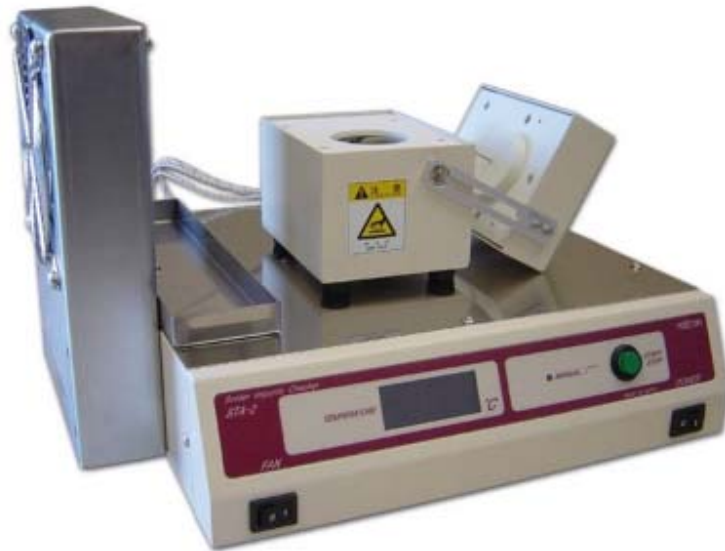


## **MALCOM MDEL STA-2 SOLDER IMPURITY TESTER**

Test content of LEAD and COPPER in solder pot

### **STEP-BY-STEP OPERATIONAL MANUAL**



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# MALCOM SOLDER IMPURITY TESTER STA-2

## Operational Software STAP-2 , STAP-Pb2

### Install English STAP-2 and STAP-Pb2

## Preparation

### § 1 Set up

Mounting cooling fan bracket to base unit.

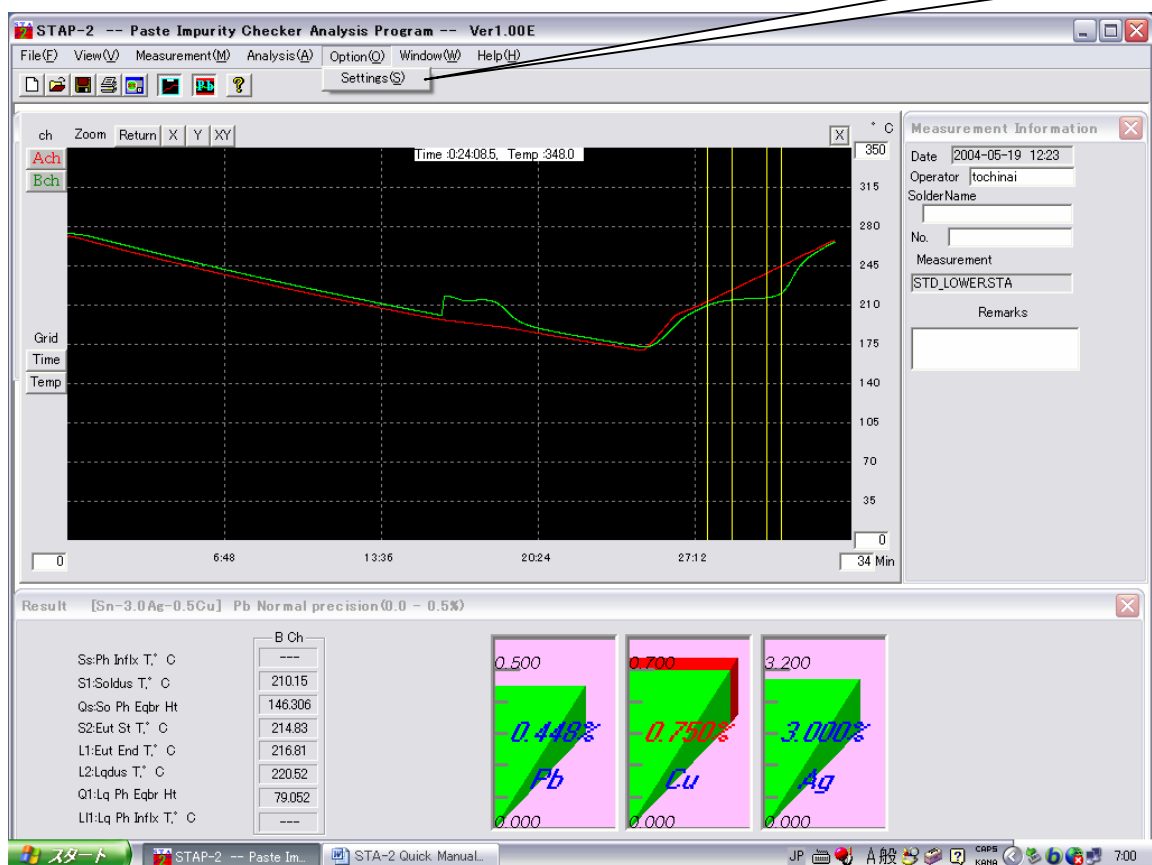
### § 2 Wiring

Connecting the heater and thermo couple sensors.

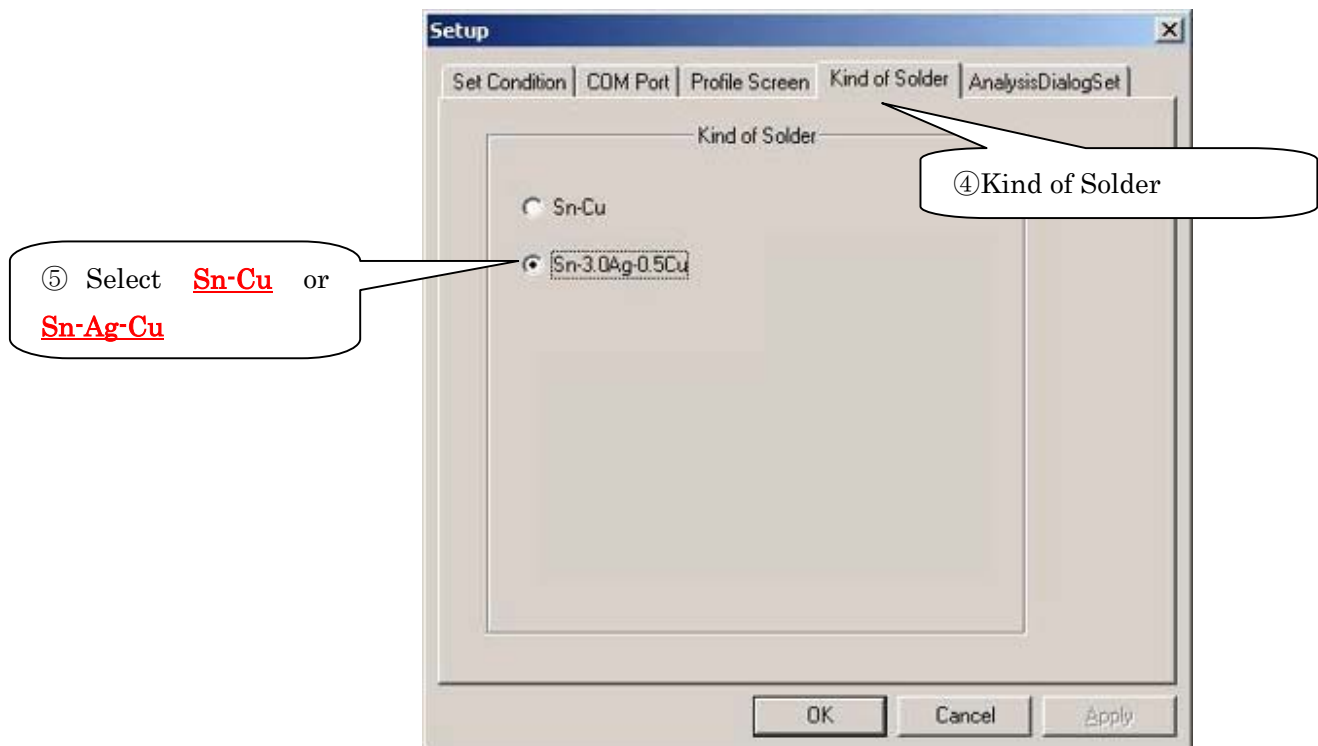
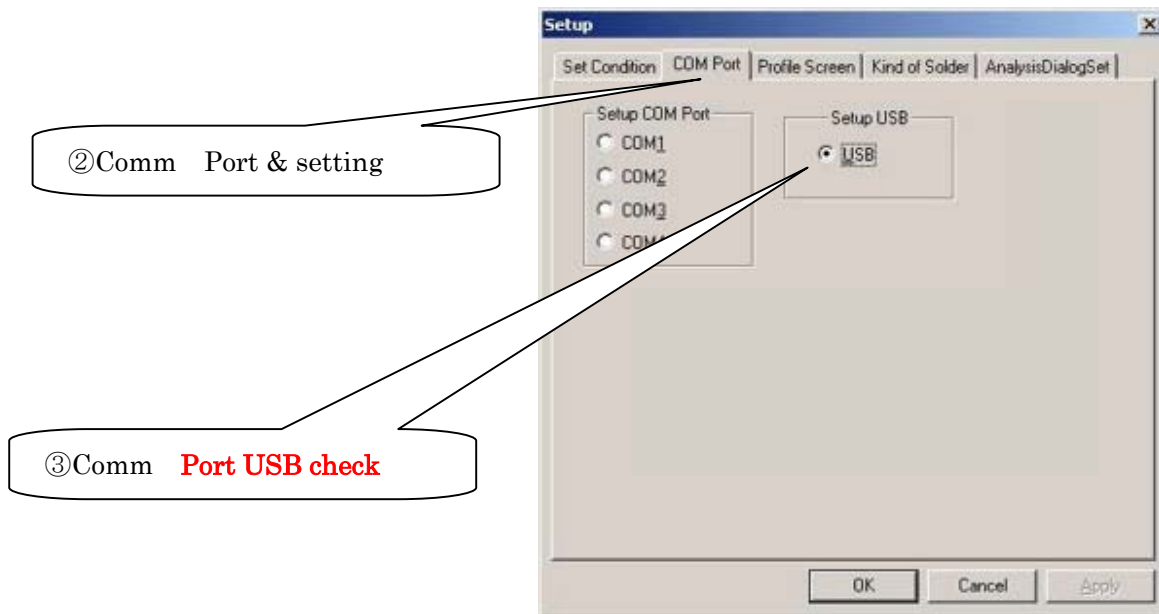
### § 3 Program setting

Install STA software and open STPA-2

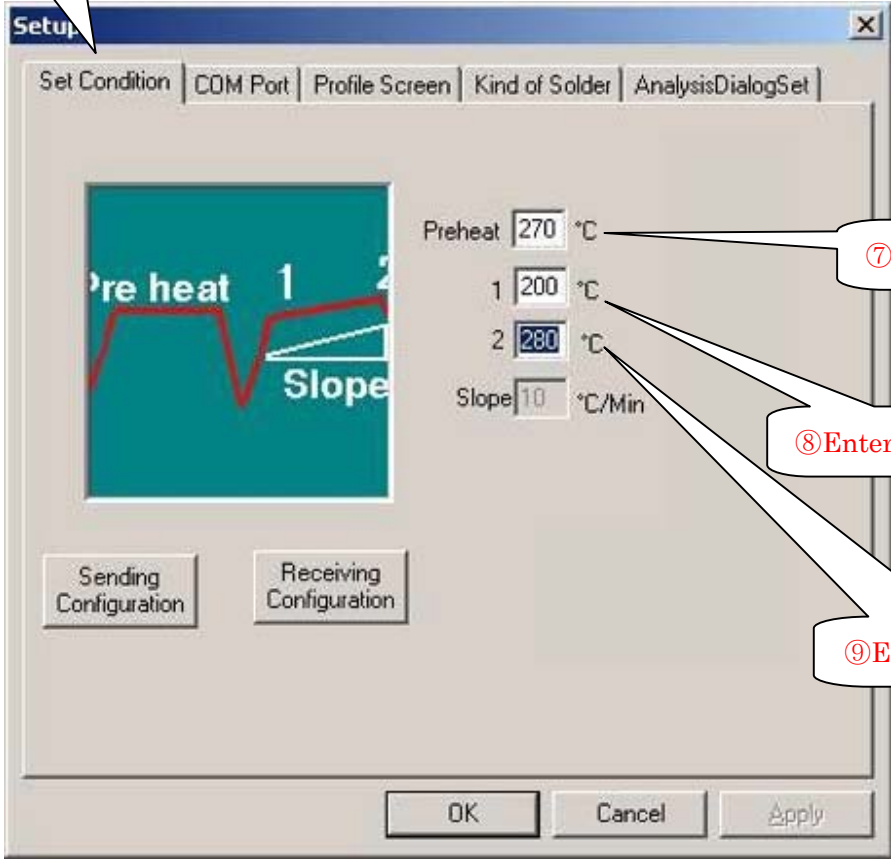
① Go to Option set up



STAP-2 is USB cable connection



⑥ Set Condition



⑩ Turn ON STA-1 power unit

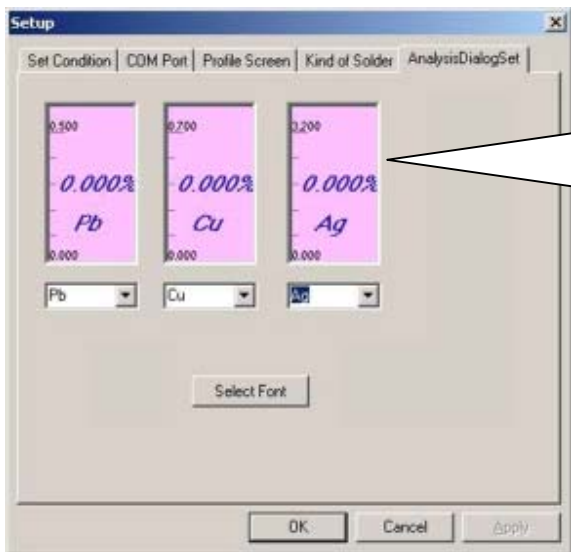
⑪ Press **Sending Configuration**

⑫ then press **Receiving Configuration**

**Connection Error**

If not established USB connection between STA-2 unit and computer  
You need install (MUsb32.sys file ) from STAP-2 CD software.

⑬ Analysis Dialog Set



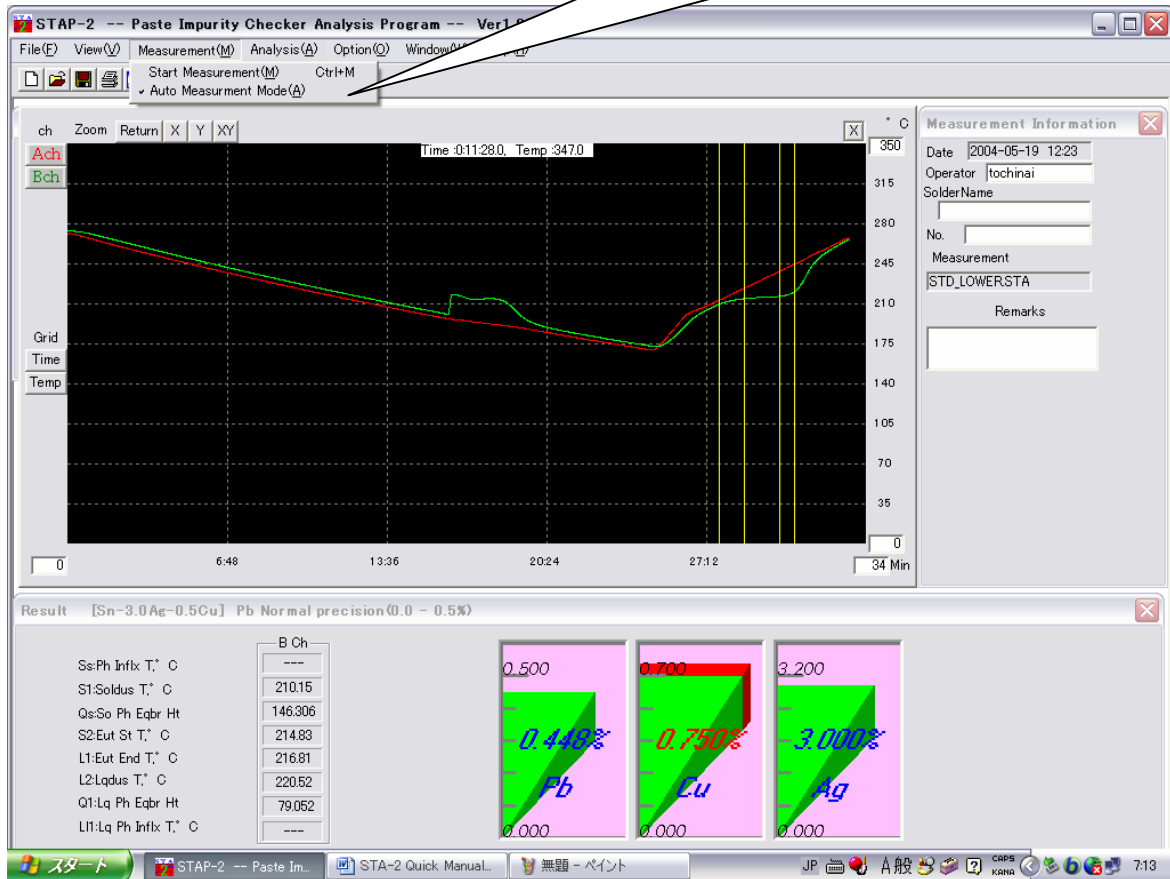
Pb, Cu and Ag Graph bar scale can  
Change by click right side of mouse.  
Ag( silver) is indication only not  
Measures scale.

Note: Cooling Fan switch keeps ON during testing and when you need to  
Cool the solder pot after test finished.

Program Setting finished Click

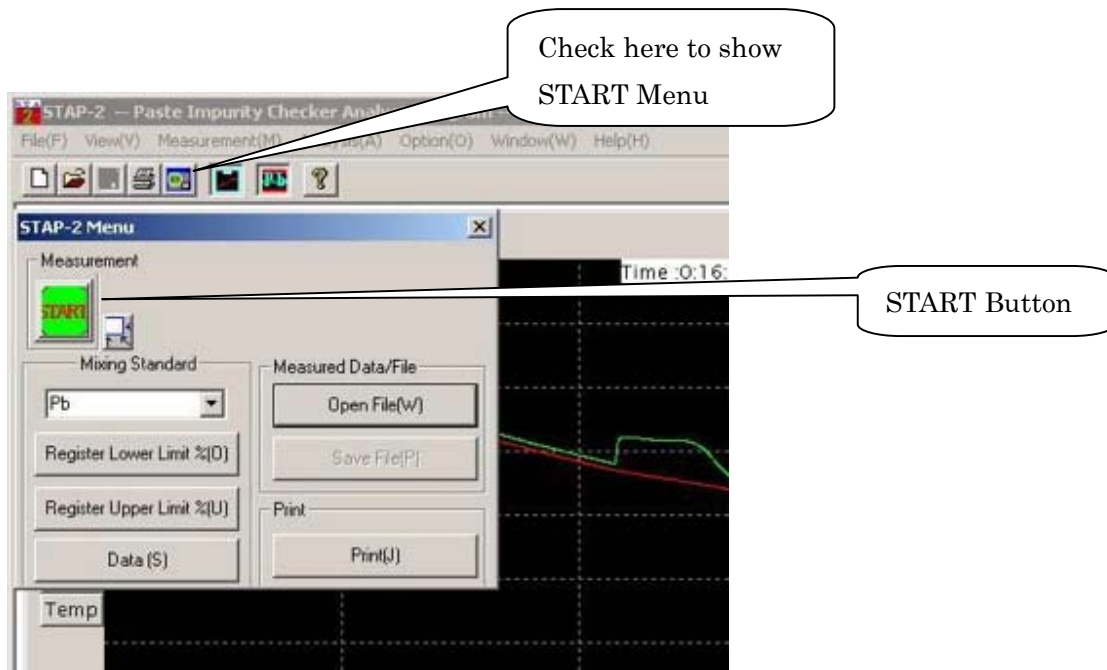
## § 4 Auto Measurement Mode

Make sure mark on Auto Measurement



## § 5 Pb Contents base data registration test

- ① Turn ON the STA-2 system and press the **GREEN push switch (Green light ON)**. (Fan switch keep ON)
- ② 0% Lead calibration solder (14grams or 80% of test cup) to fill the cup and to wait until melt.  
Or press START and wait until solder pelting then close the heater top cover.
- ③ LED temperature will increasing up to 270°C
- ④ Remove dross on the top of the cup then close the heater sensor top.  
(Make sure the thermo sensors wire needs to be clean each test and do not bend.)

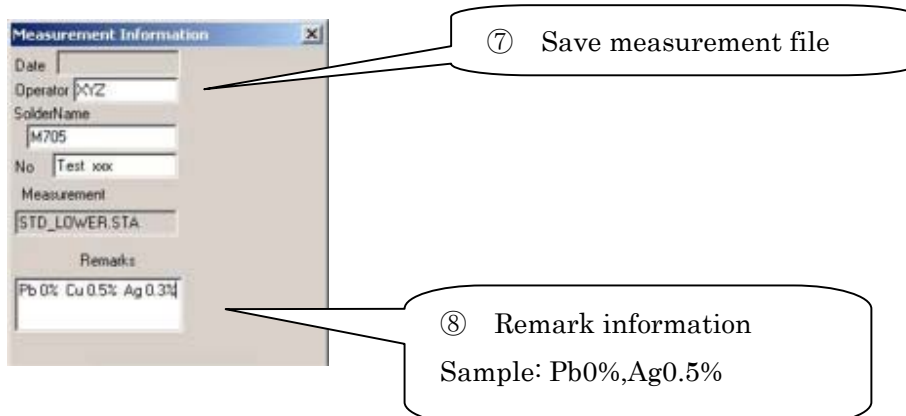


- ⑤ When you click the START button Green lamp is ON then measurement Graph will show on screen. Test takes about 35 minutes to complete the test.

**Note:** Do not remove sensor top during test.

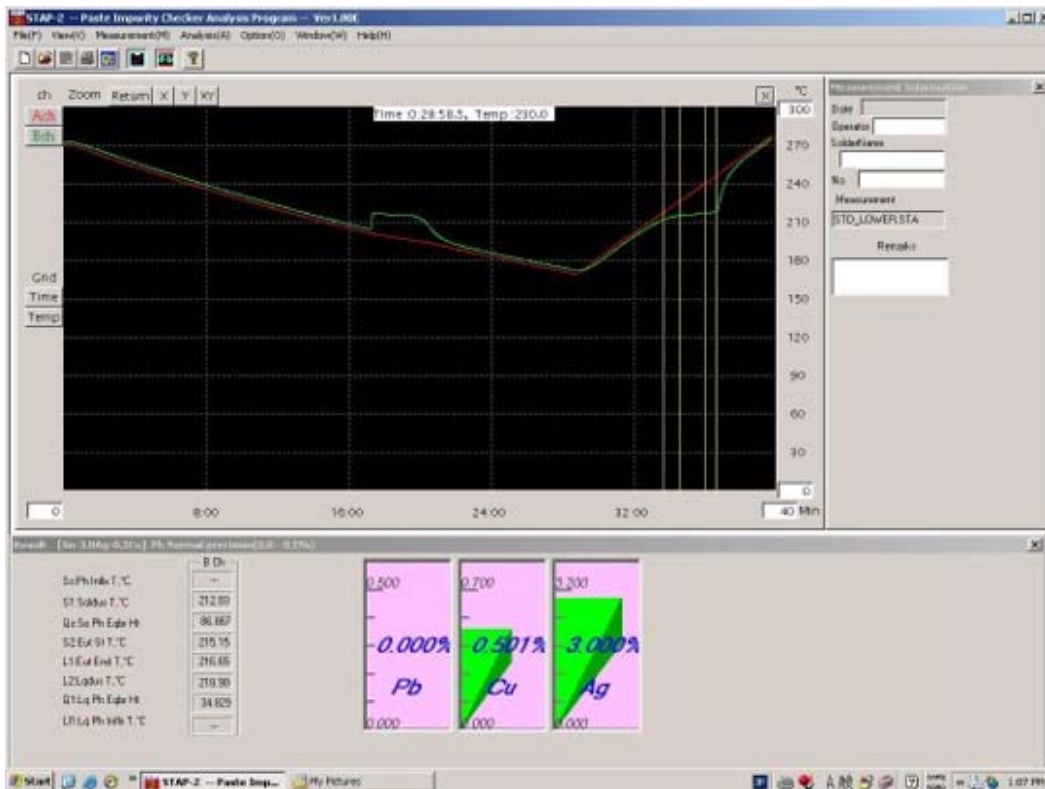
- ⑥ When test end, you can enter solder information and save data to **Data file.**  
 (solder item , Pb %.Ag%.Cu%.STA) or  
 Sample Pb0% lower. STA (lower sample test)  
 Sample Pb\_%upper.STA(upper sample test)

**Note:** Do not save data file to **Upper or Lower Limit File**



Test First to Analyze Pb Free solder (Lower Standard)  
2<sup>nd</sup> Analyze Pb 0.5% Upper Standard (Upper Standard).

## TestResult

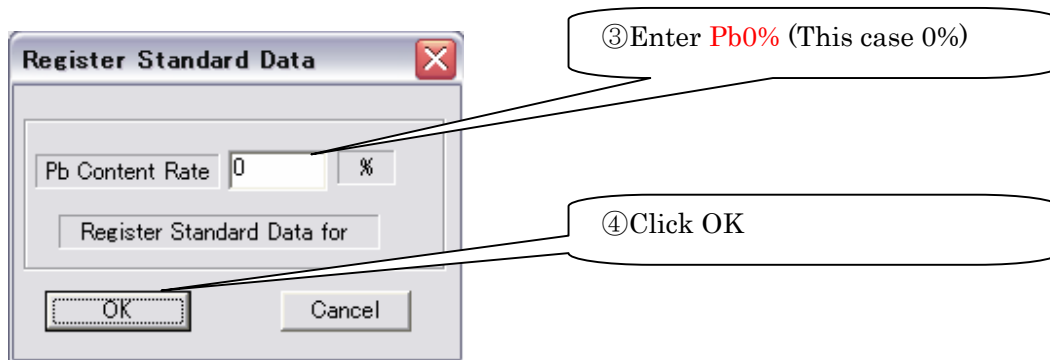
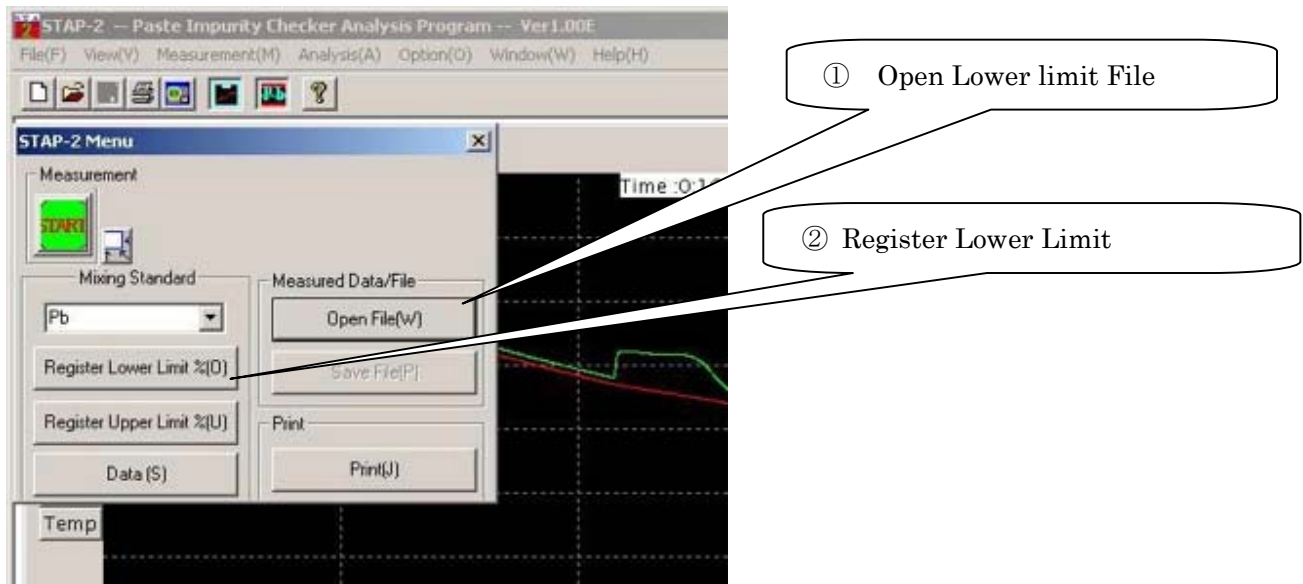


## File Test Data

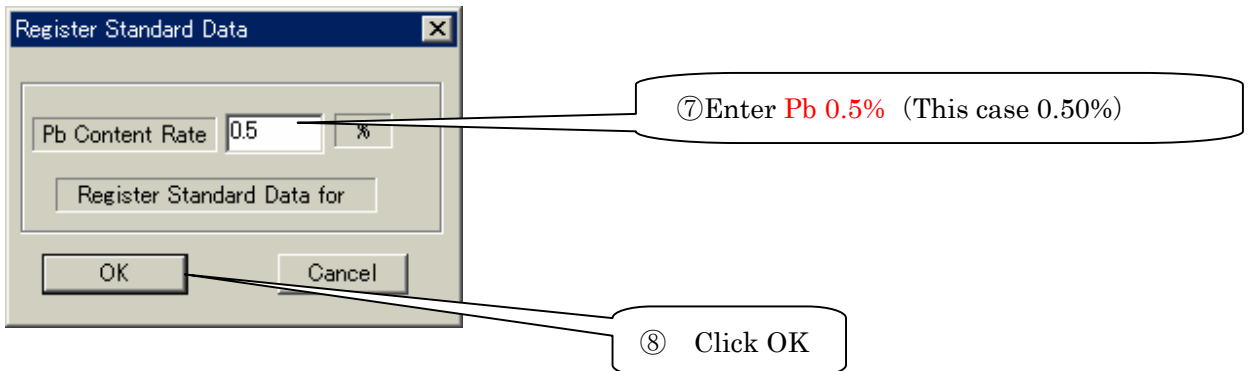
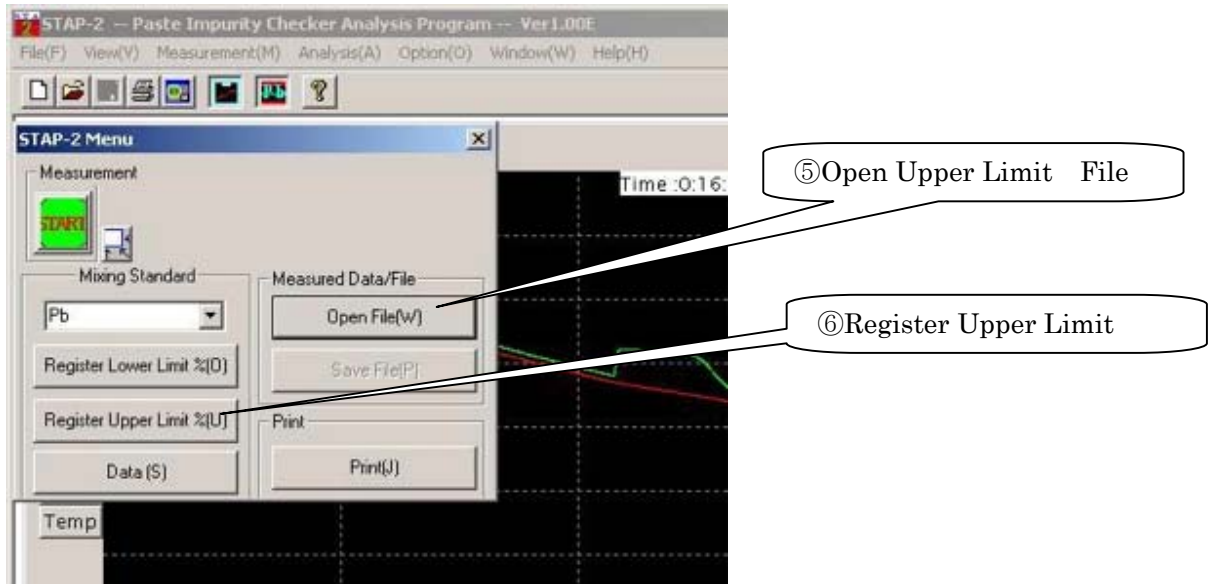
- ⑨ Remove the solder in the pot and clean inside. (**Caution very hot**)
- ⑩ Sample solder with lead (sample Pb 0.5%) test and measurement test data save to file (indicate Pb0.5 %.STA).

§ 6 Register Lower and Upper Limit 2 sample data (0% lead and lead\_\_%)

Open measured Data and select the **Lead 0% file** and register **Lower Limit**.

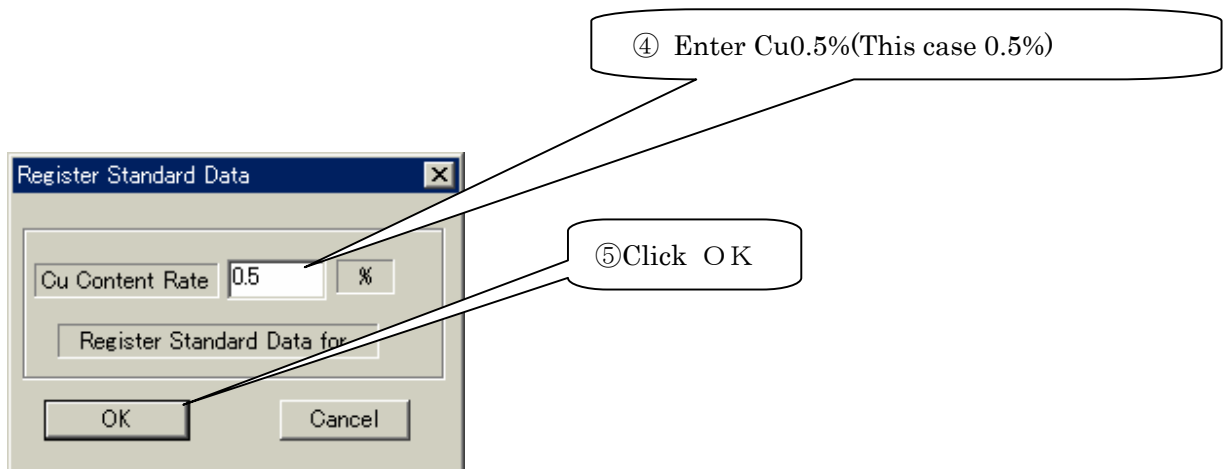
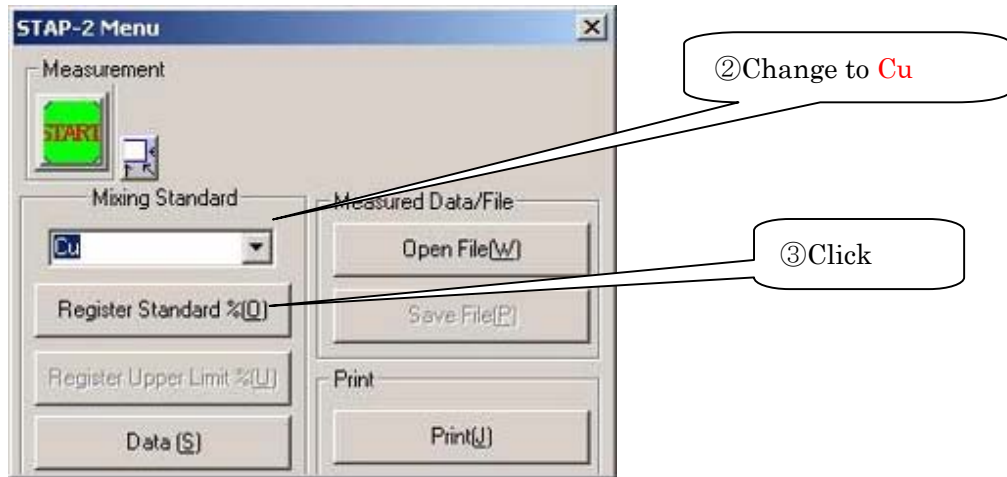


Open measured Data and select the **Lead 0.5% file** and register **Upper Limit**.



## § 7 Register Copper contents

- ① Open Pb 0% Lower data.

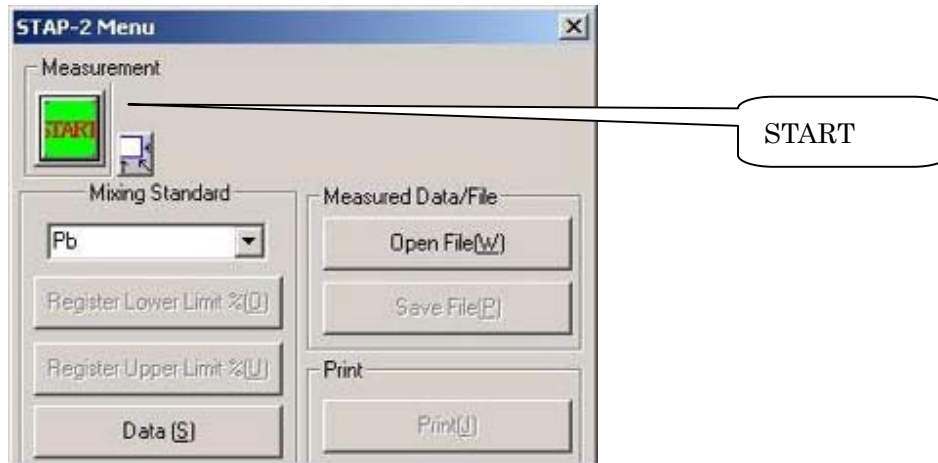


Monitor screen shows Pb 0% and Copper 0.5% graph

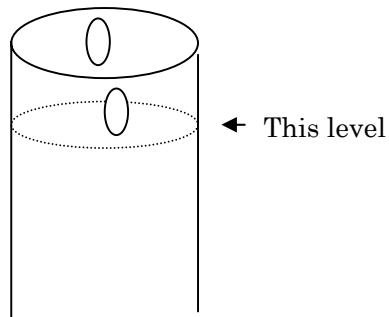
§ 5、 § 6、 § 7 Test recommended every 3 month

## Measurement Procedure

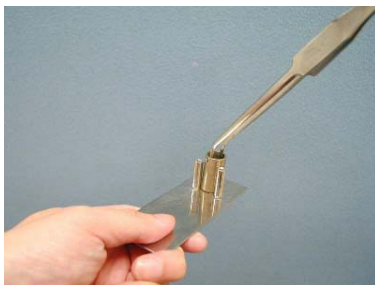
- ① Open STAP-2 or software and click START button.



- ② Set the solder cup into the holder and transfer the sample fill approximate 80% in the cup



- ③ Use tweezers to lift then place into heater unit (**Caution very hot**).



**Wait until sample solder melt. (Temp 270°C)**

- ④ Remove the dross over the molten solder surface with the stainless bar
- ⑤ Then close the heater cover.
- ⑥ Turn ON cooling fan switch during test ( only works during cooling mode)
- ⑦ Test will complete approximate 35 minutes.
- ⑧ Automatically test result shows on graph.
- ⑨ Save the test data to the Data file.
- ⑩ Open the top of the heater and take out sample solder from the cup.
- ⑪ Clean the temperature sensor (Carefully not to bend)
- ⑫ Ready for next test.

**Special Note:**

Handling the molten solder is very HOT

Heater sensors are very sensitive during test so do not move the STA-2 unit.

Check the heater temperature before touch.

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9/17/2004