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************* Readme      for A X E S   2.1 *************** October 03, 2003
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******** An X-ray powder diffraction pattern Evaluation System ************
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    AXES is a MS DOS program for powder diffraction pattern pre-processing
and visualization, peak fitting and shape analysis, Voigt analysis of peak
shapes and Williamson-Hall Plot, data preparation for several indexing
programs and Rietveld program FULLPROF. See the file AXES-OPT.txt about all
available commands and options of the last version of AXES.

The following seven paragraphs explain installation and setup steps of AXES.

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1. **Files in AXES installation directory**
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     axes-xxx.exe   - BINARY self-extracting archive,
                            where xxx is program version, e.g. 19B, 19A, etc.
     installd.bat   - batch file for installation of AXES in DOS.
     installw.bat   - batch file for installation of AXES in Windows.
     Axes-opt.txt   - list of available commands in AXES.
     readme.txt   - this file.

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2. **Installation**
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A. Copy AXES-xxx.EXE and INSTALLD.BAT onto a floppy diskette.
B. Activate the floppy drive and run INSTALLD (or INSTALLW) with the following
     command line parameters (e.g. the floppy is in A:)

              INSTALLD xxx A: [letter of drive where to install]:

follow commands on the screen (do not specify a password, but press ENTER
instead).
     In Windows you can used command file INSTALLW.bat. In this case the
installation files can be on HD or on CD. The command line parameters are the
following:

     INSTALLw [version] [Source drive and folder] [Target drive and folder]

where [version] is AXES DOS version like 21a.
Source points to the location of installation source file AXES-xxx.exe, e.g.
c:\temp\
Target points to the location where you want to install AXES, e.g. c:\axes

     During or after installation you have to modify an ASCII file called
AXES.PRG. This file is a database of the paths and names of the AXES system
programs and other external programs which are called by AXES. You can modify

a path, a program name and program parameters but not the pointer to the
program which resides in the first positions (1..7) of a row. Use the program
ax_edit.exe for this purpose. During the first installation ax_edit.exe is
invoked by installd.bat.

     Installation generates a directory /AXES/ on the drive where you
installed AXES and makes the following subdirectories under it:

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./DATA/  - for diffraction data of examples;
./GRAPH/ - for graphics data;
./DOC/   - for documentation files of AXES;
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See the file AXES_Files.PDF about the meaning of all files in AXES
directories.

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3. Start and exit AXES
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AXES starts automatically at the end of a successful installation.

To start AXES at your DOS prompt you have to activate the AXES main directory
and enter AXES followed by [RETURN].

To finish AXES you have to select from [File/Sys] menu the last command [Exit
AXES] (or press Alt X) and answer [Yes] when the dialogue of conformation to
exit AXES appears.

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4. Hardware & Software requirements
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	Minimal	Optimal
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Processor	: 386DX	486DX4
Co-Processor	: present	present
Tact rate	: 25 MHz	100 MHz
RAM	: 6 MB	8 MB
Floppy disk drive	: 1.2 MB or 1.44 MB	1.2MB or 1.44MB
Harddisk	: > 4 MB free	> 8 MB free
Printer	: 9-needle printer	24-needle printer or
		a laser printer
Mouse	: MS-compatible mouse	MS-compatible Mouse
	Mouse driver vers. >=6.00	Mouse driver vers. >=6.00
Graphic card	: VGA-Color	VESA16 Color
Monitor	: VGA-Color-14'' Monitor	VESA16 Color 15'' Monitor
Disk operat. system	: MS-DOS 5.0	MS-DOS 6.2

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5. Other operating systems (OS) and problems of starting AXES
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AXES can run under Windows 3.x, 95 and NT 4.0. Every OS system requires to set
up properties for AXES to run.
1) Windows 3.x
     To let AXES to use the external memory you have to generate a pif file
for AXES (use Windows PIF editor) and set up limits for XMS memory, *e.g.* [KB
Required] [2048] and [KB Limit] [4096].

2) Windows 95, 98
    Run AXES from MS-DOS prompt. Do not use any file operation programs like
Norton Commander in this MS-DOS prompt.

3) Windows NT 4.0
    If you have problems in starting AXES then do the following:
    - right-click the icon for the AXES shortcut, and then click Properties;
    - in the Properties window, click the Program tab;
    - click Windows NT;
    - select the Compatible Timer Hardware Emulation check box.

and also select window for the program as "full screen":
    - right-click the icon for the AXES shortcut, and then click Properties;
    - in the Properties window, click the Screen tab;
    - click Usage;
    - Click Full-screen.

4)   The "Runtime error 200" problem by starting of AXES should have been
solved now (versions from October, 2003 and up). If you get this error then
inform the authors of AXES on address below.

5)   There might be problems with accessing other AXES system external
programs from inside AXES. In case the system does not come back to AXES after
returning from an external program you have to generate individual icons for
AXES system programs. Then you can call these programs separately by clicking
the icons.

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6. **Program distribution and registration**
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    AXES is a shareware program. The version B (basic set of commands) is
free of charge for university institutions. The last version of the program
can be downloaded by ANONYMOUS FTP from the following address:
                    ftp.physic.ut.ee/pub/pc/axes
NB!
    Use binary mode for transfer of files. In case you are going to use the
    program in your work, please fill in the registration form
    (/AXES/DOC/AXES_REGISTER.PDF) and send it to the address specified in
    the form.

    Details of ordering of versions A (all commands), L (all + long array),
and W (for Windows 9x and NT) can be followed from the registration form.

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7. **Problems with AXES**
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Please send questions about problems with AXES to

                    hugo@physic.ut.ee