

XM-17330/27330

BINARY/ASCII CONVERSION PROGRAM

For the proper use of the instrument, be sure to read this instruction manual. Even after you read it, please keep the manual on hand so that you can consult it whenever necessary.






IXM-17330/27330-1BAT (608001)

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NOTATIONAL CONVENTIONS AND GLOSSARY

■ General notations

-  **WARNING** : A potentially hazardous situation which, if not avoided, could result in death or serious injury.
-  **CAUTION** : A potentially hazardous situation which, if not avoided, could result in minor injury or material damage.
Material damage includes, but is not limited to, damage to related devices and facilities, and acquired data.
- CAUTION –** : Points where great care and attention is required when operating the device to avoid damage to the device itself.
-  : Additional points to be remembered regarding the operation.
-  : A reference to another section, chapter or manual.
- 1, 2, 3** : Numbers indicate a series of operations that achieve a task.
-  : A diamond indicates a single operation that achieves a task.
- File:** The names of menus, or commands displayed on the screen, and those of buttons of the instrument, are denoted with **bold** letters.
- File–Exit** : A command to be executed from a pulldown menu is denoted by linking the menu name and the command name with a dash (–).
For example, **File–Exit** means to execute the **Exit** command by selecting it from the **File** menu.

■ Mouse operation


- Mouse pointer:** An arrow-shaped mark displayed on the screen, which moves with the movement of the mouse. It is used to specify a menu item, command, parameter value, and other items. Its shape changes according to the situation.
- Click:** To press and release the left mouse button.
- Right-click:** To press and release the right mouse button.
- Double-click:** To press and release the left mouse button twice quickly.
- Drag:** To hold down the left mouse button while moving the mouse.

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1 GENERAL

This program converts the binary-format data measured by the JXA-8100/8200 series Electron Probe Microanalyzer into ASCII-format data to allow data processing by computers other than the one installed in the microanalyzer. It also converts quantitative data, analyzed in the form of a line or a map, into binary-format data that can be processed with the line-analysis or map-analysis program. It allows conversion of qualitative and quantitative analysis data, map-analysis data, line-analysis data, and EDS analysis data.

 EDS spectra can be converted into the EMSA format and vice versa. Perform this conversion using **Utility-File Utility** in the EPMA Main Menu, not by this program. See the instruction manual of the basic unit.

■ Conversion

Measured data of each program is stored in files within the directories shown in Fig. 1. The data format and the file type for the stored data are shown in Table 1.

This program converts the measured data from the binary into ASCII-format data, and creates a new file in the /temp/ASCII directory and measured data directory or a user-specified directory. (The ASCII-format file 0.cnd is copied without being converted.)

With the data measured with the qualitative, map, or line analysis program, up to 30 data files are available for one stage number. The measurement conditions are all stored in a measurement condition file (0.cnd). During conversion, measurement condition files will be created one by one (1.cnd, 2.cnd, ...) in accordance with the respective measured data (1.spc, 2.spc, ... in qualitative analysis).

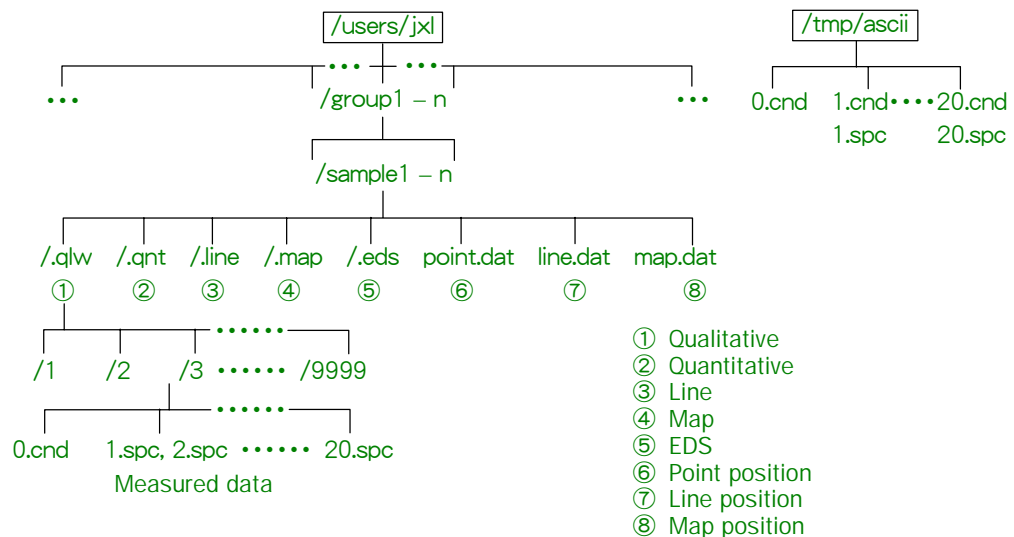


Fig. 1 Directory structure used by the software

This program converts quantitative data, analyzed in the form of a line or map, into data that can be processed with the line analysis or map analysis program.

Table 1 Storing the measured data

Analysis program	File name	Data format	Contents
Qlw	1.spc, 2.spc, ...	Binary	Spectrometer conditions and measured data No. 1, 2, ...
	0.cnd	ASCII	Qualitative analysis measurement conditions
Map	1.map, 2.map, ...	Binary	Measured data of elements No. 1, 2, ...
	0.cnd	ASCII	Map analysis measurement conditions
Line	1.line, 2.line, ...	Binary	Measured data of elements No. 1, 2, ...
	0.cnd	ASCII	Line analysis measurement conditions
Qnt	1.cor, 1.wt	ASCII	Quantitative analysis result file
	0.cnd, 1.qnt	ASCII	Quantitative analysis measurement conditions and measured data
Eds	1.dat	Binary	EDS analysis measurement data
	0.cnd	ASCII	EDS analysis measurement conditions

2 OPERATION PROCEDURES

1. Click on the **Utility** icon in the EPMA Main Menu; then select **Ascii Conversion** from the **Utility** menu (☞ Fig. 2).

The ASCII Conversion window opens as shown in Fig. 3.

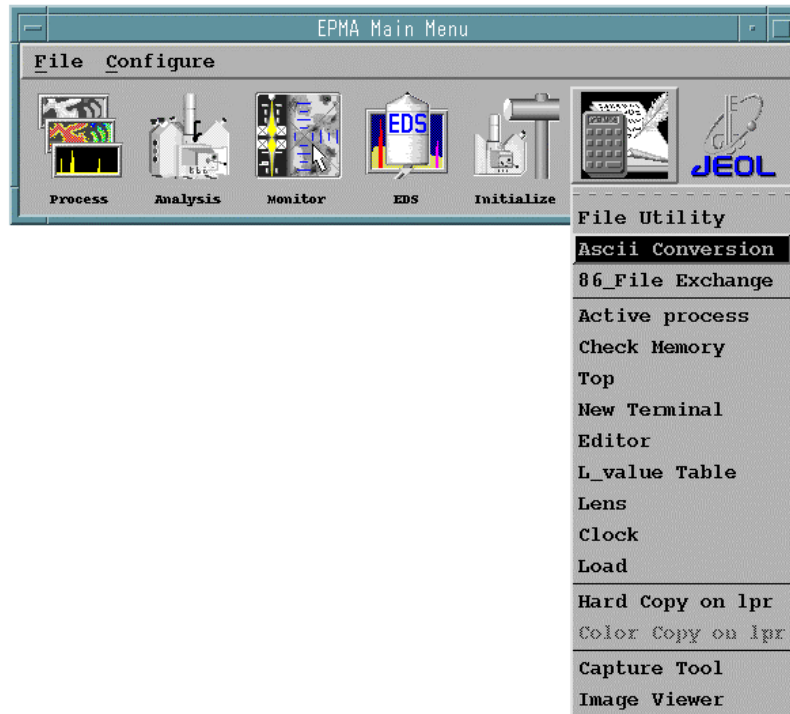


Fig. 2 Utility menu



Fig. 3 ASCII Conversion window

2. Click on the **Conversion** button in the ASCII Conversion window.
The Conversion menu opens as shown in Fig. 4.

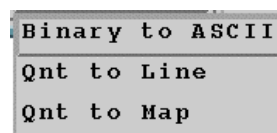


Fig. 4 Conversion menu

2.1 Binary Format to ASCII Format Conversion

Specify the measured data whose format is to be converted from binary to ASCII and execute format conversion according to the following procedure.

1. Select **Binary to ASCII** from the Conversion menu (☞ Fig. 4).
The Binary to ASCII window opens as shown in Fig. 5.

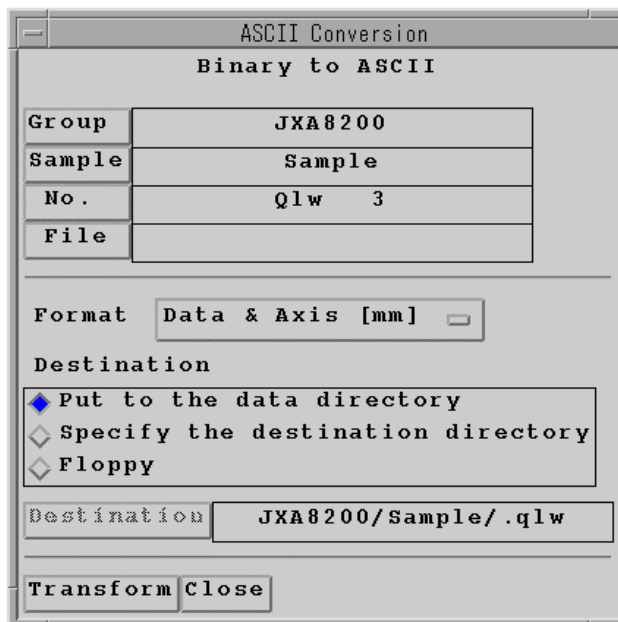


Fig. 5 Binary to ASCII window

2. Click on the **Group** and **Sample** buttons in the Binary to ASCII window.
The Select Group and Sample window opens as shown in Fig. 6.

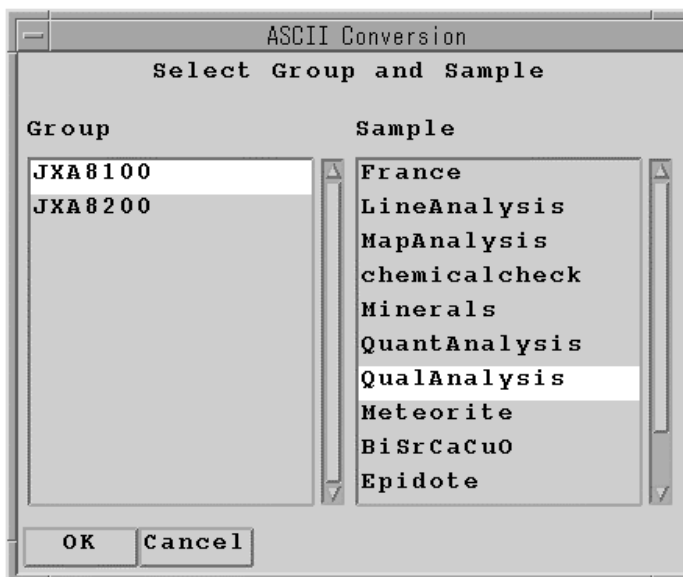


Fig. 6 Select Group and Sample window

3. Select the names of the group and the sample where the desired measurement data is stored from the respective lists, and click on the **OK** button.
4. Click on the **No.** button in the Binary to ASCII window.
The **Select Number** window opens as shown in Fig. 7.

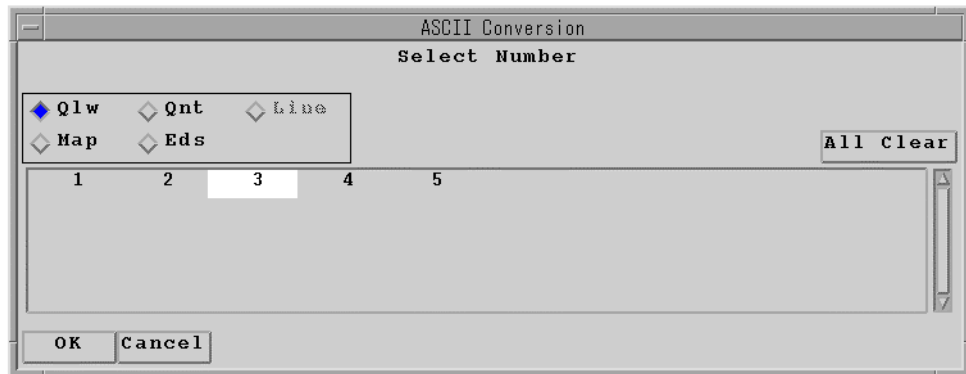


Fig. 7 Select Number window

5. Specify the software for the measured data to be converted and the number of the stage position (see Fig. 7), and click on the **OK** button.
6. Click on the **File** button in the Binary to ASCII window (see Fig. 5).
The **Select Data File** window opens as shown in Fig. 8.

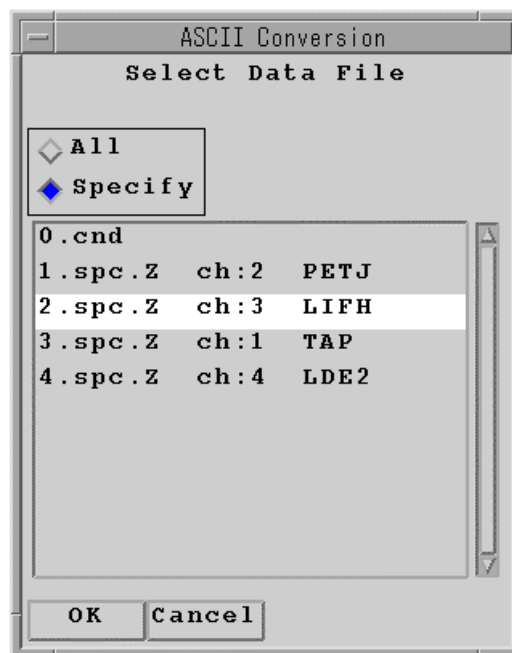


Fig. 8 Select Data File window

7. Click on the **All** button if you want to convert all measured data. To selectively convert only the desired files, first click on the **Specify** button, then specify the desired files in the list. Click on the **OK** button.

8. Select the format into which to convert the data, using the **Format** selection buttons (☞ Fig. 5).
For qualitative or line analysis, you can select either data only or both the data and the axis value of the spectrum graph to be converted.
For map analysis, you can select how to print the data, one data on one line or in matrix form.
9. Specify the destination directory, using the **Destination** selection buttons (☞ Fig. 5).
If you select **Put to the data directory**, the converted data is stored in the directory in which the data are stored.
If you select **Specify the destination directory**, you can then select the desired destination directory using the **Destination** button. At this time, the numbered directory corresponding to the sample number where the converted file is stored is automatically created.
If you select **Floppy**, the converted file is stored on a DOS-format floppy.
10. Click on the **Transform** button in the Binary to ASCII window (☞ Fig. 5).
The files specified in the above steps are converted to ASCII format.
For qualitative analysis, the converted file name has the form xx_spc.txt. Likewise, for line analysis and map analysis, they are xx_line.txt and xx_map.txt, respectively. Here, xx is the data number. The condition files are created with the name xx_con.

2.2 Conversion of Quantitative Analysis Line Formed Data to Line Analysis Data

1. Select **Qnt to Line** from the Conversion menu (☞ Fig. 4).
The **Qnt to Line** window opens as shown in Fig. 9.

Group	JXA8100
Sample	Minerals
Start No.	1
End No.	100
Line No.	2

Weight % Atomic % Intensity

Transform close

Fig. 9 Qnt to Line window

2. Input the **Group** name, **Sample** name, **Start No.** and **End No.** of the quantitative analysis data to be converted.
3. Input the line analysis number of the destination directory in the **Line No.** input box.
4. Select **Mass %**, **Atomic %**, or **Intensity** for the data conversion style.
5. Click on the **Transform** button in the Qnt to Line window (☞ Fig. 9).
The specified files are converted to Line Analysis data.

2.3 Conversion of Quantitative Analysis Map Formed Data to Map Analysis Data

1. Select **Qnt to Map** from the Conversion menu (☞ Fig. 4).
The **Qnt to Map** window opens as shown in Fig. 10.

ASCII Conversion	
Qnt to Map	
Group	JXA8100
Sample	Minerals
Start No.	1
End No.	2500
Map No.	3
X Pixels	50
Y Pixels	50
<input type="radio"/> Weight % <input checked="" type="radio"/> Atomic % <input type="radio"/> Intensity	
Transform close	

Fig. 10 Qnt to Map window

2. Input the **Group** name, **Sample** name, **Start No.** and **End No.** of quantitative analysis data to be converted.
3. Input the map analysis number and the X- and Y-pixels of the destination directory in the **Map No.** , and **X Pixels** and **Y Pixels** input boxes.
4. Select **Mass %**, **Atomic %**, or **Intensity** for the data conversion style.
5. Click the **Transform** button in the Qnt to Map window (☞ Fig. 10).
The specified files are converted to Map Analysis data.