



PROCESS AUTOMATION

Freelance 2019

Operators Manual

Archive Browser





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About this book

Use of warning, caution, information, and tip icons

This publication includes **Warning**, **Caution**, and **Information** where appropriate to point out safety related or other important information. It also includes **Tip** to point out useful hints to the reader. The corresponding symbols should be interpreted as follows:



Electrical warning icon indicates the presence of a hazard which could result in *electrical shock*.



Warning icon indicates the presence of a hazard which could result in *personal injury*.



Caution icon indicates important information or warning related to the concept discussed in the text. It might indicate the presence of a hazard which could result in *corruption of software or damage to equipment/property*.



Information icon alerts the reader to pertinent facts and conditions.



Tip icon indicates advice on, for example, how to design your project or how to use a certain function

Although **Warning** hazards are related to personal injury, and **Caution** hazards are associated with equipment or property damage, it should be understood that operation of damaged equipment could, under certain operational conditions, result in degraded process performance leading to personal injury or death. Therefore, comply fully with all **Warning** and **Caution** notices.

Terminology

The Glossary contains terms and abbreviations that are unique to ABB or have a usage or definition that is different from standard industry usage. Please make yourself familiar to that.

You will find the glossary at the end of the *Engineering Manual Freelance Operations*.

Document conventions

The following conventions are used for the presentation of material:

- The words in names of screen elements (for example, the title in the title bar of a window, the label for a field of a dialog box) are initially capitalized.
- Capital letters are used for the name of a keyboard key if it is labeled on the keyboard. For example, press the ENTER key.
- Lowercase letters are used for the name of a keyboard key that is not labeled on the keyboard. For example, the **space bar**, **comma key**, and so on.
- Press CTRL+C indicates that you must hold down the CTRL key while pressing the C key (to copy a selected object in this case).
- Press **ESC**, **E**, **C** indicates that you press and release each key in sequence (to copy a selected object in this case).
- The names of push and toggle buttons are boldfaced. For example, click **OK**.
- The names of menus and menu items are boldfaced. For example, the **File** menu.
 - The following convention is used for menu operations: MenuName > MenuItem > CascadedMenuItem. For example: select **File** > **New** > **Type**.
 - The **Start** menu name always refers to the **Start** menu on the Windows Task Bar.

- System prompts/messages are shown in the Courier font, and user responses/input are in the boldfaced Courier font. For example, if you enter a value out of range, the following message is displayed:

Entered value is not valid. The value must be 0 to 30.

You may be told to enter the string TIC132 in a field. The string is shown as follows in the procedure:

TIC132

Variables are shown using lowercase letters.

sequence name

1 Archive Browser

1.1 Archive Browser- General description

Freelance Archive Browser is an additional program for the Freelance system and requires a license.

Archive Browser permits viewing archived trend, log files and reports without the use of Freelance operator stations. The data can be presented in graphic form or as tables. The graphic presentation can be scaled as desired, to facilitate examination of particular past process events. In addition, it is possible to convert the data to ASCII format, making it readable by other programs, such as, for example, data base or spread sheet programs.

The transfer of archive files from the different operator stations is either automatic, manual or event-driven, as configured in Freelance Engineering. It is also possible to configure for files archived at a Operator station to be transferred to the PC on which the Freelance Archive Browser is installed.

1.1.1 Starting Archive Browser



Windows 7:

Start > All Programs > ABB > Freelance <version> > Archive Browser

Windows 10:

Start > ABB > Archive Browser

1.1.2 Requirements for receiving data through FTP export

The PC which is to receive the archives must have a network communication link with the Freelance Operations PC. For more information on installing and configuring of FTP server, refer to *Introduction - Getting Started* FTP Export is configured in the parameter-setting dialog for trend displays or logs at the relevant operator station.

The Station is determined by the IP address input for the target computer, e.g. “172.16.1.24”. If the archive files are being copied to a directory, the full name of the directory must be given. When setting parameters for the trend display or log, you need only enter a backslash\, possibly followed by the rest of the branch of the path. For example, the path C:\ARCHIV\STATION1\SSL for the target computer may mean that it diverts all input archives to the default path C:\ARCHIV and the incoming archive contributes the path information \STATION1\SSL.



It should be noted that the target computer is responsible for further file processing in data transmission. The copied file is only temporary and is overwritten next time the relevant archive is exported.



The path to the archive store at the target station needs to be kept available and must not be write-protected.

In the FTP Export File setting the export file is stored once, with the filename given in the target path, for example: STATION1\SSL\SSL_PRODUCTION. The file is overwritten each time an item is exported. The path and filename together may have length of 100 characters.

In the Directory [8.3] setting export files are transmitted in DOS format - e.g. to a PC with a Windows operating system and activated FTP server. The filename corresponds to the export date, in the format ‘YMMDDHHm.mss’, e.g. 70528162.320.



The filename does not contain any information about the type of archive. Choose a path name which will ensure that it is recognized later.

In the Directory setting export files are stored in the directory specified in the target path, under their original name (from parameter mask 1). This name is followed by the export date - separated by a dot - in the format ‘.YYMMDDHHmmss’.

Example: SSL_PRODUCTION.970528162320.

The path and filename together may have a length of 100 characters.

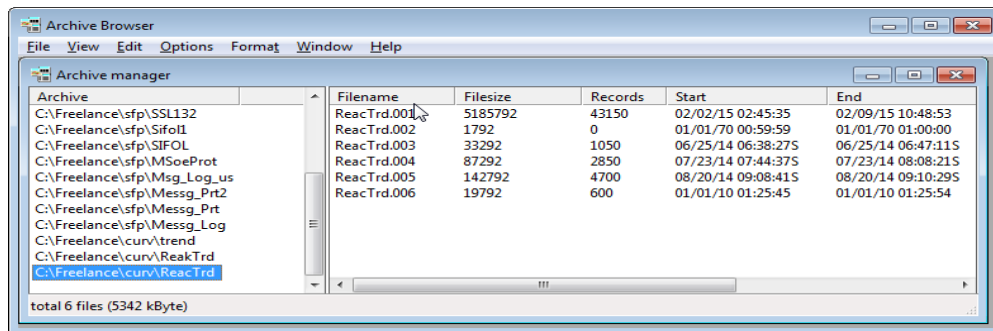
The user name and password must correspond to a valid user of the target station (see Windows User Manager).

1.1.3 Menu structure of the Archive Browser

File	Open	Window	Trend Hardcopy
	Close		Cascade
	Export		Tile horizontal
	Move		Tile Vertical
	Copy		Arrange Icons
	Delete		Close All
	Exit		Refresh File Manager F5
View	Archive Manager	Help	Contents F1
			Search
			About Archive Browser
Edit	Goto		
Options	Default view List/Trend		
	Switch trend-list		
	Trend options		
	Search path		
	Column width		
	Archive manager		
Format	Column	Fade in	
		Fade out	
		Fade in all	
		Read defaults	
	Define		

1.1.4 Call-up of the archive manager

After being called up, a file manager appears listing the available archive files, i.e. the archive found in the configured search path. See also [Search path](#) on page 23.



The available files and their directories are shown in the left window. Only filed archives found by following the set search path are displayed.

In the right window, information is listed relating to the different versions of the selected archive which can be examined.

1.2 Archive display

1.2.1 Trend archives



> Select archive from right-hand column > **Double-click** left mouse button

Tabular presentation is preselected for the logging and trend archives. However trends can also be shown as curves.



> **Options > Switch trend - list**

Selecting this option changes the presentation of the archive currently selected. If another option is chosen the presentation changes again.

The current setting only applies to newly opened windows. Windows which are already open retain the existing presentation.

Tabular presentation

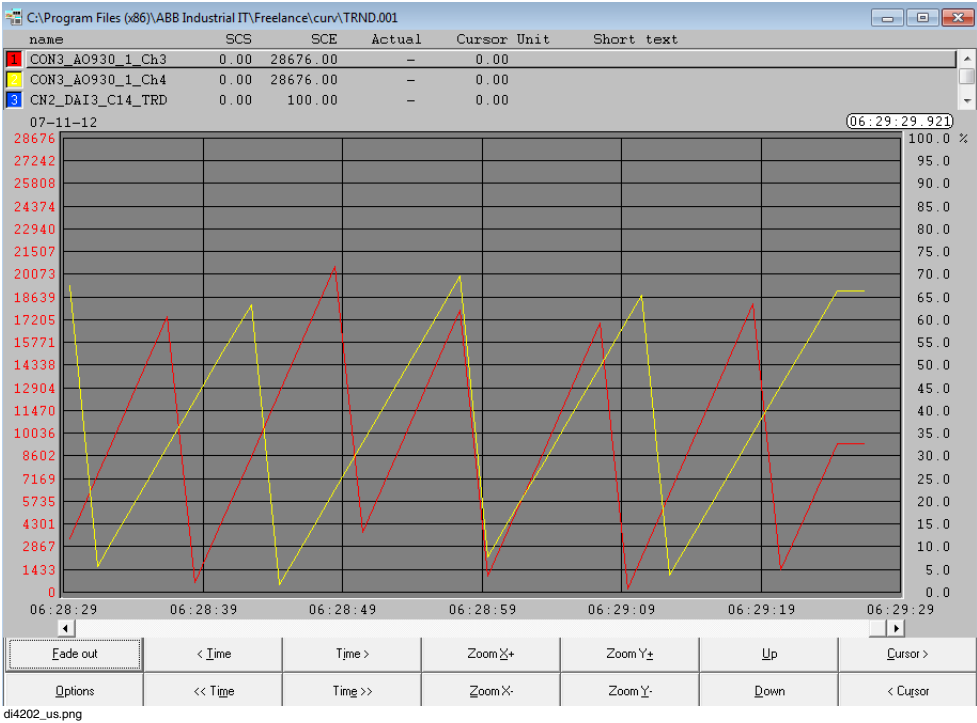
0	1	2	3	4	5	6	7	8
Rec	Status	Time	[REAL]	[REAL]	[REAL]	[REAL]	[REAL]	[REAL]
0:		DT#2012-11-	87.5	87.4500	87.4000	87.3500	87.3000	87.2000
1:		DT#2012-11-	88.0	87.9500	87.9000	87.8500	87.8000	87.7000
2:		DT#2012-11-	88.5	88.4500	88.4000	88.3500	88.3000	88.2000
3:		DT#2012-11-	89.0	88.9500	88.9000	88.8500	88.8000	88.7000
4:		DT#2012-11-	89.5	89.4500	89.4000	89.3500	89.3000	89.2000
5:		DT#2012-11-	90.0	89.9500	89.9000	89.8500	89.8000	89.7000
6:		DT#2012-11-	90.5	90.4500	90.4000	90.3500	90.3000	90.2000
7:		DT#2012-11-	91.0	90.9500	90.9000	90.8500	90.8000	90.7000
8:		DT#2012-11-	91.5	91.4500	91.4000	91.3500	91.3000	91.2000
9:		DT#2012-11-	92.0	91.9500	91.9000	91.8500	91.8000	91.7000
10:		DT#2012-11-	92.5	92.4500	92.4000	92.3500	92.3000	92.2000
11:		DT#2012-11-	93.0	92.9500	92.9000	92.8500	92.8000	92.7000
12:		DT#2012-11-	93.5	93.4500	93.4000	93.3500	93.3000	93.2000
13:		DT#2012-11-	94.0	93.9500	93.9000	93.8500	93.8000	93.7000
14:		DT#2012-11-	94.5	94.4500	94.4000	94.3500	94.3000	94.2000
15:		DT#2012-11-	95.0	94.9500	94.9000	94.8500	94.8000	94.7000
16:		DT#2012-11-	95.5	95.4500	95.4000	95.3500	95.3000	95.2000
17:		DT#2012-11-	96.0	95.9500	95.9000	95.8500	95.8000	95.7000
18:		DT#2012-11-	96.5	96.4500	96.4000	96.3500	96.3000	96.2000
19:		DT#2012-11-	97.0	96.9500	96.9000	96.8500	96.8000	96.7000
20:		DT#2012-11-	97.5	97.4500	97.4000	97.3500	97.3000	97.2000
21:		DT#2012-11-	98.0	97.9500	97.9000	97.8500	97.8000	97.7000
22:		DT#2012-11-	98.5	98.4500	98.4000	98.3500	98.3000	98.2000
23:		DT#2012-11-	99.0	98.9500	98.9000	98.8500	98.8000	98.7000
24:		DT#2012-11-	99.5	99.4500	99.4000	99.3500	99.3000	99.2000
25:		DT#2012-11-	100.0	99.9500	99.9000	99.8500	99.8000	99.7000
26:		DT#2012-11-	0.0	9.0864	16.6500	23.0423	28.5143	37.3875
27:		DT#2012-11-	0.5	1.2806	3.1917	5.7021	8.5041	14.3328
28:		DT#2012-11-	1.0	1.0255	1.3653	2.0851	3.1440	5.9998
29:		DT#2012-11-	1.5	1.4569	1.4775	1.6350	1.9697	3.1874
30:		DT#2012-11-	2.0	1.9506	1.9129	1.9158	1.9913	2.4453
31:		DT#2012-11-	2.5	2.4501	2.4022	2.3652	2.3547	2.4795

In tabular presentation of a trend the following entries are shown:

- Number and status of record,
- Time stamp of the recorded variables in format DT (Date & Time),,
- Values of variables (maximum 6).

Trend presentation

The desired section of the archive can be brought into view using the scroll bars. With the graphical presentation, the scale factor can also be adjusted.



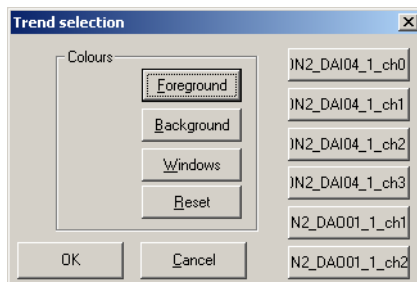
Individual trends can be selected using the above name fields. The name field for a selected trend appears raised and the scaling appears in the color for the trend. The trend can then be processed as follows, using the buttons at the bottom.

- ZoomX+ Shortens the time interval per raster.
- ZoomX- Lengthens the time interval per raster.
- ZoomY+ Reduces the scale for the Y axis.
- ZoomY- Enlarges the scale for the Y axis.

1.2.2 Trend options



> Options > Trend options



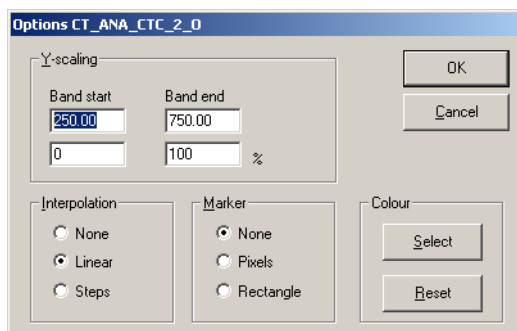
di4207uk.bmp

Colors

Colors in the graphics window can be controlled with the **Foreground**, **Background** and **Windows**. **Reset** restores colors to their original values.

Name_1..6

These buttons give the name of the variable recorded. Only buttons which apply can be seen, according to the number of channels recorded. When a variable is selected its scale is shown on the Y axis.



di4208uk.bmp

The Y axis can be scaled channel by channel in this mask. The form of presentation can also be controlled.

Y-scaling

With band start and band end the scaling of the Y axis can be set for this trend. The position on the Y axis of the band start and band end can be set between 0% and 100% using the **band start%** and **band end%**.



The band start setting must always be less than the band end. This also applies to the band start% and band end%. The percentage values can be less than 0% and more than 100%. In this case the part of the trend not between 0% and 100% will be displayed as a line above 100% or below 0%.

Band start and band end must be entered as real values. The value range is between 0.0 and ±999999999.9.

The percentage values for band start and band end must be entered as integer values between 0 and ±5000%

Interpolation There is a choice between *None*, *Linear* and *Steps*.

Interpolation	Marker		
	None	Point/Pixels	Rectangle
None	invisible		
Linear			
Steps			

di0559uk.bmp

Marker Can be set as *None*, *Pixels* or *Rectangle*.
If *None* is selected for both the interpolation and the marker, the trend is invisible!

Color The color for the display of the trend and the Y axis scaling is determined after marking **Select**. **Reset** is for standard color.

For further information, see also manual *Freelance Operations , Trend Display*.

1.2.3 Signal sequence log SSL1/SSLN

The signal sequence logs are generally found in the <FreelanceData>\sfp directory. Double clicking on a file opens a window in which the files contents are displayed.

0	1	2
Rec : Statu	Time	[VOID]
0:	DT#2012-11-04-14:05:34.480	Time marker 04-11-12 - 14:05:34
1:	DT#2012-11-04-08:31:51.461	+S1 08:31:51.461 CON3
2:	DT#2012-11-04-08:32:13.535	+S2 08:32:13.535 CON3
3:	DT#2012-11-04-08:32:13.562	+S2 08:32:13.562 CON3
4:	DT#2012-11-04-08:32:13.568	+S2 08:32:13.568 CON3
5:	DT#2012-11-04-14:02:23.275	-S2 14:02:23.275 AC800FR4
6:	DT#2012-11-04-14:02:49.409	+S2 14:02:49.409 CON3
7:	DT#2012-11-04-14:02:49.409	+S2 14:02:49.409 CON3
8:	DT#2012-11-04-14:02:49.411	+S1 14:02:49.411 CON3
9:	DT#2012-11-04-14:02:49.416	+S2 14:02:49.416 CON3
10:	DT#2012-11-04-14:05:34.508	+S1 14:05:34.508 OS1
11:	DT#2012-11-04-14:05:34.509	+S1 14:05:34.509 OS1
12:	DT#2012-11-04-14:05:34.509	+S1 14:05:34.509 OS1
13:	DT#2012-11-04-14:05:34.510	-S1 14:05:34.510 OS1
14:	DT#2012-11-04-14:05:34.510	-S1 14:05:34.510 OS1
15:	DT#2012-11-04-14:05:34.510	-S1 14:05:34.510 OS1
16:	DT#2012-11-04-14:05:34.510	-S1 14:05:34.510 OS1
17:	DT#2012-11-04-14:05:34.519	+S1 14:05:34.519 OS1
18:	DT#2012-11-04-14:05:34.532	+S1 14:05:34.532 OS1
19:	DT#2012-11-04-14:05:34.544	+S1 14:05:34.544 OS1
20:	DT#2012-11-04-14:05:34.555	+S1 14:05:34.555 OS1
21:	DT#2012-11-04-14:05:34.562	+S1 14:05:34.562 OS1
22:	DT#2012-11-04-14:05:34.571	+S1 14:05:34.571 OS1
23:	DT#2012-11-04-14:05:34.932	-S1 14:05:34.932 OS1
24:	DT#2012-11-04-14:05:35.579	! 14:05:35.579 SYSTEM XL1
25:	DT#2012-11-04-14:05:36.128	+S1 14:05:36.128 OS1
26:	DT#2012-11-04-14:05:45.406	! 14:05:45.406 SYSTEM XL1
27:	DT#2012-11-04-14:05:45.429	+S1 14:05:45.429 OS1

The following data are displayed in the table:

- Record number and status of the entry,
- Time stamp of the recorded variables in format DT (Date & Time),
- Signal content (format dependent).

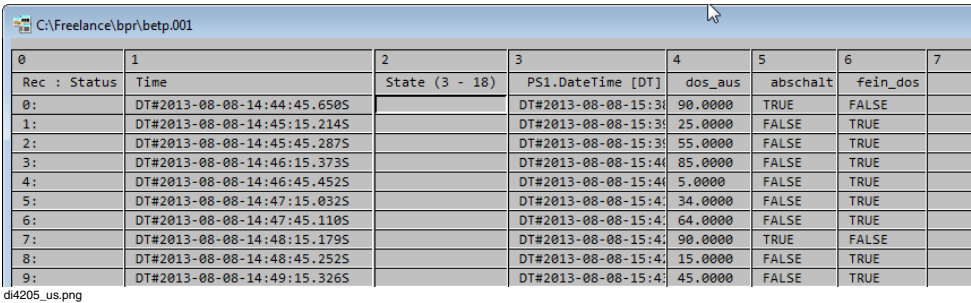
The entries for the various events are found between the time markers. Which events are displayed in which format is specified during configuration. There are special formats for process messages, system messages, operator actions and logging events. For details, refer to manual ***Freelance Operations, Logs***.



Graphical presentation of the log files is not possible.

1.2.4 Operation log OPL

The operation logs are generally found in the <Freelance Data>\bpr directory. Double clicking on a file opens a window in which the contents of the archive are displayed.



0	1	2	3	4	5	6	7
Rec : Status	Time	State (3 - 18)	PS1.DateTime [DT]	dos_aus	abschalt	fein_dos	
0:	DT#2013-08-08-14:44:45.650S		DT#2013-08-08-15:3	90.0000	TRUE	FALSE	
1:	DT#2013-08-08-14:45:15.214S		DT#2013-08-08-15:3	25.0000	FALSE	TRUE	
2:	DT#2013-08-08-14:45:45.287S		DT#2013-08-08-15:3	55.0000	FALSE	TRUE	
3:	DT#2013-08-08-14:46:15.373S		DT#2013-08-08-15:4	85.0000	FALSE	TRUE	
4:	DT#2013-08-08-14:46:45.452S		DT#2013-08-08-15:4	5.0000	FALSE	TRUE	
5:	DT#2013-08-08-14:47:15.032S		DT#2013-08-08-15:4	34.0000	FALSE	TRUE	
6:	DT#2013-08-08-14:47:45.110S		DT#2013-08-08-15:4	64.0000	FALSE	TRUE	
7:	DT#2013-08-08-14:48:15.179S		DT#2013-08-08-15:4	90.0000	TRUE	FALSE	
8:	DT#2013-08-08-14:48:45.252S		DT#2013-08-08-15:4	15.0000	FALSE	TRUE	
9:	DT#2013-08-08-14:49:15.326S		DT#2013-08-08-15:4	45.0000	FALSE	TRUE	

The table has the following entries:

- Record number and status,
- Time stamp of the recorded variables in format DT (Date & Time),,
- Status
- Names of up to 200 variables,
- Table of the recorded values of the variables.

See also manual *Freelance Operations Operators Manual, Logs*

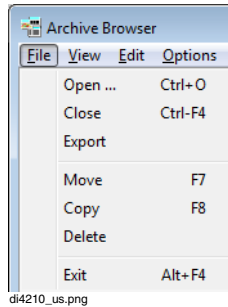


Graphical presentation of log files is not possible.

1.3 Editing files



> **File**



di4210_us.png

1.3.1 Opening files



> **File > Open**

Choose the archive file to be opened. Default filing of archives is done in the Freelance data directory under

\curv	for trend files
\ucurv	for user-defined trend files
\bpr	for operation log files
\sap	for disturbance course log files
\sfp	for signal sequence log files

1.3.2 Closing files



> **File > Close**

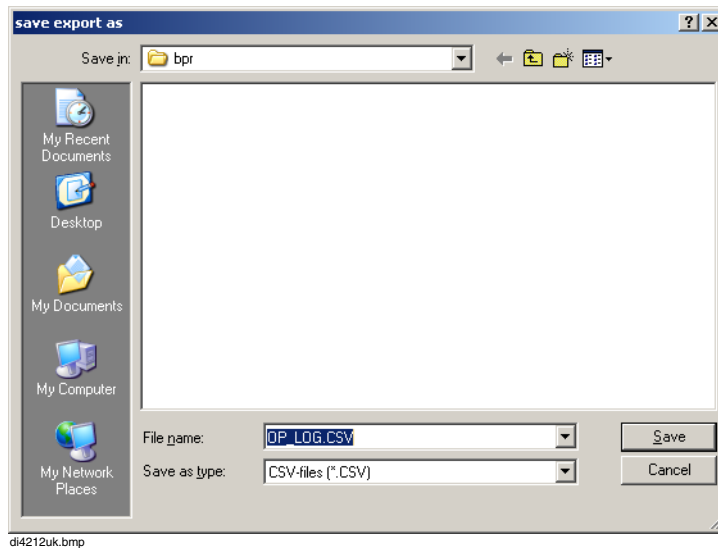
Closes the selected window.

1.3.3 Export



> **File > Export**

The contents of the archive can be converted to ASCII format (.CSV), so that they can be read into a data base or spreadsheet program.



1.3.4 Deleting files



> **File > Delete**

After confirmation, the archive file selected in the file manager will be deleted.

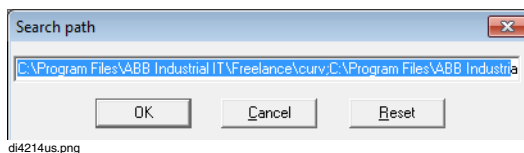
1.4 General settings

1.4.1 Search path



> Options > Search path

Paths can be entered for use by the archive manager. The archive manager will search all paths entered for valid archive files and will list available archive in the table. Path entries are separated by semicolons.



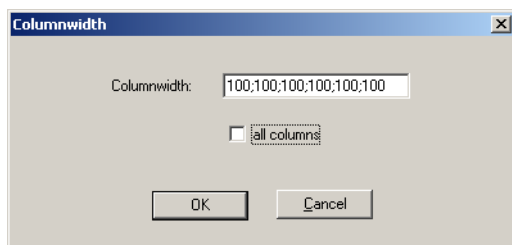
di4214us.png

1.4.2 Column width



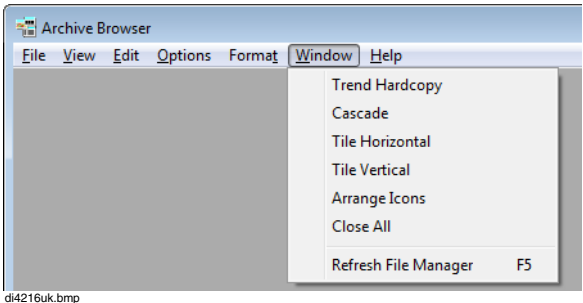
> Options > Column width

The width of the columns for the tabular display of archive files can be changed. The individual values are separated by semicolons.



di4215uk.bmp

1.5 Window settings



1.5.1 Trend hardcopy

Used to take the print out for the opened Trend window, printer must be configured or else it throws the following message



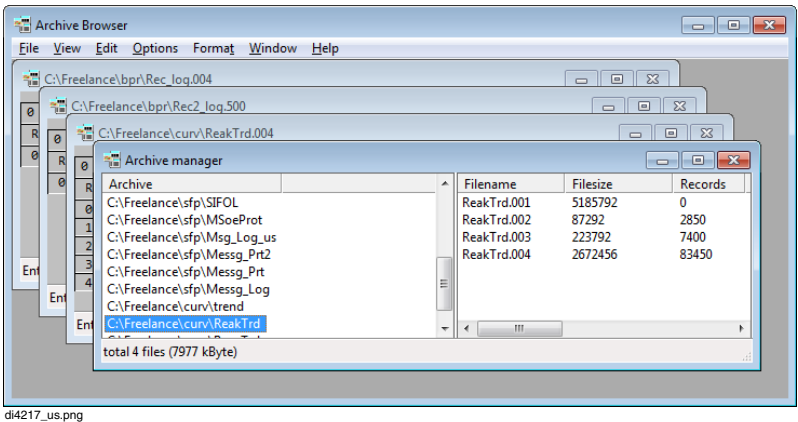
> **Window > Trend hardcopy**

1.5.2 Cascade



> **Window > Cascade**

All open windows are positioned in cascade.

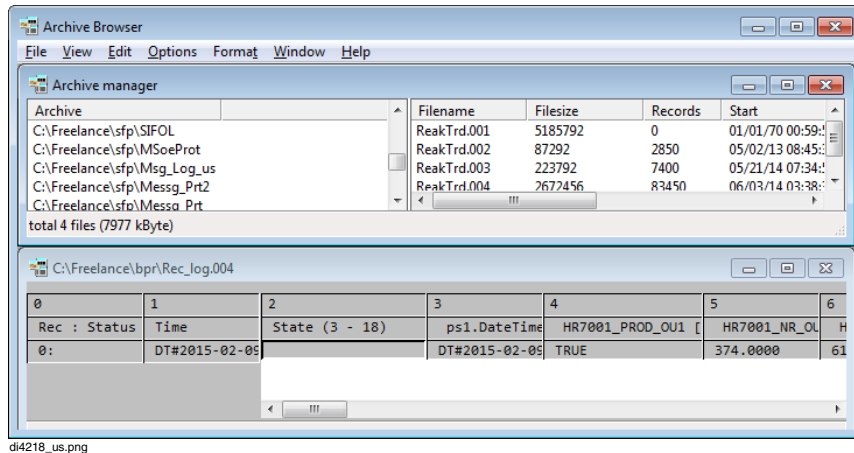


1.5.3 Tile horizontal



> **Window > Tile horizontal**

All open windows are lined up horizontally.



1.5.4 Tile vertical



> **Window > Tile vertical**

All open windows are lined up vertically.

1.5.5 Arrange icons



> **Window > Arrange icons**

If any windows were shrunk to icons, the corresponding icons are arranged.

1.5.6 Close all



> **Window > Close all**

All open windows will be closed.

1.5.7 Refresh file manager



> **Window > Refresh file manager**

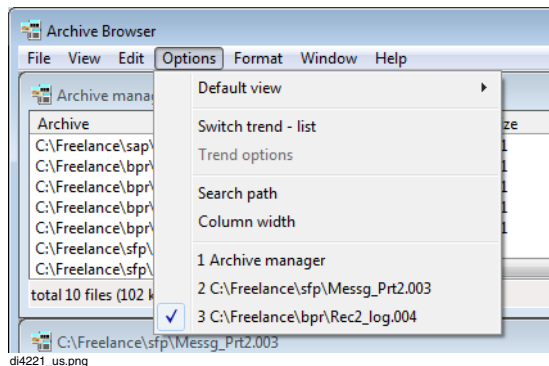
The contents of the file manager display will be rebuilt, i.e. the files in the archive directories will be reread.

1.5.8 List of open windows



> **Options**

The names of the files displayed in the open windows are listed at the bottom of the **options** menu. When a number of windows are open, an easy way to bring one to the foreground is to click on the desired archive here.



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