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› [DollaTek](#) /

› DollaTek CH341A Programmer Kit Instruction Manual

DollaTek 6543815031

DollaTek CH341A Programmer Kit Instruction Manual

This manual provides detailed instructions for the setup, operation, and maintenance of your DollaTek CH341A Programmer Kit. Please read thoroughly before use.

PRODUCT OVERVIEW

The DollaTek CH341A Programmer Kit is a versatile tool designed for reading, writing, and erasing EEPROM and BIOS chips, primarily from the 24 and 25 series. It is ideal for tasks such as BIOS flashing, device repair, and firmware development. The kit includes the main CH341A programmer, various adapters for different chip packages, and an in-circuit programming clip.

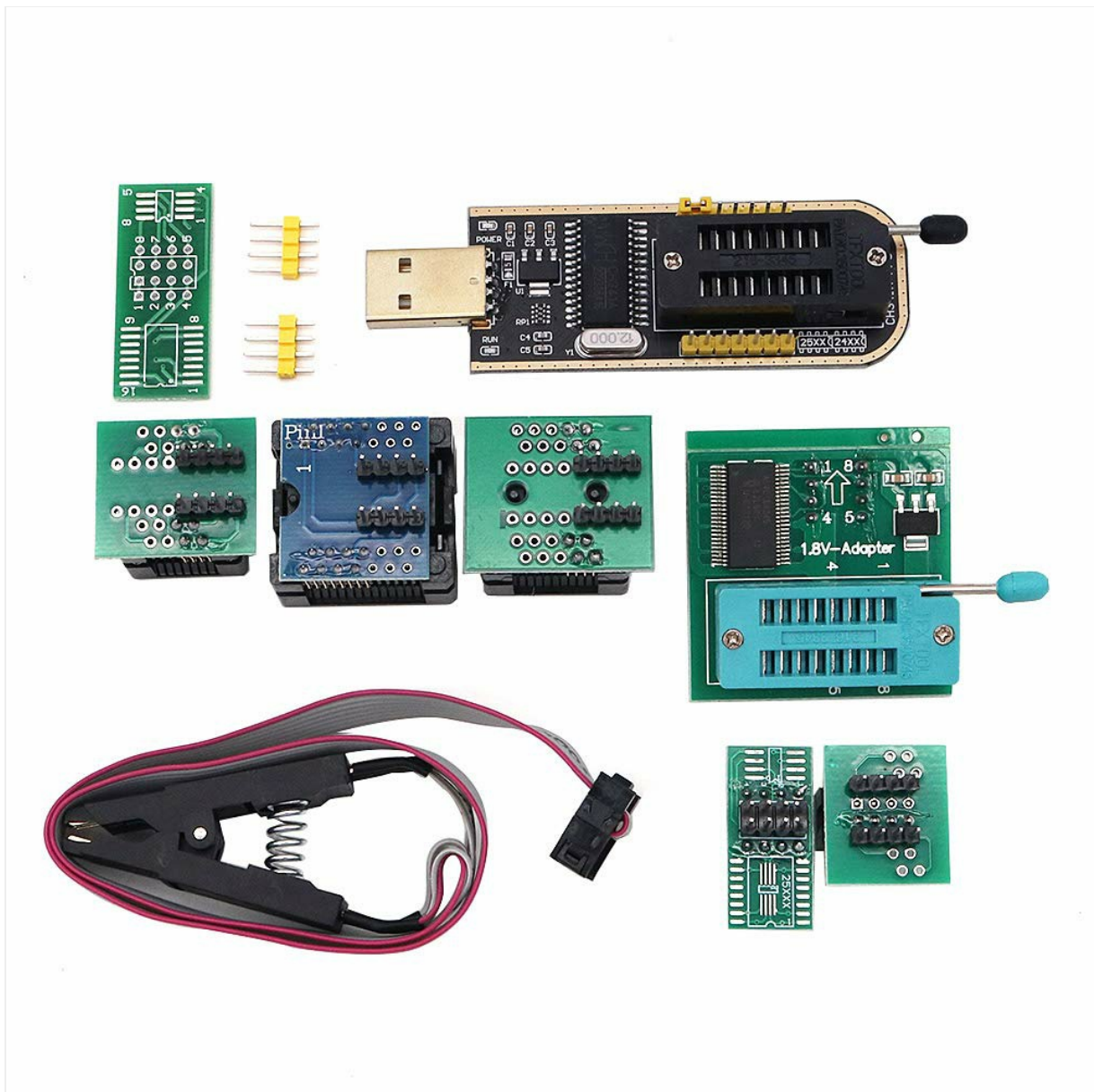


Image Description: A complete view of the DollaTek CH341A Programmer Kit, showcasing the main USB programmer, several DIP and SOP adapters, and the SOP8 test clip.

COMPONENTS INCLUDED

Your DollaTek CH341A Programmer Kit includes the following items:

- **CH341A USB Programmer:** The core device for connecting to your computer and interfacing with memory chips.
- **SOP8 to DIP8 150mil Socket:** An adapter for narrow-body SOP8 chips to DIP8 format.
- **SOP8 to DIP8 200mil Socket:** An adapter for wide-body SOP8 chips to DIP8 format.
- **SOP16 to DIP8 Socket:** An adapter for SOP16 chips to DIP8 format.
- **1.8V Adapter:** Used for programming chips that operate at 1.8V.
- **SOP8 Test Clip:** For in-circuit programming of SOP8 chips without desoldering.
- **Additional Pin Headers/Adapters:** Various small PCBs and pin headers for connectivity.



Image Description: The CH341A USB programmer module, shown with the SOP8 clip and 1.8V adapter, ready to be connected to a computer's USB port.

OPERATING INSTRUCTIONS

This section outlines the general procedure for reading and writing data to EEPROM and BIOS chips.

General Programming Process

- 1. Identify Chip:** Determine the type and voltage of the chip you intend to program (e.g., 24 series, 25 series, SOP8, SOP16, 1.8V).
- 2. Select Adapter:** Choose the appropriate adapter or socket for your chip. For SOP8 chips, select the 150mil (narrow) or 200mil (wide) adapter. If the chip operates at 1.8V, use the 1.8V adapter in conjunction with the main programmer.
- 3. Insert Chip/Connect Clip:**
 - **For DIP chips or chips on adapters:** Carefully insert the chip into the ZIF (Zero Insertion Force) socket on the CH341A programmer or the chosen adapter. Ensure correct pin orientation (Pin 1 alignment).
 - **For in-circuit programming with SOP8 clip:** Attach the SOP8 clip to the target chip on the circuit board. Ensure all pins make good contact. Connect the clip's ribbon cable to the appropriate header on the CH341A programmer.
- 4. Connect to Programmer:** If using an adapter, plug the adapter into the ZIF socket of the CH341A programmer.
- 5. Launch Software:** Open the programming software on your computer.

6. **Detect Chip:** In the software, use the "Detect" or "Identify" function to ensure the programmer recognizes the connected chip.
7. **Read/Backup:** It is highly recommended to first read and save a backup of the existing data from the chip before attempting to write new data.
8. **Erase (if necessary):** For some chips, an erase operation is required before writing new data.
9. **Load Data:** Load the desired firmware or data file into the programming software.
10. **Write/Program:** Initiate the write or program operation. Monitor the software for progress and completion.
11. **Verify:** After writing, perform a verification step to confirm that the data was written correctly.
12. **Disconnect:** Safely remove the chip or clip from the programmer/circuit board.

Using the SOP8 Clip for In-Circuit Programming

The SOP8 clip allows you to program EEPROM chips directly on a circuit board without desoldering them. This simplifies the BIOS flashing process. Ensure the device powered by the chip is turned off and disconnected from power sources before attaching the clip. Carefully align the clip with the chip's pins, ensuring a firm and stable connection.



Image Description: A close-up of the SOP8 test clip with its ribbon cable, designed for in-circuit programming of surface-mount chips.

Using the 1.8V Adapter

Some modern EEPROM and BIOS chips operate at a lower voltage of 1.8V. If your target chip requires 1.8V, you must use the included 1.8V adapter. Connect the 1.8V adapter to the CH341A programmer's ZIF socket, and then insert your 1.8V chip (or its adapter) into the 1.8V adapter's socket. Failure to use the correct voltage adapter can damage the chip or

programmer.

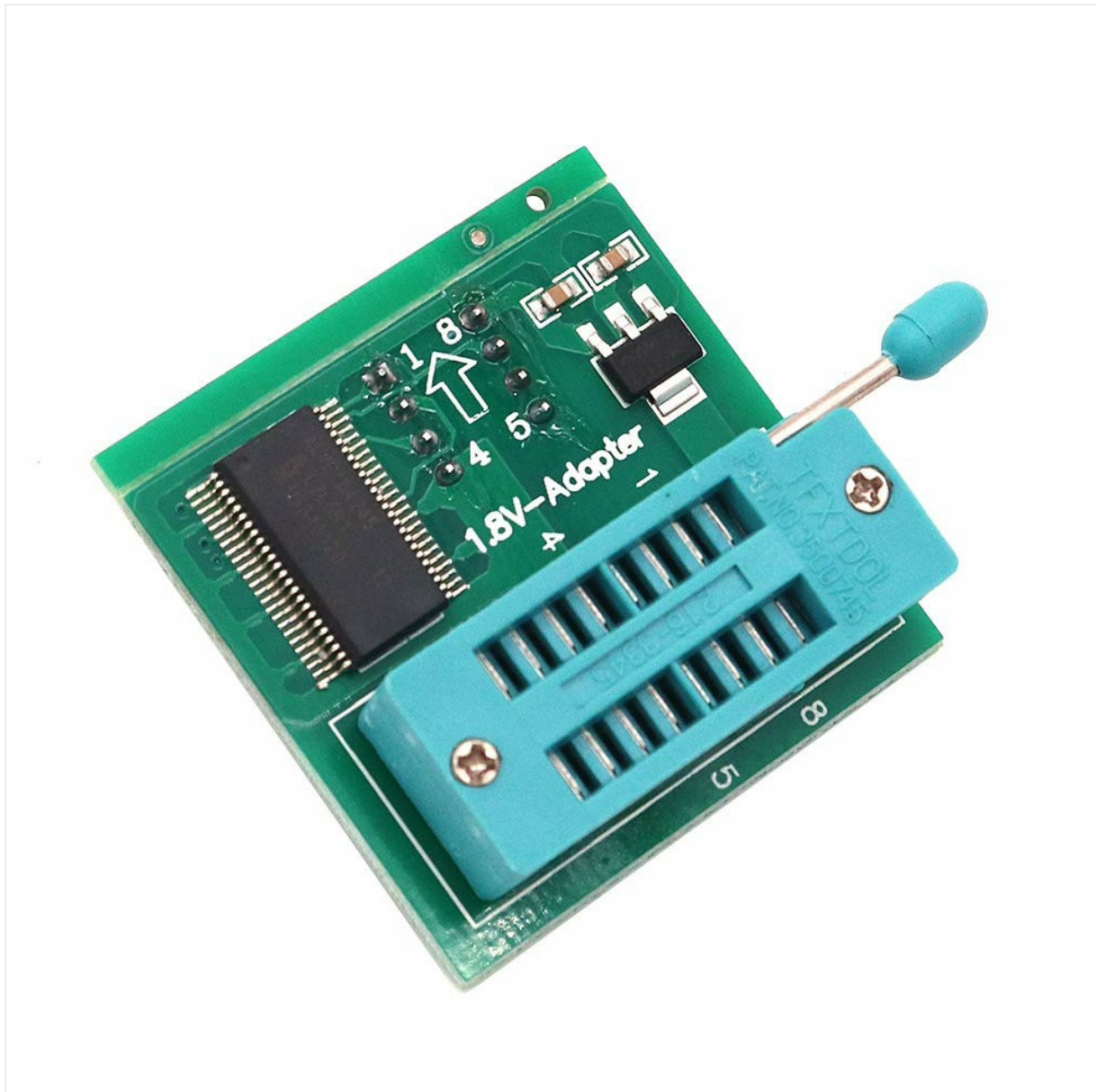


Image Description: The 1.8V adapter board with its ZIF socket, used for programming low-voltage chips.

MAINTENANCE

To ensure the longevity and proper functioning of your DollaTek CH341A Programmer Kit, follow these maintenance guidelines:

- **Storage:** Store the programmer and its accessories in a dry, dust-free environment, away from direct sunlight and extreme temperatures.
- **Cleaning:** Use a soft, dry cloth to clean the programmer and adapters. Avoid using liquid cleaners or solvents.
- **Handle with Care:** The ZIF sockets and pin headers are delicate. Avoid applying excessive force when inserting or removing chips and adapters.
- **Inspect Connections:** Periodically check the SOP8 clip and other adapters for any bent or damaged pins.
- **ESD Precautions:** Always observe Electrostatic Discharge (ESD) precautions when handling chips and the programmer to prevent damage.

TROUBLESHOOTING

If you encounter issues while using the DollaTek CH341A Programmer Kit, refer to the following common problems and solutions:

- **Programmer Not Detected:**

- Ensure the CH341A driver is correctly installed.
- Try a different USB port on your computer.
- Verify the USB cable connection.

- **Chip Not Recognized by Software:**

- Confirm the chip is inserted correctly into the ZIF socket or adapter, paying attention to Pin 1 orientation.
- Ensure all pins of the SOP8 clip are making good contact with the chip.
- Verify you have selected the correct chip type or family in the programming software.
- Check if the chip requires a 1.8V adapter and that it is correctly installed.
- Some chips, particularly ESMT SST class 25, may only be readable and not writable due to CH341A chip characteristics.

- **Read/Write Errors:**

- Ensure the chip is properly powered (if external power is required for the target circuit during in-circuit programming, though the programmer itself is USB powered).
- Check for poor contact with the SOP8 clip; sometimes one pin might not connect properly.
- Verify the integrity of the data file you are trying to write.
- Ensure the chip is not write-protected.
- The erase speed for some chips is approximately 2-3 Mbit per minute; ensure sufficient time is allowed for operations.

- **SOP8 Clip Connection Issues:**

- Some users have reported issues with the SOP8 clip having one pin too short, making a reliable connection difficult. Gently adjust the clip or ensure maximum pressure is applied for contact. If persistent issues occur, consider an alternative clip.

SPECIFICATIONS

Key technical details for the DollaTek CH341A Programmer Kit:

- **Main Programmer Chip:** CH341A
- **Interface:** USB
- **Supported Chip Series:** Most 24/25 series EEPROM BIOS SOP8 SOP16 chips.
- **Supported Voltages:** Standard 3.3V/5V (via USB), 1.8V (with included adapter).
- **Programming Speed:** Read 2-3 times faster than simple 25 series programmers. Erase speed approximately 2-3 Mbit per minute.
- **SOP8 Clip Compatibility:** Supports both wide and narrow body SOP8 chips with 1.27mm pitch.
- **Manufacturer:** DollaTek
- **Model Number:** 6543815031
- **Package Dimensions:** Approximately 16.7 x 13.8 x 5 cm
- **Package Weight:** Approximately 90 grams

WARRANTY AND SUPPORT

Specific warranty information for the DollaTek CH341A Programmer Kit is not provided in this manual. For warranty details, technical support, or further assistance, please contact your retailer or the manufacturer, DollaTek, directly. Refer to the product packaging or the point of purchase for contact information.

