



# Installation Guide

## Drive Control Interface

DRIVE  
CONTROL  
INTERFACE



Order No. DOC E00 027





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# 1 Before You Begin Working

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## 1.1 Intended Audience

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This manual contains all information and instructions you need for install and Configure a Drive Control Interface

## 1.2 Explanation of Symbols and Notes

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The following symbols and highlighted passages draw attention to important information.




Explanations of these symbols see chapter „Hazard Alert Messages”



### Information

**Information important for understanding this introduction.**

<KEY>	Key on the keyboard of the AMU processor
<1> + <2>	Press these keys simultaneously
„ABCD”	Headline, e. g. chapter 3 „For Your Safety” Special term, e. g. „Manage Users” Filename, e. g. „AMUINST.EXE”
ABCD	Terms appearing on the AMU operating console
ABCD	Command line appearing in the OS/2 input window, e. g. [C:\]cd amu
	Reference to a description - on another page of this manual

## 1.3 Technical Support

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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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### 1.4 About this Manual

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This manual contains all information and instructions you will need for correct installation of the Drive Control Interface.

You have received comprehensive training at ADIC or ADIC/GRAU Storage Systems and can operate and service the AMU-PC without endangering yourself or others.



#### **WARNING!**

**Operation and maintenance of the AML system by untrained persons can lead to dangerous situations.**

**The consequence could be severe or fatal injury caused by moving parts or contact with live connections.**

**Introductory training at ADIC or ADIC/GRAU Storage Systems therefore is an indispensable precondition for all who work with the AML system!**

You are servicing the plant and are therefore also responsible to ensure only trained personnel authorized by ADIC or ADIC/GRAU Storage Systems carries out the following on the equipment

- prepare for operation
- set-up
- start
- operate
- shut down
- maintain
- restart

Refer to the Operator Guide if there is an operating problem.

If you cannot solve the problem

- consult a trained specialist
- consult the service partner, ADIC or ADIC/GRAU Storage Systems

Please note however:



#### **WARNING!**

**You may carry out some work and adaptations only if you have the appropriate qualifications and training!**

**Disconnect the power cable before you open the device.**

## 1.5 Copyright

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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 About Drive Control Interface

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### 2.1 Compatibility

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For usage of the DCI the following prerequisite must be ok:

**Hardware:**

- AML/2, AML/E and AML/J  
(Scalar 1000 has a own drive communication and will not support DCI)
- AMU-PC: ADIC/GRAU-Controller or compatible (The before used Artist, Dell or Siemens PCs have not enough performance and will be not supported.)
- Serial Commication with IBM RIC-Adapter is **not** supported (Please use the new Multiport Adapter.

**Software:**

System	Microcode Version
AML/2	Version 2.30G with Fix 4 or higher
AML/E	Version 2.30G with Fix 4 or higher
AML/J	Version 4.01 or higher
AMU	3.10A or higher
DAS/2	3.012 or higher

### 2.2 Structure of Drive Control Interface (DCI)

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:DCI is the hardware for connecting

- the AML Management Unit (AMU)
- the DLT LP dirves

The controller is designed for AML/2, AML/E and AML/J

For the communication is the CAN-AC1-Adapter in the AMU-PC necessary. This adapter used a shared memory from D0000 - DFFFF, but no interrupt. No changes on the jumper of the CAN-AC1 adapter are necessary (all on default)

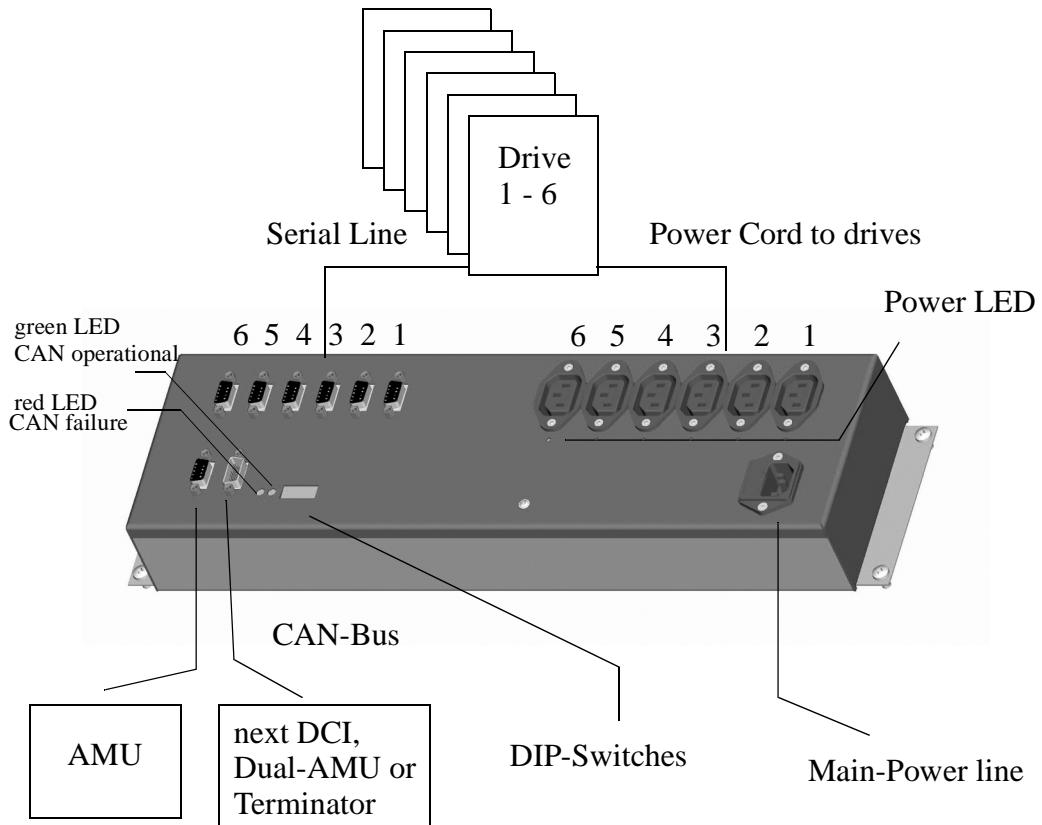
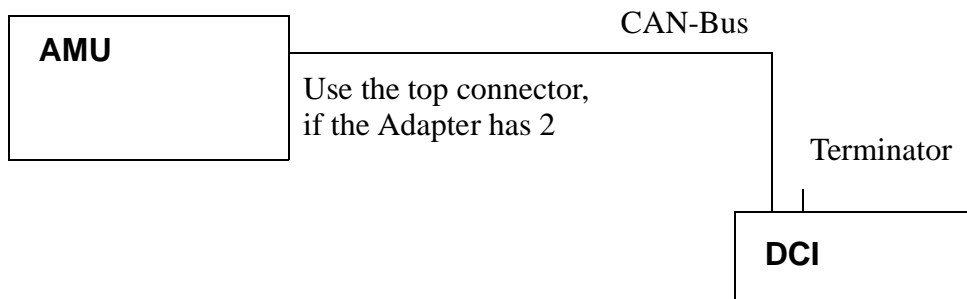


Fig. 2-1: Top view of DCI

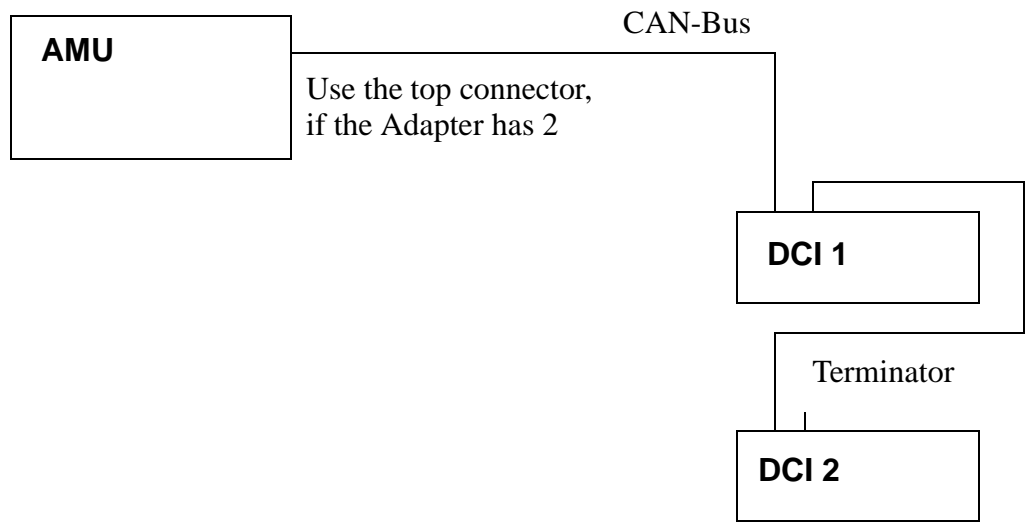
## 2.3 Configurations

Depend of the number of DCI boxes and AMU PCs in a system are different configurations possible:

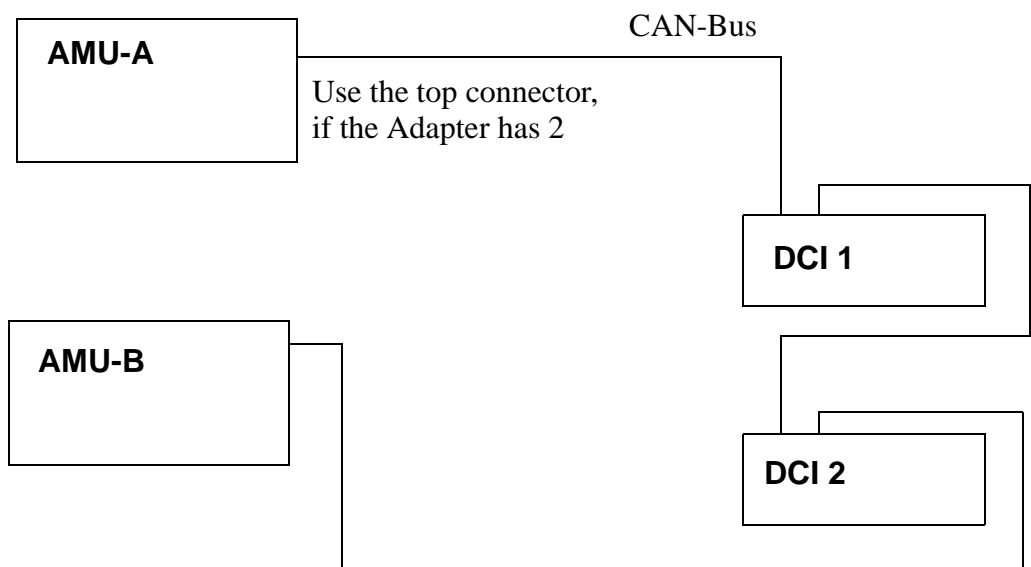
### Single AMU and Single DCI



## Single AMU and multiple DCIs



## Dual-AMU and multiple DCIs

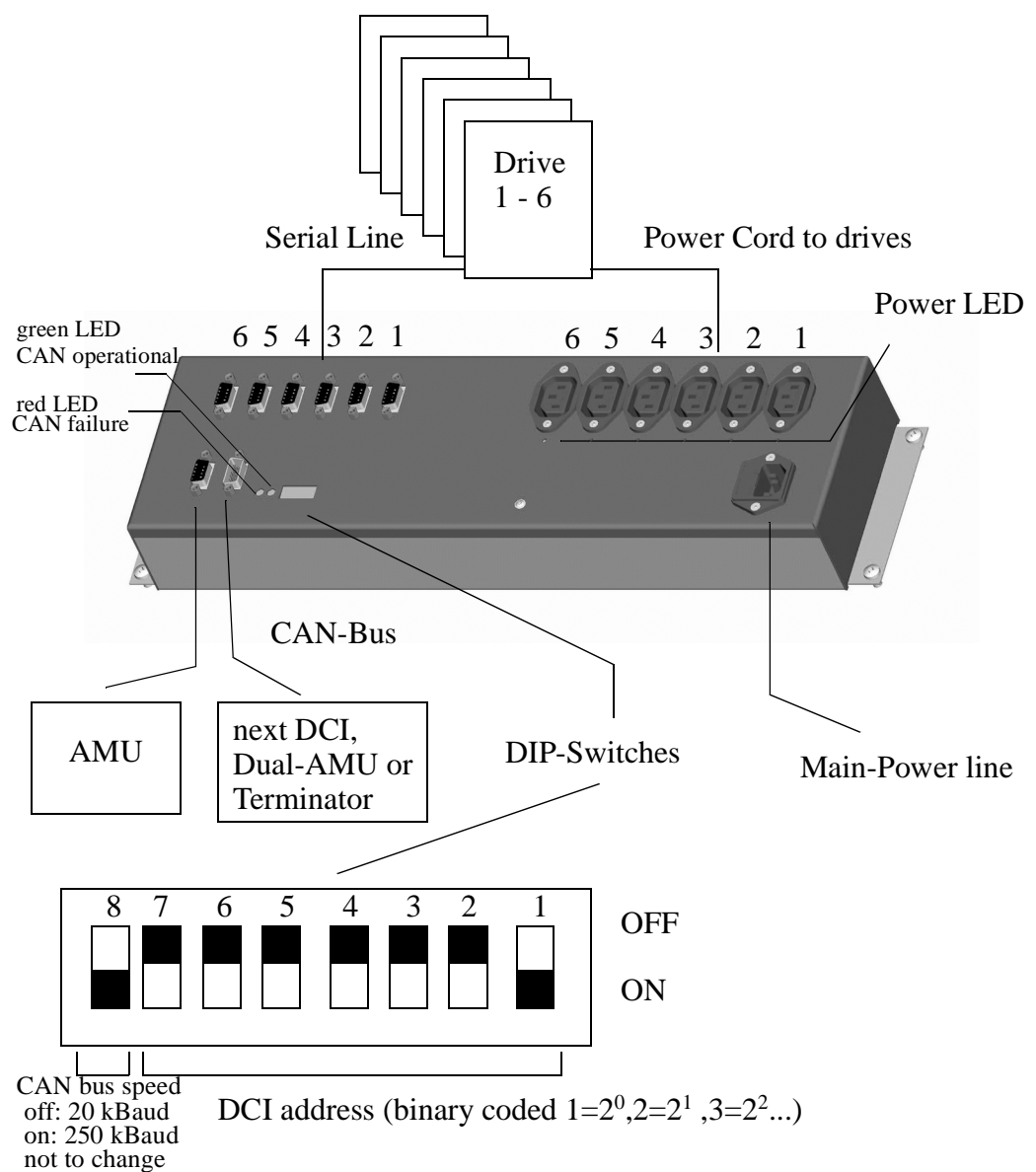




### 3 Configuration DCI

#### 3.1 Configuration of the DCI

The Drive Control Interface is necessary for controlling the DLT 7001 and DLT 8001 (Low Profile) drives.



The Configuration will be done in

- **Graphical Configuration** of the AMU (AMUCONF.INI) and
- for loading microcodes in AMUSTART.CMD  
the following setting is necessary in the AMUSTART.CMD:

```
cd CAN
DL
```

- Check or add in the CONFIG.SYS the following driver setting.

```
DEVICE=C:\AMU\CAN\CANDRV.SYS
```

- Please do following steps in the **Graphical Configuration** of the AMU:
  - Create for each DCI one drive container
  - Create connection lines from container to the robot
  - Open the container and move the DLT drives in the container or create drives
  - Open the drive configuration and set up the following values

**Description** (Name for DAS)

**Dismount Management**  
(Default-values for DAS)

**Clean Management**

**Automatic Cleaning**  
(DCI controlled)

**Number of Cycles** = 0, for no cyclic Cleaning but cleaning on request

**Clean Time:** 200 (Average duration of the cleaning)

**Clean Pool:** In CleanPool-Management defined Name, which contained the clean tapes for the DLT drives.

Fig. 3-1: Drive configuration for DLT with DCI

- Leave the container
- Create a connection line between container and AMU symbol

## Configuration of the DCI

1

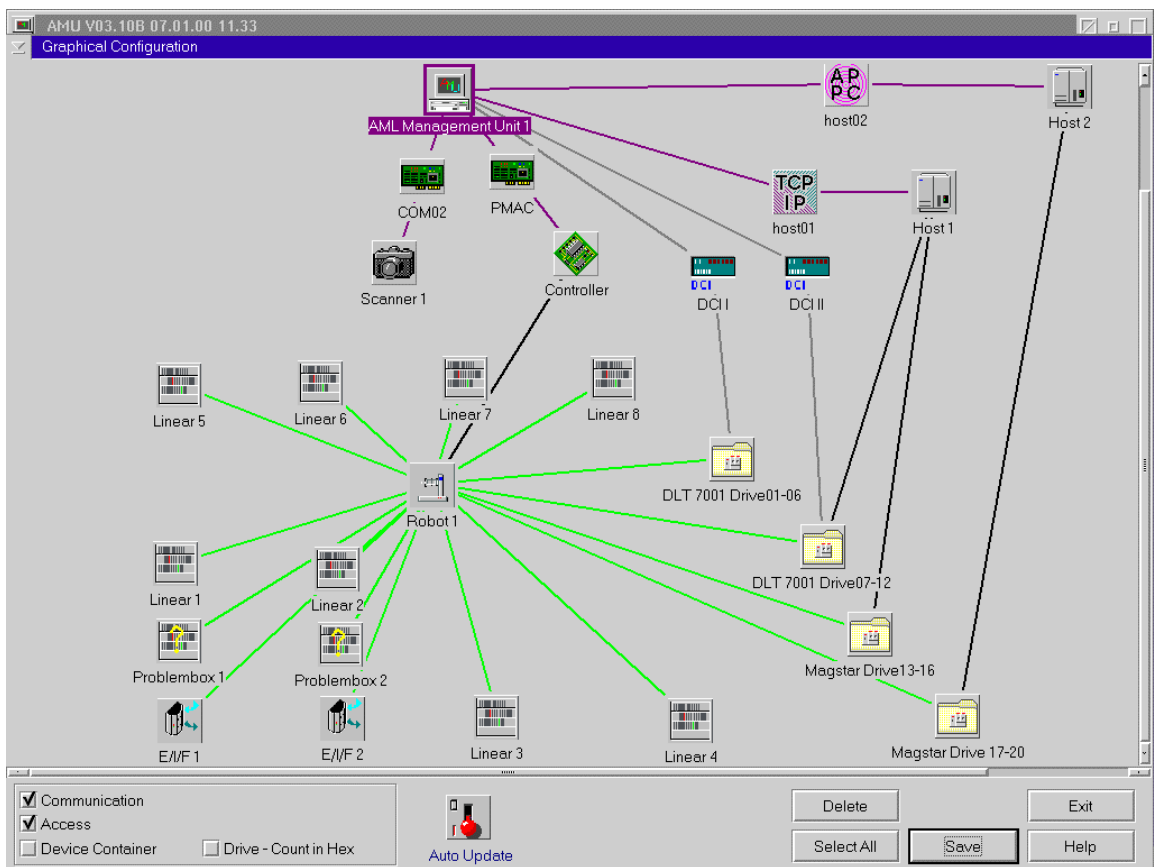


Fig. 3-2: Example of AML/J configuration with DCI in the "Graphical Configuration"

- Open the new arised communication symbol between drive container and AMU

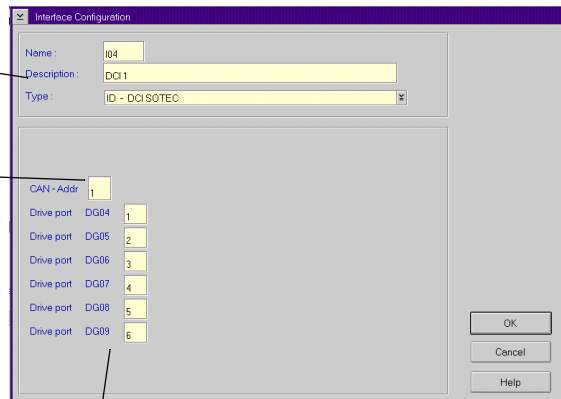
- Set up the following values.

### Description

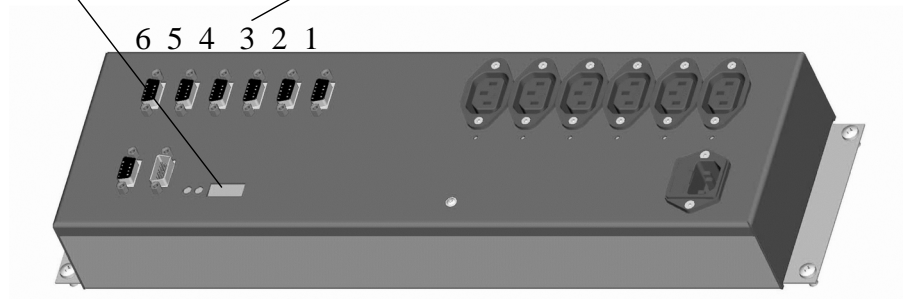
(e.g. "DCI 1" where 1 is the CAN-Address)

### CAN-Address

related to the setting of the DIP-switches



**Drive Port** of the DCI to the drive



## 3.2 Startup and Test with DCI

There are two operating modes of DLT 7001S and 8001S

Drive empty and the handle button below is outside

Drive occupied and the handle button above is outside

### Warning:

**If there any other combination ( e.g. Drive empty and button above is outside) the setting must be correct manually:**

- Switch off th drive
- with glove in the drive slot the small button (Interposer) pressed together with the handle button (The Interposer locked the drive)



### 3.2.1 Start Sequence for Systems with DCI

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- a) switch on the DCI together with the drives
- b) switch on the AMU - PC's
- c) switch on the robot(s) and wait for robot (and tower) ready
- d) during the first activity on a drive with DCI, the AMU checked the condition of the drive
  - Drive is empty and not ready ( green LED flashing ):  
Robot pressed handle and wait for drive release.
  - Drive is occupied  
condition will be detected by DCI, keep is possible after the UNLOAD command (SCSI or AMU)

#### Information

**If the drive will be switched off and again on during the operation, the DCI detects the new conditions and operates correctly (see above point d))**

### 3.2.2 Tests with Drives

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Mount is only possible for a drive, which is ready (green LED is on but not flashing)

Keep is only possible after a

- SCSI-unload
- pressed unload button on the drive (robot or manual)

#### Using of PMMAINT with DCI

Before you use the Pmmaint, also the script DL.bat (C:\AMU\CAN\DL.BAT) must be activated.

