

Maintenance of the Program Adapter

How to Clean IC Sockets

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Flash Support Group, Inc.

Thank you for purchasing this program adapter.

Although this program adapter is provided with IC sockets recommended or introduced by device manufacturers, a programming failure may occur if the program adapter deteriorates due to problems that occur with usage such as stains on terminal contact surfaces and solder transfer. * To use the adapter for a long time, perform maintenance on it as described below.

*** Due to a change in the device lead characteristics to comply with a recent trend toward lead-free soldering and other factors, a programming failure may occur after the adapter is programmed some hundreds of times depending on the operating environment, maintenance, and other conditions.**

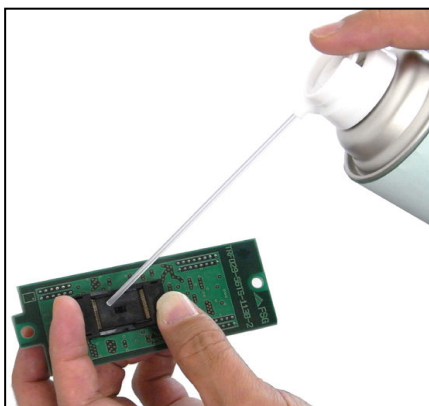
Precautions:

The following maintenance may not be effective depending on the shape of the adapter, device lead components, and operating environment. We recommend that you check the effect of each procedure as you complete it and replace the adapter if necessary.

If programming failures increase

Perform the following steps, in the order described below, to remove the cause of the failure resulting from a poor contact.

1. Cleaning of socket contacts with air or brush (removal of contact failures caused by dirt, dust, etc.)



Use compressed air or a similar tool to blow off dust from the contacts between the socket pins and the device leads.

2. Cleaning of socket contacts with air together with contact cleaner (removal of stains such as flux)

- (1) Use compressed air or a similar tool to blow off dust from the contacts between the socket pins and the device pins.
- (2) Spray contact cleaner onto the socket pin contacts.
- (3) Use compressed air or a similar tool to completely blow off the contact cleaner remaining in the socket.
 - * If contact cleaner is used with dust remaining on the contact, the dust may adhere to the contact, resulting in a contact failure.
 - * Any contact cleaner that remains on the contact or other part will promote oxidation or other reactions, which will cause a contact failure.
 - * Contact cleaner is effective only in separating stains from the contact. Be sure to blow off the stains together with the cleaner.
 - * This is not an effective method for removing oxide films caused by solder transfer or for mechanical damage.



Cleaner example

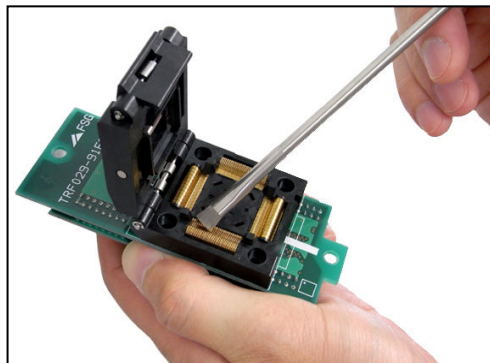
Contact cleaner: RC-S201 (made by Sunhayato)
TEL: +81-3-3984-7791
URL: <http://www.sunhayato.co.jp/>

3. Socket cleaning (removal of oxides due to soldering or other causes)

Cleaning with a special brush

The contact status may be improved by using a special brush to remove solder transferred residue from the contact surface.

- * Excessive brushing may peel the coating, which adversely promotes deterioration. Be careful that the coating is not peeled off.
- * This may not be effective for a socket configured to come in contact with the device leads in the lower part (e.g. SOP and TSOP) because the brush cannot reach the contact.



Tool example

Special brush: Nanotech brush
(made by KITA Manufacturing)

TEL: +81-72-485-1900

URL: <http://www.kita-mfg.com/>

Cleaning with a special sheet

The contact status may be improved by using a special sheet to remove solder transferred residue from the contact surface.

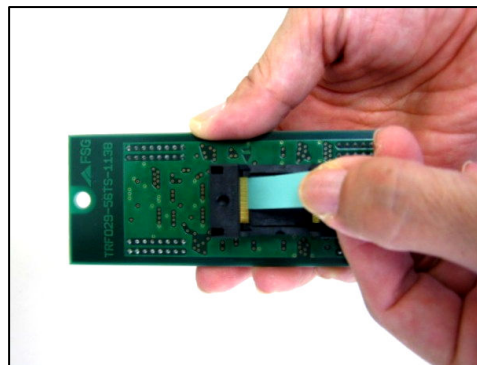
- * Excessive sanding with the sheet may peel the coating, which adversely promotes deterioration. Be careful that the coating is not peeled off.
- * This is effective for a socket configured to come in contact with the device leads in the lower part (e.g. SOP and TSOP).

- (1) Cut the special sheet into an appropriate size and insert it into the contact between the socket and the device leads.
- (2) Pull out the sheet slowly.
- (3) Repeat (1) and (2) several times.
- (4) Blow off dust from the contact.

Tool example

Special sheet: Ultrafine abrasive film
(#6000, 2-micrometer)

Made by Sankyo-Rikagaku



Precautions:

When using tools to maintain the program adapter, read the instruction manual of each tool carefully and follow the precautions written in each instruction manual.

If the contact status is not improved by the above procedure

Deterioration due to age or mechanical breakage is the likely cause, so we recommend that you replace the program adapter.

To purchase a new program adapter, contact our customer service department (Tel: +81-53-459-1050) or your local distributor.

Storing the adapter

To prevent contact oxidation caused by solder transfer, after using the adapter, do not store it in a location subject to high temperature and humidity. When reusing it several days after the last usage, we recommend that you brush the contacts gently.