
HAND HELD PROGRAMMER QUICK START GUIDE

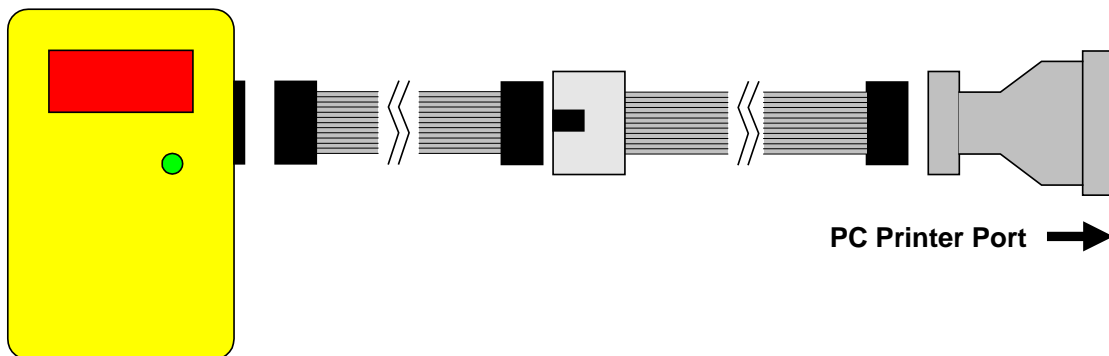
IMPORTANT INFORMATION

1) Do not leave the programmer connected to the PC adapter or a target system, as this will drain the battery.

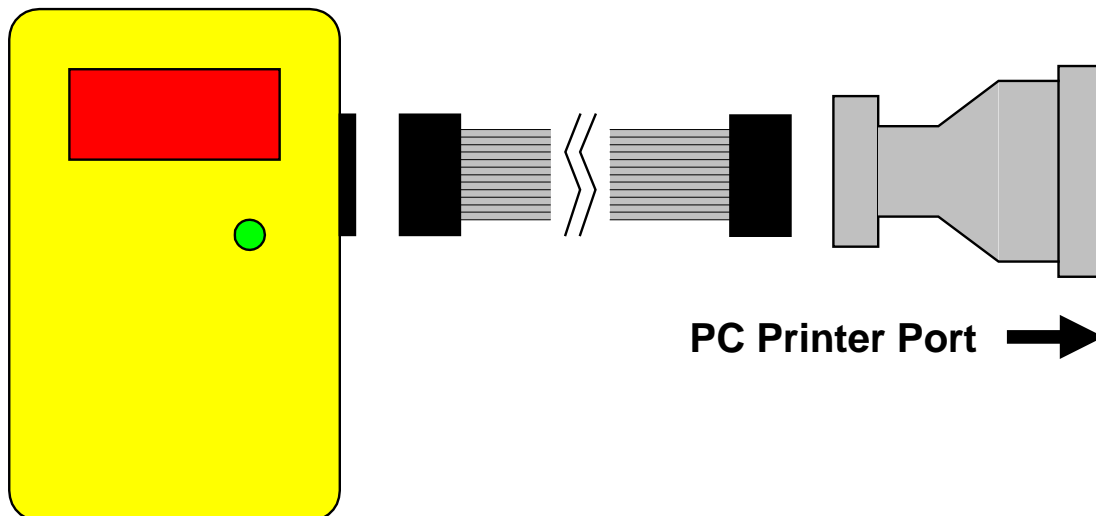
LOADING FROM THE PC

1) Connect the PC adapter (dongle) to the PC parallel port.

2a) Connect the long extension cable, using the end black socket, to the PC adapter. Then connect the programmer to the end grey plug of the extension cable - using the short ribbon cable. This method is useful where access to the PC adapter is poor.



2b) Or, simply connect the PC adapter directly to the programmer using the short ribbon cable.



3) Install and Run the Handheld Programmer software

- Select the EEPROM device you want to use on the device screen
- Select a file to load into the EEPROM on the next screen
- The next screen has extra settings.
 - Reset line:** Used to isolate any microcontroller that is connected to the EEPROM. This line holds the microcontroller in reset during EEPROM programming operations. Set the polarity to Low or High, depending on your microcontroller reset polarity or leave it Off.
 - Bus Address:** Some devices have bus address pins (2, 3 or 4) so that multiple devices can be chained together by hardwiring different addresses on to these Address pins. The number in this box can be changed to select the device in the chain that you wish to program. See device datasheets for the availability of this function on your selected device.
 - Page Size:** 24C and 25C devices from different manufacturers can have a different number of bytes per page for programming. This number is changed to reflect standard page sizes for different devices, but devices with the same number e.g. 25C512, can have different page sizes. Change the number of bytes to match the device datasheet, if programming errors occur.
- The next screen is for setting the **target voltage**.
 - Notes:**
This setting will change depending on whether the target is powered or not. See *section below on Power Options*. As a general rule:
 - 1) If Programmer powers target, set voltage to required target voltage
 - 2) If target is powered and Vcc is connected to ISP header, set voltage to 0V
 - 3) If target is powered and Vcc is **NOT** connected to ISP header, set voltage to match target voltage – Vcc
- The next screen is more settings for 25C only – protection settings.
- Almost there! On the next screen, make sure that the LPT port you select is the one the PC adapter is using. The time selection on this screen allows error light to stay on for a shorter or longer time, default 5 seconds.
 - Note:**
The error code (1, 2, 3 etc. flashes – see *below*) will repeat once a second, for as long as this time – default 5 seconds.
- On the last screen, click the **Upload** button to load the handheld programmer.

You Programmer is now loaded and ready for use.

If you get errors when loading the Handheld Programmer, please see *Troubleshooting* section.

PROGRAMMING A TARGET

1) Connect the programmer to the target system using the short ribbon cable.

- Target Layout – not end of lead view
- Header is 0.1" (2.54mm) box header in 5 x 2 format, with polarising notch
- See section below for *Six Way adapters*
- Programming lines should be isolated from application circuit with series resistors, especially if application circuits force the state of the device pins.

D	C	B	RST	A		24CXXX	25CXXX	93CXXX
9	7	5	3	1		N/C	SI	DI
10	8	6	4	2		N/C	CS (bar)	CS
						SCL	SCK	CLK
						SDA	SO	DO

GND Vcc

POWER OPTIONS

There are three power options with the Handheld Programmer

1) Programmer powers target

Plug into unpowered target. Connector pin 2 (Vcc) must be connected to Vcc on your board and all 4 GND pins must be connected to target ground. Use battery or external PSU. **There is a 150mA current limit for powering the target.**

In Software, select Vcc needed by target circuit on Target Voltage screen (0-5V)

2) Target Powered and Vcc connected to ISP Header

If target Vcc is connected to ISP header – Pin 2, then *Set voltage in software, on Target Voltage Screen, to 0V (or less than target voltage)*. All 4 GND pins must be connected and target must be powered.

3) Target Powered and Vcc NOT connected to ISP header

If target Vcc line is NOT connected to Pin 2 – Vcc on ISP header,

In Software, select Vcc on Target Voltage screen (0-5V) to match target circuit voltage. Do connect all four GND pins to target ground. Power Target

2) Press the button to start programming.

3) LED Codes

Normal operation:

A single green flash (red on v1.06), when first connected. Then, after pressing the button, the LED turns green for the duration of programming. At the end of programming the green LED switches off, and the target system is powered down.

If there was an error, the LED will flash RED. These codes repeat once a second, so do not confuse a single flash repeated 5 times with 5 flashes!

Error code – LED turns red:

- 1 flash - device not responding
- 2 flashes - program failed
- 3 flashes - options write failed
- Constant Red LED - Low battery or Over-Current trip > 150MA

SIX WAY ADAPTERS

Because of the need to connect more than 1 GND pin, the adapter should connect GND pins together. So, the adapter is not as straight forward as it first appears.

Adapters from the 10-way DIL interface to 6-way flying leads, 6-way DIL (3 x 2 0.1" pin header), and 6-way Micromatch connectors are available from Kanda.

Order Codes are:

10FLEX6



10DIL6



10MICR6



SAVING SETTINGS

The settings you have used can be saved for use again, in a FOB (.fob) file.

To save settings, click on **Save Fob button** on last page, and give the file a name.

To load a FOB settings file, click on **Browse button** on first screen and select the FOB file to load.

Note:

If you try and change device with a FOB file loaded, you may get unpredictable results. We advice you to NOT load a FOB file if you intend to change device as the fuses could be very different.

BATTERY AND POWER SUPPLY

The Handheld Programmer uses a standard 9V PP3 battery. These are commonly available.

The Handheld Programmer can also be powered from an external Power Supply. The power supply should be

- 2.1mm barrel connector (coaxial plug), centre positive.
- 9V DC regulated
- 300 mA plus

A universal PSU or Wall Transformer is available on the Kanda shop –
Order Code PSU9V-UNI

TROUBLESHOOTING

Error message: “Programmer is not responding – check connections and battery power”

- 1) Ensure dongle (PC adapter) is connected to printer port
- 2) Make sure programmer is connected as shown on page 1
- 3) Check port setting – LPT1, LTP2 etc.
- 4) In BIOS, make sure port is set to EPP v1.9 or ECP
- 5) Some early versions of XP poll printer port – if you have early XP version, load service packs
- 6) Check battery voltage (9V)

Programming Errors – RED Flashes on LED when programming

- 1) Ensure your target circuit is wired correctly as shown in connection diagram on Page 3
- 2) Check power options are correct – see Power Options on Page 3

Program OK – Green LED which switches off when program is complete

Because Serial EEPROM devices do not have any device ID numbers or other way of determining that a device is present, then this just means that the programmer has found a powered circuit, NOT that it has actually found a device.

FURTHER INFORMATION

Please contact support@kanda.com for technical support or go to our website support pages for latest software.

See www.kanda.com/support

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