



AML Management Unit
3.10b

Release Notes

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1 Version 3.10 AMU Release Notes

This release notes covers the Version 3.10 release of the AML Management Software (AMU). If question arise about any of these notes, call theADIC/GRAU Technical Assistance Center at the appropriate number:

- 00-800-9999-3822

1.1 For Your Safety



Attention

The AMU 3.0 has processes which sends itself time controlled commands to robots. Please make sure, that nobody is inside the library, if the AMU will be started. The AMU send commands undepended of a started host software.

1.2 Requirements

The CD_ROM of this AMU version is a complete version, which does not require a previous version of AMU software. AMU 3.10 can replace all previous installed AMU versions.

The following software releases are required:

Table 1-1 Software Release Requirements

Software	Version	Version for use DCI
AML/2 robot Standard Gripper tower parallel gripper	AML/2 2.20F or higher AML/2 2.20G or higher AML/2 2.30E or higher	AML/2 2.30G with Fix 4 or higher
AML/E robot Standard gripper parallel gripper:	AML/E 2.20K or higher AML/E 2.30D or higher	AML/E Version 2.30G with Fix 4
AML/J robot	AML/J 2.40D or higher	AML/J Version 4.01
Scalar 1000	Scalar 1000 Microcode 1.01 or higher	
DAS	UNIX: DAS 1.20 OS/2: DAS 3.012	
SNI-robar	Robar V2.5 or higher (recommended Robar-SV V3.0 ^a)	
HACC/OS400	Version 2.2 or higher	
HACC/VM	Version 1.4.2 or higher	
HACC/MVS	Version 3.00 and PTF ZY30012 ^b	
TwinATL	Version S0308D20 or higher	

a.Support of the new AMU 3.0-Features

b.Older versions of HACC/MVS do not support Dual-AMU and AMU-Clean-Management

Other host application software version prerequisites do not apply.

1.3 System Hard- and Software

Table 1-2 Hardware- and System-Software Requirements

Processor	Pentium 120 (minimum)
Memory	32MB Minimum (64MB recommended) Systems having heavy load or more than two hosts connected should have 64MB)
Disk	850 MB or more
IBM OS/2	Warp 3.0 with MPTS Fixpack WR08610 or higher (for update look at the ADIC/GRAU Service CD-ROM 3/1999 (326S00003) or ask ADIC/GRAU Technical Assistance)
IBM DATABASE 2	DB/2 2.1 or higher (for updates ask ADIC/GRAU Technical Assistance)
IBM Communications Manager	if necessary: CM/2 1.11 or higher
IBM TCP/IP	if necessary: OS/2 WARP CONNECT with TCP/IP support
Dataswitch (only AML/2 and AML/E with Dual AMU)	Automatic Data Switch The Manual Data Switch, previous used for Backup AMU will not longer supported on AML/2 and AML/E.

1.4 Updates

Updates of any of these products should be performed by authorized and trained personnel.

Update from AMU 2.00 and earlier

The update of AMU 2.00 to AMU 3.02 should be performed by authorized and trained personnel.

Update from AMU 2.20,AMU 2.30 or AMU 2.40 or AMU 3.02

If the correct prerequisites have already been installed, an update to AMU 3.02 may be performed by trained customer personnel.

2 AMU Installation Program

2.1 Installation

Perform the following steps to install the AMU version 3.10 :

Step 1 Check the correct level of your system software with the command `syslevel` (MPTS, DB/2)
AMU 3.02 does not work with a older Database Manager and without the MPTS Fixpack WR08610)

Step 2 If you install an update stop the current processing. Run shutdown AMU. If you run an initial installation, begin with step 5.

Step 3 Open an OS/2 window.

Step 4 Change the name of the file `STARTUP.COM` to `STARTUP.ORG`.

```
C:\move startup.cmd startup.org
```

Step 5 Restart the computer (shutdown and boot).

Step 6 Insert the first diskette of AMU Software into the diskette drive or the CD-ROM in the CD-ROM drive.

Information

Do not interrupt the installation process. This may lead to undefined conditions and problems with the database.

Step 7 Open an OS/2 window and change to the drive or directory, where your AMU software is located
e.g.

```
C:> e:<Enter>  
E:> cd amu310
```

Step 8 Enter in this directory

```
E:\AMU310> install
```


Step 9 Select the installation options

```
      I N S T A L L A T I O N      U T I L I T Y
      A M U - V E R S I O N  3.10b
      A D I C / G R A U Storage Systems

1 = New Installation of AML Management Software
    (Installation without backup of an older Version)

2 = AMU Update from AMU 3.10 to 3.10b

3 = AMU Update from AMU 2.30x, 2.40xx or 3.0x to AMU 3.10b

4 = AMU Update from AMU 2.41 to AMU 3.10b

5 = AMU Update from AMU 2.1xx or 2.2xx to AMU 3.10b

6 = AMU Update from AMU 2.0xx to AMU 3.10b
    (Are you sure you have the correct robot software?)

7 = AMU Update from AMU 1.xxx to AMU 3.10b
    (Are you sure you have the correct robot software?)

8 = Deinstallation (Rollback) of a previously installed AMU 3.10b

9 = End

Select an Option:
```

Step 10 Select your hardware.

```
      I N S T A L L A T I O N      O p t i o n s
      A M U - V E R S I O N  3.10b

1 = Installation without Options
    (only AML/2, AML/E and AML/J)

2 = Installation with Drive Control Interface (DCI)

3 = Installation with Quadron Software for RIC adap. (only AML/2)

4 = Installation with Quadron Software and DCI (only AML/2)
    (Are you sure you have the correct robot software?)

5 = Installation for Scalar 1000

Select an Option:
```

Step 11 Login with AMUADMIN when prompted to log on.



Warning

Please do not interrupt the installation process.

Step 12 For User of Dismount Manager Clean Manager, for a new installation, this step must be done after the first start of the AMU:

Write the modules for automatic start in the file

AmuConf.INI

Use the following command, like the following example:

```
C:> cd amu
C:\AMU> patini PROC KRNLOAD "KNP UPM ARC HOC CLM DIM"
```

Table 2-1 Load modules for Kernel

Using functions	Load modules
Dismount Manager	KNP UPM ARC HOC DIM
Clean Manager	KNP UPM ARC HOC DIM CLM

Step 13 If you run an update installation, reverse the renaming of the filename of STARTUP.CMD und change the part
START KRN START CON to START AmuStart

```
C:> copy startup.org startup.cmd
```

Step 14 Configure the AMU start options in AmuStart.cmd

Step 15 After the first start and the actualisation of the table pool:
- insert the of clean cartridges from Host in the AMU database
- insert and actualisation of scratch tape pools
stop the AMU and run:

```
C:\amu> arcbndit
```

The following steps only apply to systems with a second harddisk (AML controller).

Step 16 Terminate OS/2 and restart the computer.

Step 17 Wait until the following appears on the top left corner on the monitor:
■ OS/2

Step 18 Press keys <Alt>+<F1>

```
RECOVERY CHOICES

Select the system configuration file to be used, or enter the option
corresponding to the archive desired.

ESC - Continue the boot process using \CONFIG.SYS without changes
C   - Go to command line, (no files replaced, used original CONFIG.SYS)
V   - Reset primary video display to VGA and reboot
M   - Restart the system from Maintenance Desktop (Selective Install)

Choosing an archive from the list below replaces your current CONFIG.SYS,
Desktop directory, and INI files with older versions. These older versions
might be different from your current files. Your current files are saved in
\OS2\ARCHIVES\CURRENT.

1) Archive created 18.6.97 12.00.00
2) Archive created 18.6.97 12.10.00
3) Archive created 18.6.97 12.20.00
X) Original archive from INSTALL created 18.6.97 10.00.00
```

Step 19 Select <C> as command line.

Enter the following command:

```
C:> amu\hddcopy
```

Step 20 For Systems with VTAM Connection: Please have a look at the AMU Reference Guide and the CM/2 Documentation.

2.2 Deinstallation

During the installation, the previous AMU version, if present, was saved into backup directories. Selecting the corresponding option from the installation program menu allows to deinstall the AMU Version 3.02 and restore the previous installed AMU Version:

Step 1 Stop operation of the AML Management Software. (Host commands ROSO and HOLD or DAS command Robhome and DAS shutdown). Select "Shutdown AMU" from the AMU User Interface.

Step 2 Change the name of the file STARTUP.CMD to STARTUP.ORG.

```
C:> move startup.cmd startup.org
```

Step 3 Restart the computer (shutdown and boot).

Step 4 Insert the first diskette of AMU Software into the diskette drive or CD-ROM in the CD-ROM drive.

Step 5 Open an OS/2 window and change to install drive (e.g A:).

Step 6 Type "Install" and press <ENTER>.

Step 7 Select the deinstallation option from the installation menu. Wait until the deinstallation process completes.

3 Changes in Version 3.10b

Table 3-1 Changes in the changed modules for version 3.10b

Module	Description
KrnPmac.DLL	Changes in the synchronisation of the threads (Problems with fast > 300MHz Computers). Initialisation of variables with 0. Changes in the memory management.
Bud.exe	- Changes in the Log- and Traces for better analysis for the problem of a lost of communicatin between the two AMU computers. - Additional changes in the memory management.
Clm.exe	If the user increased the MaxUseCount of a drive during the started cleaning (already sendd NTFY 1309) now the clm completed this cleaning to prevent a for ever locked drive.
FileTr.exe	GUI fields can now be entered by the Tab key.
AmuConst.ini AmuConst.rc	ADS icon was missing because a value DTYP NUMOF was not correct.
ConArc.DLL	Check boxes now only enabled for devices from type tower
ConEdVol.DLL	For Update all in Edit Volser Range, now the field Owner must be filled with values 1-3.
ArcBase.DLL	Additional check of the COwner, modification only to 1,2 or 3 allowed.
KrnPhys.DLL	access to the request table now with a semaphore.
cfg.dll	CAN address for DCI changed to 2 digits, additional PROC KRNLOAD

4 Changes in Version 3.10a

Table 4-1 Changes in the changed modules for version 3.10a

Module	Description
KrnUtil.DLL	Krn Trap after a negative answer for a not longer necessary KEEP (rc=1094 or N203) changes of the logwrites for **kernel** state mismatch
ConTrc.DLL	Write/Formate trace produced an error message
KrnPMAC.DLL	Teach with option 1P has produced a trap, because of a too small buffer
HocEHLL.exe	Trap if the communication session is inactive
KrnPhys.dll	Drive are not able to operate if the drive name is higher then 99 (Coordinate not found in KrnRefPt)
KrnP.exe	corrected exit list
DBconv.exe	not valid values in the column VTYPE will be replaced with U instead of X
AMU.msg	changed Logwrites for BUD (remove the wrong %)
AmuConst.ini	additional Drive M8100 (Diana-4)
HOCSan.DLL	Correction in the protocol to the scanner communication (Barcode reading with fast AML controller)

Configuration Changes

With AMU 3.10a will supported the new drive M8100 from Fujitsu (Diana-4) for the media type 3590 (Magstar). For using of the drive, you need the robot code 4.00 or higher for AML/J and 2.30G for AML/2 and AML/E. The new drive has the AMU type 'DZ'.

5 Changes in Version 3.10

5.1 Drive Control Interface

AMU 3.10 can be configured with a communication line to the Drive Control Interface (CAN-Bus) for

- Check the drive state
- Check Drive Clean requirements
- Determine time for drive dismount by the robot

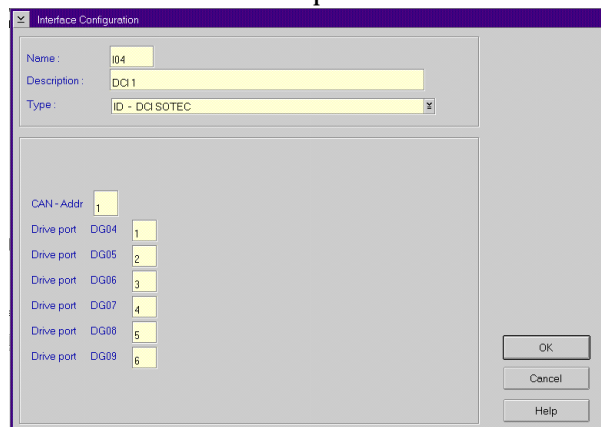
5.2 Backup Deamon

AMU 3.10 will be distributed with a new BUD for a more safety control of the database on the Dual-AMU. New Features are:

- No more updates possible from a passive to a active AMU
- In case of a missing coordinate, the BUD send now futher updates to the other coordinates.

5.3 Configuration

For the DCI create the new Interface type ID (DCI-SOTEC) for configure CAN address and the DCI port.



For the Host a new configuration field for Insert- and Eject-ranges for Default using, if the Host does not send a Insert-or Rject area in the command.

For the AMU to AMU communication with TCP/IP changed the configuration to reduce the configuration to only 2 hostnames and 2 ports (automatic duplication for the second AMU communication ICON)

5.4 File Transfer

New Graphical Interface in the Service for transfer configuration files from one to the other PC with the FTP (free preselection of files and target PC)

6 Detailed AMU process changes

6.1 ARC

- new query for number of dirty records (used for switch command)

6.2 ART, LOG, TRC

- no changes

6.3 BUD

- complete new

6.4 CON

- ConConf changes for DCI
 - line from AMU to drive container with configuration Icon
 - In Host configuration default Logical Ranges, if the host send insert/ejects without a range
- In Menu Service replaced the BUD Control with Dual-AMU Service with File-Transfer, Activate this AMU
- Allowed the Configuration for no cyclic drive cleaning

6.5 CLM

- support of the Clean command from DCI

6.6 DIM

- no changes

6.7 HOC

- Changes for Dual-AMU configuration

6.8 KRN-L

- in case of a krn state mismatch, autorecovery
- new internal status command for drive cleaning
- enhancement in the switch modul for the normal switch
- support of the new separat process KRN-P
- support of the new BUD

6.9 KRN-P

- process separated
- enhancement for Drive control CAN commands to the DCI, new reco-

very commands to the robot for operate the handle on the DLT drive

6.10 RFM

- no changes

6.11 RTE

- free memory before exit

6.12 PMMAINT

- enhancement of the preparing of the configuration

6.13 CFG

Table 6-1 New Types in the configuration

Code for media type in AMU	Media Type
DG	Drive DLT (Low Profile)
ID	DCI Communication

7 Addressed Tickets

7.1 AMU 3.10b

Table 7-1 Solved problems in AMU 3.10b

Ticket number	Problem
ET0000036640 ET0000031062	KRN Tap SYS 3175
ET0000036863	Problems with configuration changes and locked drives
ET0000036525	Problems with wrong COwner in the database (Owner = 0)
ET0000038039	interne Problems with the command list access, which produced a complete system stop

7.2 AMU 3.10a

Table 7-2 Solved problems in AMU 3.10a

Ticket number	Problem
ET0000033419	KRN-Trap direct after a KEEP which is not longer necessary (drive is already empty)
ET0000033919	Failure message during the format trace direct on a floppy drive (drive a:\)
ET0000033920	Teach with the option 1P produced a Trap
ET0000034028	Trap if the Host communication session not active
ET0000034432	Drive with names about D99 will not found in the teach point file

7.3 AMU 3.10

Table 7-3 Solved problems in AMU 3.10

Ticket number	Problem
ET0000030906	Enhancement of Logwrite for the FLIP command
ET0000033088	Kernel State mismatch produced a stop of the system
ET0000030878	sort files in the View Log files dialog
ET0000031062	Prevent the system failure SYS3170
ET0000015086	Move to the second problembox in a AML/J
GR000002985	Problems with the file transfer of the AMU-CONF.INI file to the DUAL-AMU

8 Known Bugs and Work Arounds

Table 8-1 Known Bugs and Work arounds

Ticket number	Problem	Workaround
19990505_3	Rho File Manager starts KRN without any options (Problem with DAS or Dual-AMU)	After using RFM, restarts the AMU (shutdown AMU, call AmuStart.cmd)
ET0000025079	The command INVT in the ABBA/1 format returned for coordinates with ejected volser FREI00 and 0L instead of the volser and *E	Use the command ULC (HACC/MVS command ACC to get informations about the coordinate)
ET0000031435	The function BACKUP of the RFM does not work.	Use the command receive files from rho to make a bak-kup of the controller micro-code of AML/2 and AML/E
GR000004295	On AML/2 twin systems the pass trough function does not work	Insert the cartridges always on the robot, where the drive is located for the mount
GR000002878	AMU-Manual Mode also for AML/J	Configure the robot type R0 (AML/2)

Table 8-1 Known Bugs and Work arrounds

Ticket number	Problem	Workaround
SNS007	<p>EJ(T) support for volume mountable from Insert area The AMU 3.0 offers the direct mounting of cartridges from a EIF position or an HICAP door. It is currently not possible to issue an EJ or EJT command for such cartridges. This can cause troubles for the applications, that usually do not know whether a cartridge is in such a position or not. This error will be corrected in the next AMU release.</p>	<p>The consequence in BS2000 is that the MAREN statements //EXPORT-VOLUME and //RETURN-VOLUME will be rejected for volumes that are mountable from an EIF or an HICAP door. Procedures using this statement will go to error. Waiting for the AMU correction, - the removal of such volumes from the BS2000 MAREN catalogue can be done by a manual removal from the EIF or HICAP door (i.e without any //EXPORT-VOLUME //RETURN-VOLUME on BS2000). - it is still possible to insert the cartridges into the robot with IN before using them for mounting. - the use of the MAREN statements //EXPORT-VOLUME and //RETURN-VOLUME on BS2000 is forbidden for volumes in the robot if the volumes are not explicitly inserted with IN.</p>
SNS021	<p>Commands for drives during a AMU generated drive cleaning will be canceled by AMU.</p>	<ul style="list-style-type: none"> • For compatibility with ROBAR, do not use AMU drive cleaning for drive used by ROBAR. • Set in DAS the option <code>no_avc</code>

9 Example of Start Scripts

9.1 Startup.cmd

```
startcm
cmwait -w 600
cd amu
start AmuStart
start nnlink
```

9.2 c:\AMU\AmuStart.cmd

```
@REM -----
@REM      Filename:      AmuStart.cmd
@REM      Description:   Start Script for the AMU modules
@REM
@REM      [cd can
@REM      DL                      Download binaries to CAN-controller
@REM      cd ..]
@REM      start /C /min "AMU Kernel" krn [/S] [/R] [/B]
@REM      Options: /S      AMU with a DAS
@REM              /R      Dual AMU (AMU router is running)
@REM              /B      Dual AMU (AMU Backup Deamon is running)
@REM      [start /C /min "AMU Router" rte]          Dual-AMU with router
@REM      [start /C /min "AMU Backup Deamon" bud]   Dual-AMU with Backup Deamon
@REM      start con [/L]          Option: /L automatic start of Online Log
@REM -----

cd can
DL
cd ..

start /C /min "AMU Kernel" krn /S /R /B
start /C /min "AMU Router" rte
start /C /min "AMU Backup Deamon" bud
start con /L
exit
```

