Installation of PY-2020iS control software ver.3.04 and temperature calibration of PY-2020iS furnace

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Follow Steps 1~10 below.

Step1: Check current calibration temperature setting

1.1 The currently set calibration temperature of the pyrolyzer furnace is checked. Select **"Tools" – "Maintenance"** from the menu bar. A password prompt is displayed (Fig. 1.1). Enter **"2020"** as password and hit **[OK]** button.
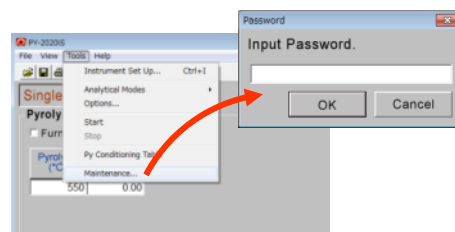

Fig. 1.1

1.2 Note the value displayed in **"Maintenance"** screen, framed in red (Fig. 1.2). If this value is **"0"**, the temperature calibration has been reset. When calibrated value is entered in Step 3 and subsequent steps, prepare to recreate a calibration curve as needed, because the pyrolyzer furnace actual temperature changes.
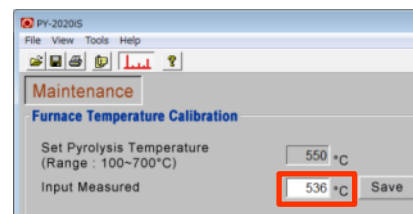

Fig. 1.2

Step2: Obtain temperature calibration value

2.1 The "Performance guarantee" that is included in the shipping package (filed with Operation Manual) is shown in Fig. 2.1. In the furnace temperature calibration, use "Calibrated value" or the value in "INPUT PY TEMP" (the form may differ depending on shipping date.)

Also note that the calibration value changes when furnace heater or temperature sensor is replaced. Use the value recorded in "Work report" of the most recent repair work.

Fig. 2.1

2.2 If the "Performance guarantee" has been lost, use the temperature calibration value recorded at the bottom of the temperature controller. There may be no such value recorded depending the unit. If this is the case, contact Frontier Labs Customer Service department from our website with your serial number.

Step3: Prepare to install Software Ver. 3.04

3.1a Check the folder name where the older version of PY-2020iS software is installed. If a shortcut icon for PY-2020iS is on your desktop, right-click the icon. When menu is displayed, click "**Property**". Note the link shown in the window displayed (Fig. 3.1a). Proceed to Step 3.2.

3.1b if a PY-2020iS shortcut icon is not on your desktop, select **"Program" – "PY-2020iS Control" – "PY-2020iS Control"**, then right-click on the icon. When a small window is displayed, click **"Properties"**. Note the path shown in the window displayed (Fig. 3.1b). Proceed to Step 3.2.

3.2 On a 32 bit Windows OS, check that it is **"C:¥Program Files¥PY-2020iS Control¥py2020is.exe"**, on a 64 bit Windows OS, it is **"C:¥Program Files (x86)¥PY-2020iS Control¥py2020is.exe"**.

3.3 If the character string is one of two shown above, the current settings can be used. If the character string differs from ones shown above, the COM port number for the temperature controller (Step 6.3) and the operating environment of accessory devices (Step 10.2) need to be reconfigured during the first startup after Ver. 3.04 software has been installed. Start the older version of PY-2020iS control software and select "**Tools**" - "**Option**" from the menu bar. When a dialog box shown in Fig. 3.2 is displayed, record the COM port numbers used by PY-2020iS and AS-1020E,

3.4 Copy **"C:¥Program Files¥PY-2020iS Control"** folder displayed in Step 3.2 before installation to "**Document**" or "**My document**". Now, rename the folder such as to **"PY-2020iS Control Backup 20150918"** so that it includes the work date.

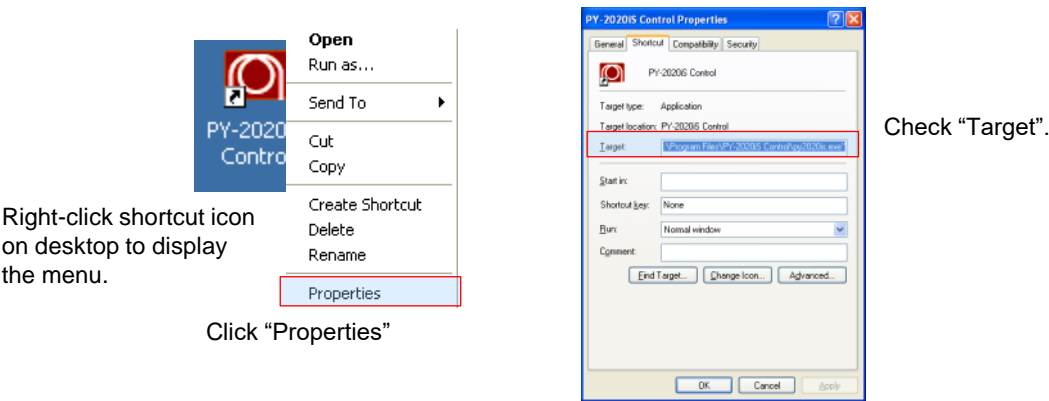3.5 Ensure that the **C** drive has greater than 10 MB of available disk space.

Right-click shortcut icon on desktop to display the menu.

Click "Properties"

Check "Target".

Fig. 3.1 a

Right-click **"PY-2020iS Control"** to display menu.

Hit **[Start]** button to display this menu.

Click **"Property"**
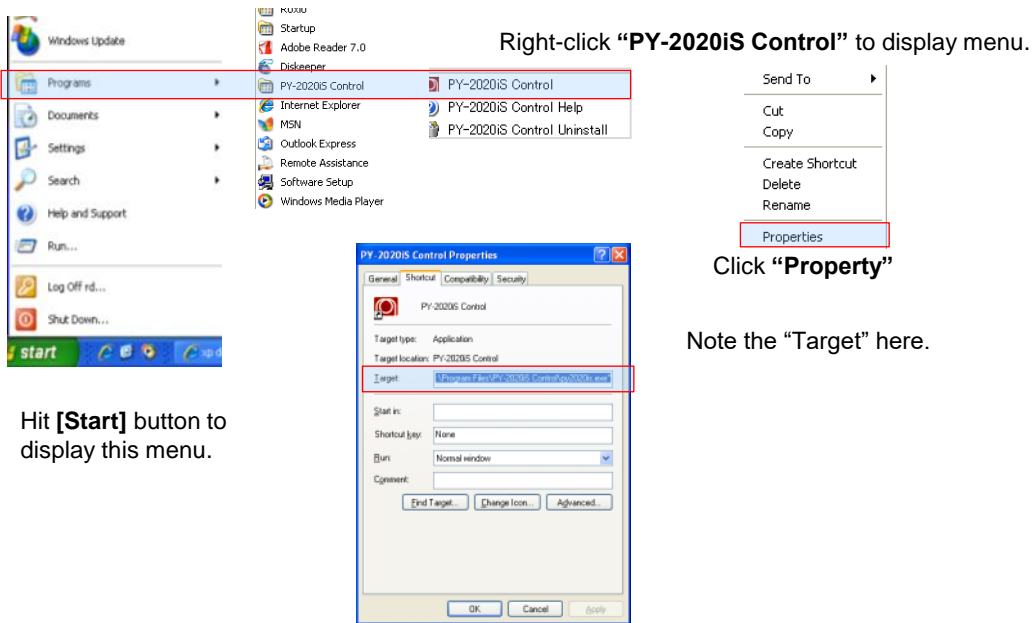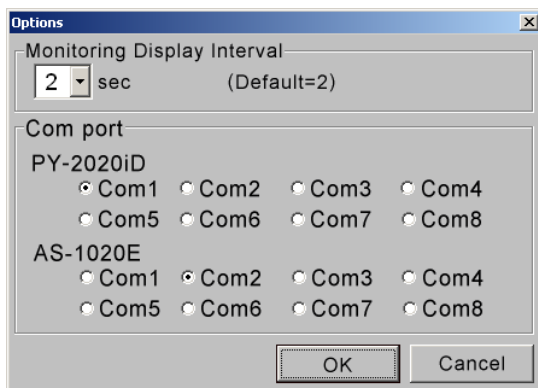
Note the "Target" here.

Fig. 3.1 b

In the example here, PY-2020iS uses COM1, and AS-1020E uses COM2.

Record the value above.

Fig. 3.2

Step4: Downloading Software Ver. 3.04

4.1 Download PY-2020iS control software Ver. 3.04 from Frontier Labs webpage (https://www.frontier-lab.com/support/product-support/). Right-click the zip file in Fig. 4.1 framed in red, then choose **"Save Target As"**.

4.2 A window shown in Fig. 4.2 is displayed, just hit **[Save]**.

4.3 Right-click the saved file, then choose "**Extract All**" (Fig. 4.3).

4.4 **SETUP.ex**e file shown in Fig. 4.4 will be created. Copy this file to a USB flash memory or CD, then insert it to a PC to which the software will be installed.
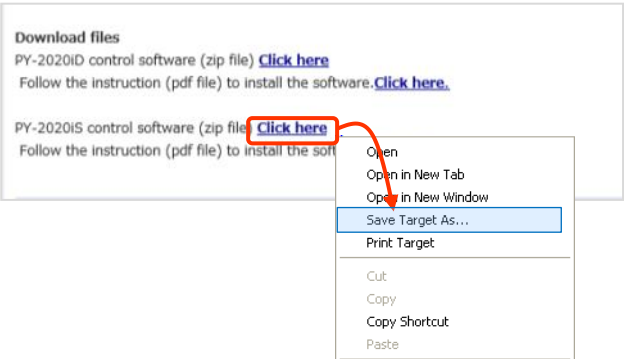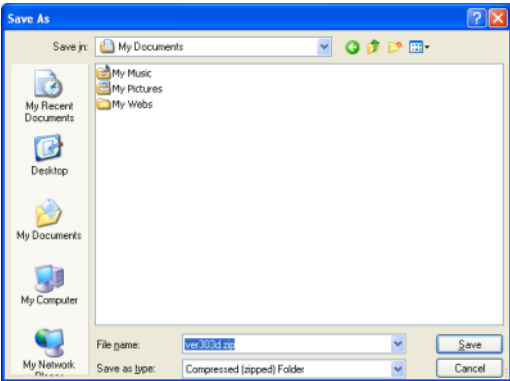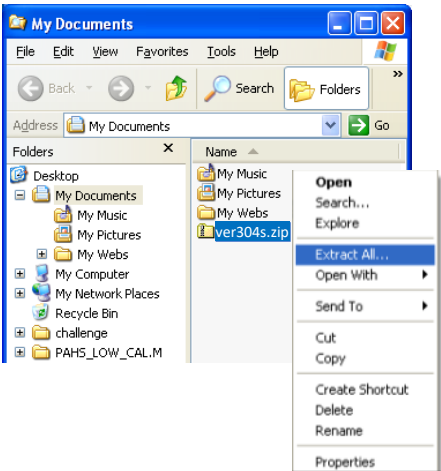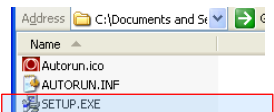

Fig. 4.1

Fig. 4.2

Fig. 4.3

Fig. 4.4

Step5: Installing Software Ver. 3.04

5.1 Left-double-click **"SETUP.exe"** obtained in Step 4. A window shown in Fig. 5.1 will be displayed. Hit **[Next]** button.

5.2 Enter your name and affiliation in the dialog box shown in Fig. 5.2, then hit **[Next]** button.

5.3 A window shown in Fig. 5.3 is displayed. Click **[Next]** button.

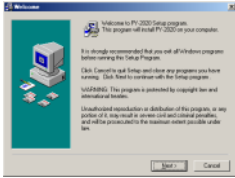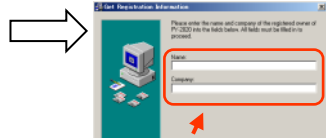5.4 When the installation is finished, a window shown in Fig. 5.4 is displayed. Hit **[Finish]** button.

Enter your name and affiliation.

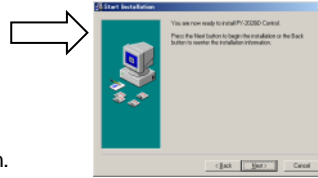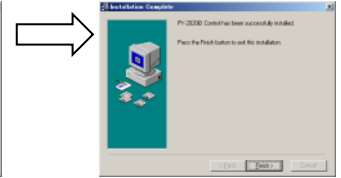| Fig. 5.1 | Fig. 5.2 | Fig. 5.3 | Fig. 5.4 |

> **CAUTION!** The software files are installed in either **C:¥Program Files** or
> **C:¥Program Files (x86)**.
> Note that the software cannot be installed on **D:** drive.

Step6: Starting software

6.1 Turn on the power of Pyrolyzer's temperature controller.

6.2 Start PY-2020iS Ver. 3.04 software application by selecting "**Programs**"-"**PY-2020iS Control**"-"**PY-2020iS Control**" (Fig. 6.2).
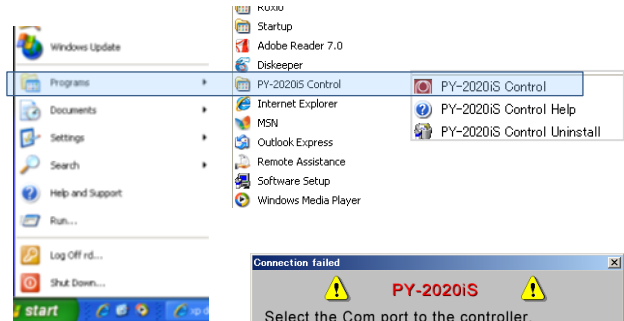
6.3 If files location other than

"**C:¥Program Files¥PY-2020iS Control**" or
"**C:¥Program Files(x86)¥PY-2020iS Control**"

has been used, COM port query window (Fig. 6.3) may be displayed at the first startup. Choose COM port number recorded in Step 3.3.
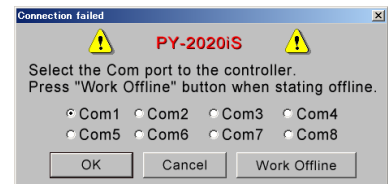
6.4 After the software has been installed, a dialog box shown in Fig. 6.4 will be displayed only at the first startup.
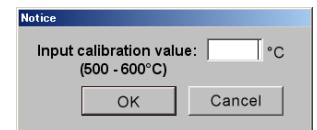

Fig. 6.2

Fig. 6.3

Fig. 6.4

Step7: Entering temperature calibration value

7.1 Enter temperature calibration value and hit **[OK]** button (an example in Fig. 7.1 shows 536). Numeric values outside of 500~600 range are not accepted, or a window shown in Fig. 7.2 will be displayed.

7.2 For confirmation, enter the calibration value entered in Step 7.1 again in the window shown in Fig. 7.3. If two values do not match, a window shown in Fig. 4 will be displayed.
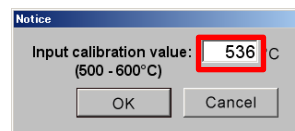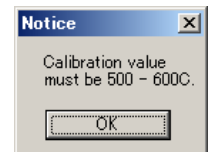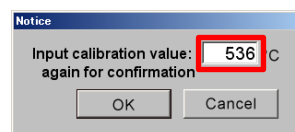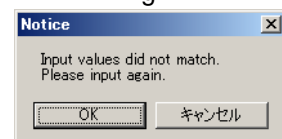

Fig. 7.1

Fig. 7.2

Fig. 7.3

Fig. 7.4

5

Step8: Confirming temperature calibration value

The same number is correctly entered in windows shown in Figs. 7.1 and 7.3, a dialog box shown in Fig. 8.1 is displayed. Confirm that the value framed in red is correct, then click **[Yes]** button. This will return to the window shown in Fig. 7.1.

The calibrated value entered can be viewed at the right bottom of the window displayed by selecting **"Help" - "About"** from the menu bar (Fig. 8.2).

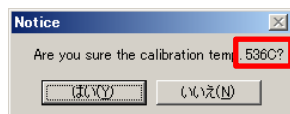
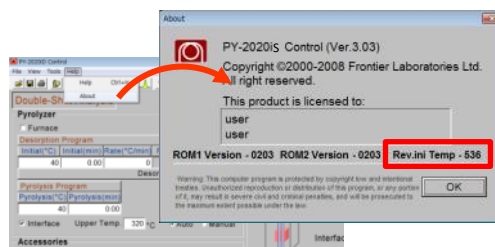Fig. 8.1   Fig. 8.2

Step9: Affixing confirmation seal

Record the temperature calibration value (CAL Factor), date and operator's name and keep them.

Step10: Setting up analytical conditions

10.1   This completes the temperature calibration. Now, use the Pyrolyzer as usual, by loading your normally used method files and by entering required parameters for analysis. In an event where method files are missing, copy backup files created in Step 3.4. Also, if analysis has been performed without saving the method files, ensure that the analytical conditions are all correct before initiating analysis.

10.2   If the software has been installed in a location other than

"C:¥Program Files¥PY-2020iS Control" or
"C:¥Program Files(x86)¥PY-2020iS Control",

select **"Tools" – "Instrument Set Up"** to set up again for Selective Sampler, MicroJet Cryo-Trap, and Auto-Shot Sampler along with stability time, and then click **[Use as Default Value]** button (Fig. 10.1).

Also, a COM port query window (Fig. 10.2) may be displayed. Choose COM port number for Auto-Shot Sampler (AS-1020E) recorded in Step 3.3, while Auto-Shot Sampler is powered on.
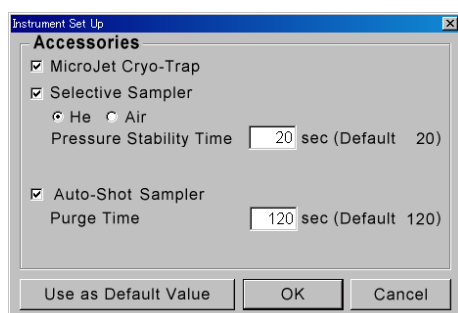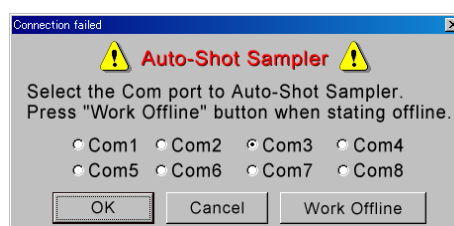

Fig. 10.1   Fig. 10.2

CAUTION! 1. This software cannot be used, if the temperature calibration is performed at other than 550ºC. If temperatures other than 550ºC for the calibration are to be used, redo the temperature calibration by selecting "**Tools**" – "**Maintenance**" from the menu bar.

2. In the case where your PC has been replaced with a new one or the software has been reinstalled, repeat the Steps 2~8 above.

3. If different pyrolyzers share a single PC, perform the Steps 2~8 again and enter the calibration value for each furnace (value described in Step 2).