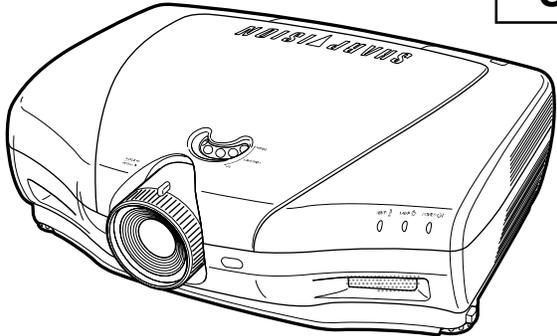


**SHARP**

**SERVICE MANUAL  
SERVICE-ANLEITUNG**

SUPPLEMENT

S81Y7XVZ9000U



**DLP PROJECTOR  
DLP PROJEKTOR**

**MODELS  
MODELLE**

**XV-Z9000U/E**

In the interests of user-safety (Required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified should be used.

Im Interesse der Benutzersicherheit (erforderliche Sicherheitsregeln in einigen Ländern) muß das Gerät in seinen Originalzustand gebracht werden. Außerdem dürfen für die spezifizierten Bauteile nur identische Teile verwendet werden.

**OUTLINE**

- The PC interface board programs have been updated as from the January 2002 production in order to improve the lip synchronization function.
- This SUPPLEMENT MANUAL discusses the program updating procedure. For to-be-reprogrammed units from users, first check the programs' version and then take their proper steps.

**BESCHREIBUNG**

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## ■ Improving the Z9000U units

(Program version-up for HTPC (Home Theater PC) compatibility, performance upgrading and lip synchronization improvement)

The Z9000U units have been improved in the following 3 points. These improvements can be confirmed by looking at the program versions.

Program version and PC interface version	HTPC compatibility	Redesigned circuitry for performance improvement	Lip synchronization improvement
<b>1</b> Z901819 and Z901905 (CPCI0051CE01)	No	No	No
<b>2</b> Z901927 (CPCI0051CE05)	Yes	Yes	No
<b>3</b> Z901Z25 ⇔ Z902220 (CPCI0051CE05)	Yes	Yes	Yes

To implement the above improvements from Level-**1** to Level-**3**, it is necessary to update the PC interface board programs, modify the hardware, and change some parameter settings. There is no need to replace the PC interface board itself. If this board is replaced, however, the background setting must be additionally readjusted.

To get the Level-**1** unit compatible with HTPC, just update the programs. To upgrade the Level-**2** unit to Level-**3**, update the programs and make some readjustments. All these are discussed below.

### Upgrading from Level-**1** to Level-**3**

#### 1) Checking the unit

- Select "STATUS" on the menu screen and look at the right bottom of the screen to check the program version. If the version is "Z901819" or "Z901905", take the following procedures.

#### 2) Jotting down the process parameters.

- Note down the existing settings specified below because there may be a problem during the reprogramming. Your notepad can be used to confirm the settings after the reprogramming.

(1) Power on the unit and call the process mode.

To do so, use the keys on the remote controller or on the unit. Press the keys "INPUT → UP → DOWN → ENTER → ENTER → MENU" in this order. Or just press the S001 switch on the main PWB.

(2) Select "A/D, DLP and DTV" in this order on the process menu. Write down the following parameters.

A/D : A/D converter input setting

DLP : Background setting

DTV : Component mode A/D setting

(3) Exit from the process menu. Press the keys in the same order as for entering this mode.

### 3) Modifying the hardware

- Remove the PC interface board from the unit. Make the following modifications.

(1) Add two jumper leads.

Connect one jumper between TL88 and TL136 and the other between TL87 and TL140. Apply adhesive to the specified points to secure the jumpers. Refer to the attachment file "0051 Modifications".

(2) Change the resistor constants.

Change the constants of the following jumper resistors on the board.

R82: Not mounted → 0 ohm

R69, R93 and R94: 0 ohm → abolished

R76: Not mounted → 47 ohms

For more details, refer to the attachment file 0051 Modifications.

### 4) Updating the programs

- Get the following two programs updated.

Main program Z9000\_020220.bhx

CVIC program cvic\_AB\_Z9000\_1219a1.bhx

The reprogramming procedures are the same as for the projector data program. Refer to the attachment file "Z9000Manual.doc".

### 5) Checking and readjusting the process data

- Enter the process mode again and check the parameters jotted down in Step 2 above.

A/D : A/D converter input setting

DLP : Background setting

DTV : Component mode A/D setting

If any of them has been accidentally deleted, reenter the same value.

- Enter the process menu "SSS" and click on "S2".

- For readjusting the video line, refer to the Service Manual.

Feed the NTSC video signal to the "INPUT4" pin. Make sure the signal has clear white level (100% white) and black level (0% black) (setup at 0%). Select "VIDEO1" on the process menu. Adjust the "BRIGHT" setting until a bit dropout occurs at the black side. Then adjust the "CONTRAST" setting until a bit dropout occurs at the white side.

- Enter the process menu "SSS", click on "S4" and exit from this process.

## Upgrading from Level-**2** to Level-**3**

(No modifications on the hardware)

### 1) Checking the unit

- Select "STATUS" on the menu screen and look at the right bottom of the screen to check the program version. If the version is "Z901927", take the following procedures.

### 2) Jotting down the process parameters.

- Do the same as for the upgrading from Level-**1** to Level-**3**.  
Select "VIDEO1" on the process menu and write down the "CONTRAST" and "BRIGHT" settings too.

### 3) Updating the programs

- Get the following two programs updated:

Main program Z9000\_020220.bhx

CVIC program cvic\_AB\_Z9000\_1219a1.bhx

Take the same steps as for the upgrading from Level-**1** to Level-**3**.

### 4) Checking and readjusting the process data

- Check the "A/D, DLP and DTV" settings on the process menu.
- Enter the process menu "SSS" and click on "S2".
- Select "VIDEO1" on the process menu. Enter the noted-down values in the "CONTRAST" and "BRIGHT" settings. There is no need to readjust the other "VIDEO1" settings.
- Enter the process menu "SSS", click on "S4" and exit from this process.

## Upgrading the Level-**1** unit for HTPC compatibility

(No modifications on the hardware)

### 1) Checking the unit

- Select "STATUS" on the menu screen and look at the right bottom of the screen to check the program version. If the version is "Z901819" or "Z901905", take the following procedures.

### 2) Updating the programs

- Get the following program updated:

Main program Z9KU\_011122b.bhx

Refer to the attachment file "Z9000Manual.doc".

## ■ Reprogramming procedure

### Requirements on the programming PC

- OS: Windows95, 98 or NT4.0
- RS232C terminal (No problem if compatible with SVM or SAPS)

For this programming, the operator must be able to do the following levels of running the computer.

- Opening specified folders on a "Windows95/98" machine.
- Double-clicking to run files.
- Decompressing "Zip" files.

In the screen displays below, the circle means that you move the cursor there and click the mouse, where the circle indicates that you look there and confirm.

### Reprogramming for the projector

<Preparations>

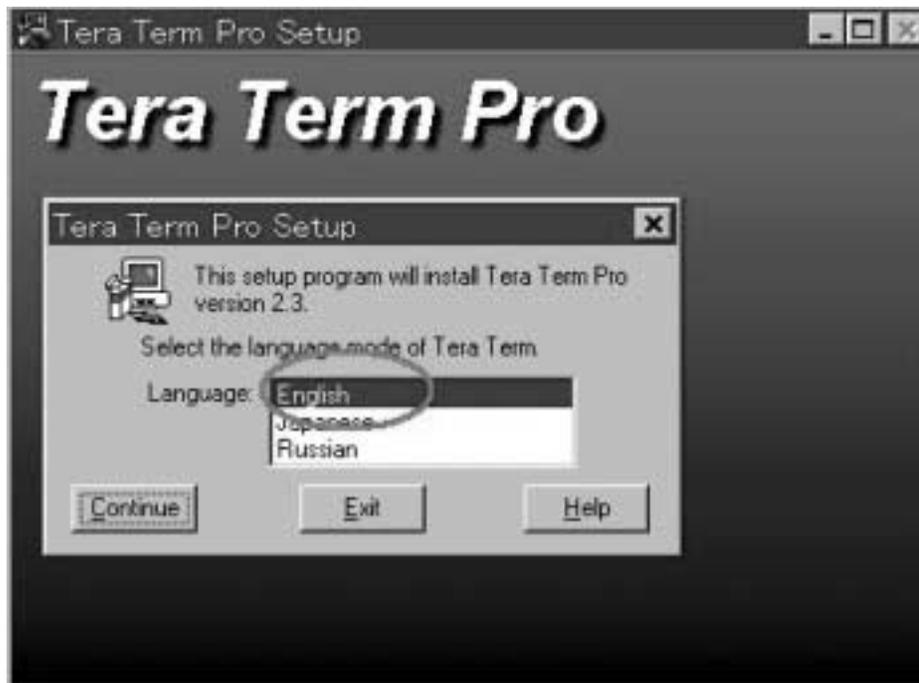
Installing the write program and the data program

The "TeraTermPro" communication program is used for this programming.

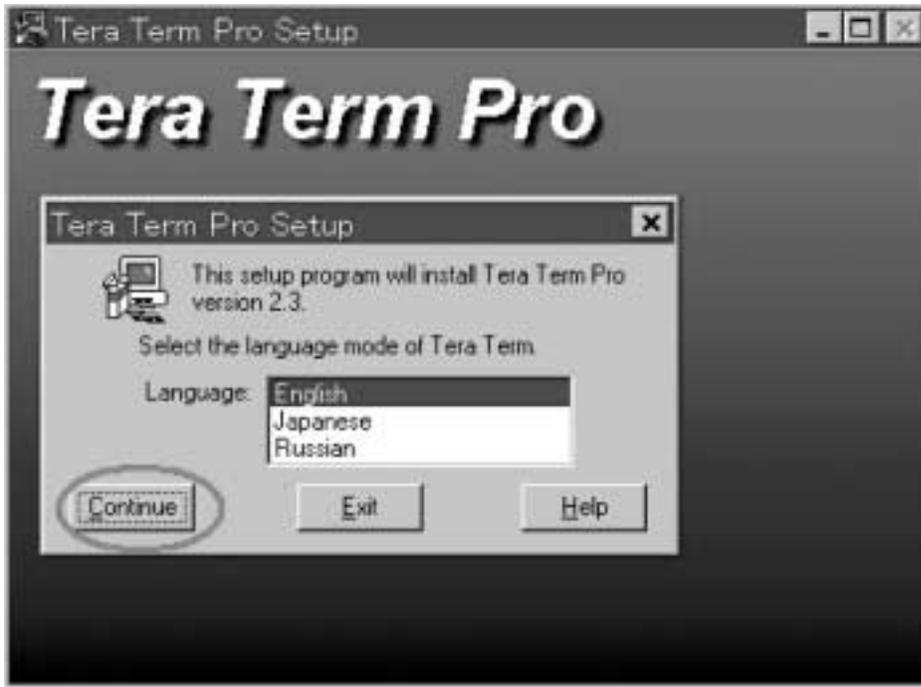
Note: If your computer already has the "TeraTermPro" program installed, once uninstall this program and reinstall it in the following procedure. (This is because the program may fail to work depending on the computer's operating environment.) Refer to Paragraph 2) at the end of this manual.

#### 1) Installing the TeraTermPro program

- a. Decompress the attached "ttermp23.zip" file and click on the "setup.exe" file in the folder.
- b. The "Language" box shows up. Click on [English].



c. Click on **[Continue]**.



d. The "NOTE: ~" message appears. Click on **[Continue]**.



- e. The "Tera Term Pro Setup Destination Path ~" message appears. Click on **[Continue]**. Do not change the Path entry. The program may fail to work.



- f. The "Tera Term Pro Setup Complete" message appears. Finally click on **[OK]**.



## 2) Installing the projector program and write macro

- a. Click on the attached "**dsetup.exe**" file.
- b. The "**dsetup window**" opens and click on **[OK]**. Do not change the "**Install Directory**" entry. The program may fail to work.



## Programming the Z9000 units

### <Precautions>

Be sure to strictly follow the programming procedure. And the projector may fail to work if the power is shut down halfway, the serial cable gets disconnected, or a wrong step is taken.

- a. Connect the serial cable between the Z9000 unit and the program-installed computer. This is similar to SVM-serial connection.
- b. Power on the computer and the Z9000 unit as well.
- c. Press the following keys on the remote controller or the Z9000: **"INPUT → UP → DOWN → ENTER → ENTER → MENU"** in this order.
- d. The process menu appears on the screen. Select **"SPECIAL"** and press the **"ENTER"** key".  
(Note: "Z9KU[011122b]" as shown below indicates the program version after updating.  
Before updating, a different program version is displayed.)

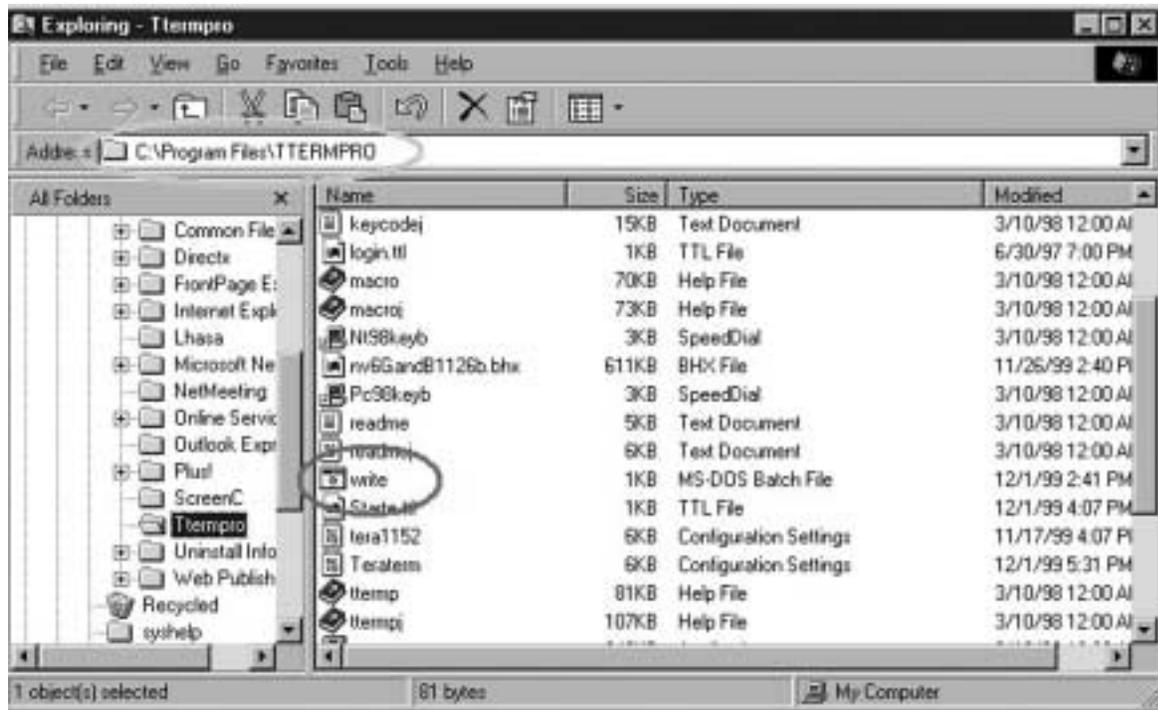


- e. Select **"IPL"** and press the **"ENTER"** key". The Z9000's lamp goes out and the program updating mode comes up. (The POWER LED indicator starts flashing in blue.)

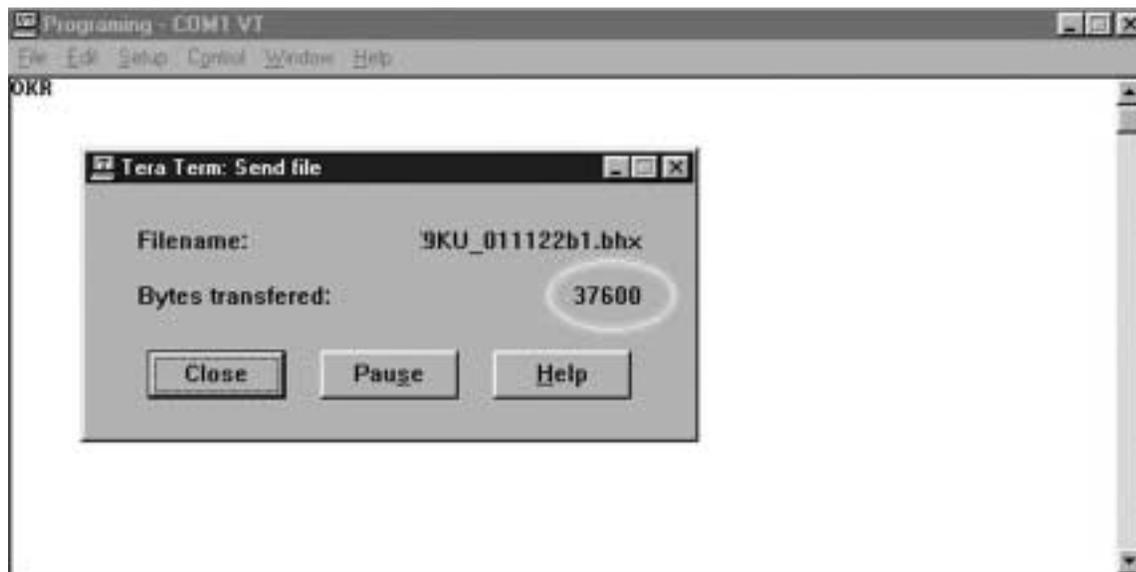


f. Open the "**C:\Program Files\TTERMPRO**" folder using the Explorer on the computer.

g. Double-click on the "**write.bat**" file.



h. The program updating gets started. The "**Tera Term Send file**" dialog box appears. See if the number located below "**Bytes transferred: xxxx**" is counting up. This means the program is updated.



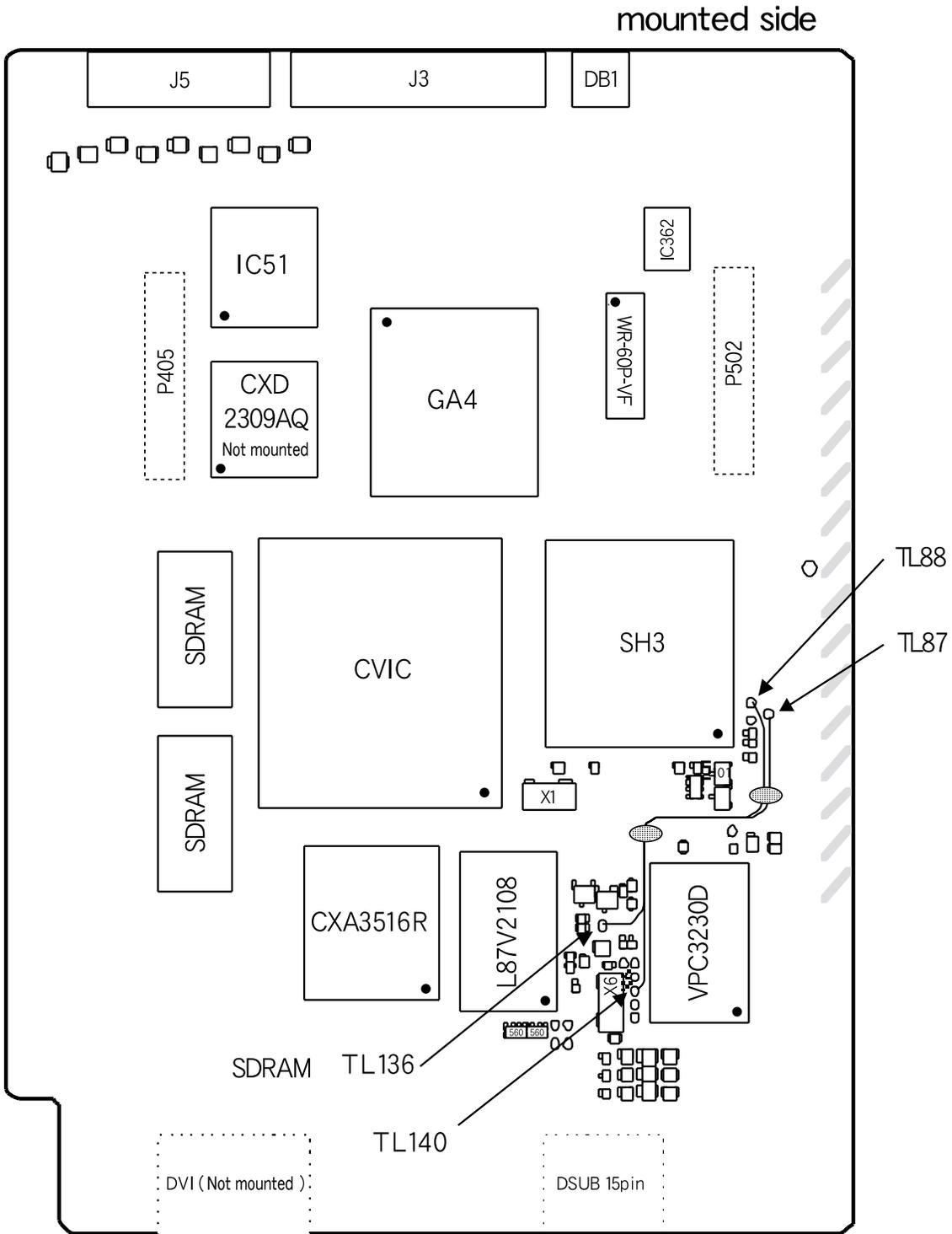
- i. Soon after, the "**Transfer Program**" dialog box appears. Click on **[OK]**.



- i. Finally unplug the AC power cable and plug it in again. Switch on the power again.
- The above procedures have been tested and confirmed on a "Windows98 [English version]" machine.
  - When uninstalling the existing "TeraTermPro" program, take the following notes.
    - (1) For uninstalling, click "**My Computer**", select "**Control Panel**" and use "**Add and Delete Applications**".
    - (2) There are some files that cannot be uninstalled all at once. Delete the entire folder of "**C:\Program Files\TTERMPRO**" (previously installed program folder). Be sure to take Step (1) first and then Step (2). Otherwise the newly installed program may perform poorly.

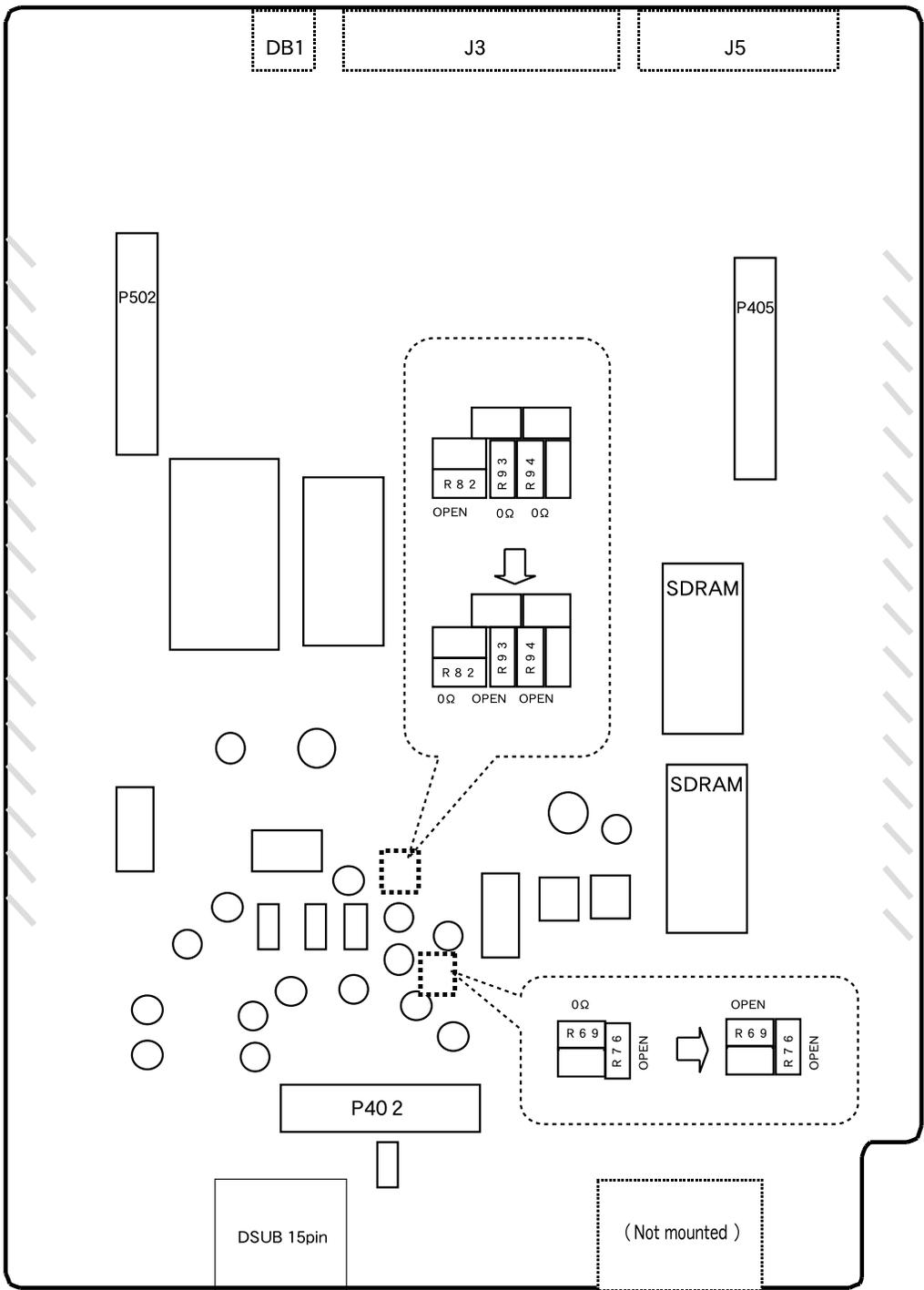
## ■ Modifications on the PC interface board

Connect one jumper between TL88 and TL136 and the other jumper between TL87 and TL140. Apply adhesive to the two points indicated above.



R 8 2	OPEN → 0 Ω
R 6 9、9 3、9 4	0 Ω → OPEN
R 7 6	OPEN → 4 7 K Ω

soldered side



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