuration)

Recognized by

- TEACH.PMC (F_NOTBUEGEL_V)
- GRIPPER.PMC

Possible causes

- Gripper mechanism defective (query pin bent)
- Front query pin sensor "Medium present" defective

Recovery measures

- Check the gripper with the gripper test program (replace the gripper when necessary)

8.2.10 Message 0418

Medium has fallen out of the gripper

Host error number in ABBA/1 format

N104 Medium lost

Message in the AMU LOG Control Center

%ITape lost.<0418>

%1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)

Recognized by

- ROBO.PMC (F_TAPELOST)
- UNIT.PMC

Possible causes

- Front query pin sensor "Medium present" (bow) triggered during drive handling or repeated access:
 - sensor defective
 - medium cannot be gripped due to a drive defect or errors in the drive handling settings
- Medium lost:
 - medium defective
 - gripper defective (motor or mechanism)

Recovery measures

- Check
 - the handling with PMMaint (adjust corrective values with **Patch** when necessary)
 - the gripper with the gripper test program (replace the gripper when necessary)
 - the home offset with **Motor Limits**
 - the Teach points (teach again with Trace KRN 8)
 - the drive
- Repeat the step motor installation (**Gripper Init**)
- Check whether a medium that fell out is defective (insertion with the I/O unit)

8.2.11 Message 0420

No medium found in drive

Host error number in ABBA/1 format

N206 Medium cannot be removed from the unit

Message in the AMU LOG Control Center

%1Tape not ejected from mediumdevice for %2.<0420>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
%2 Robot name (Description from the graphical configuration)

Recognized by

- UNIT.PMC (F_EMPTY)

Possible causes

- Medium needs more time to unload
- Unload command not sent
- Unload function in drive defective
- Drive empty but marked as occupied in the SQL database (medium unloaded manually)
- Gripper sensors defective
- Drive handling not set correctly

Recovery measures

- Increase the **KEEP** delay time in the host software or modify the variable P 254
- Execute the **UNLOAD** command (configure an automatic Unload in the AMU-CONST.INI (ZTYP) when necessary)
- Check:
 - the drive Unload function
 - the drive status (correct the database when necessary)
 - the handling with PMMaint (adjust corrective values with **Patch** when necessary)
 - the gripper with the gripper test program (replace the gripper when necessary)

8.2.12 Message 0422

High mechanical resistance when gripping the medium on the drive

Host error number in ABBA/1 format

N110 Crash during medium removal from a unit

Message in the AMU LOG Control Center

%1Crashsensor %2 during GET from mediumdevice.<0422>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Controller name (Description from the graphical configuration)

Recognized by

- UNIT.PMC (F_CRASH_LW_GET)

Possible causes

- Medium not gripped correctly during a **GET**:
 - drive defect (medium no longer ejected far enough)
 - gripper defect (defective gripper sensor, loose toothed drive belts or other mechanical damage on the gripper)
 - handling for **GET** not set correctly
 - invalid Teach point file or incorrect home offset values
 - more than one medium in the drive

Recovery measures

- Check
 - the handling with PMMaint (adjust corrective values with **Patch** when necessary)
 - the gripper with the gripper test program (replace gripper when necessary)
 - the home offset with **Motor Limits**
 - the Teach points (teach again with Trace KRN 8)
 - the drive
- Repeat the step motor installation (**Gripper Init**)
- Remove the superfluous (wrong) media from the drive

8.2.13 Message 0423

High mechanical resistance when inserting the medium on the drive

Host error number in ABBA/1 format

N113 Crash during medium insertion into a unit

Message in the AMU LOG Control Center

%1Crashsensor %2 during PUT to mediumdevice.<0423>

- %1 Message category
 (INFORMATION:, WARNING:, STATUS:, ERROR:)
%2 Controller name (Description from the graphical configuration)

Recognized by

- UNIT.PMC (F_CRASH_LW_PUT)

Possible causes

- Medium not inserted correctly during a **PUT**:
 - drive defect (medium blocks during insertion)
 - gripper defect (defective gripper sensor, loose toothed drive belts or other mechanical damage on the gripper)
 - handling for **PUT** not set correctly
 - invalid Teach point file or incorrect home offset values
 - more than one medium in the drive

Recovery measures

- Check
 - the handling with PMMaint (adjust corrective values with **Patch** when necessary)
 - the gripper with the gripper test program (replace gripper when necessary)
 - the home offset with **Motor Limits**
 - the Teach points (teach again with Trace KRN 8)
 - the drive
- Repeat the step motor installation (**Gripper Init**)
- Remove the superfluous (wrong) media from the drive

8.2.14 Message 0440

No medium found at position

Host error number in ABBA/1 format

N101 No medium found at specified coordinate

Message in the AMU LOG Control Center

%1The position is empty.<0440>

%1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)

Recognized by

- RACK.PMC (F_EMPTY_RACK)
- BOX.PMC

Possible causes

Error in the database (medium removed from position manually or entered in the database without physical insertion)

Recovery measures

- Check the position in the Archive (visually or **Inventory** command)
- Check whether the medium has fallen out and is on the Archive floor
- Check the databases:
 - the position status in the AMU
 - the Volser (check other Archive positions for the same Volser)
 - medium management system host software
- Correct the AMU database and the host Archive information



ATTENTION!

Differences to the Archive catalog of the host computer can occur. Execute an upload to the host Archive catalog after any changes to the Archive catalog or after an AMU command (☞ Host software documentation).

8.2.15 Message 0442

High mechanical resistance when gripping the medium

Host error number in ABBA/1 format

N101 Crash during removal of a medium from a unit

Message in the AMU LOG Control Center

%1Crashsensor %2 during GET from rack.<0442>

- %1 Message category
 (INFORMATION:, WARNING:, STATUS:, ERROR:)
%2 Controller name (Description from the graphical configuration)

Recognized by

- RACK.PMC (F_CRASH_RA_GET)
- BOX.PMC

Possible causes

- Medium not gripped correctly during a **GET**:
 - drive defect (medium no longer ejected far enough)
 - handling for **GET** not set correctly
 - more than one medium in the drive
- Invalid Teach point file or incorrect home offset values
- Handling for **PUT** not set correctly
- Gripper defect (defective gripper sensor, loose toothed drive belts or other mechanical damage on the gripper)

Recovery measures

- Check
 - the handling with PMMaint (adjust corrective values with **Patch** when necessary)
 - the gripper with the gripper test program (replace the gripper when necessary)
 - the home offset with **Motor Limits**
 - the Teach points (teach again with Trace KRN 8)

8.2.16 Message 0443

High mechanical resistance when gripping the medium

Host error number in ABBA/1 format

N111 Crash during medium insertion into a box

Message in the AMU LOG Control Center

%1Crashsensor %2 during PUT to rack.<0443>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Controller name (Description from the graphical configuration)

Recognized by

- UNIT.PMC (F_CRASH_RA_PUT)
- RACK.PMC
- BOX.PMC

Possible causes

- Medium not gripped correctly during a **GET**:
 - drive defect (medium no longer ejected far enough)
 - gripper defect (defective gripper sensor, loose toothed drive belts or other mechanical damage on the gripper)
 - handling for **GET** not set correctly
 - invalid Teach point file or incorrect home offset values
- More than one medium in the drive

Recovery measures

- Check
 - the handling with PMMaint (adjust corrective values with **Patch** when necessary)
 - the gripper with the gripper test program (replace gripper when necessary)
 - the home offset with **Motor Limits**
 - the Teach points (teach again with Trace KRN 8)

8.2.17 Barcode and Teach errors

8.2.18 Message 0501

Robot cannot find a Teach label

Host error number in ABBA/1 format

N016 Robot error (EXCP-AUS 5001)

Message in the AMU LOG Control Center

%1Teachlabel not recognized %2.<0501>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
- %2 Robot name (Description from the graphical configuration)

Recognized by

- TEACH.PMC (F_NO_LABEL)

Possible causes

- Teach sensor defective
- Teach label not present or dirty
- Base coordinates for Teach point wrong

Recovery measures

- Clean the Teach label
- Determine the base coordinates again (**Initial Teach**)
- Check the gripper with the gripper test program (replace the gripper when necessary)

8.2.19 Message 0502

Scanner cannot find a barcode on the medium

Host error number in ABBA/1 format

N304 Barcode label not readable

Message in the AMU LOG Control Center

%1Barcode not recognized %2.<0502>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
%2 Robot name (Description from the graphical configuration)

Recognized by

- AMU (KRN/P)

Possible causes

- No or defective barcode label on the medium
- Medium positioned around the wrong way in the rack position
- Barcode reading not set correctly
- Barcode type or code length not configured
- Scanner defective

Recovery measures

- Check
 - the medium (barcode label, position)
 - the barcode reading settings (offsets in **Patch PMMaint**)
- Set the barcode type and code length (**Barcode Test**)
- Check the scanner (replace components when necessary)

8.2.20 Message 0506

Physical coordinates for the Teach command beyond the software limit switch

Host error number in ABBA/1 format

N016 Robot error (EXCP-AUS 5001)

Message in the AMU LOG Control Center

%1Illegal range %2 during teaching.<0506>

- %1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)
%2 Controller name (Description from the graphical configuration)

Recognized by

- TEACH.PMC (F_FALSERANGE)

Possible causes

- Distance to the Teach label is too large (front query pin sensor "Medium present" is not triggered)
- Gripper crash sensor defective
- Base Teach coordinates incorrect

Recovery measures

- Check the Teach process
- Determine the base coordinates again (**Initial Teach**)
- Check the gripper with the gripper test program (replace the gripper when necessary)

8.2.21 Message 0522

Drive for the gripper turn axis not ready for operation

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1Turnaxis not ready<0522>

%1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)

Recognized by

- GRIPPER.PMC (F_TURN_NOT_READY)

Possible causes

- Step motor controller malfunction
- Malfunction in control for the turn axes motor (on the gripper)

Recovery measures

- Switch the AMU PC off and on again
- Check the cable connecting the AMU and the controller rack
- Replace the step motor controller
- Replace the gripper

8.2.22 Message 0524

Drive for the "Gripper open/close" motor is not ready

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1Gripaxis not ready <0524>

%1 Message category
(INFORMATION:, WARNING:, STATUS:, ERROR:)

Recognized by

- GRIPPER.PMC (F_GRIPPER_NOT_READY)

Possible causes

- Step motor controller malfunction
- Malfunction in control for the "Gripper open/close" motor (B-axis)

Recovery measures

- Switch the AMU PC off and on again
- Check the cable connecting the AMU and the controller rack
- Replace the step motor controller
- Replace the gripper

8.3 Robot controller status messages

8.3.1 Message 0799

Robot starting initialization

Host error number in ABBA/1 format

No message to the host

Message in the AMU LOG Control Center

%1%2 is being initialized.<0799>

%1 Message category

(INFORMATION:, WARNING:, STATUS:, ERROR:)

%2 Robot name (Description from the graphical configuration)

Recognized by

- ROBO.PMC (F_INIT)

Possible causes

Status message during the robot reference movement

Recovery measures

- Wait for the AMU message <00700> (Robot ready)

8.3.2 Message 0804

Robot controller received an illegal command

Host error number in ABBA/1 format

N010 Unknown robot command

Message in the AMU LOG Control Center

%1Illegal command %2.<0804>

%1 Message category
 (INFORMATION:, WARNING:, STATUS:, ERROR:)
%2 Controller name (Description from the graphical configuration)

Recognized by

- RACK.PMC (F_COMMAND)
- BOX.PMC

Possible causes

Syntax error in a command for I/O unit or linear rack operation

Recovery measures

- Use Trace to check the command

Robot controller status messages

9 AMU Messages



Information

Not all the messages in the log are error messages.

The AMU system messages are classified as follows:

- Error
 - cause serious impairment or even stoppage of operation. Situations leading to errors must be cleared immediately.
- Warning
 - must be observed but do not impair operation or only have a negligible influence on operation. Situations leading to warnings should be cleared at the next opportunity.
- Information
 - are status messages that visualize the operative flow and do not impair operation.

AMU system messages start with AMUxxxx where xxxx is the error code. The AMU software **Log Control Center** is only output as the number <xxxx> at the end of the system message.

Enter the `Help AMUxxxx` command on the OS/2 command line to call up an explanatory text on the message shown.

9.1 AMU errors

Message xxxx

where xxxx is the AMU error number.

Host error number in ABBA/1 format

Nxxx

where xxx is a three digit error number. The AMU error number is converted to an ABBA/1 error number for host software communicating in ABBA/1 format.



Information

Various AMU errors are converted to an ABBA/1 format error number and shown by the host software.

AMU Log message

Error message in the **AMU Log Control Center**.

The variables %1 to %8 are replaced by texts depending on the error situation and the configuration. This is why the same error number can be output for differing texts.

Originator

AMU component that caused or identified an error. The component reporting an error must not always be the originator of the error.

Possible causes

Error cause.

Recovery measures

Measures to clear or overcome the error.

9.1.1 Message 1001

Internal AMU software error

Host error number in ABBA/1 format

None

AMU Log message

Internal Error in AMU system software. File: %1 line: %2 function: %3 rc:%4

- %1 Module in which the error occurred (e.g. KrnLUtil.Dll)
- %2 Function in module %1 in which the error occurred
- %3 Line number of the function in %2
- %4 Return code of the function called in this line

Originator

AMU system software

Possible causes

Internal error in a runtime module. This can be:

- an unexpected return code or
- an unknown return code or
- a branch in an AMU program to a deadlock situation.

Recovery measures

- Terminate the AMU software properly when possible (**Shutdown AML..**)
- Restart the AMU (`startup`)

9.1.2 Message 1002

Occurring event cannot be processed

Host error number in ABBA/1 format

N002 Unexpected message from robot, serious error

AMU Log message

Event %1 is unknown for eventhandler

%1 Number of the event that could not be identified

Originator

AMU system software

Possible causes

The KrnSet.Dll module is not compatible with the AMU version in use or is not installed.

	AML/2	AML/E	AML/J
Original module	C:\AMU\KrnSetR.DLL		C:\AMU\DLL\KrnSetP.DLL
Module used	C:\AMU\DLL\KrnSet.DLL		

Recovery measures

- Check the KrnSet*.DLL modules in the directory C:\AMU\DLL
(dir c:\amu\dll\KrnSet*.dll)
 - re-install the AMU software when the correct module is not present or
 - copy the module when the wrong module is in use
(e.g. copy krnsetp.dll krnset.dll in AML/J)



ATTENTION!

Backup the Teach point files and the *.INI files of the actual AMU version before re-installing the AMU software.

9.1.3 Message 1003

Dynamic Link library cannot be loaded

Host error number in ABBA/1 format

N005 Robot not ready

AMU Log message

The module %1 cannot be loaded, RC= %2

- %1 Name of the module that could not be loaded
- %2 Return code of the load function (DosLoadModule) that was returned by the module %1 to be loaded

Originator

AMU system software

Possible causes

- Module is not installed
- Module cannot be loaded by the Load function

Recovery measures

- Re-install the AMU software
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems when this error occurs again



ATTENTION!

Backup the Teach point files and the *.INI files of the actual AMU version before re-installing the AMU software.

9.1.4 Message 1004

An entry function of a dynamic Link library (.DLL) cannot be called

Host error number in ABBA/1 format

N005 Robot not ready

AMU Log message

The module %2 cannot be linked, RC= %1

- %1 Return code of the link function (DosQueryProcAddr) that was returned after the call to the entry function of module %2
- %2 Name of the module that could not be loaded

Originator

AMU system software

Possible causes

- Module is not installed
- Module unreadable and cannot be loaded by the Load function

Recovery measures

- Re-install the AMU software
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems when this error occurs again



ATTENTION!

Backup the Teach point files and the *.INI files of the actual AMU version before re-installing the AMU software.

9.1.5 Message 1012

AMUINI.INI file not found

Host error number in ABBA/1 format

N005 Robot not ready

AMU Log message

There is no %1 in the current directory on in the DPATH.

%1 Name of the file not found ([IniDatei].INI)

Originator

AMU system software

Possible causes

- AMUINI.INI is not installed
- AMUINI.INI file is unreadable
- Environment variable AMUPATH either not set or set incorrectly

Recovery measures

Check whether

- the AMUINI.INI file is available
- the environment variable AMUPATH is set correctly in the CONFIG.SYS file.
The correct entry is:
SET AMUPATH=[Drive]:\[AMU Directory]
e.g.: SET AMUPATH=C:\AMU
- a current backup copy of the AMUINI.INI file is available:

When you have a backup copy:

- Copy the backup version into the AMU directory specified in the environment variable AMUPATH



ATTENTION!

Data loss! Always create a new backup copy after every configuration modification.

When you do not have a backup copy:

- Create a new, empty AMUINI.INI file
- Delete the unreadable AMUINI.INI file (`del amuini.ini`)
- Copy the AMUINI.BAS file to AMUINI.INI
(`copy amuini.bas amuini.ini`)
- When the AMUINI.BAS file does not exist, use the MAKEINI.EXE program to create a new AMUINI.INI file from the AMUINI.RC file:
 - open an OS/2 window
 - select the AMU software directory (`cd AMU`)
 - delete the unreadable AMUINI.INI file (`del amuini.ini`)
 - start the program as follows:
`makeini amuini.ini amuini.rc`
 - then check that the AMUINI.INI file has been created
(`dir amuini.ini`)



ATTENTION!

You must reconfigure the complete unit because the configuration data were lost.

Note

This message only appears up to AMU Version 2.1

9.1.6 Message 1013

An expected entry is missing in the AMUINI.INI configuration file

Host Message ABBA/1 Format

N003 Serious error in the Archive PC Set-up file

AMU Log message

There is no entry %1 in configuration file.

%1 Name of the entry missing in the AMUINI.INI file

Originator

AMU system software

Possible causes

- AMUINI.INI file not compatible with the AMU version in use
- AMUINI.INI file is damaged

Recovery measures

- Check whether the correct AMUINI.INI file is being used
- Create a new AMUINI.INI file (☞ Page 9 - 8)

Note

This message only appears up to AMU Version 2.1

9.1.7 Message 1014

An action cannot be executed. This is a sequence error that can occur after error numbers 1012 and 1013.

Host error number in ABBA/1 format

N005 Robot not ready

AMU Log message

The command cannot be processed because of an initialization error.

Originator

AMU system software

Possible causes

- (☞ “Message 1012” as from Page 9-8) or
- (☞ “Message 1013” as from Page 9-10)

Recovery measures

- Check in the AMU Log whether Message 1012 or 1013 occurred beforehand and, if this is the case, follow the instructions for these error numbers

Note

This message only appears up to AMU Version 2.1

9.1.8 Message 1016

A storage request from the AMU software to the OS/2 operating system could not be satisfied. The operating system could not provide any storage space.

Host error number in ABBA/1 format

N005 Robot not ready

AMU Log message

There's not enough memory. Function %1.

%1 Name of the function in which the error occurred

Originator

AMU system software

Possible causes

- No storage space could be requested within an internal AMU function
The AMU software requests dynamic main storage in certain situations and then releases the main storage after use
The OS/2 operating system could not provide any storage space

Recovery measures

- Check whether the CONFIG.SYS file has an entry MEMMAN=SWAP and enter it on any line when it is not already specified (☞ OS/2 Reference Manual)
- Check whether there is sufficient space available on the hard disk determined by the entry SWAPPATH=[Directory:\Path specification]
- Delete all unnecessary files on the hard disk

9.1.9 Message 1017

One of the services specified in the configuration file, e.g. the database service, cannot be started by the AMU software

Host error number in ABBA/1 format

N003 Serious error in the Archive PC Set-up file

AMU Log message

Service in the configuration file couldn't be started.

Originator

AMU system software

Possible causes

- The configuration file has invalid entries
- The configured service is not installed
- The configured service is installed but cannot be started

Recovery measures

- Check the configuration file
- Check whether the required service has been installed
- Check whether the installation was correct when the service is already installed
- Re-install or install the service

Note

This message only appears up to AMU Version 2.1

9.1.10 Message 1018

Configuration data could not be stored

Host error number in ABBA/1 format

N003 Serious error in the Archive PC Set-up file

AMU Log message

Configuration data couldn't been written.

Originator

AMU system software

Possible causes

- (☞ “Message 1012” as from Page 9-8)
- (☞ “Message 1013” as from Page 9-10)

Recovery measures

- Create a new configuration file when it does not already exist
(☞ “Message 1012” as from Page 9-8)
- Repeat the graphical configuration

Note

This message only appears up to AMU Version 2.1

9.1.11 Message 1019

The HOC module identified an error for a communication partner during the initialization phase

Host error number in ABBA/1 format

N005 Robot not ready

AMU Log message

Hoc detects errors for partner %3: module %2 in HocInit returns rc %1.

- %1 Return code of the module in %2
- %2 Communication module (e.g. HocAppc.Dll) that caused the initialization error
- %3 Configurable partner name (e.g. H01) communicating via module %2

Originator

AMU system software

- Module HOC.EXE

Possible causes

- Communication program such as Communications Manager/2 or TCP/IP for OS/2 not active
- Configuration error in the communication parameters for the respective partner
- Configuration error in a communication program such as CM/2 or TCP/IP for OS/2
- The respective module cannot start internal services (e.g. Send, Receive). This is especially the case for AMU versions up to 2.1 for an APPC connection when a communication module is terminated.

Recovery measures

- Check whether a communication program such as CM/2 or TCP/IP was started
- Check the communication parameters configured for the respective partner
- Compare the communication program parameters with the parameters in the AMU
- Check the interface parameters of the communication partner:
 - VTAM definitions for communication via SNA networks
 - V24 interface parameters for ROBAR connections
 - V24 interface parameters for rho controller connections
 - settings for the control unit used for Coax None-SNA connections
 - definitions in the TCP/IP network

9.1.12 Message 1025

KRN.EXE could not identify a message. The data leading to this message are rejected by the kernel

Host error number in ABBA/1 format

N010 Unknown robot command

AMU Log message

KRN couldn't identify message: %1.

%1 Message received

Originator

Sender of the data received

Possible causes

- A telegram in ABBA/1 format includes an unknown command
- The telegram syntax is wrong (e.g. acom instead of ACOM)
- A telegram in AML/2 format includes an unknown command
- A time delay in a HOC-3964R module caused protocol errors (acknowledgements from a rho controller were sent twice and the kernel cannot identify the second telegram)

Recovery measures

- Check whether the sender of the telegram is supported by the AMU software in use
- Check whether the sender of the telegram uses optional command tables containing an invalid command
- Check the parameters for the acknowledgement delay time on the rho controller

9.1.13 Message 1032

A requested Volser could not be found in the AMU database

Host error number in ABBA/1 format

N301 Unknown Volser

AMU Log message

The given Volser %1 could not be found in database.

%1 The requested Volser

Originator

- Function that triggered the search action
- AMU database system

Possible causes

- The Volser field in the command telegram contains invalid specifications
- The requested Volser is not entered in the database
- The Volser does not have a home position

Recovery measures

- Check in the AMU log whether the Volser was ejected from the Archive by an **Eject Total** command
- Check whether the Volser was ejected from the Archive by an **Update Clear** command

9.1.14 Message 1033

A coordinate searched for in the AMU database could not be found

Host error number in ABBA/1 format

N201 Unknown unit (coordinate for drive)

N401 Coordinate not defined (all other coordinates)

AMU Log message

The given position %1 could not be found in database.

%1 Rack position searched for in the AMU database

Originator

- Function that triggered the search action
- AMU database system

Possible causes

- The coordinates field in the command telegram contains invalid specifications
- The coordinate searched for is not defined in the database

Recovery measures

- Check the command telegram received
- Add the coordinates to the AMU database
- Open the graphical configuration
- Correct the configuration
- Select the **Archive.. Update devices** command in the **Service** menu

9.1.15 Message 1034

The AMU could not assign a robot to a requested action (e.g. Mount, Keep)

Host error number in ABBA/1 format

N011 Coordinates specified for wrong robot

AMU Log message

No robot could be selected.

Originator

- Function that triggered the action
- AMU database system

Possible causes

- The robot requested for the action is not configured
- The robot requested for the action does not have access authorization for the required Volser

Recovery measures

Check the configuration:

- Is the respective robot configured?
- Does the respective robot have access authorization for the required Volser?

9.1.16 Message 1038

The contents of the option field of the command telegram received are unknown

Host error number in ABBA/1 format

N002 Unexpected message from robot, serious error

AMU Log message

Unknown option in host command: %1

%1 The telegram with the unknown option

Originator

Sender of the telegram (host)

Possible causes

The connected host software uses options unknown to the AMU software

Recovery measures

Ensure that the host and AMU software used are compatible

9.1.17 Message 1043

No communication partner found connected on a serial interface

The handshake line DSR (pin 6) of the serial interface is used for the check. When this line has the level HIGH it can be assumed that the partner is connected. This message can occur when the Siemens 3964R serial communication protocol is used with the following communication partners:

- rho controller
- Controller for I/O unit/A

Host error number in ABBA/1 format

N005 Robot not ready

AMU Log message

There is no communication partner connected to %1

%1 The configured serial interface (e.g. COM01)

Originator

- Hoc3964.Dll module for serial communication
- Connected communication partner
- Hardware used
- Automatic Data Switch (ADS) used

Possible causes

- The connected controller is not switched on
- The serial cable is not connected
- The used ADS is not set to AUTO
- The used ADS has no voltage (not connected to power supply)
- ADS connection error (e.g. the AMU output port does not correspond to the ADS output port)
- The serial cable is connected to the wrong port
- The serial cable used is not wired correctly
- The connected controller does not support the handshake procedure used (DTR/DSR)
- The software of the connected controller has the wrong status and does not set the handshake line correctly
- The serial communication hardware of the connected controller is defective

Recovery measures

- Check whether
 - the connected controller is ready for operation
 - the serial cable is connected
 - the serial cable is connected to the port you configured
- Check the wiring of the serial cable used

The following wiring examples depend on the hardware used:



Fig. 9-1: SubD 9-pole (female) to SubD 9-pole (female) (AMU <--> AMU)

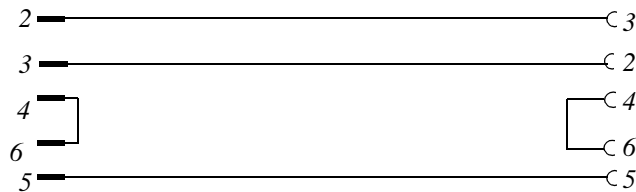


Fig. 9-2: SubD 9-pole (male) to SubD 9-pole (female) (ADS activation)

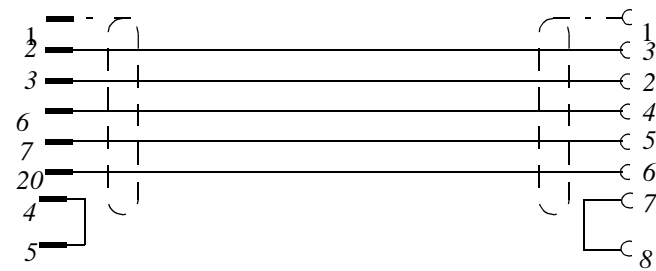


Fig. 9-3: SubD 25-pole (male) to SubD 9-pole (female) (Controller <--> AMU)

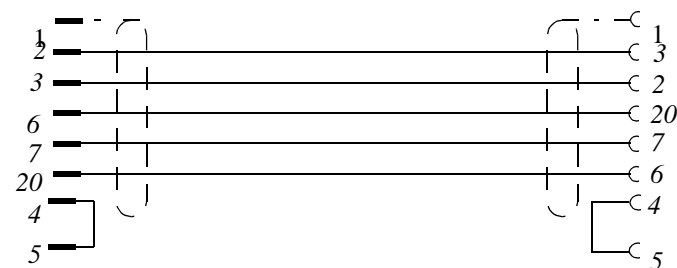


Fig. 9-4: SubD 25-pole (male) to SubD 25-pole (female) (Controller <--> AMU)

- Check the communication parameters when rho controllers are used
- Switch the connected controllers off and on to attain a defined basic status
- Replace defective hardware for serial communication

Note

Connected partners are no longer checked as from Version 2.3

9.1.18 Message 1044

The initialization could not be carried out for a serial communication port

Host error number in ABBA/1 format

N005 Robot not ready

AMU Log message

Failure setting the device control block of %1

%1 Serial interface on which the error occurred

Originator

- Hoc3964.Dll module for serial communication when using the Siemens 3964R protocol
- HocAml2.Dll module for serial communication when using the AML/2 protocol
- Hardware used

Possible causes

- Internal error in an AMU communication module

Recovery measures

- Terminate the AMU software properly (**Shutdown AML..**)
- Restart the AMU (`startup`)
- Test another free communication interface
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

9.1.19 Message 1045

The initialization could not be carried out for a serial interface and the device information could not be read out

Host error number in ABBA/1 format

N005 Robot not ready

AMU Log message

Failure getting the device control block of %1

%1 Serial interface on which the error occurred

Originator

- Hoc3964.Dll module for serial communication when using the Siemens 3964R protocol
- HocAml2.Dll module for serial communication when using the AML/2 protocol
- Hardware used

Possible causes

- Internal error in an AMU communication module

Recovery measures

- Terminate the AMU software properly (**Shutdown AML..**)
- Restart the AMU (*startup*)
- Test another free communication interface
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

9.1.20 Message 1046

An error occurred on a serial interface when setting the handshake line (modem control signal)

Host error number in ABBA/1 format

N005 Robot not ready

AMU Log message

Failure setting the modem control signal of %1

%1 Serial interface on which the error occurred

Originator

- Hoc3964.Dll module for serial communication when using the Siemens 3964R protocol
- HocAml2.Dll module for serial communication when using the AML/2 protocol
- Hardware used

Possible causes

- Internal error in an AMU communication module

Recovery measures

- Terminate the AMU software properly (**Shutdown AML..**)
- Restart the AMU (**startup**)
- Test another free communication interface
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

9.1.21 Message 1047

The initialization could not be carried out for a serial interface and the following transfer parameters could not be set:

- number of data bits
- number of stop bits
- parity

Host error number in ABBA/1 format

N005 Robot not ready

AMU Log message

Failure setting the line characteristics of %1

%1 Serial interface on which the error occurred

Originator

- Hoc3964.Dll module for serial communication when using the Siemens 3964R protocol
- HocAml2.Dll module for serial communication when using the AML/2 protocol
- Hardware used

Possible causes

Erroneous configuration of the interface used by the AMU

Recovery measures

- Check the plausibility of the parameters in the configuration of the interface involved
- Example for a connection using the AML/2 protocol
 - **Databits 8**
 - **Stopbits 2**
 - **Parity None**

AMU errors

- Example for a connection using the Siemens 3964R protocol
 - **Databits 8**
 - **Stopbits 1**
 - **Parity Even**

9.1.22 Message 1048

The initialization could not be carried out for a serial interface and the transfer rate (baud rate) could not be set

Host error number in ABBA/1 format

N005 Robot not ready

AMU Log message

Failure setting the baud rate of %1

%1 Serial interface on which the error occurred

Originator

- Hoc3964.Dll module for serial communication when using the Siemens 3964R protocol
- HocAml2.Dll module for serial communication when using the AML/2 protocol
- Hardware used

Possible causes

Erroneous configuration of the interface used by the AMU

Recovery measures

- Check the plausibility of the parameters in the configuration of the interface involved

9.1.23 Message 1049

Serial interface could not be opened

Host error number in ABBA/1 format

N005 Robot not ready

AMU Log message

Failure opening %1

%1 Serial interface that could not be opened

Originator

- Hoc3964.Dll module for serial communication when using the Siemens 3964R protocol
- HocAml2.Dll module for serial communication when using the AML/2 protocol
- Hardware used

Possible causes

- Interface is not installed
- Interface in multiple use (already opened)
- Driver not installed or not installed correctly
- Parameter files for the RIC board invalid
- Interrupt problems with AT-Bus computers (ISA-Bus architecture)

Recovery measures

Check whether

- the interface is physically installed
- the interface has multiple definitions in the configuration
- the interface is being used for the serial mouse
- DCAF is installed and perhaps uses this interface
- the "Support for serial units" is entered in the OS/2 system configuration
- the error occurs on interfaces on a RIC board in use. If this is the case, check whether the Quadron driver for the RIC board is entered in the CONFIG.SYS file. The entries should be as follows:
SET QPATH=C:\QCF\RICEXE;C:\QCF\OS2EXE
DEVICE=C:\QCF\OS2EXE\QCFDEV.SYS C:\QCF\OS2EXE\QPARAM.PRM
DEVICE=C:\QCF\OS2EXE\QCOMDEV.SYS C:\QCF\OS2EXE\QCOMPARM.PRM
- the software support for the RIC board used is installed and, if not, install the software
- the settings in the RIC parameter files QPARAM.PRM and QCOMPARM.PRM are correct (☞ Quadron Software Manual)
- the hardware settings for AT-Bus computers, such as
 - base address
 - interrupt
 - bus width
 - shared memorydo not lead to conflicts with the RIC parameters
- other adapter boards such as a Token Ring adapter or an Ethernet adapter use the same interrupt or the same base address

9.1.24 Message 1050

A module for serial communication could not carry out an internal initialization

Host error number in ABBA/1 format

N005 Robot not ready

AMU Log message

Could not start the read thread of %1

%1 Serial interface on which the error occurred

Originator

- Hoc3964.Dll module for serial communication when using the Siemens 3964R protocol
- HocAml2.Dll module for serial communication when using the AML/2 protocol

Possible causes

- Internal error in an AMU communication module

Recovery measures

- Terminate the AMU software properly (**Shutdown AML..**)
- Restart the AMU (`startup`)
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

9.1.25 Message 1051

A module for serial communication could not carry out an internal initialization

Host error number in ABBA/1 format

N005 Robot not ready

AMU Log message

Could not start the write thread of %1

%1 Serial interface on which the error occurred

Originator

- Hoc3964.Dll module for serial communication when using the Siemens 3964R protocol
- HocAml2.Dll module for serial communication when using the AML/2 protocol

Possible causes

- Internal error in an AMU communication module

Recovery measures

- Terminate the AMU software properly (**Shutdown AML..**)
- Restart the AMU (`startup`)
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

9.1.26 Message 1053

A process within the AMU software used terminated due to a software error

Host error number in ABBA/1 format

AMU Log message

The module %1 ended abnormally because of a software trap

%1 Process (e.g. module CON.Exe) that caused the error

Originator

AMU software process (%1)

Possible causes

- Internal software error that lead to the process abort

Recovery measures

- Terminate the AMU software properly (**Shutdown AML..**)
- Restart the AMU (`startup`)
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

9.1.27 Message 1054

A process within the AMU software used terminated due to a software error and the process was aborted deliberately

Host error number in ABBA/1 format

None

AMU Log message

The module %1 ended abnormally because of a kill process command

%1 Process (e.g. module KRN.Exe) that was aborted

Originator

A user who pressed the <CTRL>+<C> button combination in the kernel window for example

Possible causes

None

Recovery measures

- Terminate the AMU software properly (**Shutdown AML..**)
- Restart the AMU (`startup`)

9.1.28 Message 1055

A process within the AMU software used terminated due to a hardware error

Host error number in ABBA/1 format

None

AMU Log message

The module %1 ended abnormally because of a hardware error abort.

%1 Process (e.g. module HOC.Exe) that caused the error

Originator

Hardware used

Possible causes

AMU computer hardware error such as

- Memory error
- Hard disk error

Recovery measures

- Execute a system test for the hardware
- React accordingly to the resulting messages

9.1.29 Message 1058

The AMU database system could not be terminated

Host error number in ABBA/1 format

None

AMU Log message

The module %1 did not stop correctly due to an error

%1 Process (e.g. module HOC.Exe) that caused the error

Originator

AMU database system

Possible causes

- Preceding SQL error

Recovery measures

- Check the AMU log for SQL error messages
- Correct the SQL error (↩ DB/2 Manual)

9.1.30 Message 1059

A message is output from the DB/2 database system used by the AMU

Host error number in ABBA/1 format

N004 Serious error in the Archive mirror

AMU Log message

%1

%1 Database system message with the error code SQLxxxx

Originator

DB/2 database system

Possible causes

SQL error (↔ DB/2 Manual)

Recovery measures

- Backup the database on floppy disks
- Eliminate the database error (↔ DB/2 Manual)
- Restore the backup copy of the database

9.1.31 Message 1062

The AMU database could not be created due to an error

Host error number in ABBA/1 format

N004 Serious error in the Archive mirror

AMU Log message

The database %1 wasn't created, there is an OS/2 database engine error.

%1 AMU database name

Originator

AMU database system

Possible causes

SQL error (☞ DB/2 Manual)

Recovery measures

- Check the AMU log for SQL error messages
- Correct the SQL error (☞ DB/2 Manual)

9.1.32 Message 1065

A table in the AMU database could not be created

Host error number in ABBA/1 format

N004 Serious error in the Archive mirror

AMU Log message

The table %1 wasn't created, there is an OS/2 database engine error

%1 Name of the table that could not be created

Originator

AMU database system

Possible causes

SQL error (↔ DB/2 Manual)

Recovery measures

- Check the AMU log for SQL error messages
- Correct the SQL error (↔ DB/2 Manual)

9.1.33 Message 1068

A module to access the AMU database could not be linked to the database

Host Message ABBA/1 Format

N004 Serious error in the Archive mirror

AMU Log message

The module %1 wasn't bound successfully

%1 Name of the module that could not be linked to the database

Originator

AMU database system

Possible causes

SQL error (☞ DB/2 Manual)

Recovery measures

- Check the AMU log for SQL error messages
- Correct the SQL error (☞ DB/2 Manual)

9.1.34 Message 1081

The environment variable AMUPATH is not set or not set to the directory containing the AMUCONF.INI file (AMUINI.INI up to Version 2.1)

Host Message ABBA/1 Format

N005 Robot not ready

AMU Log message

The AMUPATH environment variable isn't set correctly, can't find AMUINI.INI

Originator

AMU system software

Possible causes

- The environment variable is not set
- The environment variable is not set correctly

Recovery measures

Check whether

- the environment variable is set
- a valid configuration file AMUCONF.INI (AMUINI.INI) is located in the directory pointed to by the environment variable

9.1.35 Message 1082

A medium should be moved to a certain coordinate with the **Move** command but is on the drive at the moment

Host error number in ABBA/1 format

N302 Volser not in Archive

AMU Log message

The requested position %1 does not contain a medium (Archive catalogue)

%1 Position where the medium should be located

Originator

- AMU database system
- Function triggering the **Move** command

Possible causes

- A medium is on the drive but should be moved to another position in the Archive
- A medium is marked as **Mounted** in the database even though it is not on the drive
- A Volser has multiple entries in the AMU database system

Recovery measures

- Wait until a **Keep** command is executed on the medium and then repeat the **Move** command
- Check the rack position with the **Inventory** command
- Correct the attribute error in the AMU database system when the medium is at the rack position
- Rack position in the Archive (from **Mounted** to **Occupied**)
- Drive (from **Occupied** to **Empty**)



ATTENTION!

Differences to the Archive catalog of the host computer can arise. Carry out the changes on the host (☞ Host software documentation).

9.1.36 Message 1083

Mount command for an occupied drive

Host error number in ABBA/1 format

N202 Unit still in use (recognized by the AMU)

AMU Log message

The requested drive %1 is not empty (Archive catalogue)

%1 Drive marked as occupied in the database

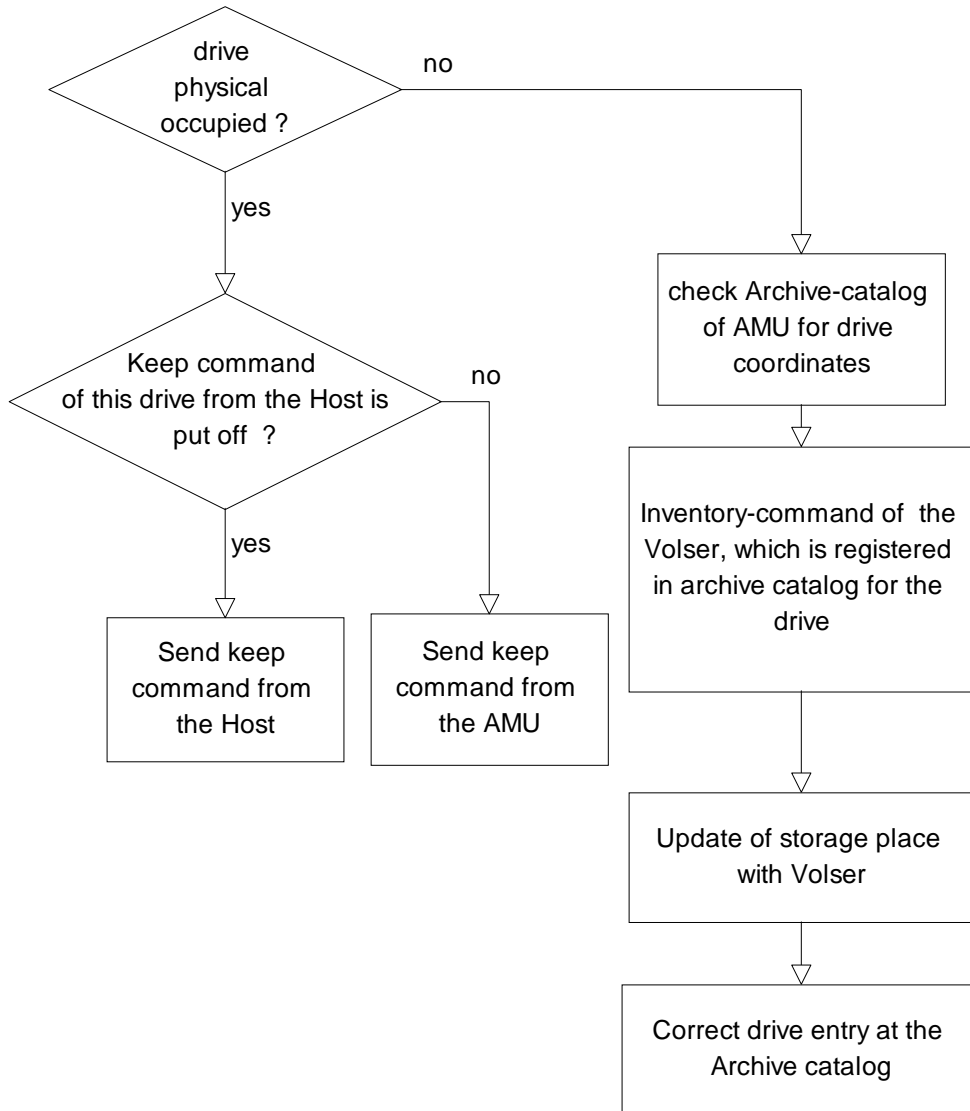
Originator

- AMU database system
- Function that triggered the **Mount** command

Possible causes

- The database does not match the physical Archive
- A database on a host system (e.g. HACCP/MVS) does not match the AMU database
- Several host systems use the same drive without knowing the status of the drive in any other host system
- A **Keep** command was acknowledged for the drive but not executed

Recovery measures



ATTENTION!

Differences to the Archive catalog of the host computer can occur. Execute an upload to the host Archive catalog after any changes to the Archive catalog or after an AMU command (☞ Host software documentation).

9.1.37 Message 1084

The AMU software received a command from an unknown partner (requester)

Host error number in ABBA/1 format

N001 Syntax error

AMU Log message

The specified requester is not known to AMU

Originator

- AMU software
- Host software

Possible causes

- The AMU software configuration does not match the values configured for the host software

Recovery measures

Check both configurations to see whether the respective requester is configured the same on both sides



Information

The requester name cannot be configured on Robar up to Version 2.4. Ensure that the requester name (host name) H01 is entered for Robar in the AMU configuration.

9.1.38 Message 1085

No robots configured in the AMU. This message is sent by commands that trigger robot actions such as **Mount**, **Keep**, ...

Host error number in ABBA/1 format

N005 Robot not ready

AMU Log message

There is no robot in configuration at all.

Originator

AMU software

Possible causes

No robots are configured (AMU graphical configuration)

Recovery measures

Check the robot configuration in the graphical configuration

9.1.39 Message 1086

No robots active at this moment

Host error number in ABBA/1 format

N005 Robot not ready

AMU Log message

There is no robot available at this moment.

Originator

AMU software

Possible causes

- The robots are switched off
- A ROSA command was issued and the robots set to inactive

Recovery measures

- Check whether the robots are switched on and switch on as necessary
- Reactivate the robots, e.g.
 - ROSA command (host software, ABBA/1 command format)
 - STAT command (host software, AML/2 command format)
 - STAT command (AMU)
 - Reset the robot controller (asynchronous STAT telegram to AMU and host)

9.1.40 Message 1091

The AMU database does not correspond to the status reported by the robot

Host error number in ABBA/1 format

N205 Unit is empty (recognized by the robot)

AMU Log message

The requested position does not contain a medium (checked by robot).

Originator

Robot software

Possible causes

- The AMU database does not match the actual Archive
 - manual access to the Archive without updating the AMU database
 - operator error (e.g. Update command with wrong status)
 - unexpected termination of the AMU software due to power failure, hardware or software error
- False reaction from robot such as
 - invalid information during barcode reading
 - invalid information when checking whether a slot is occupied or not

Recovery measures

- Check the robot hardware (barcode reading, media recognition)
- Perform an inventory for the position with automatic update (update database).



ATTENTION!

Differences to the Archive catalog of the host computer can occur. Execute an upload to the host Archive catalog after any changes to the Archive catalog or after an AMU command (☞ Host software documentation).

9.1.41 Message 1092

A robot identifies a drive as being occupied during a **Mount** to the drive

Host error number in ABBA/1 format

N204 Unit in use (recognized by the robot)

AMU Log message

The requested drive %1 is not empty (checked by robot).

%1 Name of the respective drive

Originator

Robot software

Possible causes

- The AMU database does not match the actual Archive
 - manual access to the Archive without updating the AMU database
 - operator error (e.g. Update command with wrong status)
 - unexpected termination of the AMU software due to power failure, hardware or software error
- False reaction from robot such as
 - invalid information during barcode reading
 - invalid information when checking whether a slot occupied is or not

Recovery measures

- Check the robot hardware (barcode reading, media recognition)
- Perform an inventory for the position with automatic update (update database)



ATTENTION!

Differences to the Archive catalog of the host computer can occur. Execute an upload to the host Archive catalog after any changes to the Archive catalog or after an AMU command (☞ Host software documentation).

9.1.42 Message 1094

Keep command for a drive that is marked as empty in the AMU database

Host error number in ABBA/1 format

N203 Unit is empty (recognized by the AMU)

AMU Log message

The requested drive %1 is empty (Archive catalogue).

%1 Empty drive

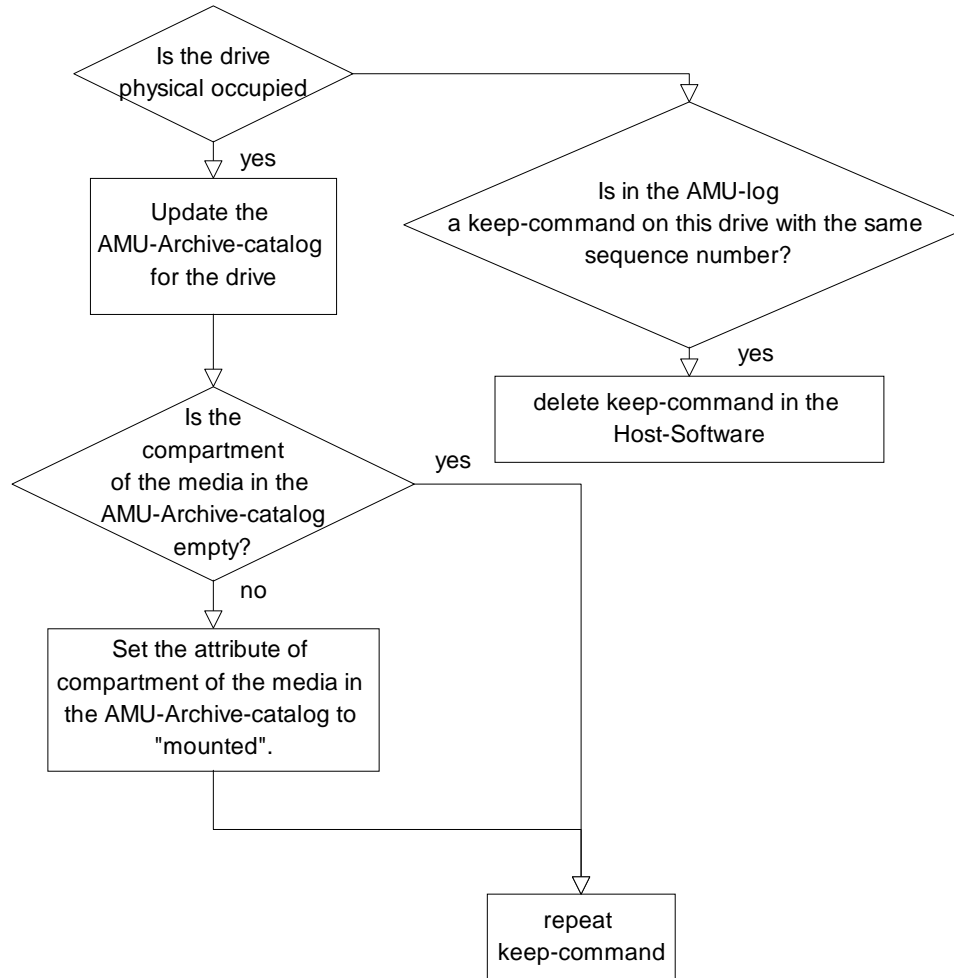
Originator

AMU software

Possible causes

- The AMU database does not match the actual Archive
 - operator error (e.g. Update command with wrong status)
- A host repeated a Keep command (e.g. acknowledgement for the Keep command not received by the host software)
- Keep command executed without preceding Mount command
- Keep command executed by the AMU

Recovery measures



ATTENTION!

Differences to the Archive catalog of the host computer can occur. Execute an upload to the host Archive catalog after any changes to the Archive catalog or after an AMU command (→ Host software documentation).

9.1.43 Message 1095

A Keep command was issued but the coordinate is marked as occupied in the Archive (storage tower, linear shelf or I/O unit) in the Archive catalog.

Host error number in ABBA/1 format

N403 Position in use

AMU Log message

The requested position %1 is not empty (Archive catalogue).

%1 Name of the respective coordinate

Originator

AMU software

Possible causes

- The AMU database does not match the actual Archive
 - operator error (e.g. Update command with wrong status)
 - medium entered twice in the AMU Archive catalog
- The medium at the home coordinate of the medium in the drive was inserted

Recovery measures

- Perform an inventory for the position with automatic update (update database)



ATTENTION!

Differences to the Archive catalog of the host computer can occur. Execute an upload to the host Archive catalog after any changes to the Archive catalog or after an AMU command (☞ Host software documentation).

9.1.44 Message 1102

A coordinate for a component (e.g. drive, storage tower or linear shelf) cannot be found in the Teach point file (KrnRefPt.R**)

Host error number in ABBA/1 format

N011 Coordinates specified for wrong robot

AMU Log message

Coordinate for %1 %2 not found in file %3.

%1 Component of the coordinate searched for (e.g. tower 1)

%2 Segment of the coordinate searched for (e.g. segment 1)

%3 Name of the file that cannot be opened

Originator

AMU software

- Module KrnPhys.Dll

Possible causes

- The respective coordinate has not been taught
- Teach point file has been deleted

Recovery measures

- Teach the respective coordinate again
- Restore the backup copy of the Teach point file to the AMU directory

9.1.45 Message 1105

The KrnPhys.Dll module received a message with syntax errors

Host error number in ABBA/1 format

N001 Syntax error

AMU Log message

%1 %2 %3

%1 Optional text

%2 Optional text

%3 Optional text

Originator

AMU software (module KrnPhys.Dll)

Possible causes

The error text output describes the error

Recovery measures

- Eliminate the error using the error text output
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

9.1.46 Message 1111

The KrnPhys.Dll module received an unknown command from the AMU kernel (KRN/L)

Host error number in ABBA/1 format

N001 Syntax error

AMU Log message

The given AMU-command %1 is invalid

%1 Unidentifiable command

Originator

AMU software

Possible causes

Internal interface error

Recovery measures

- Terminate the AMU software properly (**Shutdown AML..**)
- Restart the AMU (`startup`)
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

9.1.47 Message 1122

Unauthorized command received by the AMU (command with the same sequence number still in the AMU wait-queue)

Host error number in ABBA/1 format

N007 Non-executable command

AMU Log message

A sequence number has been used twice. Therefore the second command cannot be processed.

Originator

Sender of the respective message

Possible causes

A connected host used the same sequence number for different commands

Recovery measures

- Ensure that the host software uses unique sequence numbers

9.1.48 Message 1123

AMU command wait-queue limit exceeded and no new commands will be accepted

Host error number in ABBA/1 format

N007 Non-executable command

AMU Log message

The host(s) sent more commands than executable at one time.

Originator

The connected hosts

Possible causes

Too many messages were sent to the AMU

Recovery measures

- Ensure that the host software does not send too many messages to the AMU
 - a maximum of two commands from a host will be accepted in the AMU command wait-queue (new commands can first be sent after one of the commands has been acknowledged)
 - the AMU can process a maximum of 240 commands (sum of commands sent to the AMU from all connected hosts and the AMU operator interface)

9.1.49 Message 1131

Command cannot be executed in Simulation mode

Host error number in ABBA/1 format

N007 Non-executable command

AMU Log message

Command %1 cannot be executed in simulation or configuration mode.

%1 Command that could not be executed

Originator

AMU software

Possible causes

AMU switches to Simulation mode after

- the host command (MAN) or
- the **Simulation only** command in the **Options** menu on the operator interface

Recovery measures

Reset the AMU to Normal mode again with either

- the host command AUTO (☞ Host software documentation) or
- the **Simulation only** command in the **Options** menu on the operator interface



ATTENTION!

Differences can arise between the Archive catalog and the Archive. Only use the Simulation mode to test the software without a real Archive.

Note

All commands are executed as from AMU Version 2.3.

9.1.50 Message 1136

Move command executed on a rack position marked as occupied in the AMU Archive catalog

Host error number in ABBA/1 format

N403 Position in use

AMU Log message

The requested target device %1 is not empty (Archive catalogue).

%1 Occupied target coordinate

Originator

AMU software

Possible causes

- The AMU database does not match the actual Archive
 - operator error (e.g. Update command with wrong status)
 - medium entered twice in the AMU Archive catalog
- The medium at the home coordinate of the medium in the drive was inserted

Recovery measures

- Perform an inventory for the position with automatic update (update database)



ATTENTION!

Differences to the Archive catalog of the host computer can occur. Execute an upload to the host Archive catalog after any changes to the Archive catalog or after an AMU command (☞ Host software documentation).

9.1.51 Message 1137

Move command executed on a rack position marked as free in the AMU Archive catalog

Host error number in ABBA/1 format

N402 No medium found at the specified coordinate

AMU Log message

The requested source device %1 is empty (Archive catalogue).

%1 Start coordinate marked as free

Originator

AMU software

Possible causes

- The AMU database does not match the actual Archive
 - operator error (e.g. Update command with wrong status)
 - medium entered twice in the AMU Archive catalog
- The medium at the home coordinate of the medium in the drive was inserted

Recovery measures

- Perform an inventory for the position with automatic update (update database)



ATTENTION!

Differences to the Archive catalog of the host computer can occur. Execute an upload to the host Archive catalog after any changes to the Archive catalog or after an AMU command (☞ Host software documentation).

9.1.52 Message 1138

Requested robot is not ready

Host error number in ABBA/1 format

N005 Robot not ready

AMU Log message

The desired robot is not available.

Originator

AMU software

Possible causes

The respective robot is inactive:

- Robot was stopped by a ROSA command
- AMU has no communication with the respective robot (⇒ “Message 1043” as from Page 9-22)
- Controller is switched off
- Robot is defective
- Fuse in the robot control cabinet (F11) is defective

Recovery measures

- Start the robot with suitable commands from a connected host (ROSA, STAT)
- The robot is ready after a positive acknowledgement
- When the acknowledgement is negative, check the messages in the log for the causes (⇒ AMU Log)
 - communication error to the robot controller
 - robot error (⇒ “Messages” as from Page 5-1)

9.1.53 Message 1139

Command to a robot that is not configured

Host error number in ABBA/1 format

N007 Non-executable command

AMU Log message

The desired robot is not known to AMU.

Originator

AMU software

Command sender

Possible causes

- Command syntax error
- Host software configuration error
- AMU configuration error (graphical configuration)

Recovery measures

- Check the robot number in the command
- Check the AMU graphical configuration (number of robots)
- Check the configuration of the host software used (☞ Host software documentation)

9.1.54 Message 1140

A coordinate is wrong within the command used

Host error number in ABBA/1 format

N011 Coordinates specified for wrong robot

AMU Log message

The desired coordinate %1 is wrong.

%1 Invalid coordinate

Originator

AMU software

Possible causes

The start coordinate is higher than the end coordinate in an Inventory command on a certain range

Recovery measures

- Check the coordinates in the command (start coordinate must be lower than the end coordinate)
- Repeat the command

9.1.55 Message 1141

Database could not be updated

Host error number in ABBA/1 format

None

AMU Log message

The update of %1 was not successful.

%1 Coordinate of the database that could not be updated

Originator

AMU software

Possible causes

- The coordinate to be updated is not within the database
- The database is not present
- The database is damaged

Recovery measures

- Check whether:
 - the required coordinate is actually within the database
 - the database is available (execute the Create Archive command when necessary)
 - the database is damaged (restore the database when necessary)

9.1.56 Message 1147

A message from a storage tower, robot, I/O unit or ADS has the wrong data length

Host error number in ABBA/1 format

N001 Syntax error

AMU Log message

Stringlength %1 of Controller %2 is incorrect.

%1 Data length actually received
%2 Name of the sender of the message

Originator

- AMU software
- Sender of the erroneous message

Possible causes

- The connected partner does not match the partner configured in the AMU software
- The controller software used has a different telegram format (wrong software version)
- Data transfer error that did not affect the protocol used

Recovery measures

- Check whether:
 - the connected partner is the actually configured partner
 - the software version used is compatible to the AMU software

9.1.57 Message 1146

An internal message from AMU/L to AMU/P has the wrong string length

Host error number in ABBA/1 format

N001 Syntax error

AMU Log message

Stringlength %1 of AMUL-string is incorrect.

%1 Actual data length

Originator

AMU software

Possible causes

Internal interface error between AMU/L and AMU/P

Recovery measures

- Restart the AMU
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

9.1.58 Message 1148

A message could not be sent internally, i.e. an inter-process communication did not function correctly

Host error number in ABBA/1 format

N005 Robot not ready

AMU Log message

AMU can't send string to partner %1.

%1 Name of the configured partner

Originator

AMU software

Possible causes

- Partner not ready for communication
- Receive wait-queue for communication has not been created
- Data should be sent to a partner (e.g. H01) via a HOC module but this is not active

Recovery measures

- Check whether
 - the appropriate HOC module has been started
 - the communication program required by the HOC module has been started (e.g. CM/2, TCP/IP)
 - the interface is available (only for serial communication)
(⇒ "Message 1043" as from Page 9-22) to („Message 1051“ on Page 34)

Note

The internal communication between the individual modules of the AMU software operates with OS/2 queue methods.

This error also occurs in AMU Versions < 2.3 when a HOC module is not ready.

9.1.59 Message 1152

A coordinate cannot be updated because the coordinate does not match the requested coordinate type

Host error number in ABBA/1 format

N502 Non-compatible I/O unit definition

AMU Log message

This coordinate can not be updated because it's not the type of coordinate you expected it to be. CTYPE = %1.

%1 Coordinate type

Originator

- AMU software
- Host software

Possible causes

- Operator error (e.g. Update command with invalid coordinate)
- Differences between host and AMU configurations with regard to the I/O unit definitions (e.g. update on an insert coordinate in the host but this coordinate is an eject coordinate in the AMU configuration)

Recovery measures

Check the host and AMU configurations for differences in the I/O unit definitions

9.1.60 Message 1153

All positions in the Problem box are marked as occupied in the AMU database

Host error number in ABBA/1 format

N007 Non-executable command

AMU Log message

All positions in problem box are occupied. The running procedure must be stopped because the problem box is required.

Originator

AMU software

Possible causes

- Problem box is full
- Problem box light barrier defective
(only for I/O unit/A and I/O unit/B)
- Problem box was emptied after the unit was switched off

Recovery measures

Check whether:

- the Problem box is occupied (remove all media)
- the light barrier works correctly
 - for I/O unit/A (Problem box P0, P1 and P6), turning the Problem box triggers an update in the AMU database
 - for I/O unit/A and I/O unit/B (Problem box P1, P2, P3 and P4), closing inquires the status of a light barrier and this triggers an update in the AMU database
 - for I/O unit/C (Problem box P5), the database is updated when the I/O unit is closed (without a status inquiry to the light barrier)



Information

Only remove the media from the Problem box when the unit is switched on otherwise differences arise between the physical status of the Problem box and the status in the AMU database.

9.1.61 Message 1154

An executing insertion could not be completed due to an error

Host error number in ABBA/1 format

N007 Non-executable command

AMU Log message

The currently running insertion of media could not be finished because of an error in processing.

Originator

AMU software

Possible causes

- AMU error 1153 Problem box full
- Too many ejections to the Problem box because:
 - barcode not readable
 - no free positions in the storage tower
 - medium could not be positioned to its home position

Recovery measures

- Check the Log for preceding errors (e.g. barcode read error)
- Empty the Problem box
- Restart the insertion

9.1.62 Message 1157

The ejection area is marked as occupied in the database and Move or ejections are not possible to this area

Host error number in ABBA/1 format

N503 Ejection slot full

AMU Log message

There is no free eject position in EIF-device.

Originator

AMU software

Possible causes

- The ejection area is occupied
- The database does not match the actual status of the ejection area

Recovery measures

- Check whether the ejection area is occupied
- Remove all the media from the area
(An inventory with update of the AMU database for this area is performed automatically when the I/O unit is closed)

9.1.63 Message 1159

The requested I/O unit is not defined

Host error number in ABBA/1 format

N011 Coordinates specified for wrong robot

AMU Log message

The desired EIF-device is not known to AMU.

Originator

AMU software

Sender of the message that caused this error

Possible causes

- Command syntax error
- Host software configuration error
- AMU configuration error (graphical configuration)

Recovery measures

- Check the coordinates in the command
- Check the AMU graphical configuration (I/O unit definitions)
- Check the configuration of the host software used (☞ Host software documentation)

9.1.64 Message 1162

A requested medium is not available

Host error number in ABBA/1 format

N302 Volser not in Archive

AMU Log message

The requested medium %1 is not in a storage position.

%1 Volser of the medium requested

Originator

AMU software

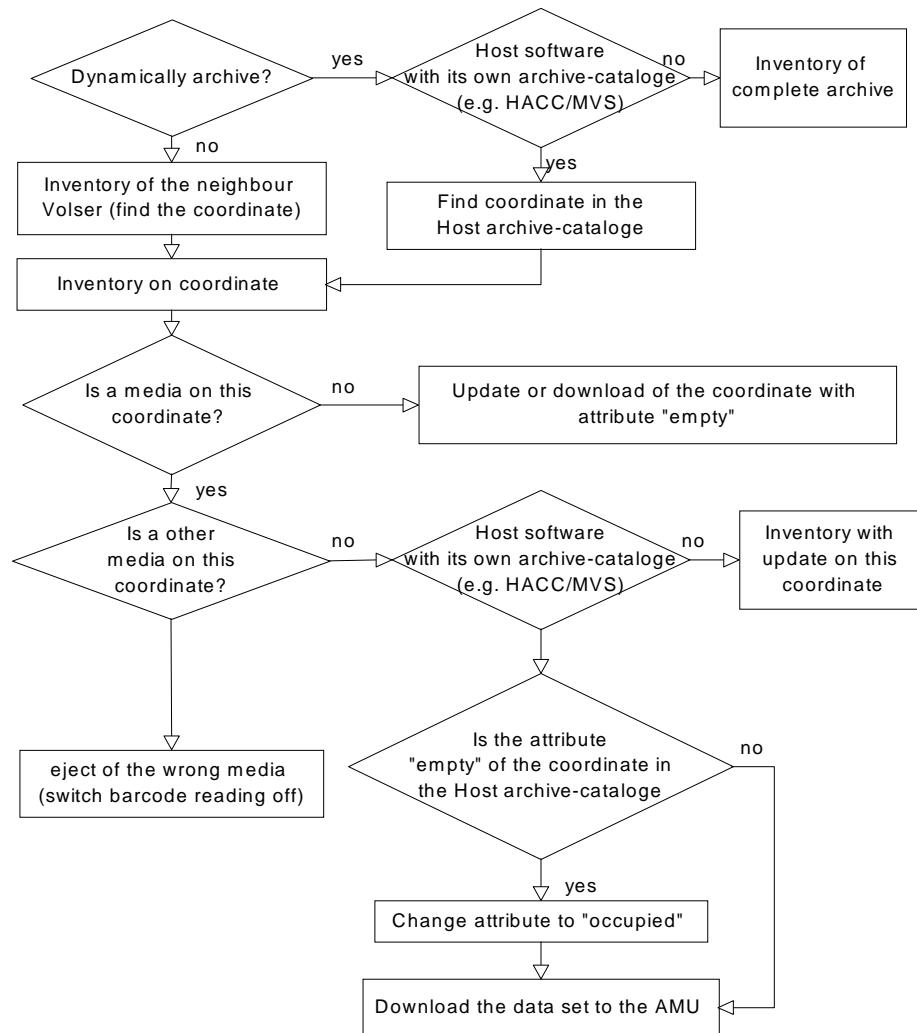
Possible causes

Volser does not have a home coordinate:

- Volser is not in the AMU database
- Volser is not in the Archive

Recovery measures

- Check how the command was triggered:
 - manually with an operator command
 - automatically by a program
 - command from the AMU operator interface or from the host



ATTENTION!

Differences to the Archive catalog of the host computer can occur. Execute an upload to the host Archive catalog after any changes to the Archive catalog or after an AMU command (👉 Host software documentation).

9.1.65 Message 1163

A robot action (e.g. **Mount**) aborted due to an error and the medium was automatically returned to its home position

Host error number in ABBA/1 format

N016 Robot error (EXCP-AUS 5001)

AMU Log message

AMUP moved medium back to the source position.

Originator

Robot software or robot/storage tower hardware

Possible causes

- Crash during a **Mount** of a medium in a drive
- Crash in storage tower during medium insertion
- Crash during a **Move** from one position to another

Crash causes can be:

- Medium not gripped properly during a **Get**:
 - drive defective (medium not ejected far enough)
 - gripper defective
 - handling for **Get** not set correctly
 - invalid Teach point file or wrong actual values for a reference point (P207)
- Another medium is already in the rack position
- I/O unit full
- Handling not set correctly
- Gripper defective

Recovery measures

- Check
 - the rack position (already occupied?)
 - handling for **PUT** and **GET**
 - the Teach points (repeat Teach with Trace KRN 8)
 - the gripper with the gripper test program (replace the gripper when necessary)

9.1.66 Message 1164

A robot action (e.g. **Keep**) aborted due to an error and the medium was automatically moved to the Problem box

Host error number in ABBA/1 format

N101 Robot crash during medium removal/insertion

AMU Log message

AMUP tells AMUL to move a medium to the problembox.

Originator

Robot software or robot/storage tower hardware

Possible causes

- Crash during a **Keep** of a medium in a drive
- Crash during a **Move** to home position after the 1st crash

Crash causes can be:

- Medium not gripped properly during a **Get**:
 - drive defective (medium not ejected far enough)
 - gripper defective
 - handling for **Get** not set correctly
 - invalid Teach point file or wrong actual values for a reference point (P207)
- Another medium is already in the rack position
- I/O unit full
- Handling not set correctly
- Gripper defective

Recovery measures

- Check
 - the rack position (already occupied?)
 - handling for **PUT** and **GET**
 - the Teach points (repeat Teach with Trace KRN 8)
 - the gripper with the gripper test program (replace the gripper when necessary)
- Insert the medium again with the I/O unit

9.1.67 Message 1165

The coordinates returned from the robot during teaching are invalid

Host error number in ABBA/1 format

N016 Robot error (EXCP-AUS 5001)

AMU Log message

Coordinate check failed during teaching.

Originator

Robot software

Possible causes

- The nominal coordinates and the actual coordinates differ by more than 5 cm:
 - communication error between the AMU and the robot controller
 - mechanical changes during teaching
 - error in the robot software

The new coordinates are not stored.

Recovery measures

- Repeat the **Teach** command
- Check the coordinates for the component in the graphical configuration

9.1.68 Message 1166

A requested drive is not entered in the AMU database

Host error number in ABBA/1 format

N201 Unknown unit

AMU Log message

The device is unknown to the archive catalog %1.

%1 Drive coordinate

Originator

- Sender of the command causing the error
- AMU database

Possible causes

- The drive is not present but this is not known to the sender of the command
- The drive is not configured
- The drive is not entered in the database

Recovery measures

- Check whether:
 - the drive is available
 - the drive is defined in the graphical configuration (correct the configuration when necessary)
 - the configuration of the host software used (☞ Host software documentation)
 - the drive is entered in the database (add with **Update Devices** when necessary)

9.1.69 Message 1170

Either a robot, storage tower, scanner or the I/O unit did not reply to the AMU within a defined interval

Host error number in ABBA/1 format

N102 Timeout (robot error)

AMU Log message

%1 did not respond to AMU-P message %2, timeout error.

%1 Name of the respective robot, storage tower, scanner or I/O unit

%2 Sequence number of the command involved in the timeout

Originator

- Robot software
- Storage tower software
- Scanner software
- Software operating panel I/O unit/A
- AMU software module HOC.EXE or the communication module used

Possible causes

- Robot controller switched off
- Robot controller defective
- Connection to the robot controller defective
- Storage tower controller switched off
- Storage tower controller defective
- Connection to the storage tower controller defective
- Operating panel I/O unit/A switched off
- Operating panel I/O unit/A defective
- Connection to the operating panel I/O unit/A defective
- Scanner defective
- Connection to the scanner defective
- Appropriate HOC module has not been started
- Configuration error

Recovery measures

- Check whether
 - the robot controller is switched on
 - the storage tower controller is switched on
 - the operating panel I/O unit/A functions correctly
 - the connection to the robot controller functions correctly (☞ “Message 1043” as from Page 9-22)
 - the voltage supply is applied to the scanner
 - the connection cable is attached to the scanner (check the interface converter as well)

9.1.70 Message 1173

A drive with flap cannot be closed by the robot

Host error number in ABBA/1 format

N207 Flap on the drive cannot be closed

AMU Log message

The drive %1 cannot be closed.

%1 Name of the respective drive

Originator

- Robot software
- Robot hardware
- Drive

Possible causes

- The drive flap could not be closed during cartridge insertion
 - handling not set correctly
 - mixed-media gripper installed (not designed for drives with flaps)
 - drive defective
 - gripper defective
 - Unload command or button activated during the Mount process

Recovery measures

- Check
 - the drive handling (correct the offset values in KONFIG.DAT or for flap closing in LW3480.DAT or LWSTK90.DAT for AML/2 and ELW3480.DAT or ELWSTK90.DAT for AML/E when necessary)
 - the gripper with the gripper test program (replace the gripper when necessary)
 - the drive (mechanism, correct commands)

9.1.71 Message 1175

A medium was moved to the Problem box after an erroneous robot action

Host error number in ABBA/1 format

N504 Medium moved to the Problem box

AMU Log message

The medium was moved to the problembox because of an severe error.

Originator

- Robot software
- Robot hardware
- Storage tower hardware

Possible causes

- Crash during medium return to its home position after a **Keep** command
- Crash during medium return to its home position after the medium could not be ejected
- Crash in the storage tower during an insertion and then a crash at the home position with the same medium

Recovery measures

- Check
 - the rack position (already occupied?)
 - handling for **PUT** and **GET**
 - the Teach points (repeat Teach with Trace KRN 8)
 - the gripper with the gripper test program (replace the gripper when necessary)
- Insert the medium again with the I/O unit

9.1.72 Message 1187

The specifications in dialog for **Put or Get** are invalid

Host error number in ABBA/1 format

N016 Robot error (EXCP-AUS 5001)

AMU Log message

The coordinate %1 is invalid

%1 Invalid coordinate

Originator

User who called the dialog

Possible causes

- Operator error

Recovery measures

Input the correct coordinate

9.1.73 Message 1191

A requested storage tower or one to be serviced not logically ready

Host error number in ABBA/1 format

N011 Coordinates specified for wrong robot

AMU Log message

The desired tower is not available

Originator

- AMU software
- Storage tower software
- Storage tower hardware

Possible causes

- Storage tower did not reply to the initialization message
- Storage tower not set to ready with the **Status** command
- Storage tower error message caused a status change

Recovery measures

- Use the **Status** command to set the storage tower ready
- Review the AMU Log to find the reason for the error

9.1.74 Message 1201

The AMU software received a command during the initialization phase

Host error number in ABBA/1 format

N005 Robot not ready

AMU Log message

AMU is still not ready. Command is lost

Originator

AMU system software

Possible causes

Programs (e.g. HOC.EXE or ARC.EXE) are not ready

Recovery measures

- Wait until the AMU start process has completed
- Repeat the lost command

9.1.75 Message 1204

The AMU database could not be updated and an SQL error message is then written to the AMU Log

Host error number in ABBA/1 format

None

AMU Log message

The database %1 was not updated

%1 Name of the AMU database

Originator

AMU database system

Possible causes

- The user does not have the necessary access authorization
- SQL error

Recovery measures

- Check whether you are registered as database administrator (register as administrator when this is not the case)
- Check the AMU Log for SQL error messages
- Correct the SQL error (☞ DB/2 Manual)

9.1.76 Message 1207

It is not possible to determine the current state of the AMU database

Host error number in ABBA/1 format

None

AMU Log message

Unsuccessful end of reading the database configuraion

Originator

AMU database system

Possible causes

SQL error

Recovery measures

- Check the AMU Log for SQL error messages
- Correct the SQL error (☞ DB/2 Manual)

9.1.77 Message 1213

An error was determined during the comparison of the actual status of the database and the corresponding configuration

Host error number in ABBA/1 format

None

AMU Log message

Unsuccessful end of computing the differences.

Originator

AMU database system

Possible causes

- AMU error 1207
- AMU error 1210
- Erroneous configuration file (AMUCONF.INI)

Recovery measures

- Check the AMU Log for SQL error messages
- Correct the SQL error (↔ DB/2 Manual)
- Check the configuration

9.1.78 Message 1216

An error occurred during a database update

Host error number in ABBA/1 format

None

AMU Log message

Unsuccessful end of adjustment of the database.

Originator

AMU database module

Possible causes

- AMU error 1220
- AMU error 1223
- SQL error

Recovery measures

- Check the AMU Log for SQL error messages
- Correct the SQL error (☞ DB/2 Manual)
- Check the configuration

9.1.79 Message 1220

A newly configured component could not be added to the AMU database

Host error number in ABBA/1 format

None

AMU Log message

The device %1 could not be added

%1 Component name

Originator

AMU database module

Possible causes

SQL error

Recovery measures

- Check the AMU Log for SQL error messages
- Correct the SQL error (↔ DB/2 Manual)
- Check the configuration

9.1.80 Message 1223

A component could not be deleted from the AMU database

Host error number in ABBA/1 format

None

AMU Log message

The device %1 could not be deleted

%1 Component name

Originator

AMU database module

Possible causes

SQL error

Recovery measures

- Check the AMU Log for SQL error messages
- Correct the SQL error (☞ DB/2 Manual)
- Check the configuration

9.1.81 Message 1229

An error occurred during a database update with **Edit Uolser Range**

Host error number in ABBA/1 format

None

AMU Log message

An error occurred during the database update

Originator

AMU database module

Possible causes

SQL error

Recovery measures

- Check the AMU Log for SQL error messages
- Correct the SQL error (↔ DB/2 Manual)
- Check the configuration

9.1.82 Message 1235

A robot cannot access the storage tower or drive during teaching

Host error number in ABBA/1 format

None

AMU Log message

%1 has no access to %2

%1 Robot

%2 Coordinate that cannot be taught

Originator

AMU software

Possible causes

Configuration error (connection between the robot and components in the graphical configuration could be missing)

Recovery measures

Check the graphical configuration (green connection lines between robot and the components being taught)

Note

This error only occurs during new teaching processes (option xN on whereby x is the robot number)

9.1.83 Message 1237

No dynamic positions defined in the AMU database

Host error number in ABBA/1 format

N401 Coordinate not defined

AMU Log message

There is no dynamic position defined in your AML system.

Originator

AMU software

Possible causes

- Configuration error, no positions with the attribute **AMU-Dynamic** or **HACC-Dynamic** were allocated
- The positions were configured later but the database was not updated to the actual status

Recovery measures

- Check whether
 - you forgot to configure dynamic positions (change the configuration when necessary)
 - dynamic positions are defined in the database (update the database when necessary)

9.1.84 Message 1238

No dynamic positions free in the AMU database

Host error number in ABBA/1 format

None

AMU Log message

All dynamic position in your AML system are occupied.

Originator

AMU software

Possible causes

- Too many media in the Archive
- Media were only ejected temporarily (instead of total)
- Media were manually removed from the Archive
- Configuration error, no positions with the attribute **AMU-Dynamic** or **HACC-Dynamic** were allocated
- Additional positions were configured later but the database was not updated to the actual status

Recovery measures

- Check
 - the archive (**Inventory** command)
 - the graphical configuration
 - the AMU database

9.1.85 Message 1241

A command was not executed by the operator in the operating mode **Manual Operation** and the command was rejected with **Reject** in the AMU window **Manual Operation**

Host error number in ABBA/1 format

N012 Command suspended by manual intervention

AMU Log message

Command %1 has not been executed by operator

%1 Command not executed

Originator

Operator during **Manual Operation**

Possible causes

Operator action

Recovery measures

Repeat the command

9.1.86 Message 1242

Several commands should be executed simultaneously in the operating mode **Manual Operation** but this operating mode can only execute one command at a time

Host error number in ABBA/1 format

N012 Command suspended by manual intervention

AMU Log message

Command %1 not accepted. Other command pending.

%1 Non-executable command

Originator

Host software

Possible causes

Host software sent a command to the AMU even though the previous command has not been answered

Recovery measures

Repeat the command

9.1.87 Message 1245

Error message from Rho File Manager (RFM) after a timeout whilst waiting for a reply from a certain rho controller

Host error number in ABBA/1 format

None

AMU Log message

Timeout-error while waiting for Rho response

Originator

- rho controller
- RFM.EXE

Possible causes

- rho controller switched off
- rho control defective
- Connection cable to controller defective
- Interface used on the AMU defective
- Interface parameters do not match on the AMU and the corresponding rho controller

Recovery measures

- Check
 - the interface parameters of the AMU and rho controller (identical parameters on both interface)
 - the functionality of the rho controller (reset the rho controller when necessary)
 - the connection cable to the rho controller
 - the serial interface to the AMU
 - the data traffic between the RFM and the rho controller (Line-Tracer or **Trace** function of the AMU).

9.1.88 Message 1257

System error message from the rho controller during the "Coupling" function (connection to Rho File Manager)

Host error number in ABBA/1 format

None

AMU Log message

RHO Error %1

%1 rho error message

Originator

- rho control
- RFM.EXE

Possible causes

- rho controller hardware error
- rho controller operating system error

Recovery measures

- Use the PHG to determine the reason for the error
- Further help (☞ Documentation "rho3 Signal description and error messages")
- Restart the controller
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems should this error occur frequently

9.1.89 Message 1269

The AML database could not be deleted

Host error number in ABBA/1 format

AMU Log message

The database %1 was not deleted

%1 Database name

Originator

AMU database system

Possible causes

- The user does not have the necessary access authorization
- SQL error

Recovery measures

- Check whether you are registered as database administrator (register as administrator when this is not the case)
- Check the AMU Log for SQL error messages
- Correct the SQL error (☞ DB/2 Manual)
- Use the SQL commands to determine where the error occurred in the database:
logon /l amuadmin /p=password(password=Admin. password)
startdbm
start using database aml
dbm drop table amu.coordinates
dbm drop table amu.sccordinates
dbm drop database aml
 - a return code is displayed for each SQL instruction (return codes > SQL0000 are SQL errors)
- Uncatalog the database and delete the database directory before creating a new database:
startdbm
logon /l amuadmin /p=password(password=Admin. password)
dbm uncatalog database aml
 - delete the directory for the AMU database (SQL00001) with all sub-directories
- Create a new database
 - AMU function **Restore**
 - AMU function **Update Database** in **BUD-Control** for a Dual-AMU

9.1.90 Message 1271

A medium should be moved to a target coordinate (**Mount**, **Keep** or **Move**) with a different media type

Host error number in ABBA/1 format

N209 Medium wrong for the command

AMU Log message

The media types of source- and target coordinate in command %1 do not fit

%1 Command involved in the error

Originator

AMU software

Possible causes

- AMU configuration error
- Configuration error for the host software, to the extent that this information can be configured there
- The wrong **Media Type** has been entered in the database for this coordinate (only possible through manual update in the database or the complete component has been configured incorrectly)

Recovery measures

- Check
 - the command
(position for **Source** and **Target** must have the same **Media Type**)
 - the **medium** of the corresponding coordinates in the graphical configuration (change the configuration when necessary)
 - the configuration of the host software used (Media Type cannot be configured on all hosts) (☞ Host software documentation)
- Update the database (**Update Devices**)
- Transfer the changes to the Dual-AMU (BUD control)
- Repeat the erroneous command

Note

This error can first occur as from AMU Version 2.1

9.1.91 Message 1274

Error message from the configuration server of the AMU software with varying texts depending on the situation

Host error number in ABBA/1 format

AMU Log message

Cfg-Error: Scope „%1“ : %2 %3.

- %1 Area in which the error occurred
- %2 Optional text
- %3 Optional text

Originator

CFG server of the AMU software

Possible causes

- AMUPATH does not match the actual AMU directory
- AMUCONF.INI file not present or damaged
- LOCAL.AMU file not present or damaged
- AMUCONST.INI file not present or damaged

Recovery measures

- Check whether
 - the AMUCONF.INI file is present
 - the environment variable AMUPATH is set correctly in the CONFIG.SYS file. The correct entry is:
SET AMUPATH=[Drive]:\[AMU Directory]
e.g.: SET AMUPATH=C:\AMU
 - a current backup copy of the AMUCONF.INI file exists (floppy disk, on Dual-AMU or file CONFAMU.INI in the AMU directory)

When you have a backup copy:

- Copy the backup version into the AMU directory specified in the environment variable AMUPATH



ATTENTION!

Data loss! Always create a new backup copy after every configuration modification.

When you do not have a backup copy:

- Copy the AMUCONF.BAS file to AMUCONF.INI
(`copy amuconf.bas amuconf.ini`)



ATTENTION!

You must reconfigure the complete unit because the configuration data were lost.

- Does the LOCAL.AMU file exist in the AMU directory?. When it does not exist:
 - create the file with a text editor (e.g. "E")
 - enter the AMU name in the file (e.g. A02)
 - when an editor is not available, create the file with the OS/2 command lines
`cd amu`
`copy con local.amu <Enter>`
`A01 <CTRL>+z <Enter>` (A01 = Name of the AMU)
- Does the AMUCONST.INI file exist in the AMU directory?. When it does not exist:
 - copy the backup copy to the AMU directory
 - transfer the file from the Dual-AMU (BUD control)
 - create a new file
Open an OS/2 window
 - Select the AMU software directory (`cd AMU`)
 - delete the unreadable AMUCONST.INI file
(`del amuconst.ini`)
 - start the program as follows:
`makeini amuconst.ini amuconst.rc`
 - then check whether the AMUCONST.INI file has been created
(`dir amuconst.ini`)

9.1.92 Message 1277

The AMU database could not be started by a module
(DB/2 command START USING DATABASE not executed)

Host error number in ABBA/1 format

None

AMU Log message

Database %1 for module %2 is not started because of an error

%1 Database name

%2 Name of the module that attempted to start the database

Originator

AMU software

Possible causes

- Database is not present
- Database has not been started
- AMU software database modules are not compatible with the database
- User does not have the necessary access authorization
- "User Profile Management" has not been set up correctly
- SQL error

Recovery measures

- Start the database manager in an OS/2 window (startdbm)
- Check whether you are registered as database administrator (register as administrator when this is not the case)
- Check whether the database is available

```
dbm list database directory on c
```

 - when the database is not found, create a new database with the AMU functions **Restore** or **Create Archive**
 - when the database is present, **shutdown ABBA...**

AMU errors

Enter the following in the OS/2 window
logon /l amuadmin /p=password
(password=Administrator password)
cd amu
arcbndit
(database is adjusted to the AMU software)

9.1.93 Message 1279

The AMU database was not stopped by a module
(DB/2 command STOP USING DATABASE not executed)

Host error number in ABBA/1 format

None

AMU Log message

Database %1 for module %2 did not stop correctly due to an error

%1 Database name

%2 Name of the module that attempted to stop the database

Originator

AMU software

Possible causes

- Database not present
- Database is damaged
- Database manager not started
- Database not started beforehand
- Database in use by other processes
- Database started by another process at the same time as the stop

Recovery measures

- When the database is not available or damaged:
create a new database with **Restore** or **Create Archive**
- When other processes are using the database:
stop the processes accessing the database
- When the database was started by another process immediately after the stop:
restart the OS/2 operating system

9.1.94 Message 1280

An error occurred during the allocation of access authorizations (GRANT) to retrieve (SELECT) or modify (UPDATE) lines in a table

Host error number in ABBA/1 format

None

AMU Log message

Grant SELECT, UPDATE on table %1 to PUBLIC failed.

%1 Name of the table in which the error occurred

Originator

AMU database system

Possible causes

- The *.BND files are not compatible with the AMU database modules used
- The AMU database modules have not been linked to the existing database
- No access authorization to perform this action

Recovery measures

- Open an OS/2 window and enter:
logon /l amuadmin /p=password(password=Admin. password)
cd amu
arcbndit
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems when errors occur whilst executing ARCBNDIT

9.1.95 Message 1284

An error occurred during the allocation of access authorizations (GRANT) to execute (EXECUTE) or link (BIND) a program module to the AMU database

Host error number in ABBA/1 format

None

AMU Log message

Grant EXECUTE, BIND on program %1 to PUBLIC failed.

%1 Name of the program that caused the error

Originator

AMU database system

Possible causes

- The *.BND files are not compatible with the AMU database modules used
- The AMU database modules have not been linked to the existing database
- No access authorization to perform this action

Recovery measures

- Open an OS/2 window and enter:
logon /1 amuadmin /p=password(password=Admin. password)
cd amu
arcbndit
- Contact the Customer Help Desk at ADIC/GRAU Storage Systems when errors occur whilst executing ARCBNDIT

9.1.96 Message 1291

The *.DSR file selected for the **Disaster Recovery** function cannot be opened

Host error number in ABBA/1 format

None

AMU Log message

The file for disaster recovery could not be found in the AMU directory.

Originator

AMU system software

Possible causes

- The file is not present
- The file is damaged

Recovery measures

- Create the file with the Volsers for Disaster Recovery as follows:
Volser1 optional text as commentary
Volser2 optional text as commentary
VolserN optional text as commentary
 - Volser1 to VolserN are any optional Volsers from the AMU database
The commentary must be separated from the Volser name with spaces
 - terminate each line with <Enter>

9.2 AMU Warnings

Message xxxx

where xxxx is the AMU warning.

AMU Log message

Message in the AMU **Log Control Center**.

The variables %1 to %8 are replaced by texts depending on the error situation and the configuration. This is why the same error number can be output for differing texts.

Originator

AMU components that caused the warning

Possible causes

Reason for the warning

Recovery measures

- Measures to eliminate or clear the warning situation

9.2.1 Message 1026

The AMU software received a command in an unknown or not supported ABBA/1 format

Host error number in ABBA/1 format

N010 Unknown robot command

AMU Log message

Not supported ABBA/1 command: %1

%1 The not supported/unknown ABBA/1 command

Originator

Sender of the ABBA/1 command

Possible causes

AMU software does not support the host software used

Recovery measures

- Check the host software used
- Contact the manufacturer of the host software

9.2.2 Message 1027

The data received from the host contain invalid specifications and will be ignored

Host error number in ABBA/1 format

N011 Coordinate specified for wrong robot

AMU Log message

Missing or wrong data was given with the command: %1 Option:%2

%1 The command to which the data belong
%2

Originator

AMU system software

Possible causes

Host software sends an incomplete/erroneous format

Recovery measures

- Check the host software used
- Contact the manufacturer of the host software

9.2.3 Message 1037

A host communication to a configured partner cannot be opened at the present time

Host error number in ABBA/1 format

None

AMU Log message

HOC error: %1

%1 Error message depending on the partner type

Originator

- AMU software
- HOC module
- Communication program (e.g. Communications Manager/2)
- rho controller

Possible causes

- Communication program (e.g. CM/2) has not been started or is configured incorrectly
- Serial communication partner (e.g. rho controller) or not switched on

Recovery measures

- Check
 - the communication start
 - the communication with the error message that was output
- Check the following when the error occurred during APPC communication
 - whether CM/2 has been started
 - whether the communication partner (host software) has been started
 - the CM/2 parameters
 - the host configuration parameters (VTAM)
 - the AMU graphical configuration (APPC parameters must match the APPC configuration parameters for CM/2)
- Check the following when the error occurred during Coaxial or 3270 communication
 - whether CM/2 has been started
 - whether the communication partner (host software) has been started
 - the CM/2 parameters
 - whether the connected control unit for DFT (Distributed Function Terminal) has been configured
 - whether the CONFIG.SYS file contains the entry DEVICE=DFTDD.SYS (driver for the coaxial board used)
 - the error message in the 3270 screen (MACHxxx, PROGxxx, COMMxxx) (☞ Help System for 3270 Emulation for detailed information)
 - the AMU graphical configuration (the 3270 parameters must match the 3270 configuration parameters of the CM/2)
- Check the following when the error occurred during TCP/IP communication
 - whether TCP/IP for OS/2 has been started
 - whether the communication partner is active
 - the TCP/IP communication parameters in the TCP/IP configuration (IP address, network screen, broadcast)
 - the AMU graphical configuration (the TCP/IP parameters must match the TCP/IP configuration parameters for OS/2)
- Check the following when the error occurred during serial communication (only 3964 communication)
 - whether the communication partner is switched on
 - the connection cable (pins 6 and 20 crossed)
 - shielding

9.2.4 Message 1104

The KRNPYYS.DLL module received a message that could not be assigned

Host error number in ABBA/1 format

N001 Syntax error

AMU Log message

The message with the sequence number %1 is unknown for AMUP.

Originator

AMU software module KRNPYYS.DLL

Possible causes

- Message is after the timeout on the rho controller
- The rho controller replies to a command several times

Recovery measures

- Execute the **Status** command with **Option R1** or **R2**
- Check whether the controller now answers correctly
- Restart the controller

9.2.5 Message 1121

Differences have been determined during an inventory of the Archive (an unexpected Volser was found in a rack position)

Host error number in ABBA/1 format

N306 Wrong medium at the specified coordinate

AMU Log message

Inconsistency during INVT detected. Coordinate: %1. expected volser %2

%1 Coordinate where the difference was determined

%2 Volser expected at this coordinate

Originator

AMU software

Possible causes

Manual intervention in the Archive (e.g. after a malfunction) without updating the database

Recovery measures

- Use **View Volser** in the **Archive Catalog Management** to determine the coordinate for the Volser
- Use **Inventory** to determine whether another medium is at the home position of this Volser
- When this coordinate is free, use the **Move** command from the actual position to the home coordinate
- Repeat this procedure for all coordinates for which the warning appeared

ATTENTION!



Differences to the Archive catalog of the host computer can occur. Execute an upload to the host Archive catalog after any changes to the Archive catalog or after an AMU command (☞ Host software documentation).

9.2.6 Message 1134

An error occurred whilst setting the process priority for the kernel and the kernel process continues to run with the priority allocated by the operating system

Host error number in ABBA/1 format

None

AMU Log message

The priority for %1 wasn't set correct, OS/2 errorcode: %2

%1 Process name

%2 OS/2 error code

Originator

OS/2 operating system

Possible causes

Invalid call parameters in the program

Recovery measures

Contact the Customer Help Desk at ADIC/GRAU Storage Systems.

9.2.7 Message 1155

An inventory terminated because no media were found in the insertion area

Host error number in ABBA/1 format

N305 No medium found in the specified row

AMU Log message

The currently running insertertion of media is finished. There wasn't found any medium in insert positions.

Originator

AMU kernel

Possible causes

- An inventory on the insertion area running before the insertion was terminated with an error
- The robot system could not read the barcode labels of the media in the insertion area
- One of the light barriers monitoring the insertion area is defective (row status is always empty)
- Insertion area is in fact empty

Recovery measures

- Check
 - the AMU Log for error messages referring to the preceding inventory
 - the functionality of the light barriers (only for I/O unit/A)
 - whether the robot's barcode recognition system is working properly

9.2.8 Message 1270

A medium cannot be moved to the Problem box because it is full

Host error number in ABBA/1 format

N505 Medium moved to the Problem box, Problem box is full

AMU Log message

A medium was carried to the problem box. The problembox is full now.

Originator

Robot software

Possible causes

- Problem box is full
- Problem box light barrier defective
(only for I/O unit/A and I/O unit/B)
- Problem box was emptied after the unit was switched off

Recovery measures

Check whether:

- the Problem box is occupied (remove all media)
- the light barrier works correctly
 - for I/O unit/A (Problem box P0, P1 and P6), turning the Problem box triggers an update in the AMU database
 - for I/O unit/A and I/O unit/B (Problem box P1, P2, P3 and P4), closing inquires the status of a light barrier and this triggers an update in the AMU database
 - for I/O unit/C (Problem box P5), the database is updated when the I/O unit is closed (without a status inquiry to the light barrier)



Information

Only remove the media from the Problem box when the unit is switched on otherwise differences arise between the physical status of the Problem box and the status in the AMU database.

This message first appears as from AMU Version 2.00

9.2.9 Message 1273

Warning from the configuration server of the AMU software with varying texts depending on the situation

Host error number in ABBA/1 format

None

AMU Log message

Cfg-Error: Scope „%1“ : %2 %3.

%1 Area in which the error occurred

%2 Optional text

%3 Optional text

Originator

CFG server of the AMU software

Possible causes

- AMUPATH does not match the actual AMU directory
- AMUCONF.INI file not present or damaged
- LOCAL.AMU file not present or damaged
- AMUCONST.INI file not present or damaged

Recovery measures

- Check whether
 - the AMUCONF.INI file is present
 - the environment variable AMUPATH is set correctly in the CONFIG.SYS file. The correct entry is:
`SET AMUPATH=[Drive]:\[AMU Directory]`
e.g.: `SET AMUPATH=C:\AMU`
 - a current backup copy of the AMUCONF.INI file exists (floppy disk, on Dual-AMU or file CONFAMU.INI in the AMU directory)

When you have a backup copy:

- Copy the backup version into the AMU directory specified in the environment

variable AMUPATH



ATTENTION!

Data loss! Always create a new backup copy after every configuration modification.

When you do not have a backup copy:

- Copy the AMUCONF.BAS file to AMUCONF.INI
(`copy amuconf.bas amuconf.ini`)



ATTENTION!

You must reconfigure the complete unit because the configuration data were lost.

- Does the LOCAL.AMU file exist in the AMU directory?. When it does not exist:
 - create the file with a text editor (e.g. "E")
 - enter the AMU name in the file (e.g. A02)
 - when an editor is not available, create the file with the OS/2 command lines
`cd amu`
`copy con local.amu <Enter>`
`A01 <CTRL>+z <Enter>` (A01 = Name of the AMU)
- Does the AMUCONST.INI file exist in the AMU directory?. When it does not exist:
 - copy the backup copy to the AMU directory
 - transfer the file from the Dual-AMU (BUD control)
 - create a new file
Open an OS/2 window
 - Select the AMU software directory (`cd AMU`)
 - delete the unreadable AMUCONST.INI file
(`del amuconst.ini`)
 - start the program as follows:
`makeini amuconst.ini amuconst.rc`
 - then check whether the AMUCONST.INI file has been created
(`dir amuconst.ini`)

9.2.10 Message 1288

The actual Volser on the medium does not match the expected Volser during a **Keep** from a jukebox

Host error number in ABBA/1 format

N307 Keep executed but the wrong medium was in the unit

AMU Log message

A medium with unexpected volser was dismounted. Expected volser: %1, dismount volser: %2.

%1 Expected Volser

%2 Actual Volser

Originator

AMU software

Possible causes

- Manual access to the jukebox
- Manipulation in the AMU database
- Barcode read error

Recovery measures

Check the media in the jukebox

Note

This message first appears as from AMU Version 2.10

10 Annex

10.1 Glossary

AML	Automated-Mixed-Media-Library; AML software and physical archive. <ul style="list-style-type: none">• /2 identifies the second Version• /E stands for Entry• /J stands for Junior
AMU	AML Management Unit Central intelligence of the AML system. Comprises hardware and software.
AMU operator interface	OS/2 program to operate the AML system (CON.EXE).
Archive	The Archive comprises <ul style="list-style-type: none">• the physical Archive and• the logical Archive. <p>The physical Archive comprises the storage towers to hold the cartridges/optical disks (= media). The logical Archive (Archive catalog) is the assignment of Volsers to the storage positions in the physical Archive.</p>
Archive catalog	An OS/2 database with the logical Archive. Contains the assignment of Volsers to the storage positions in the physical Archive as well as further significant information on the media and drives.
Archive coordinates	Define the storage position for a medium in the physical Archive.
Task, command	A command sent to the AML system: <ul style="list-style-type: none">• from the host computer• entered directly by the operator using the AMU operator interface

Barcode label	Label on the medium. Specifies the Volser of the medium in a form that the robot can read (bar code). An optical disk has 2 Volsers.
Operating area	Operating area on the operating panel to switch the AML system on and off and to control the system.
Rotation unit	Part of the I/O unit. A rotation unit can accommodate four handling boxes in its sections.
I/O unit	Input/output area. The (storage) media are inserted and ejected via the I/O unit. There are 3 types: <ul style="list-style-type: none">• Type A: with rotation units• Type B: without rotation units• Type C: manual rotation units
Handling box	Storage box for media in the I/O unit.
Host computer	Mainframe computer. The host computer data are stored on the media in the AML system Archive.
Clicking	Pressing and releasing the mouse button rapidly.
Configuration	Definition of the AML system. The configuration describes the components and their interrelationship. <ul style="list-style-type: none">• Host computer• AMUs• Controllers• Storage towers• Linear racks• Robots• Specials• Drives
Linear rack	Storage archive (only one storage level).
Medium	Storage medium in the Archive, e.g. magnetic tape cartridge or optical disk.
Media loading	Loading (MOUNT) a medium on a drive is referred to as mounting and the removal (KEEP) of a medium as dismounting.
Operator	Trained user of the AML system.
Optical disk (OD)	Optical storage medium.

Problem box	Special storage positions in the I/O unit: These accept: <ul style="list-style-type: none">• media that could not be identified• media when a robot malfunction occurs.
Quadro tower	Storage archive with 32 segments.
Scratch media	Scratch media are Archive media that can be overwritten. They are used for data output without specifying a Volser (non-specific media requests).
Segment	All rows in a column in a storage tower.
System external media	Media without a Volser in the Archive catalog. The AML system processes such media via the I/O unit.
System media	System media have a Volser, are stored in the Archive and are known to the Archive.
Teaching	Training the robot system.
Teach label	White reference marks. These are spatially detected (precision = 1/100 mm) and serve to calculate all points in the system the robot must move to. The coordinates for all Teach points are stored in the KRNREFPT.R0X file (X stands for the respective robot 1-2).
Non-specific medium request	Mount task for a scratch medium or a cleaning cartridge.
Volser, VSN	Volume serial number. A 16 character (with leading zeros/fill characters <.>) alphanumeric string that identifies each medium (cartridge, optical disk) in the Archive. The Volser is stuck on the medium as a barcode label and can be read by the robots.

