Thread Shape Definition File creating software

Cam Thread

Ver.2.0

User's Manual

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1. Cam Thread Installation Procedure

1. Insert the Cam Thread CD to CD-ROM drive.
2. Double click "My Computer" on the desktop, and double-click [CD-ROM], then the message of CD-RPM appears. Execute a file called Setup.exe.
3. Once the Setup screen is displayed, install Cam Thread by following the screen instruction.
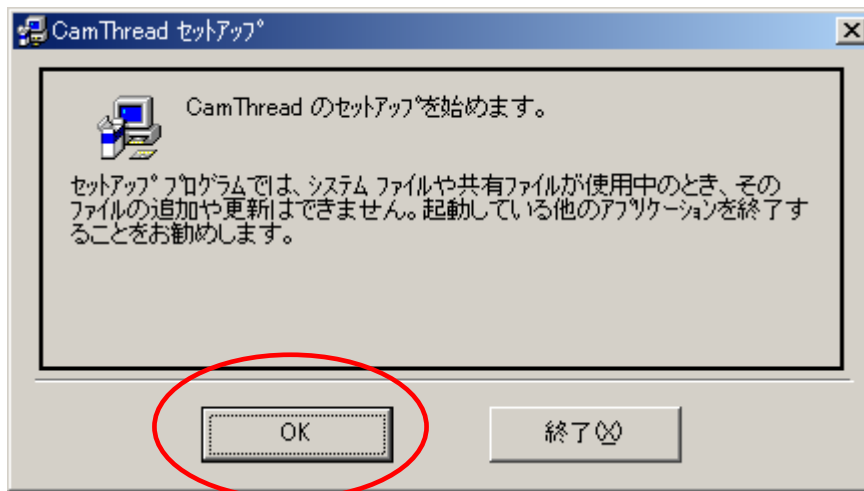
Click [OK].
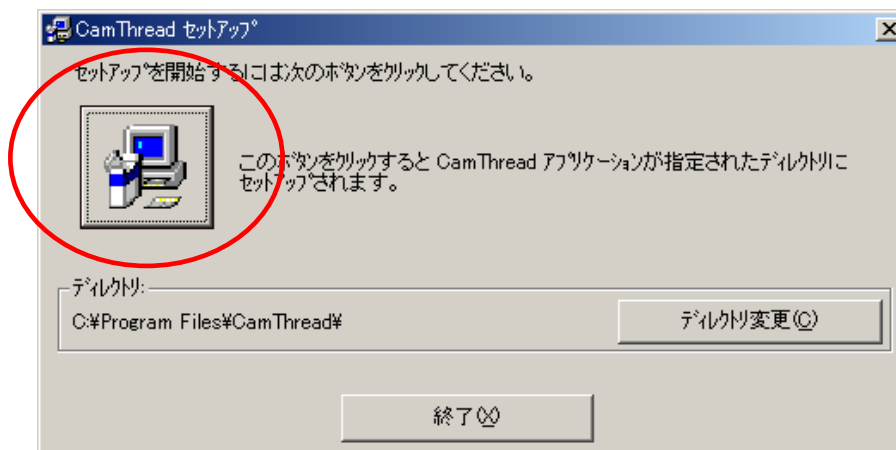
Click [Setup] icon.

This is the end of installation.

2. Cam Thread Startup

1. Click [Program (P)] → [CamThread] → [CamThread] from Windows [Start] menu to start. (Shortcut on the desktop may be convenient)
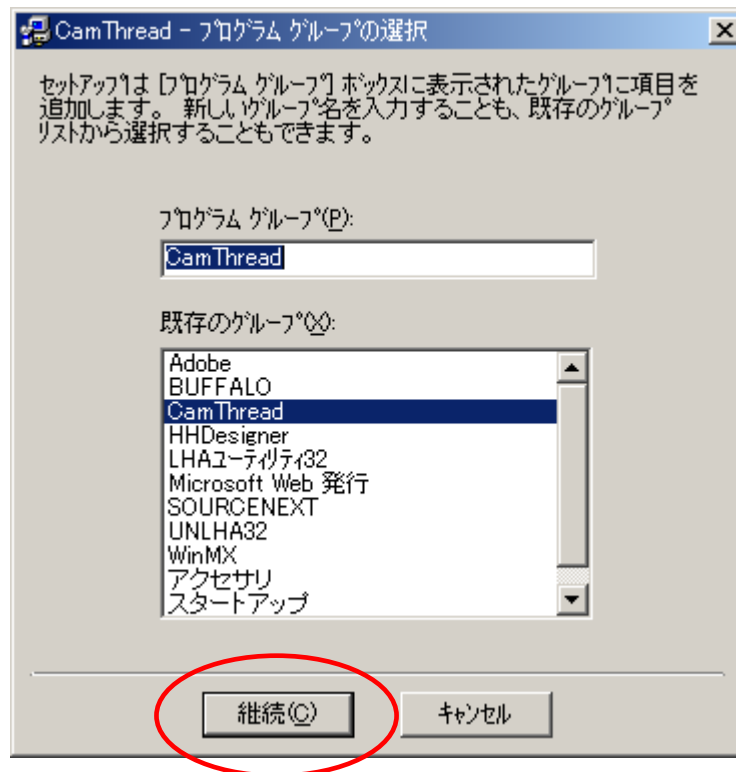
2. First, the "Key number input" screen will be displayed.
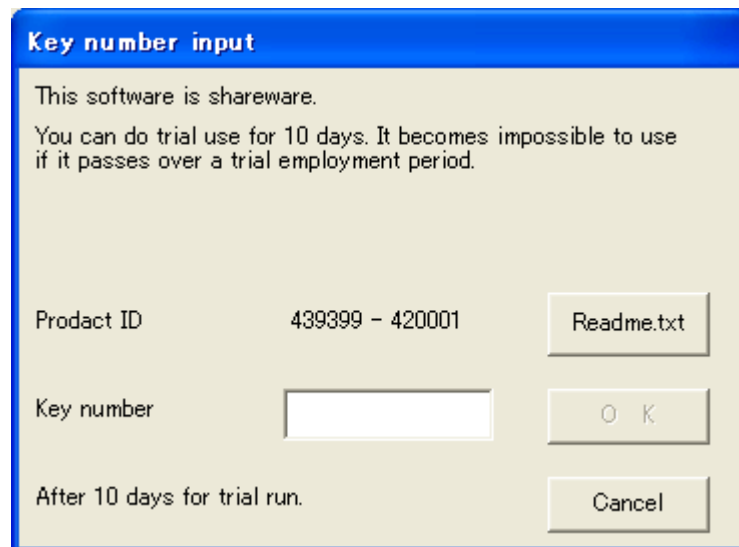
3. If purchasing, please inform us of the Product ID number.

4. Click [Cancel] for 10 days trial run.

5. This screen will not be displayed after purchasing.

3. Cam Thread Finish

1. Finish by [File(F)] → [CamThread Exit(X)] from menu.

Or click [Exit] icon to finish.

4. Operation Procedure

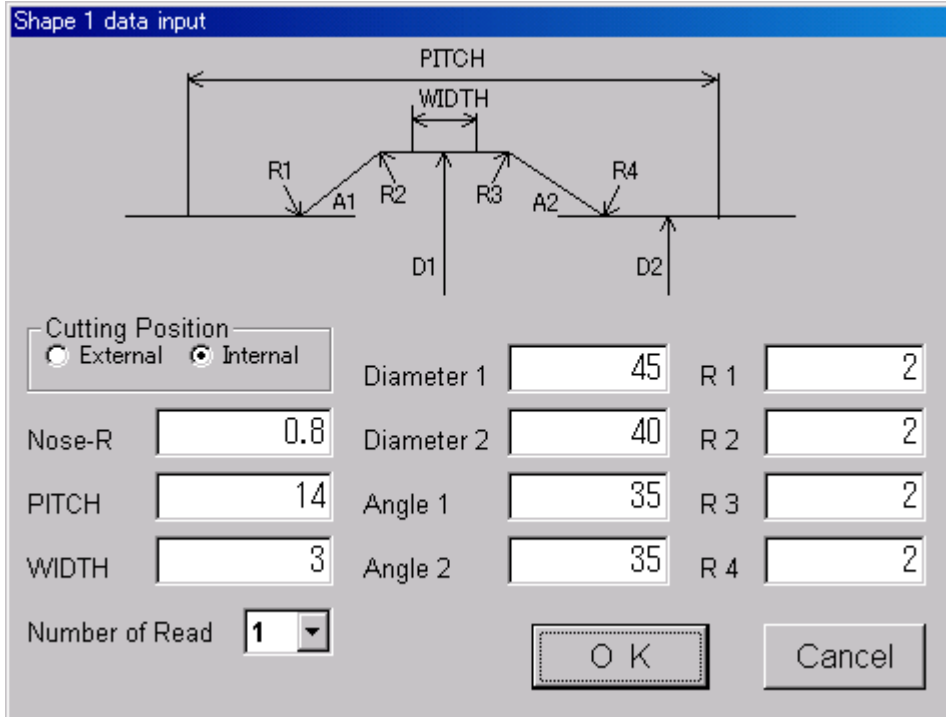1. Select the closest thread shape among [icons] and input data.

2. Check 1 face shape in graphic.

3. Make face copy of required machining length by [icon] [Face Copy].

4. Check the shape of longitudinal direction in graphic.

5. Save the multiple face data file (CAF) in Mode B by [icon] [Mode-B Caf File Save].

6. Startup [icon] [PC-APT-CAM].

7. Read in CAF file created from CamThread and create machining data file (COF).

8. Transfer COF file to machine by network or floppy.

9. Use the leaning function by Cam lathe and save the compensation file (CMF).

10. Perform actual machining by Cam lathe.

11. Measure the shape by measuring unit.

12. In case the shape can not be measured as a designed value because of tool deflection or machine rigidity, change the first input data little by little, repeat the above procedure.

Memo :

- For TM-APT-CAML, make a copy to floppy, convert from MS-DOS format to OSP format by TM-APT, and read in.

- Able to save 1 face file in [icon] mode A and perform a face copy by PC-APT-CAM.

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5. Shape 1 Data Input
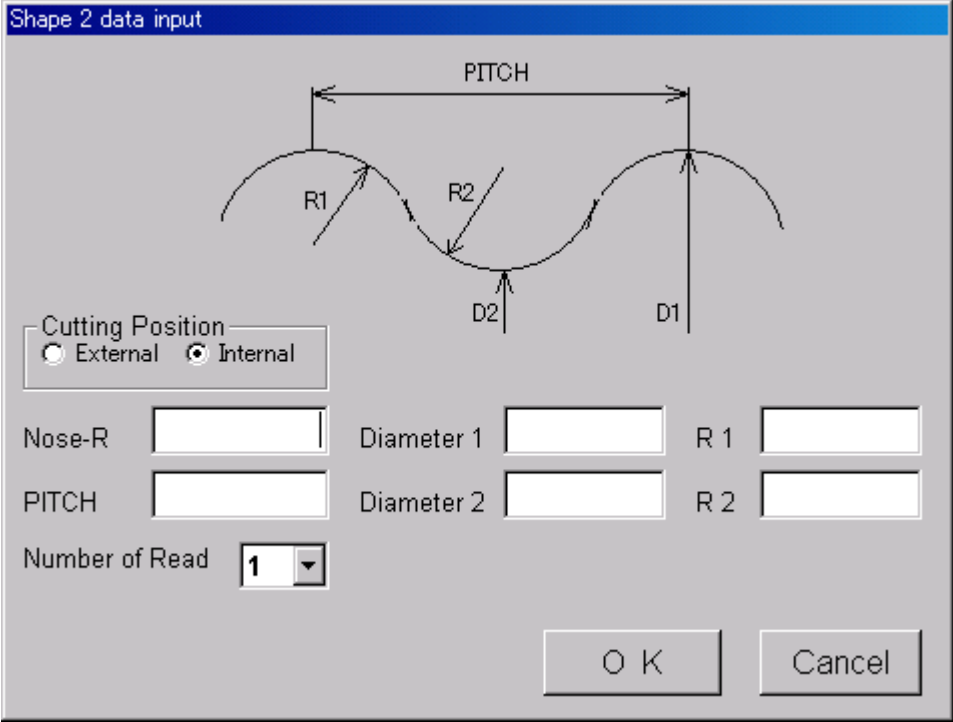

① Input each data.

② For OD machining, input the thread wave part for WIDTH.

③ In case unable to perform calculation, a data error occurs.

④ In case a data error occurs even if the drawing indicates it is correct, change the angle or R-value slightly.

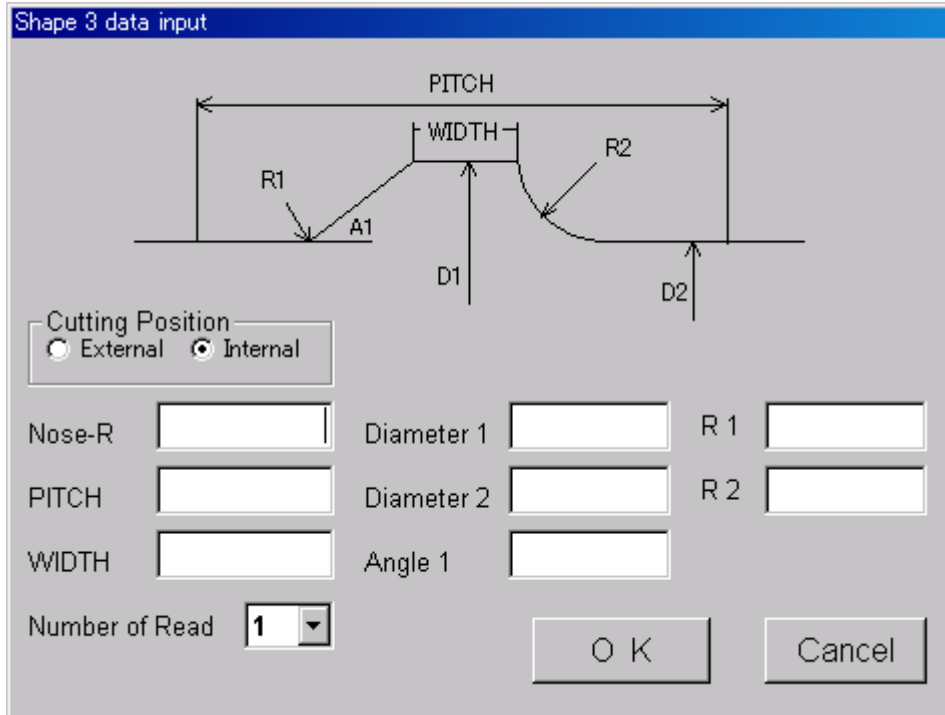⑤ Designate multiple thread for [Number of Read].

6. Shape 2 Data Input

① Input each data.

② In case unable to perform calculation, a data error occurs.

③ In case a data error occurs even if the drawing indicates it is correct, change R-value slightly.

④ Designate multiple thread for [Number of Read].

7. Shape 3 Data Input

① This shape is mainly for OD machining.

② WIDTH section needs to be machined straight in advance.

③ Connect A1 by arc R2.

④ In case unable to perform calculation, a data error occurs.

⑤ In case a data error occurs even if the drawing indicates it is correct, change R-value slightly.

8. Face Copy

① [Max. number of face] Max. number of face is 384 for PC-APT-CAM. 96 faces for initial TM-APT-CAML and 192 faces for the later TM-APT-CAML. The more the number of faces are, the more smooth the shape gets.

② [Thread direction] Designate either Right hand or Left hand of thread.

③ [Repeat function] This is a function that creates a date for only 1 pitch and uses the data repeatedly by the Repeat function in machine.
Since many faces can be designated, the shape is accurate and the number of files can be minimal. Also, the learning time can be shortened. There is no restriction for machining length. However, sometimes the connecting part of data stands out and then the feedrate will be restricted.

④ [Z-axis pitch] The shift amount of longitudinal direction when performing the face copy.

⑤ [Shift angle] The shift amount of rotation direction when performing the face copy.

⑥ [Copy number] The number of face copy.

⑦ [Thread pitch] The value that was input in the Shape data screen for thread pitch.

⑧ [Cutting length] Machining length. This will be the same as PITCH when the Repeat function is ON.

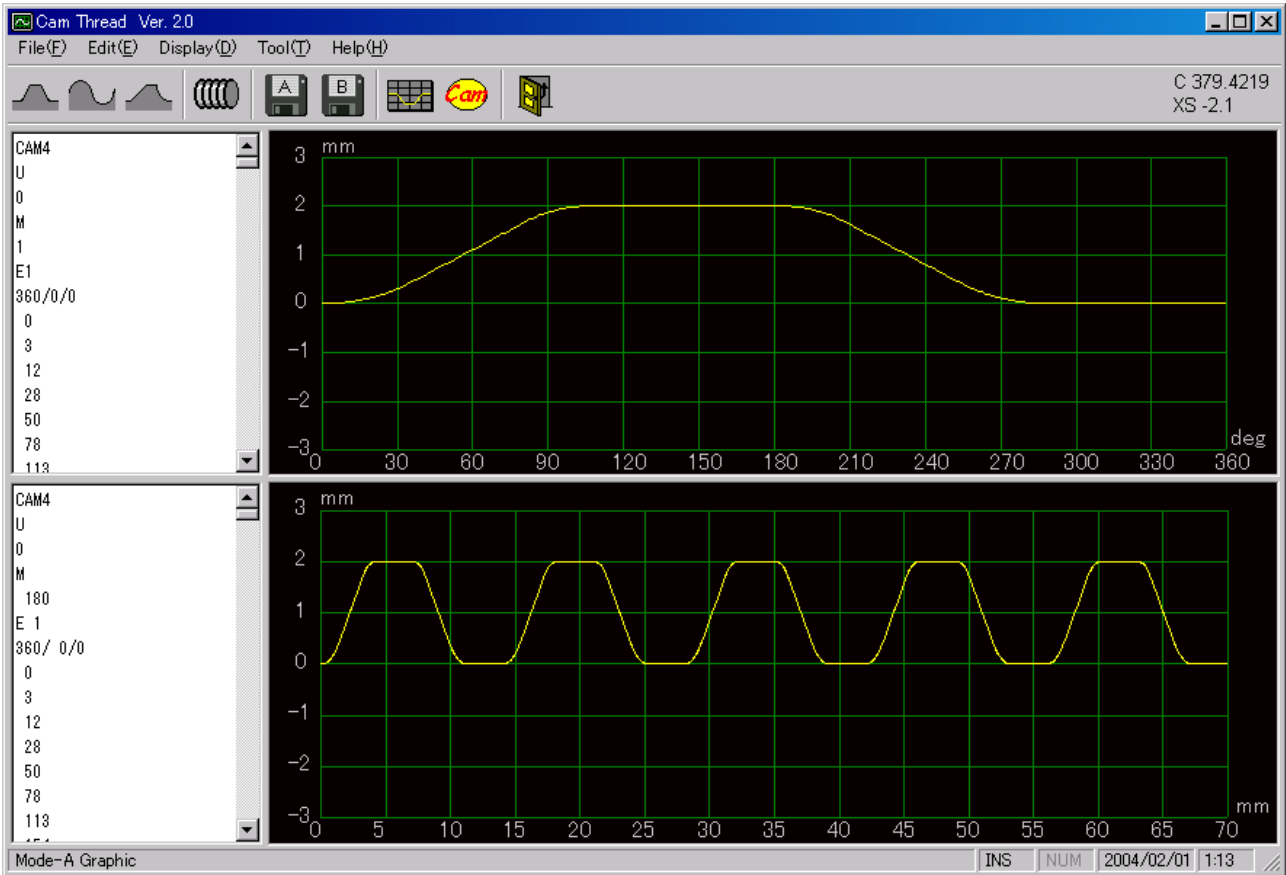# 9．Mode A　CAF File Save 🖫
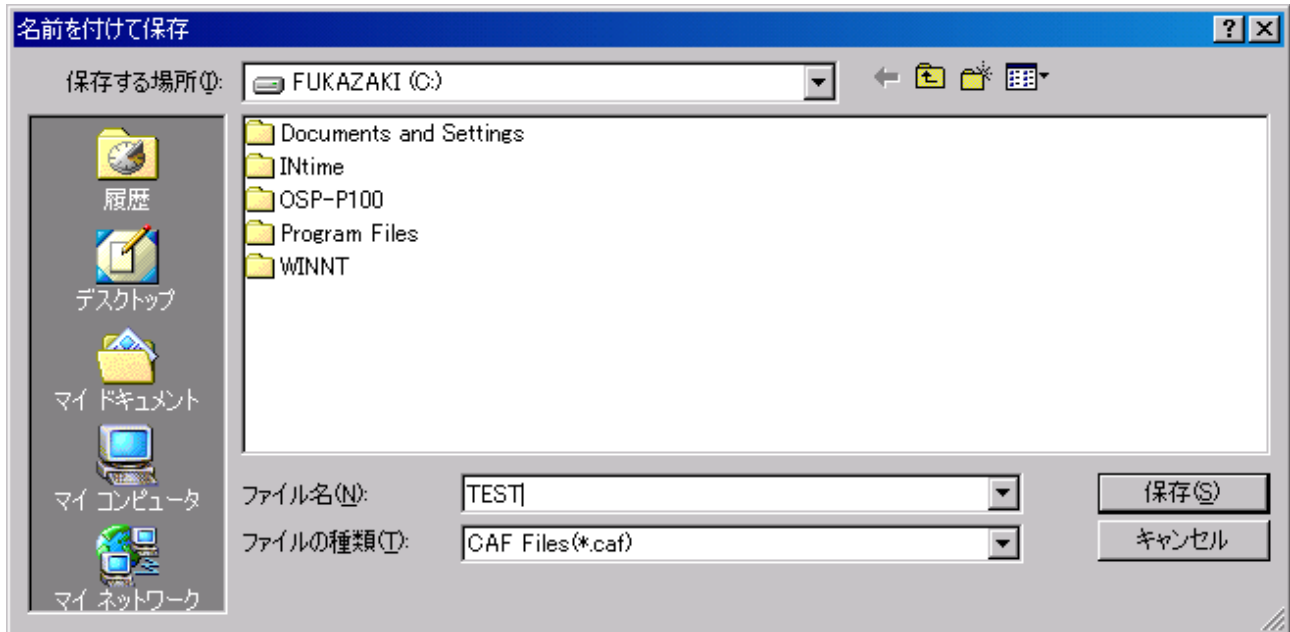
- ■ Save the shape definition file for only 1 face

- ■ Input file name for CAF file

- ■ This file will be read automatically when starting up PC-APT-CAM

10．Mode B　CAF File Save
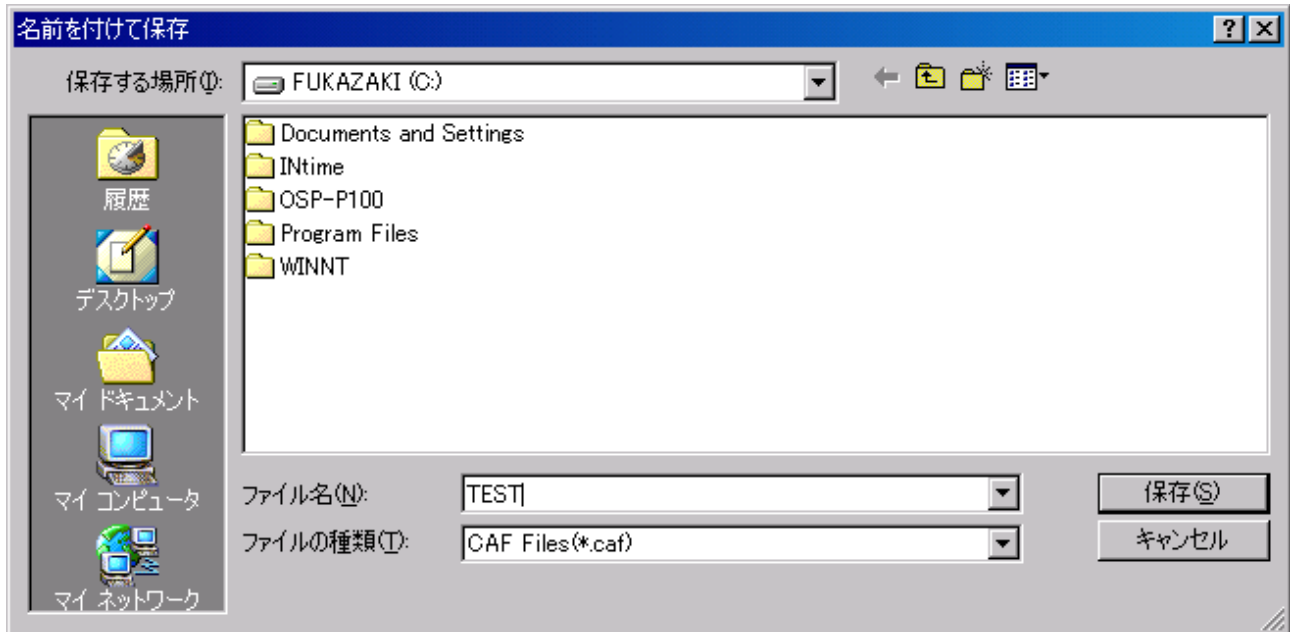
- ■　Save the shape definition file of multiple faces

- ■　Input the file name for CAF file

- ■　This file will be read automatically when starting up PC-APT-CAM

11. Graph Redraw

- ■ Normally, a graph is displayed automatically. Use this in case the graph is not displayed correctly by the save operation of file or switching screen.

12. PC-APT-CAM Startup

① By pressing [PC-APT-CAM], the following screen will be displayed for 3 seconds and start up.

② When PC-APT-CAM cannot be found, the following message will appear.

③ Click [Yes] and designate a folder.

④ The CAF file being saved right before PC-APT-CAM startup will be read automatically. If CAF file was not saved, it will return to the opening screen for the shape definition file.

⑤ Refer to the instruction manual "PC-APT-CAM" for operation method for PC-APT-CAM.