

```

92011012.12D
Cooling water container
10.01.1992 12:12:00
12.01.1992 23:00:00
    
```

	E1	E2	E3	E4
Scale start	+00.00	+000.0	+01.00	+200.0
Scale end	+20.00	+800.0	+06.00	+800.0
Measuring point	TRANSMITTER	SAMPLING	PRESSURE	LEVEL
Unit	Ma	l/h	bar	cm
Storage rate [s]	1	1	1	600
10.01.1992 12:12:00	+10.00	+650.0	+2.05	+420.0
10.01.1992 12:12:01	+10.04	+651.0	+2.05	+420.0
10.01.1992 12:12:02	+10.08	+655.5	+2.08	+420.0
10.01.1992 12:12:03	+10.14	+652.4	+2.15	+420.0
10.01.1992 12:12:04	+10.25	+660.3	+2.20	+420.0
10.01.1992 12:12:05	+10.32	+664.5	+2.31	+420.0
10.01.1992 12:12:06	+10.40	+650.0	+2.05	+420.0
10.01.1992 12:12:07	+10.51	+651.0	+2.05	+420.0
10.01.1992 12:12:08	+10.73	+655.5	+2.08	+420.0
10.01.1992 12:12:09	+10.98	+654.4	+2.44	+420.0
10.01.1992 12:12:10	+11.25	+670.3	+2.23	+420.0
10.01.1992 12:12:11	+11.32	+674.4	+2.21	+420.0
10.01.1992 12:12:12	+12.00	+670.2	+2.11	+420.0
10.01.1992 12:12:13	+12.04	+671.0	+2.23	+420.0
10.01.1992 12:12:14	+12.08	+675.5	+2.18	+420.0
10.01.1992 12:12:15	+12.14	+682.3	+2.25	+420.0
10.01.1992 12:12:16	+12.25	+690.4	+2.20	+420.0
10.01.1992 12:12:17	+12.32	+694.5	+2.21	+420.0

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1 Installation and uninstallation

1.1 Hardware requirements

PC:	IBM PC, PS/2 or 100 % compatible with 286, 386 or 486 processor
Available memory:	Minimum 450 KB RAM
Available disk space:	Minimum 1 MB (increasing according to the number of devices connected). Additional disk space is required for ASCII conversion, see 3.1.3.
Operating system:	MS-DOS version 3.3 or above Note This program can not be run under MS-Windows
Floppy disk operation:	Possible, but not recommended (from a performance point of view)
Graphics card:	CGA or above
Mouse (if used):	Serial Microsoft mouse or compatible
Read out data via RS 485 interface:	Hartmann & Braun interface card KOM 011 with 2 RS 485 interfaces is recommended
Read out data via telephone network using a modem:	RS 232 interface module type 16550 obligatory for PC interface Hartmann & Braun modem MO 01 and modem coupler unit MKE 485 obligatory

1.2 Installation

1.2.1 Copy protection

The program is protected against unauthorised copying by a software copy protection system. It is **not** possible to copy the program diskette. The program is normally provided with one user authorisation allowing the program to be installed once on the hard disk. The program can also be run using the original diskette. More than one user authorisation can be provided, but an additional premium will be charged for this option.

1.2.2 Installing the software on a hard disk

- Deactivate the mechanical write-protect device on the Program diskette.
- Insert diskette in drive A or B.
- Create a new directory for program PROG2, e.g. C:\PROG2 (it may also be installed in a different directory or on another hard disk drive).
- Move to the drive containing the Program diskette by stating A: or B:
- Copy all the files from the diskette into the directory previously created on the hard disk, e.g. COPY *.* C:\PROG2.
- Copy user authorisation onto the hard disk:
If A: is the source drive, input command **EVMOVE A: C:**; if B: is the source drive, input command **EVMOVE B: C:**.
Remove diskette and reactivate the write-protect device.

1.2.3 Starting the program

- Move to the directory on the hard disk which you created in Section 1.2.2.
- Input the appropriate one of the following three commands: PROG2D.EXE (German version)
PROG2E.EXE (English version)
PROG2F.EXE (French version) to start the program from the hard disk.

The program may also be run on other PCs from the original diskette.

1.2.4 Uninstalling the user authorisation

If the program is to be installed on another PC's hard disk, the user authorisation must first be copied back from the hard disk to the original diskette.

- Deactivate the write protect device and insert the diskette in the drive.
- If A: is the target drive, input command **A:\EVMOVE C: A:**; If B: is the target drive, input command **A:\EVMOVE C: B:**
- Reactivate the write protect device. The program can now be installed on another PC.

2 Description

The program permits the **entire** memory contents of Datavis to be read. The program saves these memory contents as a binary file on a data storage device. Since this file contains a maximum of 200 KB, archiving can be carried out on a floppy disk. Binary files produced by PROG2 can be read and displayed by the Hartmann & Braun curve evaluation program PROG3.

The saved or archived binary files may also be converted into ASCII files. These ASCII files can contain either the entire contents of the binary file or just the parts required (partitioning). In addition to the ASCII curve file, an alarm value file can also be created in ASCII format for recording alarm signal infringements.

All ASCII files produced by PROG2 are in a format which allows further processing by other programs.

3 Program structure

Once the program has been started through the command PROG2E.EXE, the main menus **File**, **Read out**, **Options** and **Help** are displayed.

3.1 "File" menu

This menu contains facilities for loading and saving measured values from binary files and for converting such files to ASCII format. Until a file has been loaded, the menu choices **Save As...**, **ASCII complete** and **ASCII Partition** remain disabled.

H&B Datavis -PROG2- Read out / Convert			File name: Unnamed
File	Read out	Options	F1=Help
Load Save As...			
ASCII complete... ASCII Partition			
Dos Shell Exit		F3	

3.1.1 Load File

This menu choice is used for loading previously saved binary files which reflect the entire memory contents of a Datavis device. These files are then available for conversion to an ASCII file.

3.1.2 Save File As

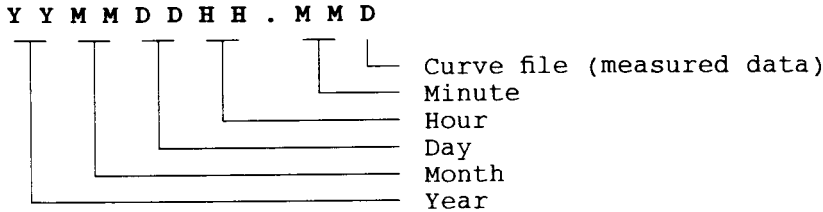
This menu choice is used for saving a previously loaded binary file with a new name and comment on a data storage device. The program automatically assigns the extension **.BIN**, and any other extension is ignored at this point.

3.1.3 ASCII complete

This menu choice converts the complete binary file into an ASCII file. The file start and end times are displayed in the window. A curve file is created for the measurement data, and an alarm value file is created as applicable.

Please note that the ASCII file to be converted may be as large as 5 MB; you should therefore ensure that sufficient disk space is available before starting conversion. If not enough space is available for the converted file, conversion is aborted by the program and an appropriate message displayed. However, in this case a file is still created with the ASCII text already converted.

The name of an ASCII file is assigned automatically by the program and is encoded in the following manner:



The file name indicates the file start time.

File name coding example:

File name: **9 2 0 1 1 0 1 2 . 1 2 D**

Curve file start time: **10. Jan. 92 12.12h**

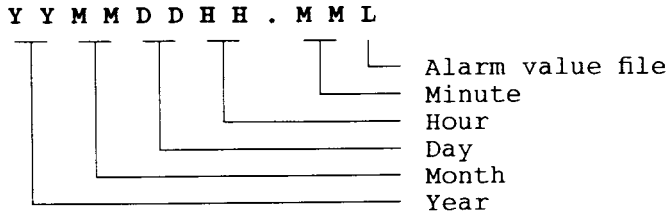
The converted ASCII file has the following format (Please note that the data in the ASCII-file is displayed as DD.MM.YYYY !):

92011012.12D	File name																																																													
Cooling water container	Description																																																													
10.01.1992 12:12:00	File start																																																													
12.01.1992 23:00:00	File end																																																													
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;"></td> <td style="width: 15%; text-align: center; border-right: 1px solid black;">E1</td> <td style="width: 15%; text-align: center; border-right: 1px solid black;">E2</td> <td style="width: 15%; text-align: center; border-right: 1px solid black;">E3</td> <td style="width: 15%; text-align: center; border-right: 1px solid black;">E4</td> <td style="width: 20%;"></td> </tr> <tr> <td style="padding-left: 20px;">Scale start</td> <td style="text-align: center; border-right: 1px solid black;">+00,00</td> <td style="text-align: center; border-right: 1px solid black;">+000,0</td> <td style="text-align: center; border-right: 1px solid black;">+01,00</td> <td style="text-align: center; border-right: 1px solid black;">+200,0</td> <td rowspan="2" style="vertical-align: middle;">Channels</td> </tr> <tr> <td style="padding-left: 20px;">Scale end</td> <td style="text-align: center; border-right: 1px solid black;">+20,00</td> <td style="text-align: center; border-right: 1px solid black;">+800,0</td> <td style="text-align: center; border-right: 1px solid black;">+06,00</td> <td style="text-align: center; border-right: 1px solid black;">+800,0</td> </tr> <tr> <td style="padding-left: 20px;">Measuring point</td> <td style="text-align: center; border-right: 1px solid black;">TRANSMITTER</td> <td style="text-align: center; border-right: 1px solid black;">SAMPLING</td> <td style="text-align: center; border-right: 1px solid black;">PRESSURE</td> <td style="text-align: center; border-right: 1px solid black;">LEVEL</td> <td rowspan="2" style="vertical-align: middle;">Data assigned to the channel</td> </tr> <tr> <td style="padding-left: 20px;">Unit</td> <td style="text-align: center; border-right: 1px solid black;">mA</td> <td style="text-align: center; border-right: 1px solid black;">l/h</td> <td style="text-align: center; border-right: 1px solid black;">bar</td> <td style="text-align: center; border-right: 1px solid black;">cm</td> </tr> <tr> <td style="padding-left: 20px;">Storage rate [s]</td> <td style="text-align: center; border-right: 1px solid black;">1</td> <td style="text-align: center; border-right: 1px solid black;">1</td> <td style="text-align: center; border-right: 1px solid black;">1</td> <td style="text-align: center; border-right: 1px solid black;">600</td> <td></td> </tr> </table>		E1	E2	E3	E4		Scale start	+00,00	+000,0	+01,00	+200,0	Channels	Scale end	+20,00	+800,0	+06,00	+800,0	Measuring point	TRANSMITTER	SAMPLING	PRESSURE	LEVEL	Data assigned to the channel	Unit	mA	l/h	bar	cm	Storage rate [s]	1	1	1	600																													
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<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%; padding-right: 10px;">10.01.1992 12:14:22</td> <td style="width: 15%; padding-right: 10px;">+12.00</td> <td style="width: 15%; padding-right: 10px;">+670.2</td> <td style="width: 15%; padding-right: 10px;">+2.11</td> <td style="width: 15%; padding-right: 10px;">+420.0</td> <td rowspan="6" style="vertical-align: middle; padding-left: 10px;">Identification of mains failure</td> </tr> <tr> <td>10.01.1992 12:14:23</td> <td>+12.04</td> <td>+671.0</td> <td>+2.23</td> <td>+420.0</td> </tr> <tr> <td>10.01.1992 12:14:24</td> <td>+12.08</td> <td>+675.5</td> <td>+2.18</td> <td>+420.0</td> </tr> <tr> <td>10.01.1992 12:14:25</td> <td>+12.14</td> <td>+682.3</td> <td>+2.25</td> <td>+420.0</td> </tr> <tr> <td>10.01.1992 12:14:26</td> <td>+12.25</td> <td>+690.4</td> <td>+2.20</td> <td>+420.0</td> </tr> <tr> <td style="text-align: center;">↓</td> <td style="text-align: center;">↓</td> <td style="text-align: center;">↓</td> <td style="text-align: center;">↓</td> <td style="text-align: center;">↓</td> </tr> </table>	10.01.1992 12:14:22	+12.00	+670.2	+2.11	+420.0	Identification of mains failure	10.01.1992 12:14:23	+12.04	+671.0	+2.23	+420.0	10.01.1992 12:14:24	+12.08	+675.5	+2.18	+420.0	10.01.1992 12:14:25	+12.14	+682.3	+2.25	+420.0	10.01.1992 12:14:26	+12.25	+690.4	+2.20	+420.0	↓	↓	↓	↓	↓																															
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10.01.1992 12:14:26	+12.25	+690.4	+2.20	+420.0																																																										
↓	↓	↓	↓	↓																																																										

In addition to the ASCII curve file, an ASCII alarm value file can also be created.

The setting and/or resetting of an alarm contact is evaluated here on a channel-by-channel basis. One must, however, bear in mind here that the accuracy of the specified times is directly dependent on the storage rate selected. If the storage rate is 1 sec. an alarm value change is returned to the nearest second. If the storage rate is e.g. 20 sec., the inaccuracy of the time specification for an alarm value change is likewise 20 seconds.

The name of the ASCII alarm value file is also assigned automatically by the program with the same coding method being used as for the curve file, apart from the last letter which is always an L.



The file name indicates the file start time.

The converted ASCII alarm value file has the following format (Please note that the data in the ASCII-file is displayed as DD.MM.YY-YY !):

92011012.12L	File name
Cooling water container alarm values	Description
10.01.1992 12:12:00	File start
12.01.1992 23:00:00	File end

	L1	L2	L3	L4	Alarm values
Function	Max	Max	Min	Min	Data assigned to alarm value
Input	E1	E2	E2	E4	
Value	+18.00	+750.0	+100.0	+250.0	
Hysteresis	+000.5%	+000.5%	+000.5%	+000.5%	

11.01.1992 12:22:04	SetL2				List of alarm value changes
11.01.1992 12:32:01	SetL1				
11.01.1992 13:10:00	SetL3				
11.01.1992 13:11:01	ResetL3				
11.01.1992 13:11:35	SetL3				
11.01.1992 13:12:00	ResetL1				
11.01.1992 13:20:10	ResetL2				
11.01.1992 13:22:22	ResetL3				

|
 |
 |
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Set = Alarm signal set Reset = Alarm signal reset

Note
 A binary file can consist of several segments. A new segment is always created if one of the following parameters was changed in the Datavis device **during operation: date/time, scaling, cycle time of the memory or alarm signal functions**. Several ASCII files are created automatically during the conversion, according to the number of segments present.
 If a mains failure occurs there will be a time jump in the ASCII file. Such irregularities are marked in the ASCII file by a line of "-----" characters.

3.1.4 ASCII Partition

This menu choice allows the binary file loaded to be converted into an ASCII file in freely definable time segments. The file start and end times permitted are restricted only by the binary file times.

See Section 3.1.3 for file name, file format, etc.

3.1.5 DOS Shell

This menu choice allows you to exit the program temporarily and return to DOS level.

Return to the program by entering EXIT at DOS level.

3.1.6 Exit

This menu choice is used to exit program PROG2.

3.2 "Read out" menu

This menu is used for reading or erasing the memory contents of connected Datavis devices.

H&B Datavis -PROG2- Read out / Convert			File name: Unnamed
File	Read out	Options	F1=Help
Select connection ...		Read out / Delete Device Memory ...	

3.2.1 Select Connection

This menu choice is used to select one of the 4 connections defined in Section 4. The active connection is displayed on the screen.

3.2.2 Read out/Delete device memory

This menu choice is used to erase the **entire** memory contents of the connected Datavis device(s).

This procedure can take a few minutes.

After reading you may, if you so wish, erase the **entire** memory contents of the connected Datavis device(s).

3.3 “Options” menu

This menu allows various program options to be set.

H&B Datavis -PROG2- Read out / Convert			File name: Unnamed
File	Read out	Options	F1=Help
		Setup ... Connections ...	
		Mouse Control ... Warning Beep ... Select Colour Palette ...	
		Print all Help Texts ...	
		Menu Shading Display Double Frame	

3.3.1 Setup

The following settings can be made:

- Work directory: Input a directory designation according to DOS conventions. This will be offered as the default directory by Save File As ..., ASCII complete and ASCII Partition. If no entry is made here the program will automatically set up subdirectories under the PROG2 directory with names matching the corresponding connections (see Sections 3.3.2 and 4).
- Floating point: The format of the decimal point (. or ,) in an ASCII file is specified. If the ASCII file is to undergo further manipulation in a user calculation program, one must establish whether numeric values are to be divided with a comma or point in order to be recognized as such.
- Printer port: The port is selected for printing out the help texts. The program automatically detects the number of ports available and offers the for selection.

3.3.2 Connections

This menu choice is for defining the ports (connections) for reading the connected Datavis devices. The program automatically detects the number of ports on the computer and offers them for selection. The type of connection (RS 232 / RS 485 or modem connection) must be specified.

3.3.3 Print all Help Texts

This menu choice allows you to print out all the help texts which the program provides the user with interactively. These texts form a supplement to this operating manual and contain, amongst other things, comprehensive information on the keyboard functions. Output is sent to the printer port specified under “Setup”.

3.3.4 Other program options

The following submenus are available to the user for customising certain visual and acoustic features of the program:

- Mouse Control
- Warning Beep
- Colour Palette
- Shading / Borders

3.4 “Help” menu

This menu allows you to use various different criteria to call up help texts (which can also be displayed in a context-sensitive mode by using the F1 key). The following submenus are presented:

- All help texts listed in alphabetical order
- Help on keyboard assignment
- Help on the help system
- Most recently displayed help text

4 Using PROG2 for reading data

PROG2 can read the memory contents of a Datavis device via the RS 232 port located on its front panel, via the RS 485 port at the rear and via the RS 485 port in conjunction with a Hartmann & Braun modem. Before data can be read from a Datavis device the "connections" must be configured, specifying the port address (COM1, ... COM4), type (RS232, RS485, modem) and the baud rate.

All the following examples are based on the assumption that the PROG2 program is installed in a directory named C:\PROG2 on the hard disk.

4.1 Read out data via an RS 232C interface

- Open the "Options" menu and select "Connections".
- Choose "New".

The following screen will be displayed:

H&B Datavis -PROG2- Read out / Convert			File name: Unnamed
File	Read out	Options	F1=Help

```

                                Edit connection

Short name      : CONRS232
Description     : Local reading via RS 232 COM2
Type           : (.)RS232 ( )RS485 ( )Modem

-Interface-
Port           : ( )COM1 (.)COM2 ( )COM3 ( )COM4
Baud rate      : ( )2400 ( )4800 ( )9600 ( )19200
Control signal: ( )Standard ( )Inverted
Address PC     : 70H

-Modem-
[ ] PABX (private exchanges)
Dial type      : ( )Tone ( )Pulse
Telephone no.  : 0w2056,1220213
Volume         : ( )Off ( )Low ( )Medium ( )High

<- Save      ESC=Cancel      F1=Help
```

- In the "Short name" field input a name (max. 8 characters) for this connection.
- In the "Description" field input any text you wish to describe the connection (field may be left blank).
- For "Type" select the default interface, RS232. If "RS232" is selected here, all other fields with the exception of "Port" are disabled as they do not apply to RS232.
- Choose the appropriate port number in the "Port" field (PROG2 automatically displays all ports detected in the PC); in the example above COM2 has been selected.
- Confirm these entries with the <ENTER> key.
- Exit the next screen "Setup connections" by again pressing <ENTER> or using the mouse to click "Ok".
- Connect the Datavis device using the interface cable. Set the interface type on the Datavis to "RS232".
- Open the "Read out" menu.
- Choose "Select connections".

- Choose connection "CONRS232".
- Open "Read out" menu.
- Choose "Read out / delete device memory".

The following screen is presented:

H&B Datavis -PROG2- Read out / Convert			File name: Unnamed
File	Read out	Options	F1=Help

Connection: CONRS232

Read out / delete device memory			
Connection: CONRS232 - Local reading via RS 232 COM2			
ESC=Cancel	Read out	Delete	F1=Help

- If you select "Read out", the connected Datavis device will be read.
- ("Delete" will prompt for confirmation before erasing the memory contents in the connected device).

Once the reading process is finished the following screen is presented:

H&B Datavis -PROG2- Read out / Convert			File name: Unnamed
File	Read out	Options	F1=Help

Connection: CONRS232

Binary file: Save as			
Directory C:\PROG2\CONRS232\			
File name			
*.Bin			
Files			
[...]			
Test1.BIN	File read previously		
Test2.BIN	File read previously		
OK	ESC=Cancel	F1=Help	

- You should provide a name of your choice (8 characters) and a description for the binary file which has just been read; this name is used to save the file on the hard disk. By default the file is saved in directory C:\PROG2\CONRS232 (unless a different directory was specified as described in Section 3.3.1)
- Once the file is saved, the data can be erased from memory by once again selecting "Delete" from the "Read out" menu.

4.2 Read out data via an RS 485 interface

- Open the "Options" menu and select "Connections".
- Choose "New".

The following screen is presented:

H&B Datavis -PROG2- Read out / Convert			File name: Unnamed
File	Read out	Options	F1=Help

Edit connection

Short name : CONRS485
 Description : Read out data via RS 485 COM3
 Type : ()RS232 (.)RS485 ()Modem

Interface

Port : ()COM1 ()COM2 (.)COM3 ()COM4
 Baud rate : ()2400 ()4800 ()9600 (.)19200
 Control signal: (.)Standard ()Inverted
 Address PC : 70H

Modem

[] PABX (private exchanges)
 Dial type : ()Tone ()Pulse
 Telephone no. : 0w2056,1220213
 Volume : ()Off ()Low ()Medium ()High

<— Save ESC=Cancel F1=Help

- In the "Short name" field input a name (max. 8 characters) for this connection.
- In the "Description" field input any text you wish to describe the connection (field may be left blank).
- For "Type" select interface type RS 485.
- Choose the appropriate port number in the "Port" field (PROG2 automatically displays all ports detected in the PC); in the example above COM3 has been selected.
- Select the required baud rate, which must correspond to that set in the Datavis devices. In the example above 19,200 baud has been selected.
- For "Control signal" select the logic required for the RTS and DTR control signal of the RS 485 interface. The Hartmann & Braun interface card works with both settings. Where external converters are being used the correct control logic may have to be ascertained by trial and error.
- In the "Address PC" field the default setting of 70H (H=hexadecimal) is usually suitable. It is of the utmost importance that none of the connected Datavis devices uses the same address.
- Confirm these entries with the <ENTER> key.
- Exit the next screen "Setup connections" by again pressing <ENTER> or using the mouse to click "OK".
- Now connect the Datavis devices. On each device the interface must be set to RS 485 and the baud rate to "19200". All devices must have different addresses.
- Open the "Read out" menu.
- Choose "Select connections".
- Choose connection "CONRS485".
- Open "Read out menu".
- Choose "Read out / delete device memory".

When this connection is used for the first time, the following screen is presented:

H&B Datavis -PROG2- Read out / Convert			File name: Unnamed
File	Read out	Options	F1=Help

Connection: CONRS485

Read out / delete device memory

Connection: CONRS485 - Read out via RS 485 COM3

Devices

Delete marks Space bar = Marking

ESC=Cancel Read out Delete Name Search F1=Help

- Choose "Search". PROG2 will automatically search for any Datavis devices linked with this connection.

When the search is completed, all Datavis devices linked with this connection are displayed along with their (hexadecimal) addresses:

H&B Datavis -PROG2- Read out / Convert			File name: Unnamed
File	Read out	Options	F1=Help

Connection: CONRS485

Read out / delete device memory

Connection: CONRS485 - Read out via RS 485 COM3

Devices

01h Datavis

02h Datavis

1Ah Datavis

2Ch Datavis

Delete marks Space bar = Marking

ESC=Cancel Read out Delete Name Search F1=Help

In the example above 4 Datavis devices were detected with the hexadecimal addresses of 01H, 02H, 1AH and 2CH. A free-form description can now be input for each of these devices (not obligatory):

- Use the arrow keys to move the selection to the device required, choose "Name" and input text.

The selection screen may now look something like the example below:

H&B Datavis -PROG2- Read out / Convert			File name: Unnamed
File	Read out	Options	F1=Help

Connection: CONRS485

Read out / delete device memory

Connection: CONRS485 - Read out via RS 485 COM3

Devices

01h	Datavis	Pressure control PICA01...04
02h	Datavis	Temperature TICA01...04
1Ah	Datavis	Flow FICA01...04
2Ch	Datavis	Tank level, tanks K1...K4

Delete marks Space bar = Marking

ESC=Cancel Read out Delete Name Search F1=Help

- Use the arrow keys to move the selection to the device required and choose "Read out" or activate the <ENTER> button. The selected device will now be read. Assumption: Datavis device with address 1AH is read.
- You should provide a name of your choice (8 characters) and a description for the binary file which has just been read; this name is used to save the file on the hard disk. The file is saved in directory C:\PROG2\CONRS485\0X1A.
- Once the file is saved, the data can be erased from memory by once again choosing "Delete" from the "Read out" menu

Read out several devices in sequence:

- Open the "Read out" menu.
- Choose "Select connections".
- Select connection "CONRS485".
- Open "Read out" menu.
- Choose "Read out / Delete Device Memory".
- Move the selection to the first device to be read.
- Mark that device by pressing the space bar.
- Move the selection to the next device and use the space bar to flag it ...
- If a device is flagged unintentionally it can be deselected again by a second press of the space bar.
- All flags can be cancelled through "Delete marks".

The selection screen may now look something like the example below:

H&B Datavis -PROG2- Read out / Convert			File name: Unnamed
File	Read out	Options	F1=Help

Connection: CONRS485

Configure devices

Connection: CONRS485 - Read out via RS 485 COM3

Devices

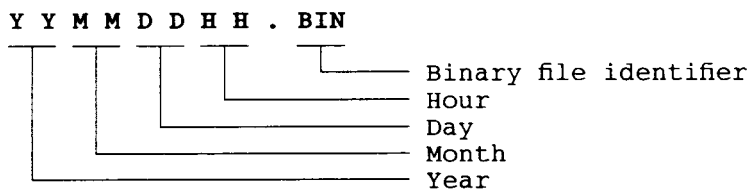
- * 01h Datavis Pressure Control PICA01...04
- * 02h Datavis Temperature TICA01...04
- 1Ah Datavis Flow FICA01...04
- * 2Ch Datavis Tank level, tank K1...K4

Delete marks Space bar = Set flag

ESC=Cancel Read out Delete Name Search F1=Help

- Choose "Read out"; The Datavis devices with addresses 01H, 02H and 2CH are read one after the other. The binary files are automatically named and saved by PROG2 according to the rules outlined below:

Name of binary file:



The file name is formed from the time of the first value in the binary file.

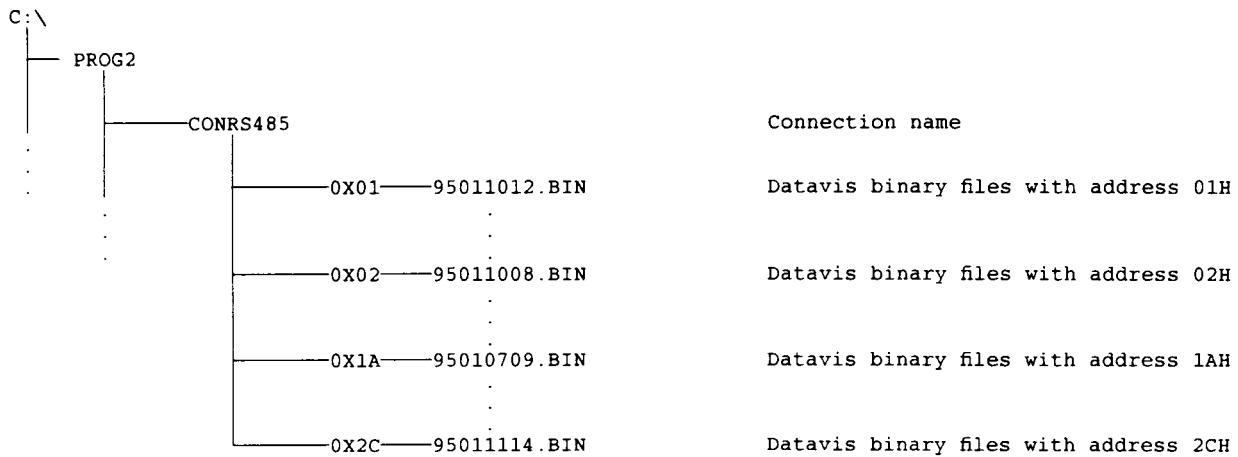
File name coding example:

File name: 9 5 0 1 1 0 1 2 . BIN

Binary file starting at: 10.Jan.95 12.??h

It is not possible to include the minute relating to the first value as DOS allows only 8 characters for the file name and the extension .BIN is obligatory for all the further operations to be performed on the binary file.

The files are stored automatically by PROG2 in the following directories:



After the reading process, all successfully read devices are flagged with "√".

If you intend reading the devices on this connection again at a later date you should note the following:

After the connection has been selected, PROG2 first checks that the devices found the first time are still present. If a device fails to respond, an appropriate message is displayed and you are offered the opportunity to remove that device from the list of devices on this connection. If all the devices are present the selection screen is presented again as shown above. If extra devices are attached again on this connection, "Search" should be selected again in order to identify the new devices. Automatic reading and saving is again carried out according to the rules described above.

4.3 Read out data via an RS 485 interface using a modem

In order to read data from Datavis devices over the public telephone network you must use the Hartmann & Braun modem MO11 at the PC end and the Hartmann & Braun modem coupler unit MKE 485 at the Datavis end.

- Open Options menu and choose "Connections".
- Choose "New".

The following screen is now presented:

H&B Datavis -PROG2- Read out / Convert			File name: Unnamed
File	Read out	Options	F1=Help

Configure connection

Short name : CONMODEM
 Description : Read out out via modem on COM1
 Type : ()RS232 ()RS485 (.)Modem

Interface

Port : (.)COM1 ()COM2 ()COM3 ()COM4
 Baud rate : ()2400 ()4800 (.)9600 ()19200
 Control signal: (.)Standard ()Inverted
 Address PC : 70H

Modem

[x] PABX (private exchanges)
 Dial type : (.)Tone ()Pulse
 Telephone no. : 0w2056,1220213
 Volume : ()Off (.)Low ()Normal ()High

<- Save ESC=Cancel F1=Help

- In the "Short name" field input a name (max. 8 characters) for this connection.
- In the "Description" field input any text you wish to describe the connection (field may be left blank).
- For "Type" select modem connection mode.
- Choose the appropriate port number in the "Port" field (PROG2 automatically displays all ports detected in the PC); in the example above COM1 has been selected.
- For "Baud rate" select the baud rate required. The baud rate chosen here must match that set on the Datavis devices. The modem **cannot** be operated with a baud rate of 19200; the highest baud rate permissible for the modem depends on the transmission quality of the telephone network and should be ascertained separately for each situation.
- The "Control signal" field cannot be selected.
- In the "Address PC" field the default setting of 70H (H=hexadecimal) is usually suitable. It is of the utmost importance that none of the connected Datavis devices uses the same address.
- Under "Modem" you should provide details relating to the telephone system and input the number for dialling. If PABX is chosen, the letter "w" (see example above) represents waiting for an outside line.
- Under "Volume" you can determine whether or not the modem at the PC end emits audible tones when dialling.
- Confirm these entries with the <ENTER> key.
- Exit the next screen "Setup connections" by again pressing <ENTER> or using the mouse to click "Ok".
- Open the "Read out" menu.
- Choose "Select connections".

- Select connection "CONMODEM".
- Open "Read out" menu. The modem will now start its dialling procedure.
- The telephone connection can be interrupted at any time by pressing the "ESC" key.

When this connection is used for the **first time**, the following screen is presented:

H&B Datavis -PROG2- Read out / Convert			File name: Unnamed
File	Read out	Options	F1=Help

Connection: CONMODEM

```

Read out / delete device memory

Connection: CONMODEM - Read out out via modem on COM1

Devices
-----
[x] Hang up after reading out marked devices

Delete marks      Space bar = Marking

ESC=Cancel      Read out      Delete      Name      Search      F1=Help
  
```

- Choose "Search". PROG2 will automatically search for any Datavis devices linked with this connection.

When the search is completed, all Datavis devices linked with this connection are displayed along with their (hexadecimal) addresses:

H&B Datavis -PROG2- Read out / Convert			File name: Unnamed
File	Read out	Options	F1=Help

Connection: CONMODEM

```

Read out / delete device memory

Connection: CONMODEM - Read out via modem on COM1

Devices
-----
01h Datavis
02h Datavis
1Ah Datavis
2Ch Datavis

[x] Hang up after reading out marked devices

Delete marks      Space bar = Set flag

ESC=Cancel      Read out      Delete      Name      Search      F1=Help
  
```

In the example above 4 Datavis devices were detected with the hexadecimal addresses of 01H, 02H, 1AH and 2CH. A free-form description can now be input for each of these devices (not obligatory):

- Use the arrow keys to move the selection to the device required, choose "Name" and input text.

The selection screen may now look something like the example below:

H&B Datavis -PROG2- Read out / Convert			File name: Unnamed
File	Read out	Options	F1=Help

Connection: CONMODEM

Read out / delete device memory

Connection: CONMODEM - Read out via modem on COM1

Devices

01h	Datavis	Pressure Control	PICA01...04
02h	Datavis	Temperature	TICA01...04
1Ah	Datavis	Flow	FICA01...04
2Ch	Datavis	Tank level, tanks	K1...K4

[x] Hang up after reading out marked devices

Delete marks Space bar = marking

ESC=Cancel Read out Delete Name Search F1=Help

- Use the arrow keys to move the selection to the device required and choose "Read out" or activate the <ENTER> button. The selected device will now be read. Assumption: Datavis with address 1AH is read.
- You should provide a name of your choice (8 characters) and a description for the binary file which has just been read; this name is used to save the file on the hard disk. The file is saved in directory C:\PROG2\CONMODEM\0X1A.
- Once the file is saved, the data can be erased from memory by once again selecting "Delete" from the "Read out" menu.

Read out out several devices in sequence:

- Open the "Read out" menu.
- Choose "Select connections".
- Select connection "CONMODEM".
- Open "Read out" menu.
- Choose "Read out / Delete Device Memory".
- Move the selection to the first device to be read.
- Flag that device by pressing the space bar.
- Move the selection to the next device and use the space bar to flag it ...
- If a device is flagged unintentionally it can be deselected again by a second press of the space bar.
- All flags can be cancelled through "Delete marks".

The selection screen may now look something like the example below:

H&B Datavis -PROG2- Read out / Convert			File name: Unnamed
File	Read out	Options	F1=Help

Connection: CONMODEM

Read out / delete device memory

Connection: CONMODEM - Read out via modem on COM1

Devices			
* 01h	Datavis	Pressure control	PICA01...04
* 02h	Datavis	Temperature	TICA01...04
1Ah	Datavis	Flow	FICA01...04
* 2Ch	Datavis	Tank level, tanks	K1...K4

[x] Hang up after reading out marked devices

Delete marks Space bar = Set flag

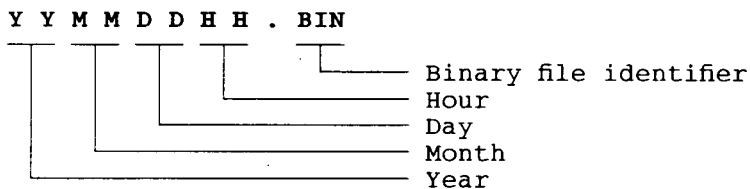
ESC=Cancel Read out Delete Name Search F1=Help

- Choose "Read out"; the Datavis devices with addresses 01H, 02H and 2CH are read one after the other.

Important: The check box "Hang up after flagged devices have been read" should normally be turned on ([x]) as otherwise the telephone connection will not be terminated after the last device is read.

The binary files are automatically named and saved by PROG2 according to the rules outlined below:

Name of binary file:



The file name is formed from the time of the first value in the binary file.

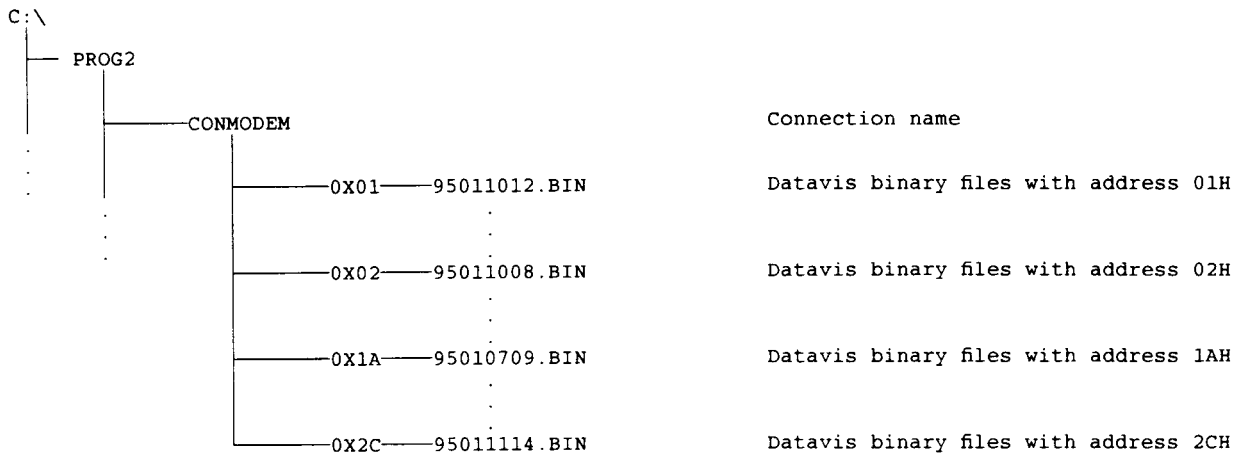
File name coding example:

File name: 9 5 0 1 1 0 1 2 . BIN

Binary file starting at: 10.Jan.95 12.??h

It is not possible to include the minute relating to the first value as DOS allows only 8 characters for the file name and the extension .BIN is obligatory for all the further operations to be performed on the binary file.

The files are stored automatically by PROG2 in the following directories:



After the reading process, all successfully read devices are flagged with "√".

If you intend reading the devices on this connection again at a later date you should note the following:

After the connection has been selected, PROG2 first checks that the devices found the first time are still present. If a device fails to respond, an appropriate message is displayed and you are offered the opportunity to remove that device from the list of devices on this connection. If all the devices are present, the selection screen is presented again as shown above. If extra devices are attached again on this connection, "Search" should be selected again in order to identify the new devices. Automatic reading and saving is again carried out according to the rules described above.

5 Read out data via command lines

Data can be read from Datavis devices and/or binary files converted to ASCII automatically by PROG2 using command lines in batch files. The advantage of this system is that there is no need to call up PROG2's user interface and choose each individual command from a menu; this procedure is replaced by a single command line. The different connections are configured as described in Section 4 and the following commands can then be used:

5.1 "Read out" command

Syntax: PROG2D READ [file=<file name>] [connection=<Name>] [adr=<XX>] [comment=<abc>]

Example: PROG2D READ file=C:\PROG2\CONRS485\0X01\DEVICE01 connection=CONRS485 adr=0X01
"comment=comment text"

Explanation: Read out the device with hexadecimal address 01 on connection CONRS485 and save the binary file with the name DEVICE01.BIN in directory C:\PROG2\CONRS485\0X01. The extension .BIN is assigned automatically by the program. An optional short description may be included after the parameter "comment=...". This comment is saved in the same binary file, and when the file is opened with the command "Load File" from PROG2 it is displayed for the user. Comments containing spaces must be enclosed in "inverted commas", e.g. "comment=comment text". The "comment=..." parameter may be omitted.

If the "file=..." parameter is omitted, the binary file is named and saved automatically according to the rules described in Sections 4.2 and 4.3.

5.2 "ASCII complete" command

Syntax: PROG2D ASCII [file=<file name>]

Example: PROG2D ASCII file=C:\PROG2\CONRS485\0X01\DEVICE01

Explanation: Converts the entire binary file DEVICE01.BIN in directory C:\PROG2\CONRS485\0X01 to an ASCII file and at the same time generate an ASCII alarm value file. The ASCII files are saved in directory C:\PROG2\CONRS485\0X01. The ASCII files are assigned names according to the rules described in Section 3.1.3.

5.3 "Read out and complete ASCII" command

Syntax: PROG2D READASCII [file=<file name>] [connection=<name>] [adr=<XX>] [comment=<abc>]

Example: PROG2D READASCII file=C:\PROG2\CONRS485\0X01\DEVICE01 connection=CONRS485 adr=0X01
"comment=comment text"

Explanation: Read out the device with hexadecimal address 01 on connection CONRS485 and save the binary file with the name DEVICE01.BIN in directory C:\PROG2\CONRS485\0X01. The extension .BIN is assigned automatically by the program. An optional short description may be included after the parameter "comment=...". This comment is saved in the same binary file, and when the file is opened with the command "Load File" from PROG2 it is displayed for the user. Comments containing spaces must be enclosed in "inverted commas", e.g. "comment=comment text". The "comment=..." parameter may be omitted. The complete binary file DEVICE01 in directory C:\PROG2\CONRS485\0X01 is then converted to an ASCII file and an ASCII alarm value file is generated at the same time. The ASCII files are saved in directory C:\PROG2\CONRS485\0X01. The ASCII files are assigned names according to the rules described in Section 3.1.3.

5.4 “Erase data memory” command

Syntax: PROG2D ERASE [connection=<Name>] [adr=<XX>]

Example: PROG2D ERASE connection=CONRS485 adr=0X01

Explanation: Erases data from memory in the device with hexadecimal address 01 on connection CONRS485

5.5 Additional commands when using a modem

When using a modem, the commands “READ” and “READ and complete ASCII” can be enhanced by using the parameters /c and /or /h.

- /c When using a modem the connection established remains after the device has been read. The modem does not hang up and the connection can be used for reading the next device.
- /h When using a modem an existing connection is used again. If a telephone connection is already established, this will be used for reading the device being addressed. The modem will then hang up after reading.
- /c /h When using a modem an existing connection is used again. If a telephone connection is already established, this will be used for reading the device being addressed. The modem will not hang up after reading.

If neither of these parameters is used the modem will hang up after reading. When several devices are read in sequence it is most important that the last device is assigned the parameter /h alone as otherwise the telephone will remain connected indefinitely.

Example: PROG2D READ file=C:\PROG2\CONMODEM\0X01\DEVICE01 connection=CONMODEM adr=0X01 “comment=File from device 01”/c

Explanation: Read out device 01 without hanging up afterwards

Example: PROG2D READ file=C:\PROG2\CONMODEM\0X02\DEVICE02 connection=CONMODEM adr=0X02 “comment=File from device 02”/c/h

Explanation: Use existing telephone connection, read device 02 without hanging up afterwards

Example: PROG2D READ file=C:\PROG2\CONMODEM\0X03\DEVICE03 connection=CONMODEM adr=0X03 “comment=File from device 03”/h

Explanation: Use existing telephone connection, read device 03 and then hang up

Irrespective of whether or not either of the above parameters is used, in the event of disruption while reading over a modem the telephone connection is terminated and then restored with the next command line.

Subject to technical changes.

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